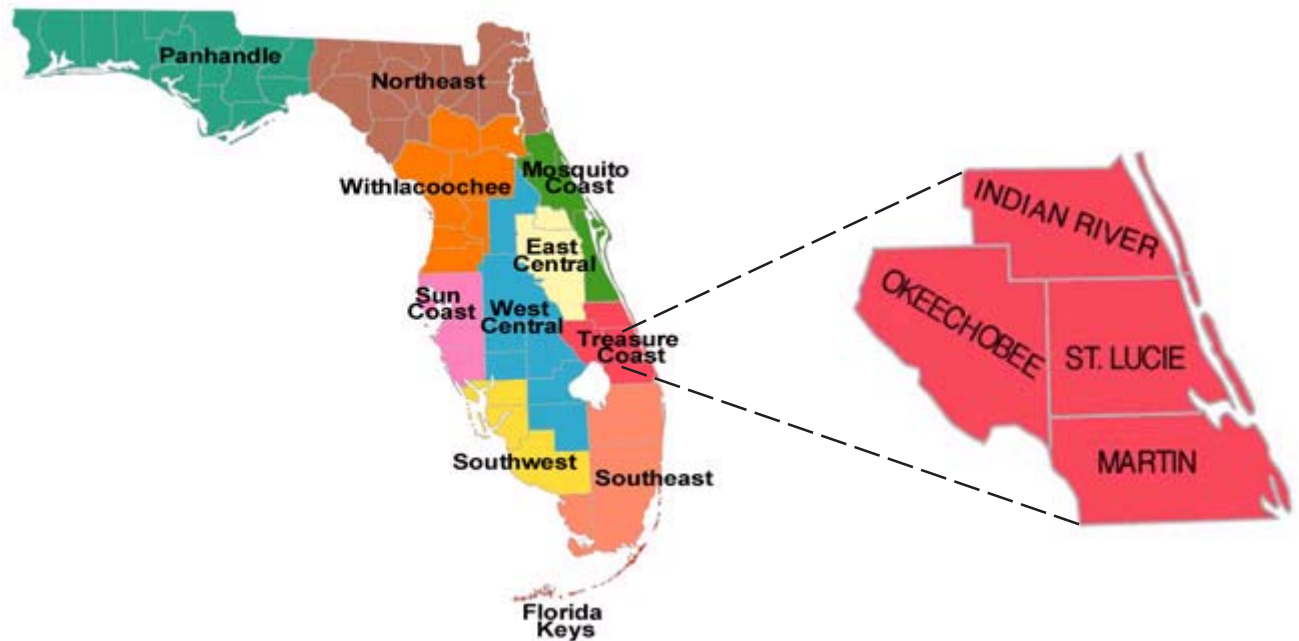


Treasure Coast Regional Working Group



The Treasure Coast Regional Working Group liaison is Jackie Smith, DEP Bureau of Invasive Plant Management, 9737 Gumbo Limbo Lane, Jensen Beach, Florida 34957, phone: 561-722-2479, fax: 561-791-4722, e-mail: jackie.c.smith@dep.state.fl.us

Jonathan Dickinson State Park

County: Martin

PCL Size: 11,480 acres

Project ID: TC-059 887 acres \$206,850.03

Project ID: TC-066 385.5 acres \$139,796.68

Project ID: TC-067 5 acres \$24,750.00

Project Manager: Florida Park Service (DEP)

Philip Myers, District Biologist

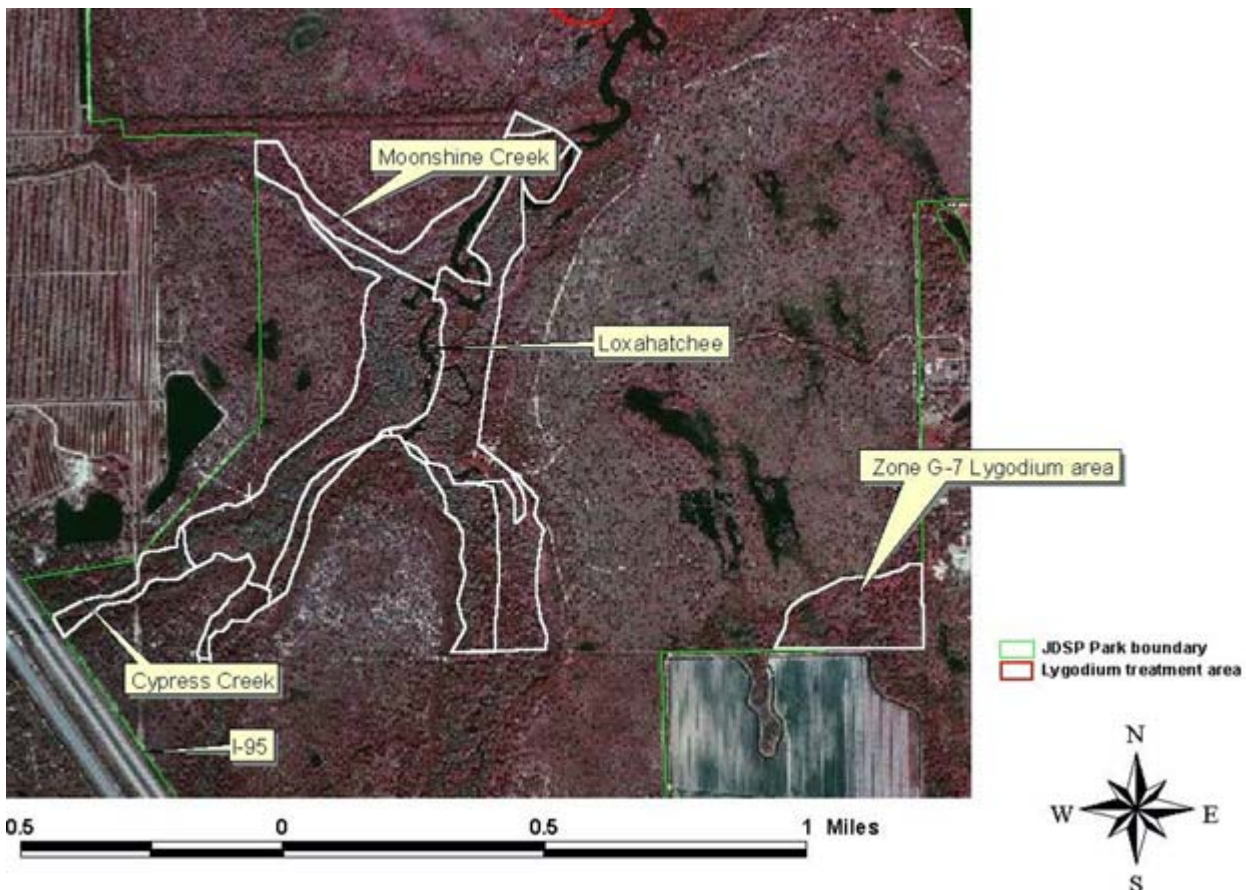
13798 SE Federal Highway, Hobe Sound, Florida 33455

Phone: 772-546-0900, Fax: 772-223-2591

E-mail: philip.myers@dep.state.fl.us

A large part of the effort at Jonathan Dickinson State Park is directed at removing Old World climbing fern (*Lygodium*) from the tributaries of the Loxahatchee River located in the northwest section of the park. The Loxahatchee River is recognized as a National Wild and Scenic River and is home to numerous endangered plant and animal species. Natural communities in the project area included mostly pine flatwoods and cypress sloughs, with some wet prairies.

The first project (TC-059) encompassed eight defined burn units near the northwestern boundary of JDSP. This project was the third and final phase of a three-year control effort and included both initial control on 571 acres and maintenance control on 316 acres. *Lygodium* was treated in the Kitching Creek floodplain and other cypress wetland areas, where it had coverage of thirty to forty percent.



Jonathan Dickinson State Park



These pictures from the JDSP NW section show the dramatic results of controlling lygodium.



Jonathan Dickinson State Park

The second project (TC-066) consisted of maintenance control on lygodium and also included 41.25 acres of treatment on the adjacent Seabranche Preserve State Park (*see next entry*). Lygodium was re-treated in the floodplain swamp of the Loxahatchee River tributaries, Cypress and Moonshine Creeks. The natural communities in this area are mostly floodplain swamp, pine flatwoods, scrub, and scrubby flatwoods. Much of the upriver area has been treated for Lygodium over several years and this work is ongoing. Through its Herbicide Bank, BIPM provided \$7,891.50 of herbicides to JDSP to support staff control operations on the park.



The third project conducted at JDSP (TC-067) was a separate operation to mechanically remove Australian pine trees knocked down by recent hurricanes. From 1942 to 1944 the United States Army owned and operated Camp Murphy in what is now known as Jonathan Dickinson State Park. Specifically, the Pine Grove Campground was the hospital area of the base. Because Camp Murphy was a secret radar training base military officials planted vegetation to hide the buildings. The buildings were moved off site after Camp Murphy closed in 1944 and Australian pines have grown on the 'Pine Grove Campsite' ever since.



Jonathan Dickinson State Park

In September 2004 two hurricanes passed directly over the park with 100 mph or better sustained winds. Severe damage was done to the Australian pines in Pine Grove Campground making it necessary to remove the trees from the campground. Trees were cut with chainsaws and heavy equipment. Volunteers and park staff spent innumerable hours removing remaining stumps, burning debris, redistributing mulch, and planting native plants in the campground.



A whole tree chipper



Mulch ado about nothing



Target Plants

Casuarina spp.

Lygodium microphyllum

Schinus terebinthifolius

Common Name

Australian pine

Old World climbing fern

Brazilian pepper

FLEPPC Rank

Category I

Category I

Category I

Treatment

mechanical

foliar

girdle

Herbicide

n/a

Glypro+Escort

Garlon 4+Stalker

Seabranh Preserve State Park

County: Martin

PCL Size: 919 acres

Project ID: TC-066 41.25 acres (\$139,796.68)

Project Manager: Florida Park Service (DEP)

Philip Myers, District Biologist

13798 SE Federal Highway, Hobe Sound, Florida 33455

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E-mail: philip.myers@dep.state.fl.us

This project re-treated *Lygodium* in Seabranh Preserve State Park and was included in the cost of the maintenance work conducted at Jonathan Dickinson State Park. The project area encompasses a baygall seepage wetland, which during most of the year does not have standing water, but has wet soils. Baygall swamp is a rare habitat in south Florida and this example is of high quality.

Numerous rare and endangered species inhabit Seabranh, including 22 plants and 29 animals. Several rare species live specifically in the baygall, including the endangered vanilla orchid (*Vanilla mexicana*). *Lygodium* patches of various sizes were scattered throughout the project area.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Lygodium microphyllum</i>	Old World climbing fern	Category I	foliar	Glypro+Escort



Map showing Seabranh Park boundary (green) and treatment area (yellow)

Old World climbing fern was first found established in Martin County in 1965. The fern today infests over 200,000 acres in southern Florida.



Foliar application of a metsulfuron methyl (e.g. Escort, Patriot) and glyphosate (e.g. Roundup, Glypro) herbicide mixture has proven effective for controlling this invasive fern. The first biological control agent for lygodium was approved for release in 2004.

St. Lucie Inlet Preserve State Park

County: Martin

PCL Size: 4,835 acres

Project ID: SE(TC)-084 73.5 acres \$701,960

Project Manager: Florida Park Service (DEP)

Philip Myers, Park Biologist

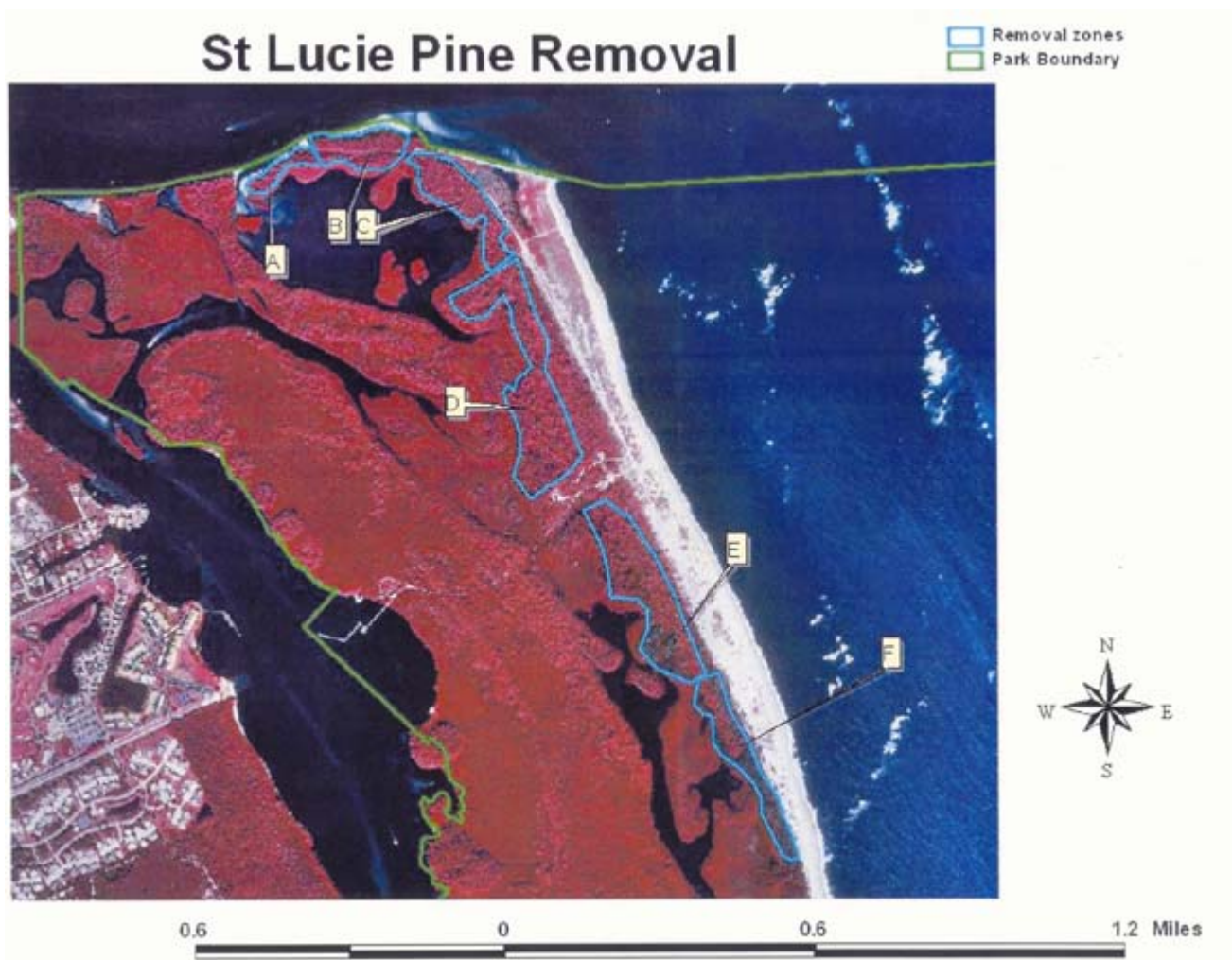
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Phone: 561-546-0900, Fax: 561-223-2591

E-mail: philip.myers@dep.state.fl.us

St. Lucie Inlet Preserve State Park comprises 900 acres of the north end of Jupiter Island plus 3,900 acres of adjacent submerged lands. The park encompasses 2.7 miles of Atlantic beach and an Anastasia Formation rock reef. Natural communities include mangrove forests and hammocks of live oaks, cabbage palms, paradise trees, and wild limes. During the summer months, the island is an important nesting area for loggerhead, leatherback, and green sea turtles. This project focused on the mechanical removal of Australian pine and Brazilian pepper within six designated work areas.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Casuarina</i> spp.	Australian pine	Category I	mechanical/cut stump	Garlon 4
<i>Schinus terebinthifolius</i>	Brazilian pepper	Category I	mechanical/cut stump	Garlon 4



Hungryland Wildlife and Environmental Area

County: Martin, Palm Beach

PCL Size: 10,294 acres

Project ID: TC-061 140 acres \$4,800

Project ID: TC-064 240 acres \$4,400

Project ID: TC-068 0 acres \$482

Project Manager: Florida Fish and Wildlife Conservation Commission

Beth Morford, Biological Scientist III

8535 Northlake Boulevard, West Palm Beach, Florida 33412

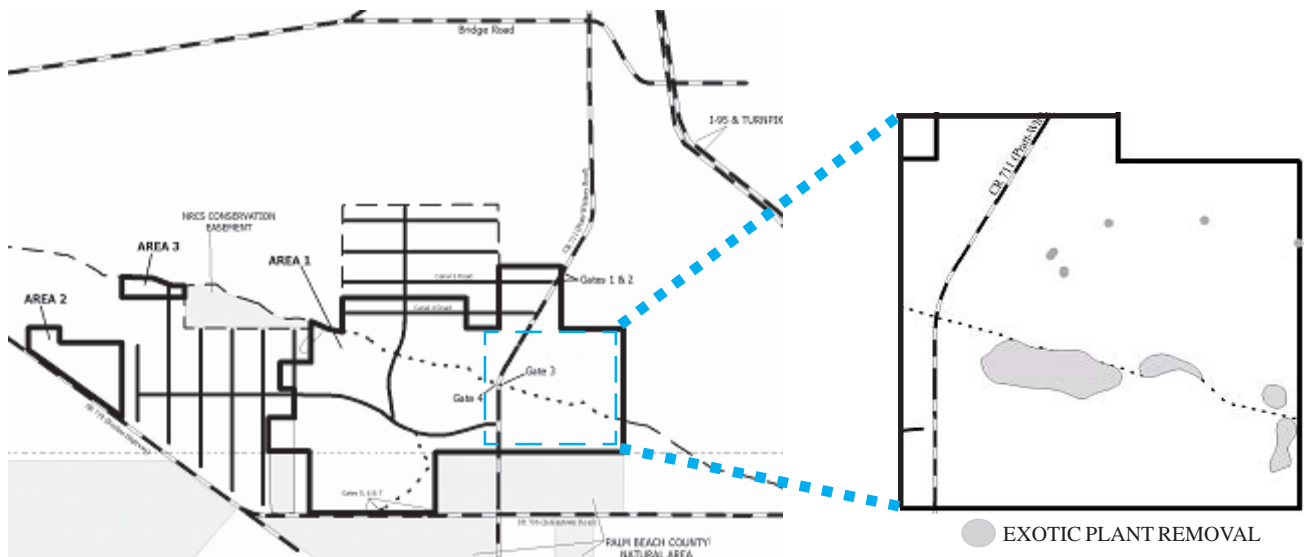
Phone: 561-625-5122, ext. 142, Fax: 561-625-5129

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Hungryland Wildlife and Environmental Area (HWEA) crosses from southern Martin County into northern Palm Beach County. The natural communities of HWEA are comprised primarily of mesic and wet flatwoods, interspersed with depression marshes and wet prairies. The South Florida Water Management District and DEP purchased this property as part of the Pal-Mar CARL/SOR project. *Florida Conservation Lands 2001* describes HWEA (i.e., Pal Mar) as “one of the highest quality pine flatwoods in south Florida.”

Three disjunct parcels separated by private lands make up the HWEA. A combination of aerial and ground surveys identified approximately 950 acres infested by melaleuca, Brazilian pepper, lygodium, and Australian pine. Additional funds were expended for equipment cost.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Lygodium microphyllum</i>	Old World climbing fern	Category I	foliar	Aquastar
<i>Melaleuca quinquenervia</i>	melaleuca	Category I	girdle	Garlon 4
<i>Schinus terebinthifolius</i>	Brazilian pepper	Category I	basal	Garlon 4



Hungryland Wildlife and Environmental Area



Old World climbing fern (*Lygodium microphyllum*) has surpassed all other species as the worst invasive plant in Florida. The four hurricanes in 2004 dispersed spores of this fern across millions of acres of the Everglades and southern Florida. Aerial application of herbicide is effective, as pictured on this page; unfortunately, the plant is difficult to detect until it has overgrown the tree canopy and a great deal of damage has already been done to native plant communities.



Savannas Preserve State Park

County: St. Lucie County

PCL Size: 5,227 acres

Project ID: TC-069 249 acres \$28,000

Project Manager: Florida Park Service (DEP)

Dan Griffin, Park Manager

9551 Gumbo Limbo Lane, Jensen Beach, Florida 34957

Phone: 772-340-7530, Fax: 772-873-6467

E-mail: daniel.griffin@dep.state.fl.us

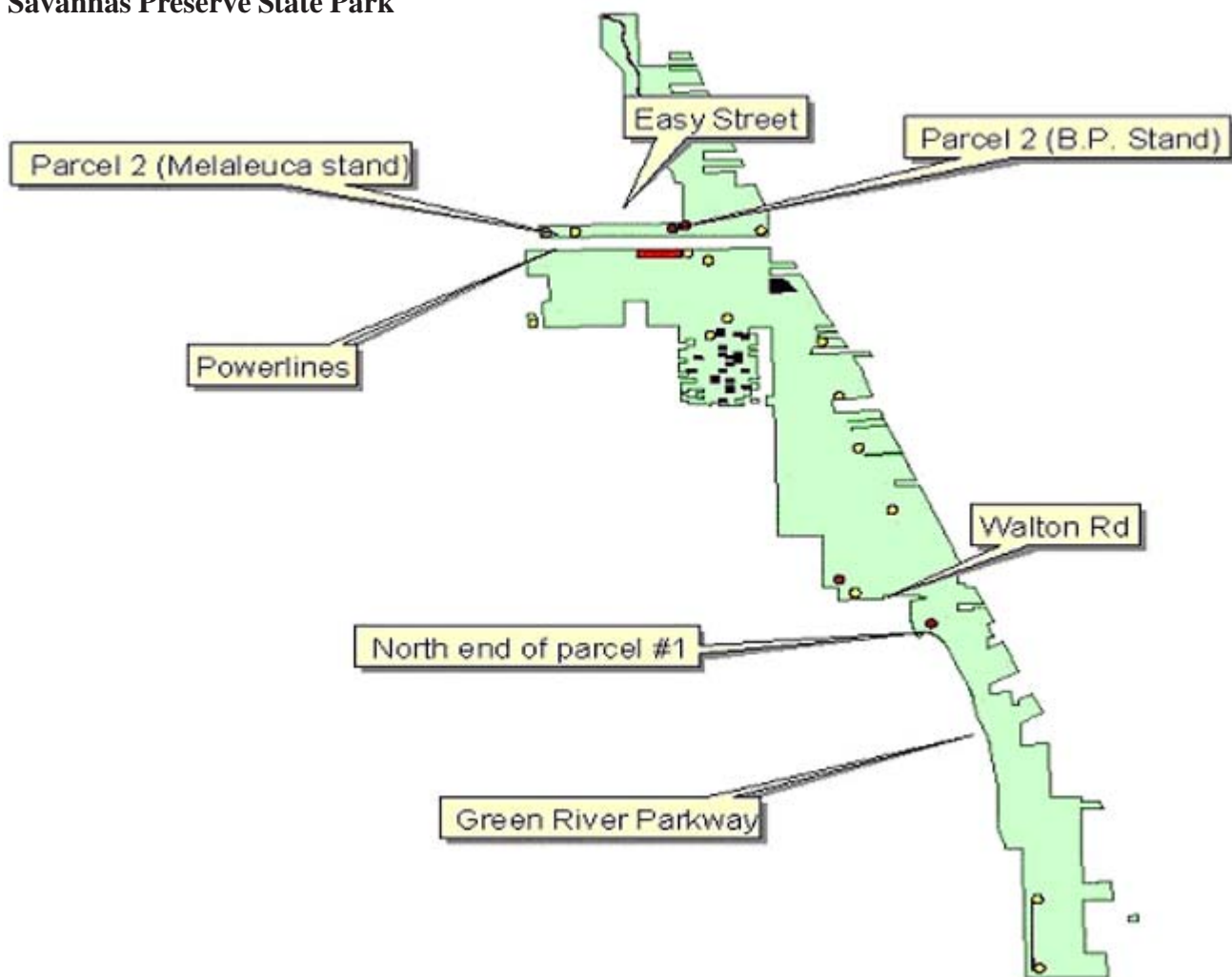
Savannas Preserve State Park stretches over ten miles of high quality natural areas managed for the primary purpose of natural resource conservation. The Savannas is the largest, most ecologically intact stretch of freshwater basin marsh in southeast Florida. The project consisted of two parcels within the Park. Park staff provided an in-kind match of labor and herbicides equal to \$5,000.

The first target site (Parcel #1) is located along the eastern park boundary beginning at Macquillen road and continuing North along the park boundary fringe to the power line easement. Parcel #1 consists of approximately 61 acres of mesic pine flatwoods and wet prairie with scattered depression marshes. The second target site (Parcel #2) is located along Green River Parkway beginning at Walton road and continuing south to the North end of the adjacent reservoir. Parcel #2 consists of approximately 188 acres of mesic pine flatwoods, wet prairie, and basin marsh.

Lygodium, melaleuca, and Brazilian pepper were the dominant invasive species throughout the project area, with the heaviest concentrations found within depression marshes and upland fringes. Estimated infestation for the entire site was ten percent coverage of melaleuca, ten percent coverage of lygodium (with the heaviest infestation along the East side of the canal bank on Parcel #2), and fifteen percent coverage of Brazilian pepper.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Abrus precatorius</i>	rosary pea	Category I	foliar	Glypro+Escort
<i>Albizia lebeck</i>	woman's tongue	Category I	cut stump	Arsenal
<i>Imperata cylindrica</i>	cogon grass	Category I	foliar	Glypro+Escort
<i>Lygodium microphyllum</i>	Old World climbing fern	Category I	foliar	Glypro+Escort
<i>Melaleuca quinquenervia</i>	melaleuca	Category I	cut stump	Arsenal
<i>Schinus terebinthifolius</i>	Brazilian pepper	Category I	basal	Garlon 4
<i>Triadica sebifera</i>	Chinese tallow	Category I	cut stump	Arsenal
<i>Sphagneticola trilobata</i>	wedelia	Category II	foliar	Glypro+Escort

Savannas Preserve State Park



Brazilian pepper on Parcel 2 gets “the treatment.”

Savannas Recreation Area

County: St. Lucie County

PCL Size: 550 acres

Project ID: TC-060 36.5 acres \$24,850

Project Manager: St. Lucie County Parks and Recreation

Summer Ivey Platt, Savannas Recreation Supervisor III

2300 Virginia Avenue, Ft. Pierce, Florida 34982-5652

Phone: 772-464-7855, Fax: 772-464-1765

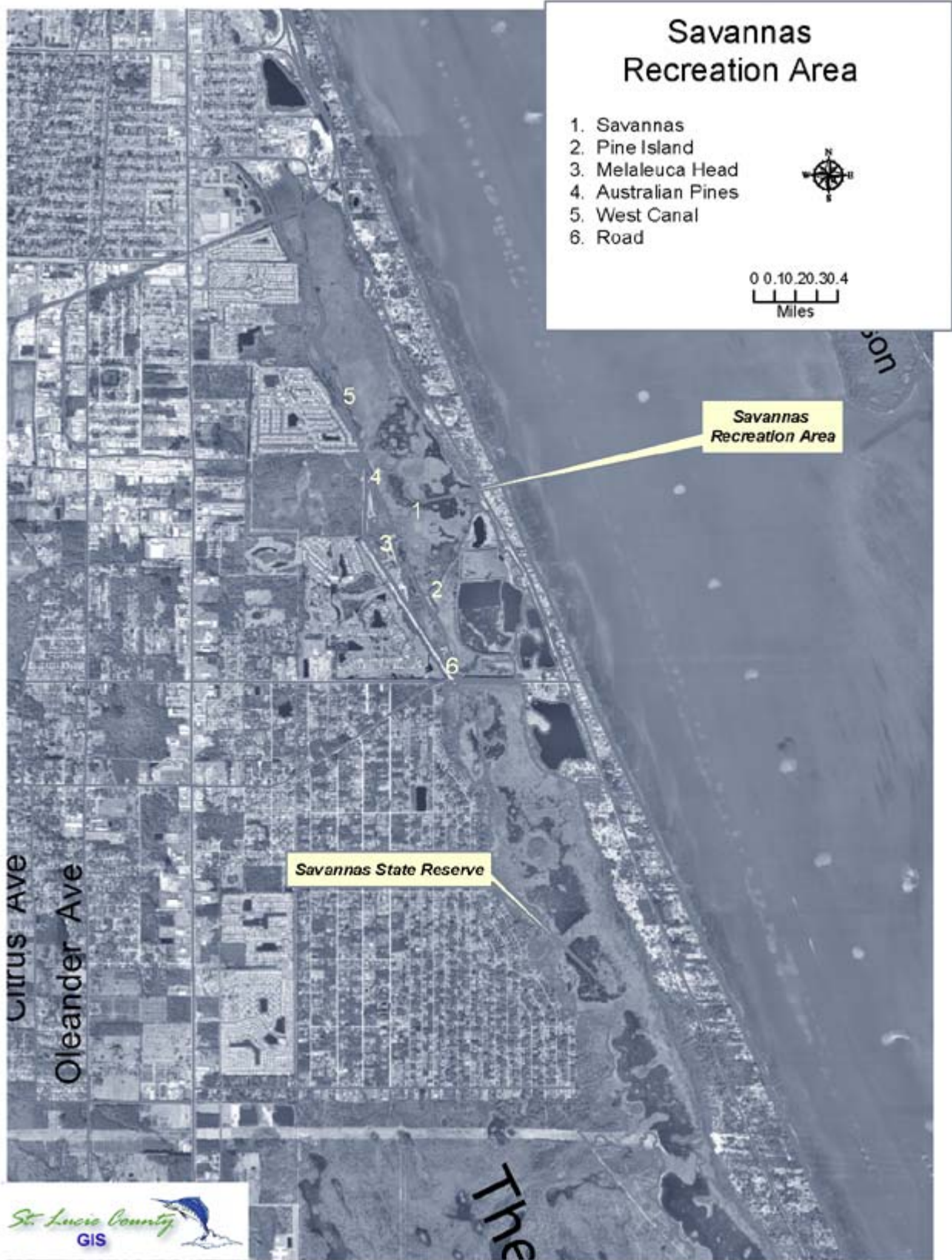
E-mail: summeri@co.st-lucie.fl.us

The Savannas Recreation Area is a mosaic of freshwater marshes, wet prairies, and pine flatwoods. The Atlantic Coastal Ridge borders the eastern edge of the marsh system. The Savannas Reserve State Park is located immediately south of the Recreation Area and comprises another 5,116-acres of diverse ecosystems. The Savannas ecosystem represents the best remaining segment of Florida's East Coast Savannas, including extensive freshwater marshes and wet prairie systems. In the past few years, melaleuca and Australian pines began encroaching into the Savannas. Invasive non-native plants primarily infested disturbed areas along the western canal and western property line.

Australian pine, Brazilian pepper, and melaleuca were the primary target species. Australian pine and Brazilian pepper were removed with a Brontosaurus mower and by cut stump treatment. Australian pine occurred in large areas along the western canal and also as a few trees on islands within the Savannas wetland system, altogether totaling 7.6 acres. Australian pine coverage equaled approximately ninety percent with some slash pine and cabbage palms interspersed. Melaleuca occurred on approximately 7.2 acres within the site, primarily along the canal, and comprised ninety percent of the cover with some native wetland hibiscus and other species intermixed.

County staff provided an in-kind match by removing Brazilian pepper and other invasive species in the 8.7-acre area along the road.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Casuarina equisetifolia</i>	Australian pine	Category I	cut stump	Garlon 4
<i>Melaleuca quinquenervia</i>	melaleuca	Category I	cut stump	Garlon 4
<i>Schinus terebinthifolius</i>	Brazilian pepper	Category I	cut stump	Garlon 4



North Fork of the St. Lucie River

County: St. Lucie County

PCL Size: 47.9 acres

Project ID: TC-063 11.5 acres \$13,935.19

Project Manager: St. Lucie County Parks and Recreation

Steven Fousek, Environmental Lands Specialist

2300 Virginia Avenue, Ft. Pierce, Florida 34982-5652

Phone: 772-462-2525, Fax: 772-462-1684

E-mail: stevef@stlucieco.gov

St. Lucie County's North Fork of the St. Lucie River site lies adjacent to the North Fork of the St. Lucie River Aquatic Preserve on the east side of the river. Natural communities present on the site include hydric hammock, floodplain forest, floodplain swamp, mesic flatwoods, and depression marsh. The rare hand fern (*Ophioglossum palmatum*) has been found on the site. Although highly dependant on water tables and rainfall, the site is approximately fifty percent uplands and fifty percent wetlands for much of the year. The four hurricanes in 2004 caused most of the site to be underwater, preventing completion of the project. The remaining work will be finished in fiscal year 2006.

Approximately twenty-three acres of the site contained Old World climbing fern, shoebuttan ardisia, strawberry guava, and Brazilian pepper. Old World climbing fern occurred in low to medium density pockets in the transition areas between hydric hammock and floodplain forest, but overall had the least coverage of the invasive plants on the site. Shoebuttan ardisia primarily invaded hydric hammock, with the plant most often found scattered and within thicker stands of strawberry guava. Strawberry guava grew in many of the same locations as shoebuttan ardisia, but was more prevalent within mesic flatwoods. Guava formed thick stands in several areas of the site.

Brazilian pepper was the most widespread and numerous invasive plant on the site. The greatest concentrations occurred on the east side of the site in the area of a former citrus grove. The beds of the old grove are still prevalent and Brazilian pepper growth prevented native vegetation from returning. Brazilian pepper also spread to other previously disturbed areas of the site.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Ardisia elliptica</i>	shoebuttan ardisia	Category I	basal	Garlon 4
<i>Dioscorea bulbifera</i>	air-potato	Category I	foliar	Razor+Escort
<i>Lygodium microphyllum</i>	Old World climbing fern	Category I	foliar	Razor+Escort
<i>Psidium cattleianum</i>	strawberry guava	Category I	basal	Garlon 4
<i>Schinus terebinthifolius</i>	Brazilian pepper	Category I	basal	Garlon 4



Lygodium weaves its leaves over everything, including other invasive species such as Brazilian pepper!

