



OUR FIGHT TO SAVE TWO PRESERVE STATE PARKS:

WHY OUR FIGHT MATTERS:

TO US

AND

TO YOU

A White Paper

Presented by:

The Conservation Alliance of St. Lucie County
and

Indian Riverkeeper (Marty Baum) of the Waterkeeper Alliance

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I. Introduction

Are Preserve State Parks simply repositories of acreage held for future development?

The Conservation Alliance of St. Lucie County (CASLC) and the Indian Riverkeeper (IRK) think not. We are engaged in a federal lawsuit to help protect our piece of Florida paradise from a bridge the city of Port St. Lucie wants to put right through the heart of two Florida Preserve State Parks: the North Fork of the St. Lucie River Aquatic Preserve (NFSLR-AP) and the Halpatiokee Trails and Buffer Preserve (BP) of the Savannas Preserve State Park (SPSP).

We are also challenging permits whenever we can.

The bridge will degrade the extraordinarily high ecological values of the NFSLR's Aquatic Preserve and the SPSP Buffer Preserve. It will destroy Halptiokee Trails of SPSP altogether.

The CASLC and the IRK are proud to take on this fight. We are concerned that if the city's preferred route, known as 1C, is allowed to be constructed here then all bets are off for any Preserve State Parks, not only in Florida but anywhere in the U.S. as well. It may very well set a precedent for the taking of parkland, paid for by taxpayer funds set aside for conservation, in which federal and state laws designed to protect places like these are set aside.¹ The precedent here involves the selection of the very route that takes the most parkland and has the highest ecological impacts.

We want to make certain that that precedent will not happen here.

Otherwise, a city can use Preserve State Parks for "incompatible uses," such as meeting transportation needs, even if there are several other, better options.

And, in this case, there were, indeed, several other better options. Of the six build routes that were considered, Route 6A, takes no parkland at all, for example. Widening the two existing bridges would cause very little additional ecological harm.

We also truly love our piece of Florida paradise. We are providing this White Paper to give the reader historical and ecological context to explain why we are

fighting so hard to protect it. We ask all who care about the sanctity of our Preserve State Parks to join us. See Section VIII for information on how to do that.

II. Florida Taxpayers Vote For Funding State Parks

Despite politicians' and developers' goals for land and water use in Florida, its citizens do want to conserve and protect its unique and fragile environment. Thankfully, some forward-looking activists were able to influence representatives to take pro-active steps to help safeguard these places in a state that would experience great population growth in years to come.

Beginning in 1963 Florida began purchasing lands with a program called Land Acquisition Trust Funds (LATF), funded by documentary stamps generated by real estate sales. This is a program that uses taxpayer money to fund purchase of state parks and preserves, but as political authorities change LATF could be diverted or dry up.

It's important to note that in the 1972 elections, which was a presidential election year with high voter turnout, Florida voters were asked to vote on whether to issue bonds to purchase park and environmental lands using documentary stamps (1), and whether to also fund purchase of such lands with general revenues (2). Florida voters overwhelmingly said yes to both initiatives, with 71% voting yes on (1) and 73% voting yes on (2).² As the years have gone by the support for purchase of state parkland and preserves with taxpayer money has only increased. In the 2014 elections 75% of Florida voters voted yes on Amendment One, which is a 20-year re-instatement of LATF monies to purchase and protect environmentally valuable lands and waters.

One explanation for voters' overwhelming desire to protect Florida's unique environment is due to the rapid population growth of the state since the 1950s. Florida is now the 3rd most populous state in the nation, and the natural beauty and resources that enticed many to live here are disappearing or have been degraded.

The NFSLR-AP was purchased with general revenue funds though the Environmentally Endangered Lands, a program to acquire and protect

“environmentally unique and irreplaceable lands as valued ecological resources of this (Florida) state.”³ The SPSP-Buffer Preserve (BP) was purchased through the Conservation and Recreation Lands (CARL) program of Preservation 2000, using funding from documentary stamps.⁴

III. Our Place on the Map: There's No Place Like It

A. The St. Lucie River: its Inlet and Estuary

Along Florida's south-central Atlantic coastline is the St. Lucie River Inlet and Estuary. The area is the epicenter of this country's highest aquatic biodiversity. Eight hundred fish species, or two-thirds of Florida's fish species, are found here.⁵ The St. Lucie River is a tributary of the Indian River Lagoon (IRL), an Estuary of National Significance.

Early Spanish explorers named it the “Rio de Luz,” or river of light, as they were enchanted by its beautiful luminescence. Historically, the freshwater North Fork of the St. Lucie River meandered slowly through numerous twists and turns along its river bends and oxbows until it met the then freshwater Indian River in Stuart. It was used by the Seminole Indians for hunting and transportation, and also featured prominently in the Seminole Wars of the 1800s.

In 1892 the St. Lucie Inlet was reopened, connecting the mouth of the St. Lucie River to the Atlantic Ocean. Now, a kind of “Crossroads” was established when the water bodies of the St. Lucie River Inlet, the St. Lucie River, and the southern Indian River Lagoon joined in Stuart. Along with highly favorable climate and oceanic variables, the resulting creation of an ecotone and a new salinity gradient, our area was transformed into a habitat that could support 800 species of fish, both saltwater and freshwater, and some of which are exceedingly rare and found nowhere else.⁶

Led by Stuart News editor in the mid-1900s, Ernest F. Lyons, due to his articulate (and award winning) essays on the beauty and uniqueness of his “Rio de Luz,” residents and visitors alike enjoyed all kinds of recreational activities on and around the St. Lucie Estuary's and River's reaches. Combined with ocean angling

and fishing on the south Indian River Lagoon, Stuart became known as the fishing capital of the U.S.

B. South and North Forks of the St. Lucie River

From the inlet, the South Fork of the St. Lucie River extends southward in Stuart, Martin County for 7 linear miles, and the North Fork of the St. Lucie River (NFSLR) extends 16 linear miles north from Martin County to Port St. Lucie and White City in St. Lucie County. It is extraordinarily rare for such a small area to host this incredible aquatic biodiversity.

Because the St. Lucie River is small, and because so many of our newer residents come from other places with more dramatic landscapes and waterscapes, the treasure that lies within its waters is not readily understood. The St. Lucie River is a “haven for myriad tropical aquatic species” because this “small river is actually the largest and most tropical one we have between Florida Bay and Jacksonville.” The river hosts rare fish, even species that stump fish biologists, because they are not known elsewhere. Some examples are: swordspine snook, tarpon snook, St. Lucie white-mouth croakers, burro grunts, slash-cheek gobies, bigmouth sleepers (the largest gobioid fish in the world), slashcheek gobies, and the very rare opossum pipefish.⁷

Our treasure here in this part of the Treasure Coast is the ecosystem that supports this awe-inspiring biodiversity. We take it as a sacred obligation to protect it.

The project area for the Crosstown Parkway Extension (CTPE) Bridge in Port St. Lucie lies within the NFSLR.

C. Ecosystem Stressors Begin

Alteration of the North Fork's natural course began in the 1920s when some of the North Fork was straightened, blocking historic water flow and natural water cleansing processes. In the mid-1900s new canals connected the St. Lucie River in Stuart with Lake Okeechobee, a U.S. Army Corps project to prevent flooding in the Everglades Agricultural Area. The “Crossroads” of the estuary now had to contend

with periodic nutrient and chemically laden discharges routed from the lake during periods of high precipitation.

Subsequently, General Development Corporation cleared over 85 square miles of native vegetation and filled wetlands to develop the city of Port St. Lucie. The more pristine ecology of the NFSLR now had to contend with untreated storm water and run-off from new residential, commercial, as well as agricultural lands.

IV. Our Preserve State Parks: Insuring Protection?

A. North Fork of the St. Lucie River Aquatic Preserve

In 1972, the NFSLR Aquatic Preserve (AP) was established to “protect its aesthetic, biological and scientific value for future generations.” (as stated in Sect. 258.36 of Florida Statutes). It was one of the first in Florida to receive the designation of “preserve state park,” which, like Florida’s magnificent Fakahatchee Strand Preserve State Park, known as the “Amazon of North America,” was “specifically selected for its superb environmental quality.”⁸

According to Coastal and Aquatic Managed Area (CAMA), (the agency within the Florida Department of Environmental Protection (FDEP) responsible for the management of aquatic preserves), such preservation measures are important counter measures to protect valuable aquatic systems undergoing great stress due to Florida’s unmanaged growth. The preserve designation was meant to provide “significant protection to ensure that these important underwater systems are cared for in perpetuity.”⁹

Numerous Florida laws specifically direct how APs are to be protected and managed. Aquatic Preserves must be “preserved to maintain the quality of their condition upon designation.” Furthermore, APs must not be taken for incompatible uses “unless no other reasonable alternative exists....”¹⁰ Recall that that is not the case here. Route 6A would not use state parkland at all.

The FDEP’s Office of Intergovernmental Programs reported that APs are to be “managed primarily for the maintenance of essentially natural conditions” when

they were approached for their evaluation of a potential bridge through the NFSLR-AP. In their response they described the NFSLR-AP as a “wilderness preserve” which is a “major tributary of the St. Lucie River Estuary, the Indian River Lagoon Aquatic Preserve, and the Atlantic Ocean.” Both the NFSLR-AP and the SPSP-BP are designated as Class III and Outstanding Florida Waters, designations that “afford special protection because of their high quality recreational and ecological significant waters.”¹¹

The NFSLR-Aquatic Preserve (AP) is 15.6 linear miles in length, and is vital in supporting the area’s aquatic biodiversity. For example, “rare topical peripheral fish species such as gobies, sleepers, and pipefish are found here. Commercially important species such as blue crabs, snook, snapper, drums, and shrimp use this area during their juvenile periods.” It “supports a variety of federally and state protected species,” including 33 birds, 14 plants and ferns, five fishes, five reptiles, and two mammals.¹²

Importantly, during the wet season, from summer to early fall, maximum numbers of plankton concentrations have been observed along the project area due to the salinity transition from low to high salinities. Studies have also noted that the highest concentration of larval crustaceans and fish occur here in the bridge project area, with the most abundant fishery species larvae along the NFSLR.¹³

B. Savannas Preserve State Park and Buffer Preserve for the NFSLR

The Conservation Alliance of St. Lucie County launched the “Save the Savannas” campaign in 1972 and joined with prominent citizens and groups from both Martin and St. Lucie Counties in order to protect the valuable Savannas ecosystem that bisected both counties from ruin by development.

In 1977 the groups’ efforts succeeded in persuading the state to establish the Savannas Preserve State Park (SPSP) as the largest protected freshwater marsh in the southeastern U.S., beginning with a purchase of 3800 acres. It is a long north-south strip of wetlands and uplands immediately west of the Atlantic Coast Ridge, which is immediately west of the Indian River Lagoon. Today, SPSP is nearly 7,000 acres, protecting not only the now contiguous 5,000 acres freshwater basin, but

other distinct and separate upland areas, including the Buffer Preserve (BP) for the NFSLR (approximately 3.5 miles west of the Basin marsh), which constitutes approximately another 1200 acres. According to FDEP, the original nine parcels of BP lands were purchased in 1994 through the Conservation and Recreation Lands (CARL) program of Preservation 2000, both of which received their funding through LATF.¹⁴

The BP's riverine ecology is distinct from that of the freshwater marsh basin of the original SPSP.

According to the Florida's Office of Intergovernmental Affairs, "BP lands were purchased primarily to augment habitat and water quality protection within the NFSLR-AP."¹⁵ On the NFSLR-AP's website it states that "the primary reason for acquiring the North Fork properties was to maintain a viable buffer that was capable of filtering water prior to entering the preserve."

The U.S. Fish and Wildlife Service (FWS) cautioned that because the BP was purchased to "protect the valuable natural ecosystem of the NFSLR for the benefit of all the citizens of the state," they could not support the construction of a new bridge through protected conservation areas, including Route 1C." However, because no preserve state parklands are affected in Route 6A, they urge that it be the fall back selection if build options must be considered.¹⁶

The Buffer Preserve is exceptionally biodiverse, hosting twelve different Florida Natural Areas Index communities or habitat types: depression marsh, mesic flatwoods, scrub, scrubby flatwoods, blackwater stream, baygall, floodplain marsh, hydric hammock, and tidal swamp, as well as the open riverine system. As of 2003, surveys indicated the existence of "179 plant species - including 12 listed species - and 370 animals - of which 19 are listed species."¹⁷

C. Preserves Protect Only Remaining Natural Corridor

Taken together, it was the establishment of the NFSLR-AP (submerged lands) and the SPSP Buffer Preserve (uplands) of the NFSLR that some of the original North Fork river habitat and flow remains in Port St. Lucie. Within the city limits, the BP "provides approximately 8 miles of natural riverfront for the North Fork," and is

"the only continuous natural corridor " left in the city and one of the few in St. Lucie County.¹⁸ The FWS agrees: the BP represents one of the last areas of natural habitat remaining in a highly urbanized area.¹⁹ Within the context of the expansive urban development in Port St. Lucie and its contribution to river and estuary habitat and water quality degradation, "in many places, the narrow BP is the only buffer" that remains between the AP and developed areas.²⁰ And, as the NFSLR-AP's website further explains, in some places residential properties directly border the AP, with no buffer.

The U.S. Army Corps of Engineers (ACE) takes a particular interest in the project due to its impact on protected wetlands and waters, but also because "any preserved lands that would be impacted would have negative impact in the public interest."²¹

V. Some Environmental Impacts of Bridge Route 1C

The following discussion is not meant to be an exhaustive review of all environmental impacts due to the limitations of this White Paper. However, we endeavor to highlight several of the most critical issues in order for the reader to become acquainted with the profound damage and alterations to this ecosystem if the construction of Route 1C bridge is allowed.

In 1999, FDEP's Administrator of CAMA, Larry Nall, stated that the proposed (Route 1C) bridge location is in "the widest part of the aquatic/buffer preserve complex ... impacting public lands to the greatest possible extent," and that "it is unlikely that a location with a greater environmental or recreational impact could be chosen."²² The bridge would cross three separate tributaries, the St. Lucie River, Evans Creek, and the Coral Reef Waterway, more protected tributaries than any of the other proposed bridge routes.²³ Additionally, Route 1C "contains the BP's most sensitive and diverse habitat in terms of community types and native flora and fauna."²⁴

The Florida Fish & Wildlife Conservation Commission (FWCC) ranked Route 1C as having the most "direct and temporary impacts to wetlands, pine flatwood, live oak hammocks ... and fish and wildlife habitats of any of the build

alternatives.”²⁵ The agency pleads for the “protection of public conservation land and the wildlife resources they support,” and asks that a serious search to “resolve transportation need with the goal of reducing the effects to important and irreplaceable natural systems” be undertaken.²⁶

In examining an aerial photo of the area it is easy to see why: this is the largest remaining expanse of land and water close to its original state with riverbends and oxbows, wetlands and uplands, with dense vegetation (on land, river banks, and submerged), all of which maximally support terrestrial, aquatic, and avian organisms dependent on this specific type of ecosystem. Here are some examples of ecosystem components at risk:

A. Water Quality

The NFSLR is listed in the National Rivers Inventory as “a significant free flowing stream with potential as a future component of the National Wild & Scenic Rivers System.”²⁷ Recall that the NFSLR-AP has an Outstanding Florida Water (OFW) classification. Both classifications carry with them cautions to protect the rivers so-named, however, an “OFW’s water quality may not be degraded,” according to Florida law (40E - 4.302(1) (a), F.A.C.).²⁸

Due to the increased urbanization, loss of riverine vegetation and habitat, storm-water runoff, and the discharges of excess nutrients and pollutants into the St. Lucie River Estuary, the NFSLR-AP consistently tests below OFW’s water quality standards.²⁹ The U.S. Environmental Protection Agency (EPA) has red-flagged the NFSLR and its headwaters from Ten-Mile Creek as “impaired waters.” The EPA also states that Route 1C is “likely to introduce substantial impact on water quality due to contaminant loading as well as water flow caused by storm water management for the proposed alignment.”³⁰ The FDEP is particularly concerned about as non-point source storm water run-off.

Periodic widespread growth of algae, lesions on fish, and sick and dying marine mammals, like manatees and porpoises, have alarmed Treasure Coast residents who have demanded that steps be taken to clean up the waters for

decades.³¹ Most recently, in 2013, which was a particularly wet year (and thus the “Crossroads” at the St. Lucie River Estuary, the St. Lucie River, and the connecting south Indian River Lagoon was inundated with both Lake Okeechobee and storm water discharges), thousands of residents gathered several times to make sure their voices were heard. Their efforts have succeeded in getting national, state, and local representatives to propose legislation. The local newspaper covers the region’s water quality almost daily, and television coverage is very frequent as well.

As of the date of this report, Treasure Coast residents are demanding that Amendment One funds be directed to purchase important parcels of sugar agricultural lands to send Lake Okeechobee discharges south, (re-initiating a portion of the historic Everglades water flow south), rather than east to our fragile estuary and rivers and west to the Caloosahatchee River.

The NFSLR is one of the components of the Central Everglades Restoration Plan (CERP), a plan that proposed numerous water quality improvement projects for the watershed area, thus illustrating the reciprocal connections that determine water quality in our region.

While there are numerous variables at play, construction of any bridge must take into account the ecological context of its proposed placement: “Construction of an additional bridge across the North Fork would be a significant addition to the cumulative impact of a seriously degraded system.,” and increased storm water runoff from not only the bridge, but also from the loss of absorptive soils and wetlands, will only add ecological stress.³² The FDEP expects these impacts to water quality from the Route 1C bridge:

- Alteration of existing surface and water hydrology and natural drainage patterns
- Reductions in flood attenuation capacity of area creeks, ditches, and sloughs - due to increased impervious surface within the watershed
- The addition of a new source of storm water discharges, treated or not, into the NFSLR-AP. ³³

That the project area lies within a 100-year floodplain is one of the variables that must be fully considered as adverse impacts can be expected. The FWCC concludes that Alternative 6A appears to cross the least amount of floodplain of all considered build alternatives.³⁴ And, of course, widening the two existing bridges would have less impact to the floodplain as well.

Water quality, as well as aesthetic values, will also be highly impacted by the inevitable and voluminous garbage and litter that motorists toss from bridges.

B. Wetlands

As indicated above, much of Port St. Lucie's wetlands were filled for development. Additionally, the statewide context for loss of wetlands is very poor: it has one of the largest percentages of wetland loss of any state in the country. As of 2008, Florida had lost over half of its original wetland acreage, estimated at 4.5 million ha. Research has shown "a high degree of correlation between population growth and cumulative permit actions." Thus, despite the Federal government's policy of "no net loss of wetlands," Florida continues to lose its valuable coastal wetlands. The free ecosystem services they provide are essential for water quality, water storage and flood control, biodiversity support, as well as carbon sequestration, all of which are important to human communities as well. And, natural wetlands are superior to constructed wetlands due to the latter's high failure rates.³⁵

The ACE, EPA, NMFS, FWS, the South Florida Water Management District as well as the local Treasure Coast Regional Planning Council were some of the agencies that voiced early objections to the taking of wetlands in the project area, particularly the route now known as Route 1C.³⁶ The Corps explains the important ecological significance of this contiguous floodplain wetland complex:

Wetlands abutting and adjacent to the NFSLR include tidally-influenced estuarine mangrove habitat, and palustrine emergent marsh, scrub-shrub and forested wetlands, and are of extremely high

quality. The wetlands within the project area are part of an important complex of intact floodplain wetlands. The estuarine and palustrine wetlands are contiguous and are part of a complete system along the entire reach of the NFSLR. ... The ACE recommends the use of previously disturbed land with no wetlands, high functioning uplands, or parcels under public ownership for conservation.³⁷

The ACE has made it very clear that the city chose the “MOST ecologically damaging” route when it selected Route 1C, in terms of Section 404 of the Clean Water Act.³⁸ The Corps states that the route will result in the most impact to the most acreage of the highest functioning and quality wetlands, and that the mangrove vegetation and tidal wetlands are almost pristine.³⁹ The Corps argues, as have other agencies, that it is always best to take every opportunity to avoid impact to wetlands, (as is required by the Clean Water Act) and especially so in this fragile riverine ecosystem.⁴⁰ They and other agencies, like the FWS and the NMFS, strongly suggested that a no-build or the bridge widening option should have been more seriously considered, and would have resulted in a far less impact analyses.⁴¹ As stated above, wetlands also will be impacted by the construction of new impervious surfaces, which will cause run-off into surrounding wetlands. Additionally, the wetlands under the bridge will become barren lands and thus will no longer contribute useful ecosystem services, and may even add to run-off problems.⁴²

C. Mangrove Wetlands

Due to the exceptionally high quality wetlands that occur in the NFSLR-AP and the BP, the NMFS further elaborated on the risks to this aquatic ecosystem, especially to the mangrove wetlands in light of their globally, nationally, and statewide imperiled status of mangrove wetlands. In Florida, due to the protection afforded by state parks, a majority of the remaining mangroves lie within their borders.⁴³ Globally, “mangrove habitat is one of the world’s most threatened tropical ecosystems with global loss exceeding 35%, and the current

rates of mangrove deforestation are likely to impact severely the function, fisheries productivity, and resilience of reefs.”⁴⁴ Only six percent of the remaining mangroves in Florida are on its east coast.⁴⁵

Combined with estuarine aquatic beds, mangrove wetlands “directly benefit the fishery resources of the St. Lucie River and surrounding waters by providing water quality benefits and nursery habitat. They are part of a habitat complex that includes sand and mud bottom and sea grass beds. This complex supports a diverse variety of fish and invertebrates within the estuary.”⁴⁶ Mangrove wetlands provide other benefits such as:

- Provide nursery, foraging, and refuge habitat for other commercially and recreationally important fish, shellfish, such as blue crab, striped mullet, and tarpon.
- Provide important water quality maintenance functions such as pollution uptake.
- Stabilize shoreline, attenuate wave action, and produce and export detritus (important to food chain). ⁴⁷

The NMFS has expressed grave concern that construction of a bridge through the AP would introduce impacts that would “further fragment” this critical estuary in the NFSLR. Additionally, mangrove habitat has been designated by the South Atlantic Fishery Management Council as a Habitat Area of Particular Concern (HAPC). HAPC’s are subsets of Essential Fish Habitat (EFH) which are considered “rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area.” All of these qualifications exist in the project area. Mangrove habitat in particular would be impacted by Route 1C. ⁴⁸ Obviously, the mangrove rivulus, a federally listed fish species found here, would be impacted by the loss of additional mangroves.

The construction of storm water retention ponds (a part of the required storm water treatment protocol for bridge construction) would add impact to

surrounding wetlands and Essential Fish Habitat (EFH), as would the presence of more impervious surfaces.⁴⁹

Taken together, construction of the bridge “would reduce the overall productivity of the St. Lucie River and reduce the abundance of fishing resources,” concludes the NMFS. From a larger statewide perspective, NMFS states: “the cumulative loss of these habitats has and continues to reduce overall fisheries within Florida waters.”⁵⁰

D. Essential Fish Habitat

The NMFS has stated that Route 1C will cause the highest impact to Essential Fish Habitat of any of the proposed bridge routes.⁵¹ It has said that only after no-build options have been exhausted and rejected, the fall back option it would most prefer would be Route 6A.⁵²

Dr. R. Grant Gilmore, Jr., Ph.D., a nationally renowned fish scientist, expressed concern that “possibly irreversible impacts” could occur due to the construction of a bridge through these habitats. In particular, the rare and threatened tropical peripheral fishes that are documented inhabitants of the NFSLR-AP such as the opossum pipefish, the bigmouth sleeper, and slashcheek and river gobies, among others, “are only known to reproduce and have predictable populations in the St. Lucie River and its tributaries”⁵³

Dr. Gilmore also states that this ecosystem’s incredible aquatic biodiversity is supported by a very small area of native vegetation, like mangroves and submerged polygonum species, and therefore every acre of it should have priority protection. He summarized his appeal this way:

Due to local urban and suburban growth, accompanied by seawalls, dredge and fill operations, wetland drainage or impounding, herbicide and fertilizer applications we are losing the very vegetative structure that insures the survival of this extraordinary fish diversity. This aquatic area can ill afford additional loss and alteration of aquatic habitat, submerged vegetation, mangroves, and wetlands that will occur with the construction of a bridge

through one of the healthiest, largest and least disturbed areas of the ... Aquatic Preserve, Evans Creek, and the wetlands of the Halpatiokee Trails section of SPSP. (Emphasis in original.)⁵⁴

E. Birds

Looking at the chart of the 33 listed (threatened, endangered, of species of special concern) bird species for the NFSLR-AP, it is obvious that a well-vegetated, undisturbed area is preferred by large numbers of bird species, including both resident and migratory, airborne and wading birds, listed or not. For example, it's an excellent area for the endangered wood stork, and the loss of wetlands would impact the local population of this as well as other wading birds. Eagles and ospreys nest here. At dawn and dusk, our local birds have created their own flyway between the two existing bridges. Audubon Florida objects to bridge Route 1C as it would impact the "large number of species of migratory birds which transit the Eastern Flyway," in which this area belongs." The bridge route also would impact an important wildlife sanctuary owned by Florida Audubon Society, which would be immediately adjacent to the bridge.⁵⁵ The St. Lucie County chapter of Audubon is on record as opposing Route 1C.

F. Mammals

The NFSLR-AP's website reports that manatees "have been observed using historic riverbends, which are shallower and less travelled than the main channel as breeding grounds.⁵⁶ According to ecologist Camille S. Yates, former curator of the Manatee Observation and Education Center in Ft. Pierce, Florida, the highly endangered West Indian manatee would suffer as a result of the construction and operation of the Route 1C bridge: the proposed project will disrupt foraging and resting areas for manatees - a species already under duress in this region.⁵⁷

VI. An End to Species Refugia and Ecological Gem?

A. Evans Creek and Fingerling Island: Needed Refugia for Animals and Humans

Another unique environmental as well as recreational asset that would suffer high and irreversible impact if the Route 1C bridge is built is Evans Creek and its bordering fingerling island. Evans Creek is an old river channel and an oxbow. It is 2.5 mile long north-south tributary of the St. Lucie River, accompanied all the way by a fingerling island, part of the SPSP-BP, of thoroughly vegetated mangrove and cabbage palm forests and wetlands. Its remoteness and inaccessibility to boat traffic has made it a "refugia" for a variety of species. Manatees, river otters, osprey, eagles, alligators, turtles, crabs, tarpon and snook are readily observed here.⁵⁸

According to Robert Hall, Environmental Specialist with Florida's Office of Intergovernmental Programs, its "ecological communities - such as flood plain marsh and tidal swamp - containing mangrove and leatherfern - are crucial elements of the river floodplain and provide nursery habitat for fish, invertebrates, amphibians, and reptiles," as well as wading birds that "depend on the marshes for feeding, loafing, and nesting."⁵⁹

Because of its native vegetative structure, it likely serves as critical habitat for the rare tropical peripheral fish species such as gobies, sleepers, and pipefishes - as well as the increasingly threatened (and federally listed) mangrove rivulus. Dr. Gilmore has stated that unless species mapping of submerged lands is performed in this area, it is likely that disturbances due to bridge construction and operation will have hidden and irreversible impacts. A tiny tributary of Evans Creek, Hogpen Slough, was documented by Dr. Gilmore as a spawning habitat for snook and would likely disappear as a result of bridge construction.⁶⁰ No species mapping was performed for or included in the Environmental Impact Statement (EIS).

For another example, Dr. Gilmore has established in his research that tarpon, a highly prized sport fish, will "abandon habitats when they are modified or disturbed by dredging and construction activities," and that "once disturbed tarpon

did not return to their previously favored site.” Adding in the loss of naturally occurring habitat that the species prefer, “it is highly likely that the present degradation of the St. Lucie River has placed (rare, threatened, and valuable sport and commercial fish species) in a more tenuous condition for survival.”⁶¹

For the visitor to Evans Creek, touring it by kayak or canoe, Evans Creek provides an unmatched riverine vista in an urban setting of a serene and historically natural Florida setting. It is valued because of its subtropical jungle-like passage in which animals can be readily seen in their native habitats. But it also provides relief from that urban environment, a refreshing time away from buildings, cars, roads, bridges, and the noise and air pollution they produce. There is no place like it in Port St. Lucie, and one would have to travel far to experience anything like it.⁶²

If the Route 1C bridge were to be built through Evans Creek, it would no longer serve as a “refugia,” for either animals or humans. Species diversity would substantially decline and many species would vacate the area, like the nesting ospreys and spawning fish, never to return. The entire recreational and aesthetic experience that exists now would be lost.

B. Halpatiokee Trails: An Ecological Gem

East of Evans Creek and vital contributor to the Buffer Preserve is the Halpatiokee Trails section of SPSP. Evans Creek is accessed at the western end of its trail. In a compact area of 18 acres, it provides the critical ecological function of water absorption, storage, and filtration due to its abundance of palustrine and estuarine wetlands. It also provides a surprisingly diverse array of habitats and native flora, and the fauna that depend on it.

The Florida Trails Association assisted the FDEP in creating the present-day hiking only series of trails at the preserve that end at Evans Creek.⁶³ It is the only access point from US1 to this historically accurate representation of land- and water-scapes.⁶⁴

Just a few minutes walk inside the trails, the beauty and serenity of it surrounds the visitors, and it's as if one is traveling back in time to enjoy the magic that Mr. Lyons captured so well. If it rains, one has to wear mud boots, as the wetlands make themselves known. Visitors readily observe terrestrial animals like a mother bobcat and her two cubs, and the most important and imperiled keystone species, the gopher tortoise. With a bit of diligence visitors can detect other animals that use the undisturbed area for one of the very few, if not the last, remaining corridors allowing them to move to feed, mate, and protect themselves.⁶⁵

Called an "ecological gem" by the Martin County Native Plant Society, Halpatokee Trails has been used by its members as well as members from the St. Lucie County chapter for field trips for over two decades. At the Trails' entrance is a Florida State Park interpretive sign that explains the seven distinct community or habitat types, which occur in this multiple elevation tract, from low wetlands to sand pine scrub uplands to the mature live oak hammocks to the riverine border at Evans Creek. Visitors delight in the incredible variety of native flora that arises from such habitat diversity. Visitors spend hours exploring and documenting the plants they find, including listed species such as large flower rosemary, rose pegonia, nodding pinweed and the cardinal airplant, among others, as well as other rare species like the tarflower.⁶⁶ FDEP identified 129 plant species in the BP as of 1999.⁶⁷ As of 2013, native plant enthusiasts from both Martin and St. Lucie Counties have identified over 200 native plants species, and expect that 100 more could be found.⁶⁸ Mr. Nall of CAMA states:

The eastern side of the corridor contains the Halpatokee Canoe and Hiking Trail. The firebreak and hiking trail system bisect seven community types. The access area alone is home to ten listed plant and animal species (confirmed). Other listed species (e.g., amphibians, reptiles, scrub jays, plants) should occur on site and will be aided by planned management such as prescribed burning. ... The scrub communities on site are in need of ecological burning and will support scrub jays. Establishment of a major thoroughfare would prevent this.⁶⁹

The Florida Trails Association, and the Martin County NPS, among other individuals and groups, registered their early opposition to the proposed Route 1C bridge with FDEP by the close of 1999.⁷⁰ Newspaper articles extolling the beauty and natural resource assets of Halpatiokee Trails were published at this time as well, written by members of local environmental groups. Protests were held on site, with the CASLC, St. Lucie County Audubon, and even FDEP's staffers participating. To this day, the controversy over Route 1C continues precisely because of the nature of taking our valued and treasured preserves. The print and television media have covered our challenges to that taking every step of the way.

If the Route 1C bridge is built, it will result in the complete destruction of the existing trails and its diverse plant communities. It is not something that can be recreated. The plant communities will either be bulldozed, or shaded by the bridge, which will cause most of them to die. Most of its wetlands will be filled or shaded, and thus will not be able to rehydrate properly. Halpatiokee Trails will no longer be able to service the NFLSR-AP and Evans Creek as a Buffer Preserve. Species diversity will plummet not only from habitat loss and fragmentation, but for those animal species that need to move for food, mating, or protection there is now likelihood that many of them could end up as roadkill.⁷¹

VII. Conclusion

After a brief overview of the environmental impacts described here, it is clear that the legislative intent of establishing Preserve State Parks to protect aesthetic, biological, and scientific values for future generations will not be honored if the Route 1C Bridge is allowed to be built in Port St. Lucie. The promise to keep these lands and waters in "essentially natural conditions" will be broken. Not only will we lose their critical ecosystem components and the services they provide, but we will introduce water, air, noise, and light pollution into an area that produced none. The entire bridge corridor, through the Coral Reef Waterway, the NFLSR-AP, including Evans Creek, and finally Halpatiokee Trails - will be forever changed, its magic gone.

The answer to the question that we opened with, whether the Preserve State Parks are simply repositories for future development, we think is “No ! ” Not only has the proposal by the current governor to put golf courses and resorts in state parks like Jonathan Dickinson State Park proved to be highly unpopular, but, so, too, did Floridians overwhelmingly vote to acquire and protect our special lands and waters due to the Amendment One vote. The will of Floridians is clear, now it's time for our elected representatives to make sure the laws designed to protect the remaining section of natural Florida's paradise are adhered to and enforced. If not, groups like ours are forced to take legal action.

Though this White Paper has not discussed the various federal and state statutes that exist to protect special places like ours, we would like, however, to quote our attorneys from the brief that was filed on March 16, 2015. Reference is made as to why such laws exist in the first place, according to the precedent-setting Overton Park decision by the U.S. Supreme Court in 1971. From that ruling:

[i]t is obvious that in most cases consideration of cost, directness of route, and community disruption will indicate that parkland should be used for highway construction whenever possible. ... Such factors are common to substantially all highway corridors. Thus, if Congress intended these factors to be on equal footing with preservation of parkland there would have been no need for the statutes.⁷²

And, of course, if that were the case, no parkland would ever be protected. It's especially so in Florida, where the apparent ease of going through the few remaining green spaces is compulsively alluring.

We ask that you join us in our battle to save our preserve parklands. It's important to both of us that our natural Florida lands, waters and the critters that we love, can continue to exist in the ecosystems that support them.

In closing, we quote from long-time Port St. Lucie resident, Robert Post, from his email to the Department of Transportation in which he pleads that the agency not permit Route 1C. He describes the beauty and uniqueness of our area, that he

has become very familiar with its prodigious species over the years, and to build a bridge right through its heart would be a great, irreversible loss. His summary says it best:

No other area of the NFSLR provides such a habitat for plants, animals, birds and fish. This (Route 1C bridge) is an environmental disaster on the fast track. Mitigation has been proposed as the solution. Not possible ! Not possible to re-create or replace this unique place along our precious St. Lucie River.⁷³

VIII. For Further Information

For further information about our legal challenge to the Route 1C Bridge, visit CASLC's website, <http://www.conservationallianceslc.org>, and click on Our Halpatiokee Legal Defense tab. You can access copies of our brief and petitions here, as well as links to media coverage of the issue. You can email us at: slcconservationalliance@gmail.com

For further information about the Indian Riverkeeper, Marty Baum, and the Waterkeeper Alliance, visit their website at: <http://www.indianriverkeeper.org>
The River Warriors have created a Facebook Page, which provides up to the minute discussion and announcements of upcoming events:
[:http://www.facebook.com/pages/Citizens-to-MOVE-the-CrossTown-Bridge](http://www.facebook.com/pages/Citizens-to-MOVE-the-CrossTown-Bridge)

We are actively seeking donations to our Halpatiokee Legal Defense Fund, and appreciate any amount you can give to this noble cause, which benefits everyone who cares about our state parks. Click on the Legal Defense Fund in the drop down menu from the Halpatiokee Defense tab. Click on the PayPal icon.

IX. Acknowledgements

This has been a decades-long fight and there are many folks who deserve our recognition and gratitude. Chief among them is Mrs. Lace Vitunac, 90, one of the original founders of the CASLC. She is as stalwart as the great Marjory Stoneman

Douglas was, who she knew and from whom she took seriously Ms. Douglas's advice to her: "Never give up!" And, she hasn't. She's the single most important reason why we continue to fight against Route 1C. Both Mrs. Vitunac, and her late husband, Walter, are deeply revered in our community. Our environment in St. Lucie County is immeasurably better for their contributions.

We will not be able to name everyone who has assisted in this fight but would like to note at least these folks, in no particular order: George and Diane Jones, Kevin and Marilyn Stinnette, Billy and Cathy Gibson, our very own "private eye" (who prefers to remain anonymous), the entire Vitunac family, Carol Herzog, Joan Bausch, Pam Hopkins, John Bradford, Diane Goldberg, AnnMarie Loveridge, Sheryl Paul, Nathaniel Pryor Reed, Greg Braun, Beverly and Paul Yoshioka, Charles Grande, Dr. Grant Gilmore, Mary Chapman, Bob and Butch Post, Gary and Sue Ellen Warden, Henry Flower, Patricia Denunzio, Sally Swartz, Ryan Abrams, Karen Alton, Drew Martin, Marty Baum and the entire clan of the River Warriors.

And, of course, we are very grateful to our wonderful attorneys who saw the import of our cause and dove right into this issue with gusto and dedication: Jason Totoiu, Esq. of the Everglades Law Center is due great credit and thanks for drafting the original assessment of the 4(f) challenge. We greatly appreciate the dogged persistence, team spirit and smart competence of Robert Hartsell, Esq. and Sarah M. Hayter, Esq., of Hartsell, Law, and Rachel S. Doughty, Esq. of Greenfire Law.

X. Notes

¹ Email from Kevin Stinnette to Larry Nall of FDEP, May 22, 1999. Stinnette was on the CASLC's Board of Directors at the time, and expressed concern about the precedent of giving lands preserved by CARL or Preservation 2000 or Save Our River funds to development interests.

The West Virginia Corridor, (or what is now known as the Crosstown Parkway,) was first proposed by Port St. Lucie as a highway that would be an east-west traffic corridor: from 1-95 in the west, and traveling east to a bridge over the NFSLR (AP), then a bridge through the SPSP marsh basin and over the IRL (AP) to Hutchinson Island (a barrier island). FDEP, Stinnette, and others repeatedly called for an EIS to be performed for the entire corridor, in accordance with National Environmental Policy Act. Calls were made for an EIS to be conducted for the two bridges as a combined project at a minimum. Port St. Lucie

threatened a lawsuit if FDEP linked the two bridges. (See Christine Caliendo, “Proposed bridges may spark legal battle council members threaten lawsuit if state environmental agency tries to link projects, Ft. Pierce Tribune, September 27, 2000.]

About this same time, the city moved to launch the “first leg” of the corridor, which would have been the bridge through the SPSP and over the IRL. Stinnette, Charles Grande (former President of CASLC) and their group successfully mobilized residents to persuade officials to drop their plans for this first leg.

The city moved to “de-federalize” the bridge project and focused its resources on construction of the western part of the corridor from I-95 east to Floresta Drive, and is now acquiring properties to the edge of the NFSLR-AP. The city never gave up its plans for the IRL bridge (see Isadora Rangel, “Will bridge plans be revived?” St. Lucie News Tribune, November 17, 2013, p. 1, 19A.)

At the Port St. Lucie city council meeting on January 23, 2012, in which the council voted to approve Route 1C as the “preferred” route, George Jones, (former President of the CASLC and Indian Riverkeeper), explained that as a retired State Parks Regional Bureau Chief, District V, (F)DEP, he felt that the selection of Route 1C was “a precedent setter.” He said that the “(F)DEP has continually and consistently defended against the taking of state parklands.

Thus, the precedent setting may in fact be twofold: 1] the taking of state parklands, that were also specifically set aside as Preserves, for “incompatible uses” such as road or bridge construction, and other development, even as other options exist that would adhere to the law; and 2] the segmentation of the highway corridor such that its total environmental (and other] impacts would not be accurately reported and assessed.

² Ney C. Landrum, *A Legacy of Green: The Making of Florida's Magnificent State Park System*, Florida Park Service Alumni Association, 2013, p. 204. Ney is the Director Emeritus of Florida State Parks.

³ *Ibid.*, p. 202, 205, 245.

⁴ *Ibid.*, p. 245; Internal FDEP memorandum from Larry Nall of CAMA to Tom Butler of Bureau of Public Land Administration, May 25, 1999.

⁵ Letter from R. Grant Gilmore, Jr., PhD of Estuarine, Coastal, and Ocean Science, Inc. to Victor Mendez of the Federal Highway Administration (FHWA), October 28, 2013.

⁶ *Ibid.*, Gilmore; Gilmore, “Losing the Nation’s Aquatic Center of Biodiversity,” Unpublished essay.

⁷ Gilmore, “The little river you drive over a big source of unique wildlife: Planned bridge threatens valuable ecosystem of St. Lucie’s North Fork,” op-ed in St. Lucie News Tribune, February 26, 2015, p. 9A.

⁸ Landrum, *op. cit.*, p. 266-267.

⁹ From FDEP, CAMA’s 2008 brochure.; Memorandum from Robert W. Hall, Environmental Specialist, Intergovernmental Programs, FDEP to Florida State Clearinghouse, September 23, 2003, re: PD&E study for Third East-West Crossing of the St. Lucie River.

¹⁰ Letter from Deborah Wolfe, Project Manager, NFSLR-AP, to Keith & Schnars, December 5, 2005, re: Department of Transportation Act of 1966 Section 4(f) Determination of Applicability. Ms. Wolfe cites numerous Florida statutes that apply to the protection of Aquatic Preserves.

¹¹ ETDM comments from FDEP to FDOT, April 10, 2008. The Florida Department of Transportation (FDOT), District 4, requested that reviewing agencies submit comments on any of the 21 categories that they deemed might present problems in the proposed construction of a bridge over the NFSLR. This is known as the Efficient Transportation

Decision Making Process (ETDM). Of the 21 categories, 11 are concerned with the evaluation of the environmental or natural resource impacts. These comments can be found at: <http://etdmpub.fl-a-etat.org/est/> The Crosstown Parkway bridge is Project #8247. The comments, along with FDOT's analysis of them can be found in the Draft EIS, as Appendix D.
¹² From NFSLR-AP brochure, listed species can be found at the NFSLR-AP's website.

Ibid., Wolfe. Ms. Wolfe states in re: opossum pipefish, mangrove rivulus, bigmouth sleeper, river goby, slashcheek goby, spottail goby, smalltooth sawfish, swordspine snook, fat snook, tarpon snook, snook that: "many of these rare and listed species (aquatic] species are small and reclusive and therefore are not commonly known about. These organisms should be considered during the permit review process for use of sovereign submerged lands as Florida Administrative Code does not allow construction or use of sovereign submerged lands to adversely affect species which (are] endangered or of special concern."

¹³ Gilmore's summary provided to the CASLC Board of Directors meeting, February 26, 2015.

¹⁴ Nall, op. cit.

¹⁵ Hall, op. cit.

¹⁶ ETDM comments from FWS to FDOT, August 7, 2008.

¹⁷ Hall, op. cit.

¹⁸ Ibid.

¹⁹ ETDM comments from FWS to FDOT, op. cit.

²⁰ Hall, op. cit.

²¹ ETDM comments from ACE to FDOT, August 5, 2008.

²² Nall, op. cit.

²³ In the Final EIS, p.4.37, it states that the surface waters subject to federal and state provisions are present in the main and secondary channels of the NFSLR, Evans Creek, South Coral Reef Waterway, and North Coral Reef Waterway. They are all Class III waterways, intended to be used for "recreation, propagation, and maintenance of a healthy, well-balanced population of fish and wildlife."

²⁴ Hall, op. cit.

²⁵ Letter from Scott Sanders, Habitat and Species Conservation Leader, Florida Fish and Wildlife Conservation Commission (FFWCC) to Beatriz Caicedo-Maddison, FDOT, District 4, July 12, 2011.

²⁶ ETDM comments from FFWCC to FDOT, August 5, 2008.

²⁷ Letter from Wallace Jones, Southeast Regional Office, National Park Service, the U.S. Department of Interior to Keith & Schnars (consultants hired by the city to build the case for a bridge, see footnote #34 below], March 11, 1990.

²⁸ Hall, op. cit.

²⁹ Nall, op. cit.

³⁰ ETDM comments from EPA to FDOT, September 20, 2006.

³¹ Nall, op. cit.

³² Hall, op. cit.

³³ ETDM comments from FDEP to FDOT, April 10, 2008.

³⁴ ETDM comments from FFWCC to FDOT, April 10, 2008.

³⁵ Samuel Brody, Davis, Stephen, III et al, "A Spatial-Temporal Analysis of Section 404 Wetland Permitting in Texas and Florida: Thirteen Years of Impact Along the Coast," Wetlands, Vol. 28, No. 1, March 2008, p. 107-116; see p. 108 for acreage lost. See also footnote #39 below.

³⁶ In 1990, the city of Port St. Lucie employed consulting firm Keith & Schnars, Inc., (K&S) to undertake a survey of the reviewing agencies for a bridge over the NFSLR. At the time, the

two bridge routes that were proposed were Walters Terrace (now known as Route 2A) and West Virginia (now known as Route 1C). The agencies expressed substantial concern about any considered crossing of these environmentally significant lands and waters, and without exception were against the West Virginia or Route 1C as it would cause the worst impacts of the two.

* Letter from Heibz Mueller, Chief, Environmental Policy Section, U.S. EPA, Region IV, to Gary Sims, Environmental Coordinator, K&S, June 12, 1990.

* Letter from Andreas Mager, Jr., Assistant Regional Director, Habitat Conservation Division, NMFS to Gary Sims, K&S, May 30, 1990.

* Letter from Charles A. Schnegel, Chief, Regulatory Section, Miami, Department of the Army, Regulatory Section, to Gary Sims, K&S, May 24, 1990.

* Letter from Jeanne Hall, Director, Regulation Department, South Florida Water Management District to K&S, May 18, 1990.

* Letter from C.W. Hoefft, Acting Field Supervisor, FWS, U.S. Department of Interior, to K&S, June 27, 1990.

* Letter from Peter Merritt, Ph.D., Regional Ecologist/Planner, Treasure Coast Regional Planning Council to K&S, April 27, 1990.

³⁷ Letter from Garrett Lips, Project Manager, Jacksonville District, ACE to Beatriz Caicedo-Maddison, FDOT, District IV, Oct. 2011. The ACE refers to the Draft EIS in establishing the acres of wetland impact due to Route 1C: 11.9 acres of direct impact, and 29.2 acres of indirect impact. In the Final EIS, p. 1.10, it states that Route 1C directly impacts more wetlands than any other build alternative. FDEP, using EST reference, cites 56.71 acres of estuarine wetland impact and 8.83 acres of palustrine wetland impact within the 500 foot buffer zone of the project.

³⁸ Memorandum from Garret Lips, Project Manager, ACE, Jacksonville District, to Kristin Stewart of K&S, and members of the FDOT working group, August 7, 2012, re: 404 B1 Guidelines.

³⁹ ETDM comments from ACE to FDOT, August 5, 2008.

⁴⁰ Brody, *op. cit.*, "... there is growing evidence that created wetlands do not function as natural wetlands, even after several decades post-creation." Thus, mitigation of destroyed wetlands is not likely to recreate the functions the natural ones are providing, and even more so if they are constructed outside of the project area.

⁴¹ Letter from Lips, ACE to FDOT, October 3, 2011, *op. cit.*; Letter from Lips to Caicedo-Maddison, FDOT, December 4, 2013; ETDM comments from NMFS to FDOT, August 14, 2008; ETDM comments from FWS to FDOT, July 18, 2008; Letter from Donald R. Progulske, Acting, Field Supervisor, So. Florida Ecological Service, FWS, to Caicedo-Maddison, FDOT, February 16, 2011; Letter from Paul Souza, Field Supervisor, FWS to Caicedo-Maddison, FDOT, September 19, 2011.

⁴² Letter from FFWCC, July 12, 2011, *op. cit.*

⁴³ ETDM comments from NMFS to FDOT, August 14, 2008.

⁴⁴ *Ibid.*

⁴⁵ Gilmore, personal communication, April 6, 2015.

⁴⁶ ETDM comments from NMFS to FDOT, August 14, 2008. Federally managed species associated with mud and sand bottom include red drum, gray snapper, brown, white, and pink shrimp. Federally managed species associated with mangroves found here include gray, lane, mutton, schoolmaster, snappers, goliath grouper, spiny lobster, and white grunt.

⁴⁷ Letter from NMFS to FDOT, August 14, 2008.

⁴⁸ *Ibid.*

⁴⁹ *Ibid.*

⁵⁰ Ibid.

⁵¹ Email from Anna L. Peterfreund, FWS to Kristine Stewart, FDOT, February 2, 2011. Includes January 12, 2011 meeting minutes of Crosstown Parkway bridge working group. See attached mitigation plan that shows NMFS stating that Route 1C has greatest impacts to EFH, as well as to wetlands.

⁵² ETDM comments from NMFS to FDOT, August 14, 2008.

⁵³ Gilmore, October 28, 2013, op. cit.

⁵⁴ Ibid.

⁵⁵ Letter from Charles Lee, Director of Advocacy, Audubon Florida to Victor M. Menendez, FHWA, October 29, 2013.

⁵⁶ See NFSLR-AP's website, op. cit.

⁵⁷ Letter from Camille Yates to Victor Menendez, FHWA, October 27, 2013.

⁵⁸ Letter from CASLC to Victor M. Menendez, FHWA, June 28, 2013; Gilmore letter to FHWA, op. cit.

⁵⁹ Hall, op. cit.

⁶⁰ In earlier surveys of the area, Dr. Gilmore observed a tiny tributary off of Evans Creek known as Hogpen Slough, to be a spawning habitat for snook. In the FEIS, p. 4.37 Hogpen Slough is identified as part of the Surface Waters to be considered in the project area.

⁶¹ Gilmore letter to FHWA, op. cit.

⁶² Bill Gibson of (electric) Motorized Kayaks conducts tours of Evans Creek. He hears from participants how unique and refreshing the trip is.

⁶³ Nall, op. cit.

⁶⁴ Letter from CASLC to FHWA, op. cit.

⁶⁵ Hall, op. cit.

⁶⁶ Letter from Joan Bausch, Conservation Chair, Martin County Native Plant Society, to Victor M. Menendez, FHWA, October 23, 2013.

⁶⁷ Ibid.; Treasure Coast Regional Planning Center, op. cit.

⁶⁸ Nall, op. cit., native plant species found at Halpatiokee Trails is available through the CASLC. See also John Bradford's blog: A Trail to the River:

<https://halpatiokee.wordpress.com/author/cyperaceae/>

⁶⁹ Nall, op. cit.

⁷⁰ Nall, op. cit.

⁷¹ ETDM comments from FFWCC to FDOT, op. cit..

⁷² Conservation Alliance of St. Lucie County and Treasure Coast Environmental Defense Fund (aka Indian Riverkeeper] vs. U.S. Department of Transportation and the Federal Highway Administration, Case No. 14-14192-CIV-Middlebrooks/Hopkins, filed March 16, 2015.

⁷³ Letter via email from Onno Robert Post to Victor M. Menendez, FHWA, October 27, 2013; The city negotiated proprietary and regulatory mitigation plans to "offset" the taking of parklands, and the ecological damage it would cause, however, this plan is valid for all build alternatives. See the CASLC and IRK's December 29, 2014 letter to the ACE re: permit application for filling wetlands at Halpatiokee Trails for further discussion of the limitations of the proposed wetland mitigation, accessed on CASLC's website.