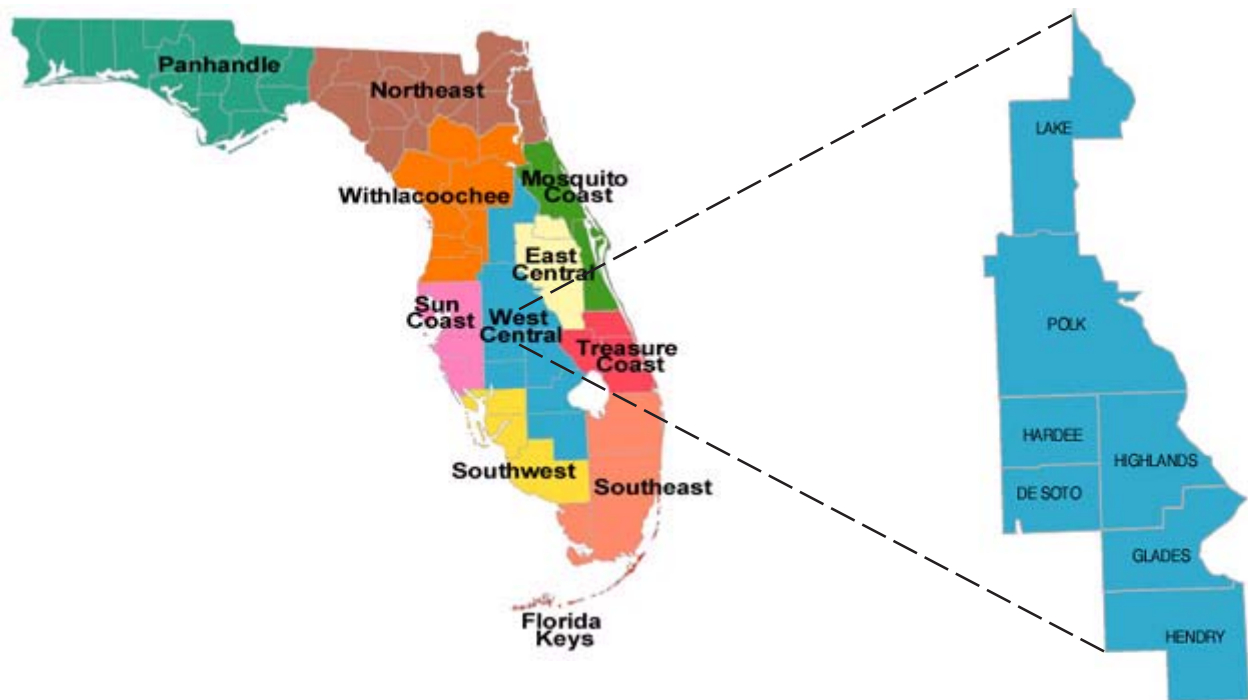


West Central Regional Working Group



The West Central Regional Working Group liaison is Scott Penfield, Avon Park Air Force Range, OLA, DET 1347 OG/CEVN, 29 South Boulevard, Avon Park AFR, Florida 33825-5700, phone: 863-452-4119 x317, fax: 863-452-4161, e-mail: ronald.penfield@avonpark.macdill.af.mil

Fisheating Creek Wildlife Management Area

County: Glades

PCL Size: 18,272 acres

Project ID: WC-032 2,651 acres \$163,480

Project Manager: Florida Fish and Wildlife Conservation Commission

Grant Steelman, Wildlife Biologist

3010 Banana Grove Road, Moore Haven, Florida 33471

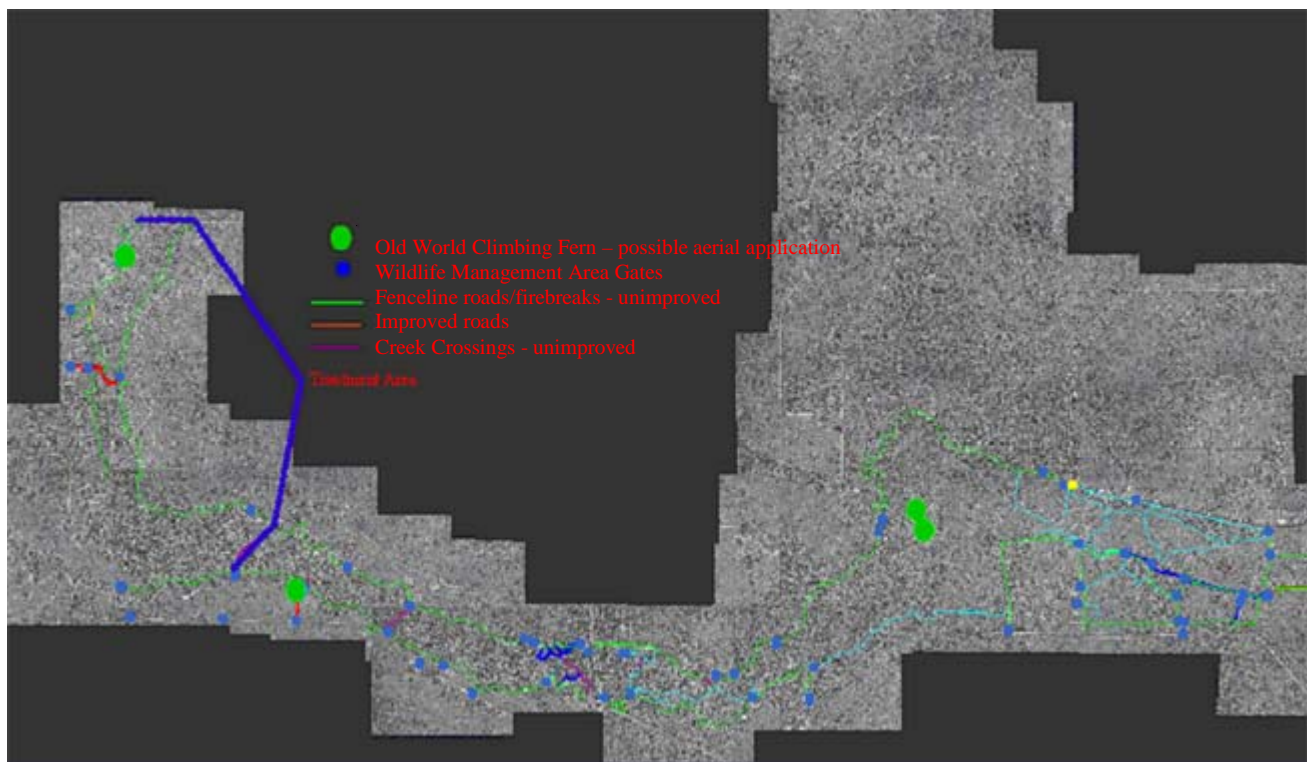
Phone: 863-946-1194, Fax: 863-946-1087

E-mail: grant.steelman@myfwc.com

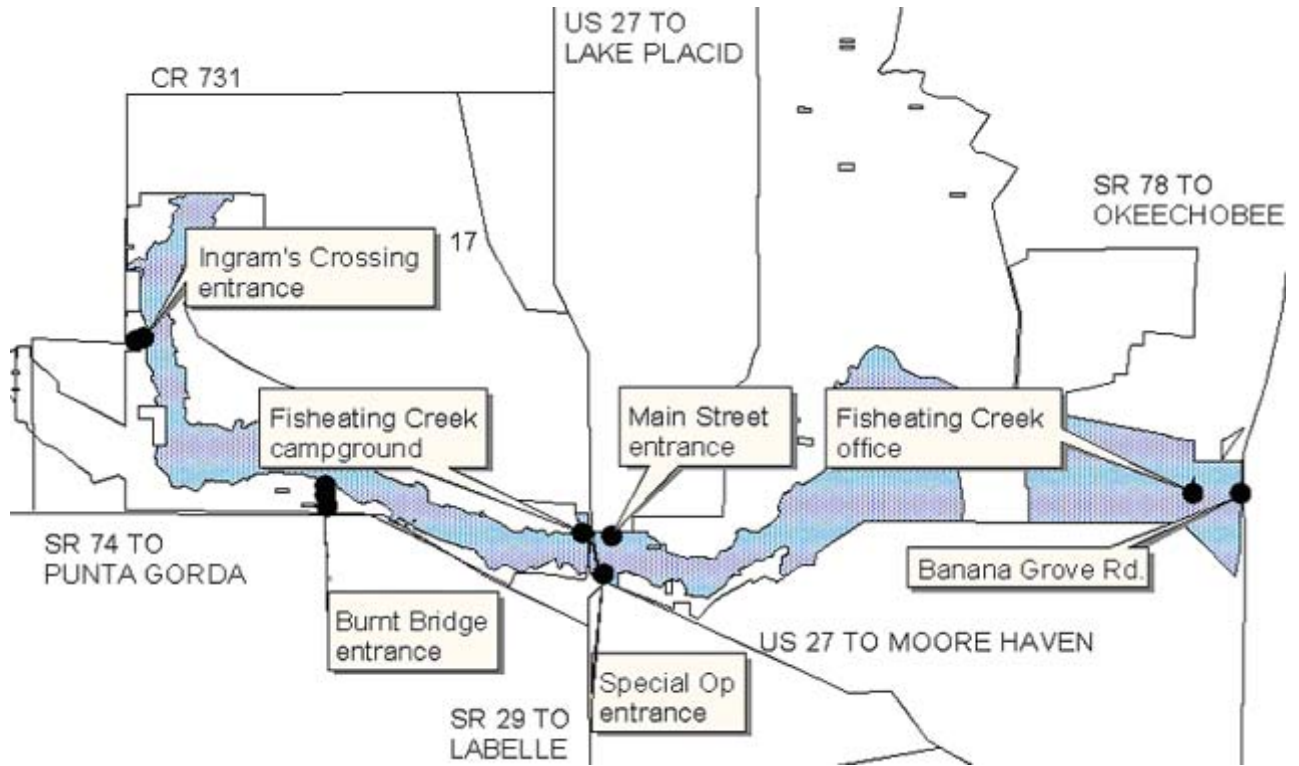
Fisheating Creek is the only undammed tributary to Lake Okeechobee. Natural communities in the WMA include cypress swamp, bottomland forest, freshwater marsh, dry prairie, prairie hammock, and hydric hammock. Dense patches of wetland nightshade inhibit and out-compete native vegetation in the cypress swamp understory.

This project targeted wetland nightshade and Old World climbing fern during Phase I and all Category II exotics during Phase II throughout the 20.3-mile Fisheating Creek channel, from the Highlands-Glades county line to US 27. Wetland nightshade and Old World climbing fern averaged a combined cover of forty percent of the entire project area, including patches of one hundred percent cover ranging in size from one acre to fifty acres.

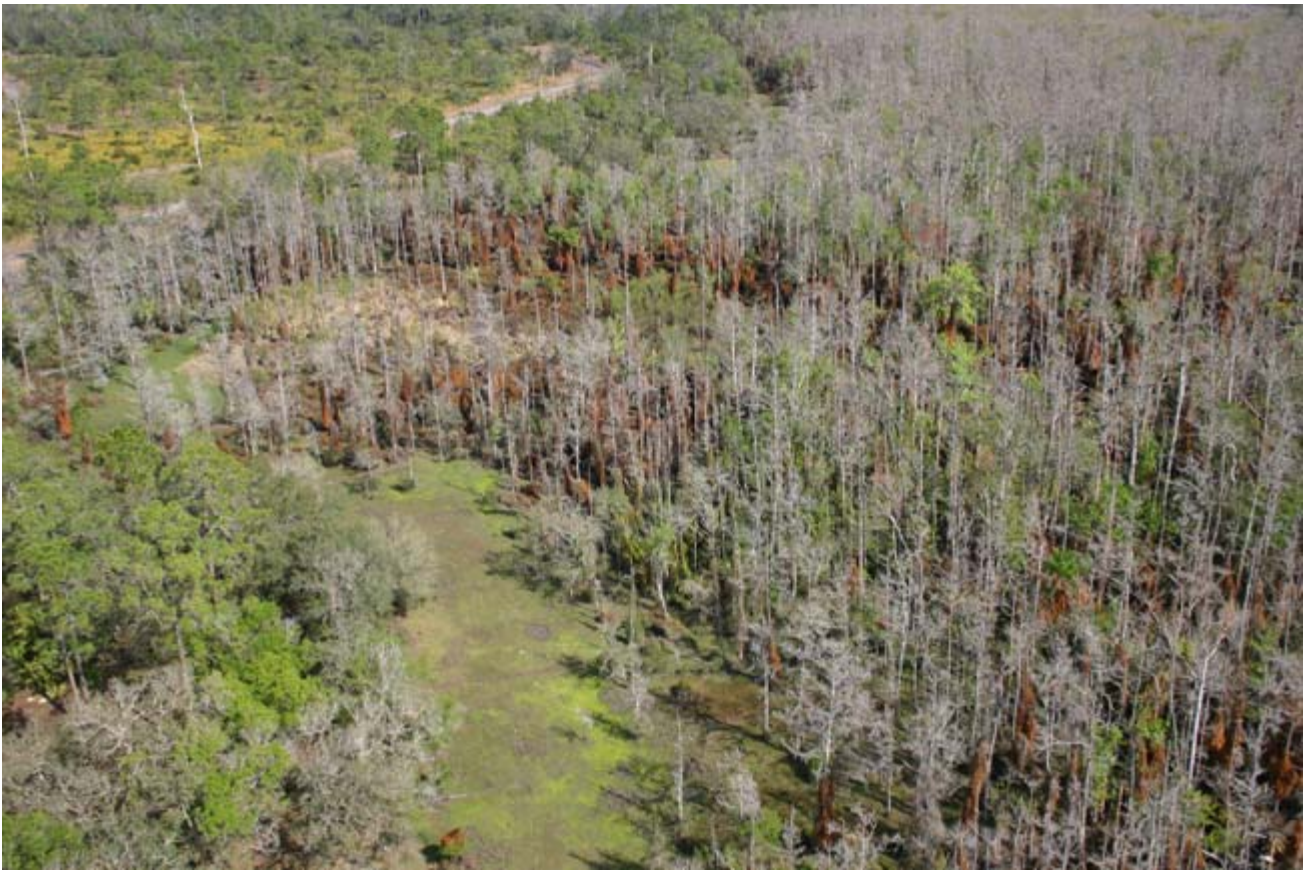
This project entered the second phase of a three-phase project treating all Category I exotics over the WMA. In addition, contractors targeted all other invasive species found within the project area of the Fisheating Creek corridor. The FWC provided a matching cost-share for the project of \$150,000 during 2002-2003 FY, \$50,000 during the 2003-2004 FY, and \$196,000 during the 2004-2005 FY.



Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Lygodium microphyllum</i>	Old World climbing fern	Category I	foliar/aerial	Rodeo+Escort
<i>Psidium guajava</i>	guava	Category I	basal	Garlon 4
<i>Schinus terebinthifolius</i>	Brazilian pepper	Category I	basal	Garlon 4
<i>Solanum tampicense</i>	wetland nightshade	Category I	foliar	2,4-D



Wetland nightshade growing profusely at Six-Mile Crossing before treatment.



Old World climbing fern (the brown amidst the gray) menaces all of south Florida.



Spirit-of-the-Wild Wildlife Management Area

County: Hendry

PCL Size: 7,500 acres

Project ID: WC-034 3,540 acres \$49,463.89

Project Manager: Florida Fish and Wildlife Conservation Commission

George W. Poole, Biologist III

100 CR 832, Felda, Florida 33930

Phone: 863-612-0775, Fax: 863-612-0780

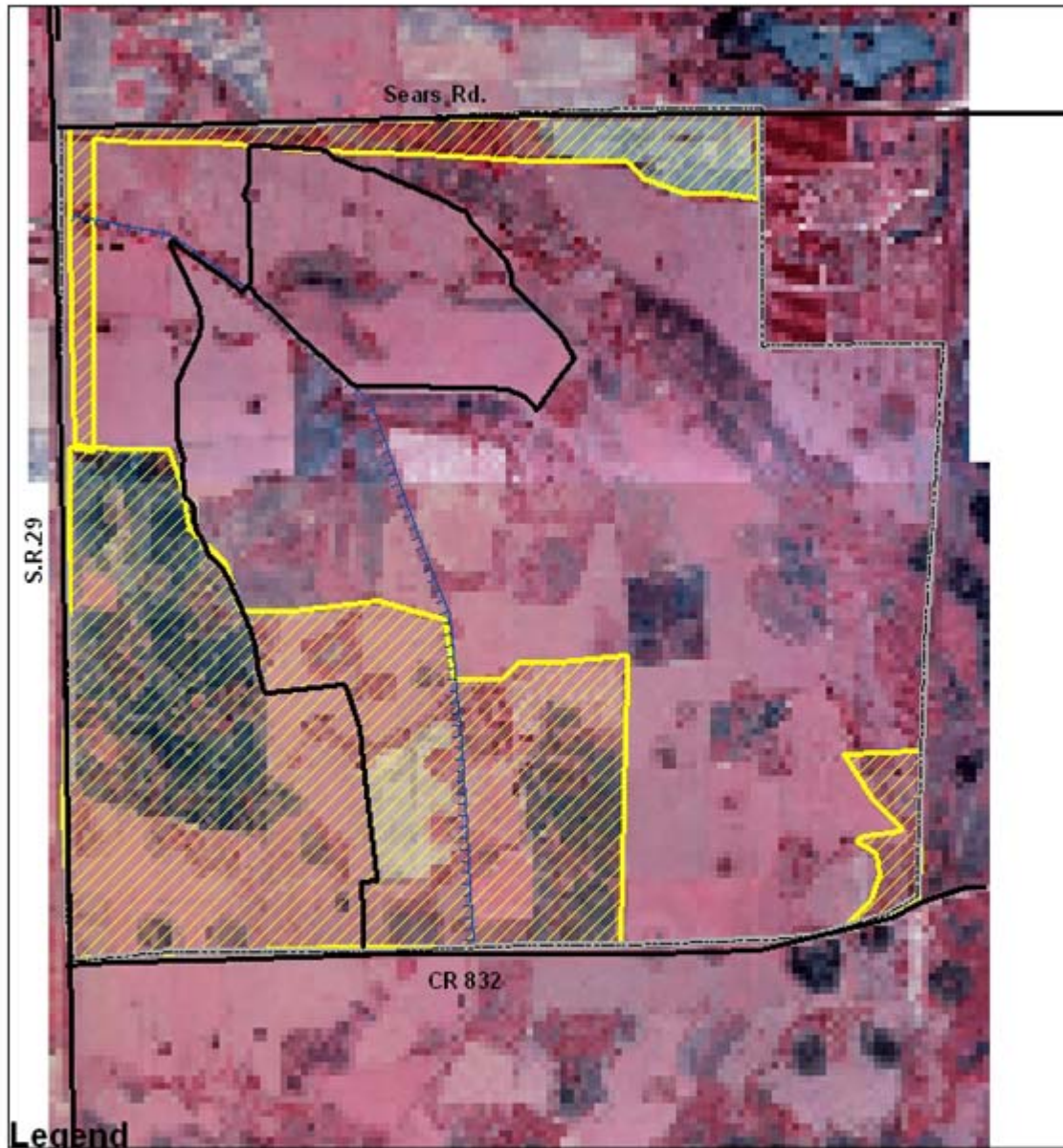
E-mail: george.poole@fwc.state.fl.us

The project area comprises approximately thirty percent depressional wetlands, sixty percent improved pasture, and ten percent mesic flatwoods, hydric flatwoods, and hydric hammocks. Agriculture and cattle operations were the historical use of the property. Brazilian pepper and tropical soda apple occurred throughout the site, although generally not in the depressional wetlands. Tropical soda apple grew primarily in small patches in improved pastures. Brazilian pepper was scattered throughout, but occurred mostly along ditches and along the boundary fence. Some small hammocks possessed an understory of Brazilian pepper seedlings. Concentrations of target species varied considerably, although no solid infestations were larger than one acre.

A second project at Spirit-of-the-Wild targeted small patches of cogon grass that were scattered throughout the management area. BIPM provided the herbicide only for this project through its Herbicide Bank. FWC provided \$30,000 in matching funds for control work at the WMA.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Imperata cylindrica</i>	cogon grass	Category I	foliar	Roundup
<i>Schinus terebinthifolius</i>	Brazilian pepper	Category I	basal	Garlon 4

Spirit-of-the-Wild WMA Hendry County, Florida



Legend

- SOW Boundary
- +++++ Roberts canal
- Main access road
- ▨ Exotics treatment Area
- SR 29
- SEARS RD
- CR 832

Okaloacoochee Slough State Forest & WMA

County: Hendry, Collier

Okaloacoochee Slough State Forest

PCL Size: 32,039 acres

Okaloacoochee Slough Wildlife Management Area

PCL Size: 2,923.45

Project ID: WC-033 3,000 acres \$138,206.34

Project ID: WC-039 5,000 acres \$17,483.09

Project Manager: Division of Forestry (FDACS)

Kevin Podkowka, Senior Forester

PO Box 712, Felda, Florida 33930

Phone: 863-612-0776, Fax: 863-612-0780

E-mail: podkowk@doacs.state.fl.us

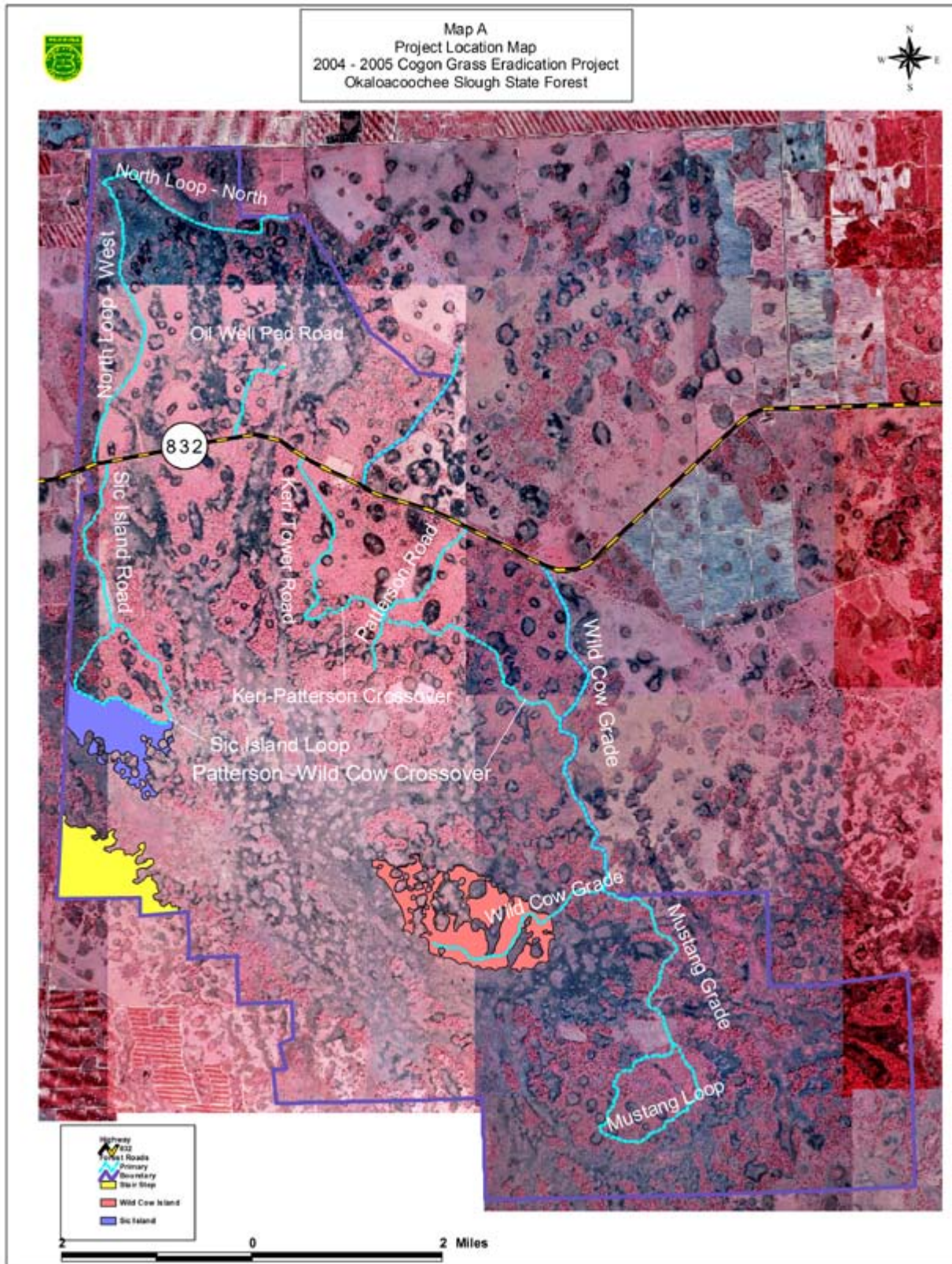
The 'OK' Slough State Forest is generally hydric in nature, with approximately 12,000 acres of mesic flatwoods and oak-cabbage palm hammocks persisting on the driest sites. The remaining two-thirds of the forest is made up of approximately 20,000 acres of a variety of plant native communities such as dome swamp, swale, depression marsh, and hardwood swamp, and approximately 2,500 acres of abandoned pasture and old fields. Timber, agriculture, and cattle operations comprised the historic use of the property. The property is jointly managed by the Division of Forestry and the Fish and Wildlife Conservation Commission.

All of OK Slough has been treated for some exotic plant species in the past. This project targeted cogon grass in the most infested areas. Cogon grass has been found throughout the forest; however, the highest rates of infestation occurred on Wild Cow Island, along the southern portions of Sic Island, the northwestern portion of the "stair step" and along many of the roads and trails.

The second project consisted of maintenance treatment on two areas. The first area included 3,000 acres where all FLEPPC Category I and II exotic species were treated. The dominant exotic species were Brazilian pepper and cogon grass, which occurred throughout the area except not generally in the depressional wetlands. The second area had originally been treated for Brazilian pepper, guava, and rosary pea in all areas dry enough to contain Brazilian pepper. This covered 2,000 acres within a 19,000-acre management unit.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Abrus precatorius</i>	rosary pea	Category I	foliar	Garlon 4
<i>Hymenachne amplexicaulis</i>	West Indian marsh grass	Category I	foliar	Roundup+Amm. Sulfate
<i>Imperata cylindrica</i>	cogon grass	Category I	foliar	Rodeo+Arsenal
<i>Melaleuca quinquenervia</i>	melaleuca	Category I	cut stump	Arsenal
<i>Psidium guajava</i>	guava	Category I	cut stump	Garlon 4
<i>Schinus terebinthifolius</i>	Brazilian pepper	Category I	basal	Garlon 4
<i>Solanum viarum</i>	tropical soda apple	Category I	foliar	Roundup+Amm. Sulfate
<i>Urochloa mutica</i>	Pará grass	Category I	foliar	Roundup+Amm. Sulfate

Okaloacoochee Slough State Forest & WMA



Okaloacoochee Slough State Forest & WMA



In March (above) the cogon grass was profusely blooming. In June, after treatment (below), the cogon grass was not looking good—the picture much more preferred by land managers.



Highlands Hammock State Park

County: Highlands

PCL Size: 9,244 acres

Project ID: WC-040 7.75 acres \$7,013.29

Project Manager: Florida Park Service (DEP)

Peter Anderson, Park Manager

5931 Hammock Road, Sebring, Florida 33872

Phone: 863-386-6099, Fax: 863-386-6095

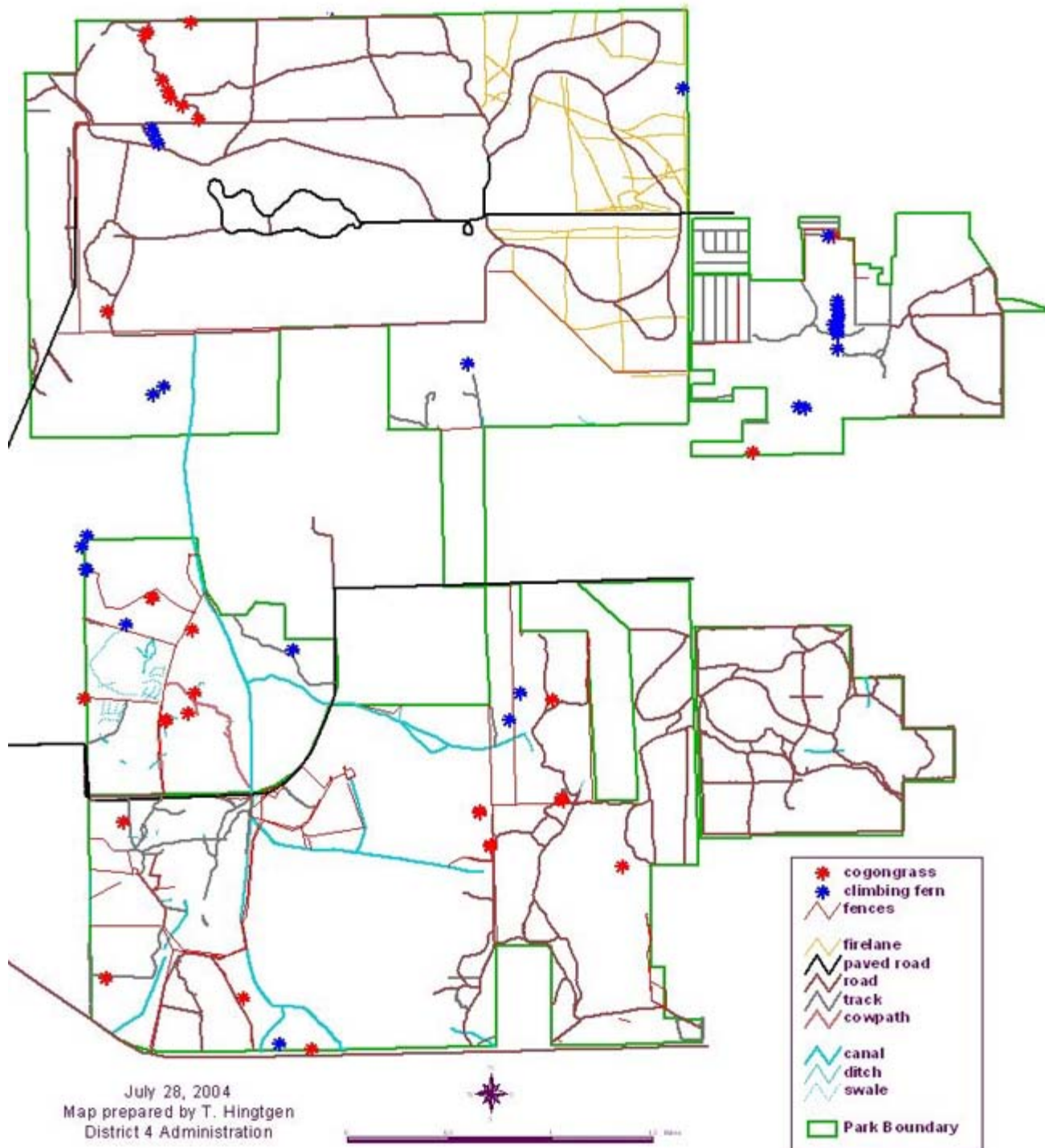
E-mail: peter.anderson@dep.state.fl.us

Highlands Hammock State Park is unique for its hardwood hammock that is one of the few remaining large virgin hammocks in Florida. Other natural communities include floodplain swamp, marsh, baygall, flatwoods, scrub, and cutthroat seeps. Originally purchased by a group of private citizens, the Park was dedicated for public use in 1931. The Civilian Conservation Corps developed the park and the Park Service later assumed management in 1935 of one of Florida's first State Parks.

The project area included two treatment sites. Both sites have cutthroat grass (*Panicum abscissum*), a species that is state listed as endangered. Both sites also harbor the southernmost populations in the United States of hooded pitcher-plant (*Sarracenia minor*).

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

Highlands Hammock State Park Exotic Plants (Roads, Fences, and Canals from Base Map)



Seminole State Forest

County: Lake

PCL Size: 26,231 acres

Project ID: WC-055 153 acres \$44,575

Project Manager: Division of Forestry (DOACS)

Joe Bishop, Forestry Supervisor II

Lake Forestry Station

9610 County Road 44, Leesburg, Florida 34788

Phone: 352-360-6677, Fax: 352-315-4488

E-mail: bishopj@doacs.state.fl.us

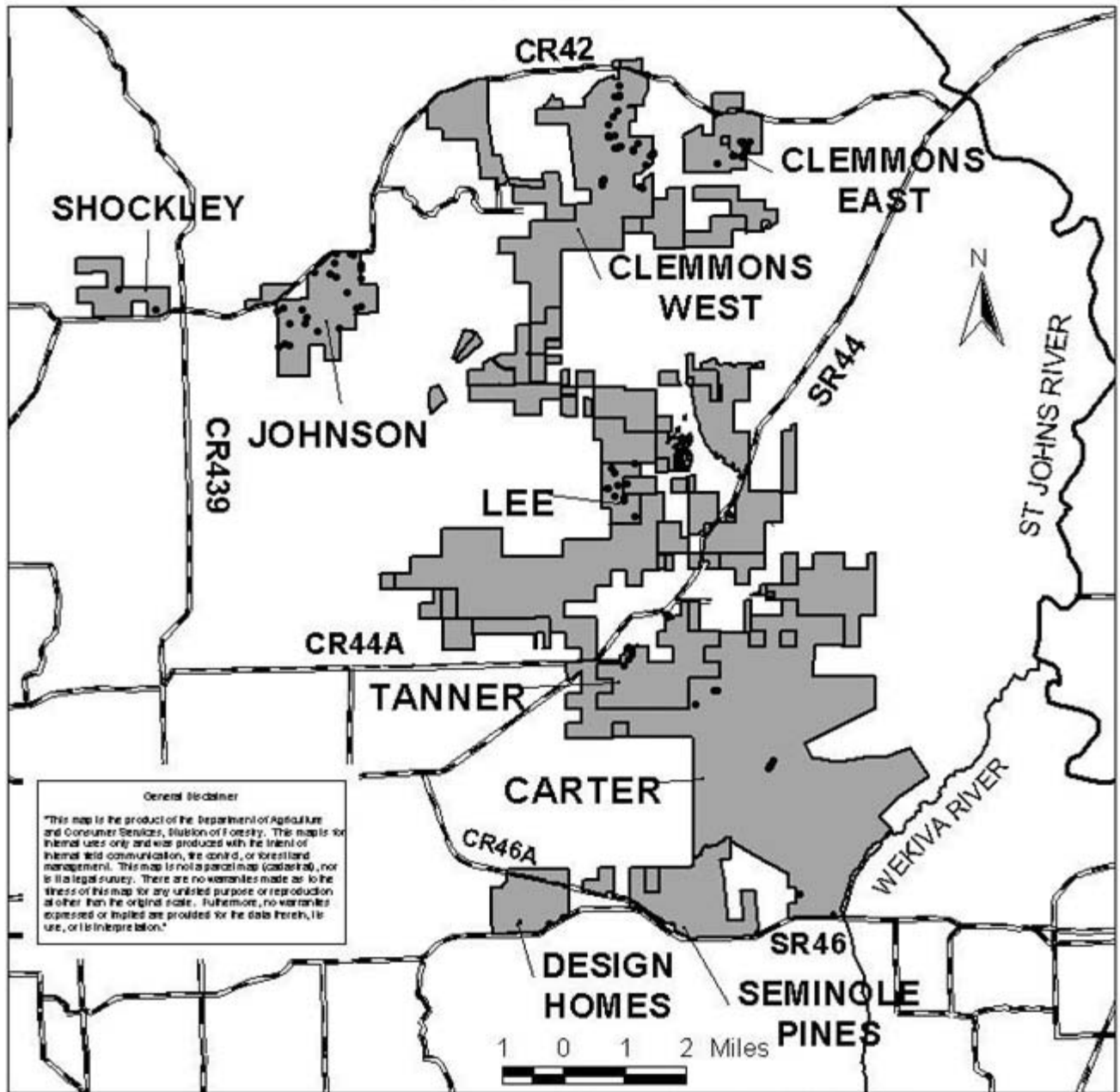
Seminole State Forest is bordered to the north by the Ocala National Forest and extends south into the Wekiva River Basin. Natural communities within the project area include sandhill, scrub, flatwoods, and bottomland forest. Twenty-five animal and seven plant species with listed status occur on the Forest.

Due to past grazing on portions of the site, disturbed areas within the project area include former pasture and old fields, in addition to an old spoil site. The target locations are found throughout the Forest and are identified on nine different parcels. Several of the parcels are undergoing restoration efforts, including mitigation tree plantings.

DOF provided time and materials worth \$2,936.02 as an in-kind match for this project.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Cinnamomum camphora</i>	camphor tree	Category I	basal	Garlon 4
<i>Albizia julibrissin</i>	mimosa	Category I	basal	Garlon 4
<i>Dioscorea bulbifera</i>	air-potato	Category I	basal	Garlon 4
<i>Imperata cylindrica</i>	cogon grass	Category I	foliar	Roundup+Arsenal
<i>Melia azedarach</i>	Chinaberry	Category I	basal	Garlon 4
<i>Solanum viarum</i>	tropical soda apple	Category I	foliar	Garlon 4
<i>Triadica sebifera</i>	Chinese tallow	Category I	basal	Garlon 4
<i>Ricinus communis</i>	castor bean	Category II	foliar	Garlon 4

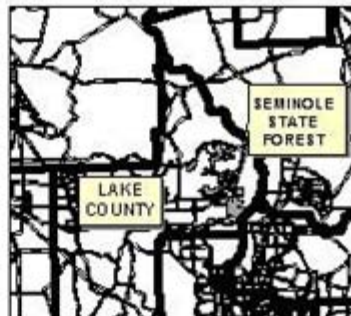
SEMINOLE STATE FOREST
TARGET LOCATIONS FOR
EXOTIC SPECIES TREATMENT



General Disclaimer
 "This map is the product of the Department of Agriculture and Consumer Services, Division of Forestry. This map is for internal use only and was produced with the intent of internal field communication, the control, or forestland management. This map is not a parcel map (cadastral), nor is it a legal survey. There are no warranties made as to the fitness of this map for any unlisted purpose or reproduction at other than the original scale. Furthermore, no warranties expressed or implied are provided for the data herein, its use, or its interpretation."

LEGEND

-  SEMINOLE STATE FOREST PARCELS
-  EXOTICS



MAP CREATED
BY JOE BISHOP
05/04/04

Lake Wales Ridge GEOpark

County: Polk

Catfish Creek Preserve State Park

PCL Size: 8,077.61 acres

Lake Wales Ridge State Forest

PCL Size: 26,487.61

Project ID: WC-035 280 acres \$26,401.36

Project Manager: Florida Park Service (DEP)

Erik Egensteiner, Park Biologist

14248 Camp Mack Road, Lake Wales, Florida 33898

Phone: 863-696-1112, Fax: 863-696-2656

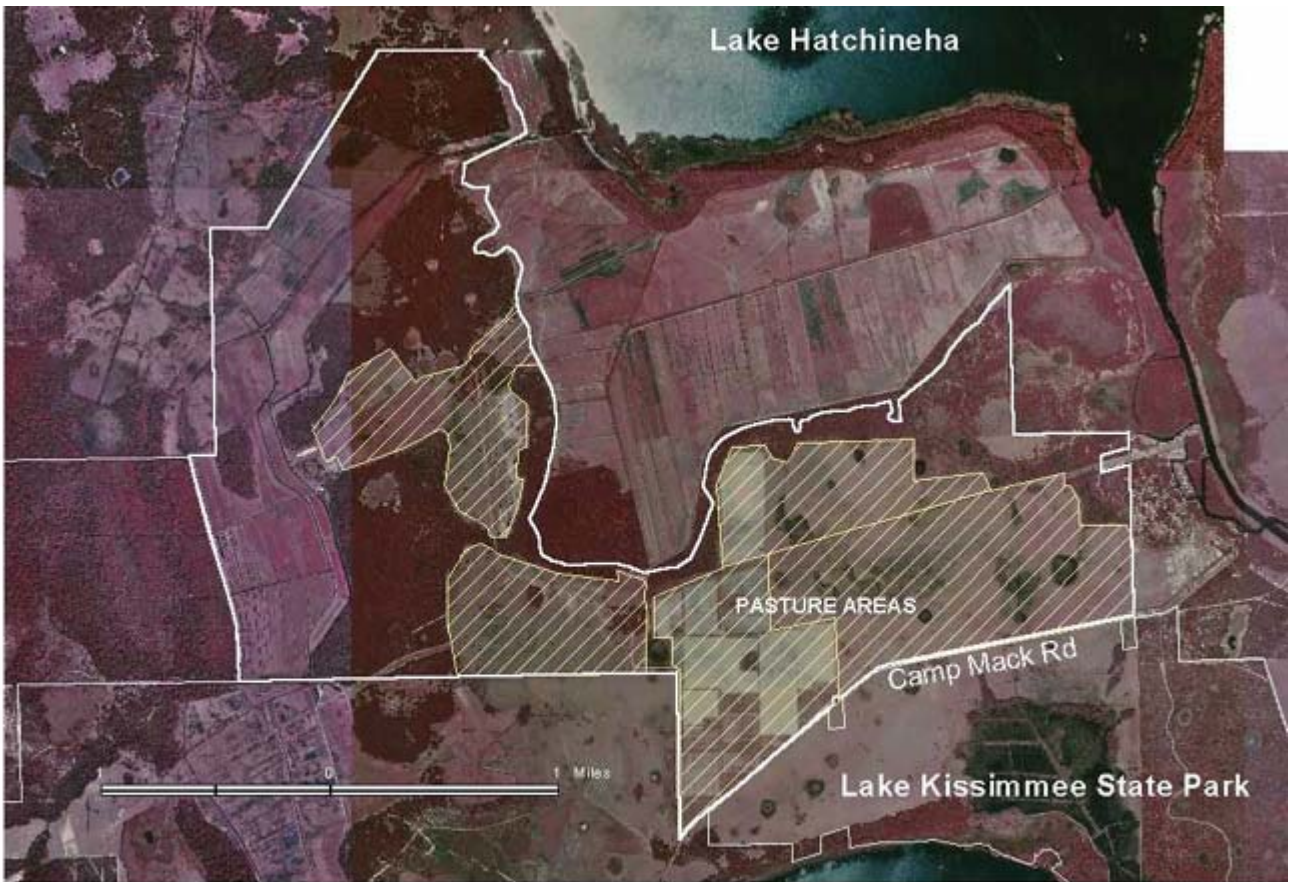
E-mail: erik.egensteiner@dep.state.fl.us

This project controlled cogon grass (*Imperata cylindrica*) in the project area at the Rolling Meadows tract of Allen David Broussard Catfish Creek Preserve State Park and controlled cogon grass, Japanese climbing fern (*Lygodium japonicum*), and Old World climbing fern (*Lygodium microphyllum*) in the project area at the Prairie tract of the Lake Wales Ridge State Forest.

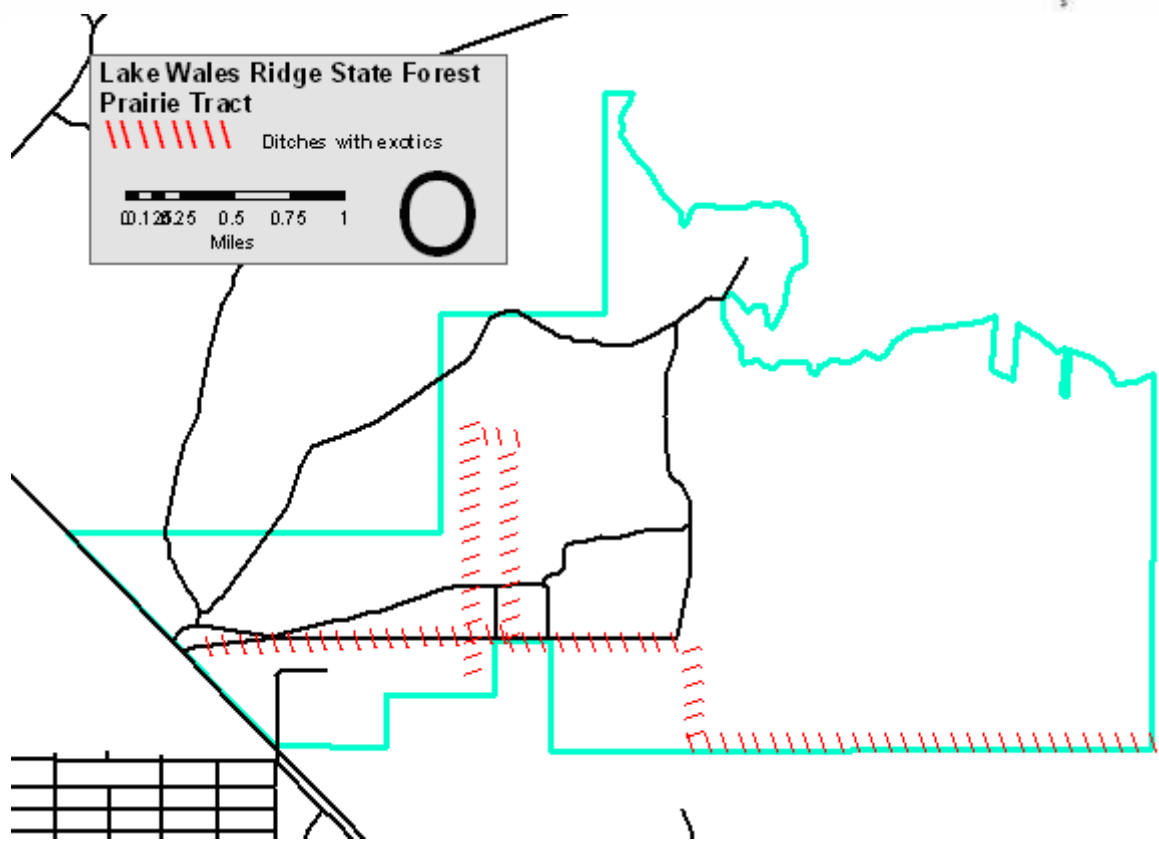
Catfish Creek Preserve State Park is located in Polk County, northeast of the town of Lake Wales. The Rolling Meadows tract, a newly acquired part of the preserve, is located just west of Lake Kissimmee State Park. The Rolling Meadows tract is approximately 3,800 acres. It includes ruderal areas consisting of pasture and sod farm areas, hydric hammock, mesic and wet flatwoods, floodplain marsh, numerous depression marshes, and baygall. The targeted exotic plants occurred in a 260-acre pasture area.

The Prairie tract of the Lake Wales Ridge State Forest is located in Polk County, east of the town of Lake Wales. This newly acquired parcel is approximately 4,875 acres. The area treated comprised approximately 20 acres on roadsides, ditch banks, and in an orange grove located within an area of mostly wet/dry prairie.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Albizia lebbek</i>	woman's tongue	Category I	cut stump	Garlon 4
<i>Cinnamomum camphora</i>	camphor tree	Category I	cut stump	Garlon 4
<i>Imperata cylindrica</i>	cogon grass	Category I	foliar	Glypro+Arsenal
<i>Lygodium japonicum</i>	Japanese climbing fern	Category I	foliar	Glypro+Arsenal
<i>Lygodium microphyllum</i>	Old World climbing fern	Category I	foliar	Glypro+Arsenal
<i>Psidium guajava</i>	guava	Category I	cut stump	Garlon 4
<i>Schinus terebinthifolius</i>	Brazilian pepper	Category I	cut stump	Garlon 4
<i>Solanum viarum</i>	tropical soda apple	Category I	foliar	Glypro+Arsenal
<i>Urena lobata</i>	Caesar's weed	Category II	foliar	Glypro+Arsenal



ALLEN DAVID BROUSSARD CATFISH CREEK PRESERVE STATE PARK



Hilochee Wildlife Management Area

County: Polk

PCL Size: 6,100 acres

Project ID: WC-036 20 acres \$22,909

Project Manager: Fish and Wildlife Conservation Commission

Cyndi A. Gates, Area Biologist

12932 CR 474, Clermont, Florida 34711

Phone: 352-241-8501, Fax: 352-242-4478

E-mail: cyndi.gates@fwc.state.fl.us

The Osprey Unit of Hilochee WMA is located in northeastern Polk County. The property extends along both sides of Interstate 4 from County Road 557 east nearly to U.S. Highway 27. Important habitat features include cypress strands and bottomland hardwood forests. Cutthroat grass (*Panicum abscissum*) occurs on the site. The area rates very high as a “biodiversity hot spot” (seven or more focal species) with very high species richness.

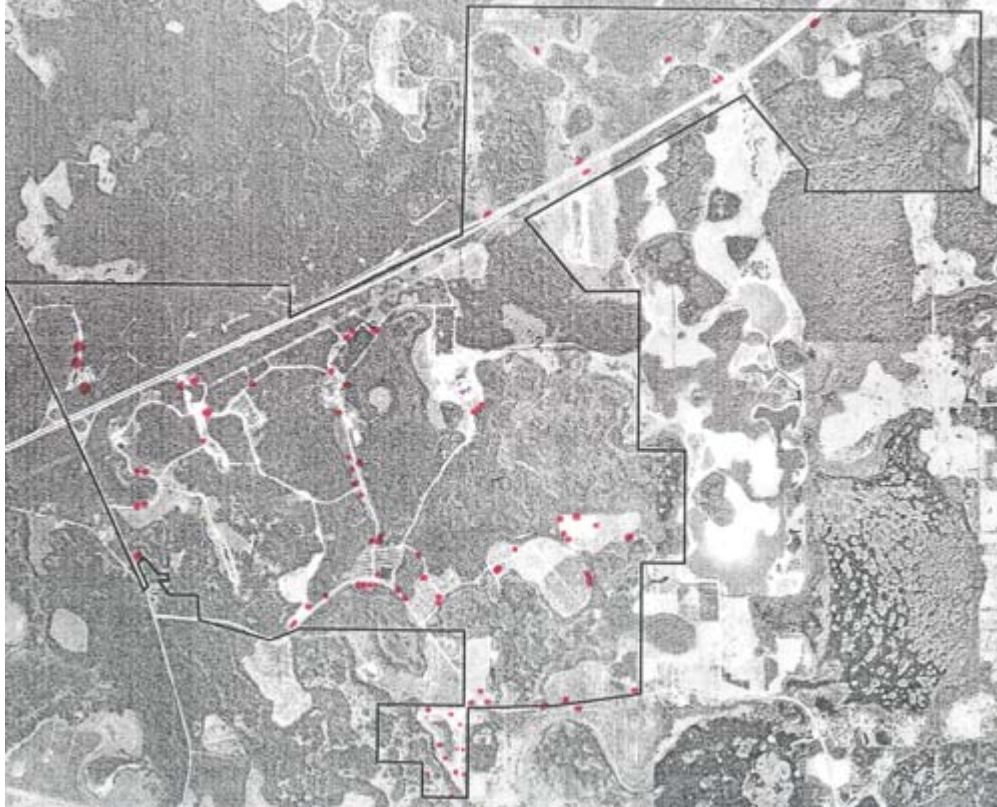
The project site consists of improved pasture, abandoned citrus groves, pine flatwoods, cypress swamp, and freshwater marsh. Sand mining, land clearing, and improved pasture have affected parts of the site. Cattle grazing occurred on most of the site up until January 2002. Tropical soda apple (TSA) infested approximately 600 acres of improved pasture and associated oak hammocks with 20-60 plants per acre on average. Cogon grass infested approximately 40 acres of citrus grove and roadways in patches that ranged in size from <0.1 acres to 4 acres.

Numerous other exotic plant species occur at the Osprey Unit, including Brazilian pepper (*Schinus terebinthifolius*), earleaf acacia (*Acacia auriculiformis*), Chinese tallow (*Sapium sebiferum*), air-potato (*Dioscorea* spp.), Japanese climbing fern (*Lygodium japonicum*), Chinaberry (*Melia azedarach*), lantana (*Lantana camara*), wild taro (*Colocasia esculenta*), and torpedo grass (*Panicum repens*), and are being mapped as infestations are located.

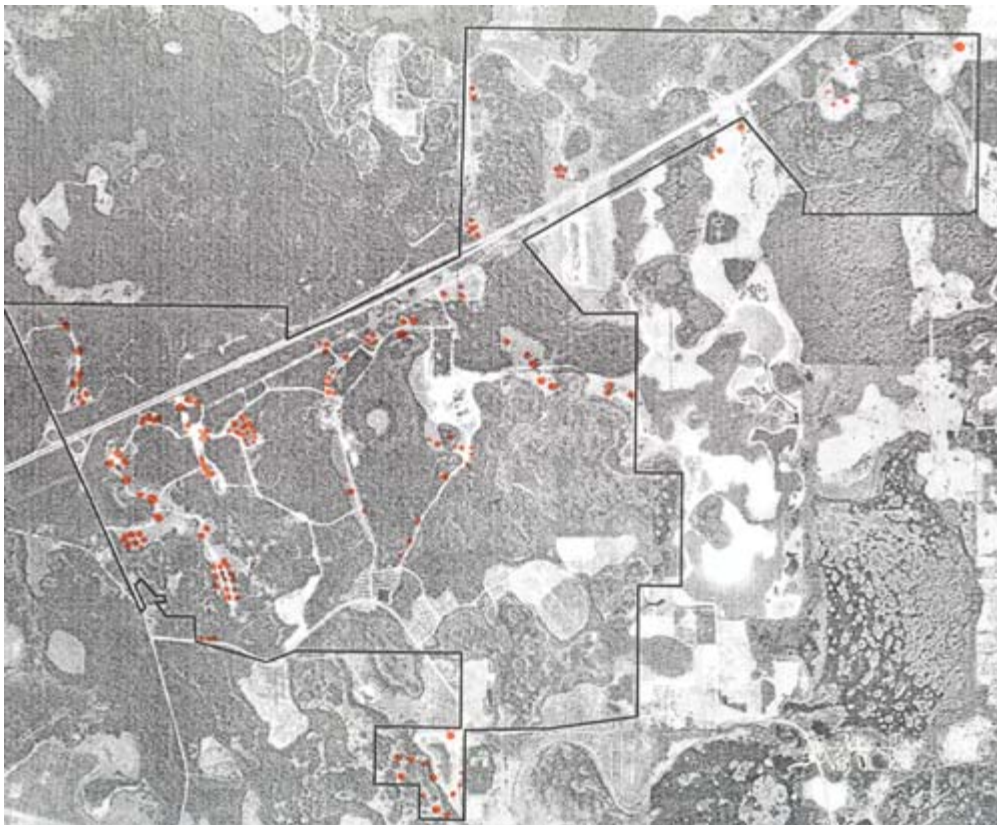
The Bureau funded a control project for 17 acres of cogon grass on the site in FY03. In Fall 2002 and Spring 2003, FWC staff treated TSA plants scattered over approximately 200 acres. Re-treatment efforts were also conducted; however, a large seed bank remains. In addition, FWC staff treated cogon grass on approximately 10 acres. The Bureau provided a portion of the herbicide necessary to conduct these efforts.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Imperata cylindrica</i>	cogon grass	Category I	foliar	Razor+Chopper
<i>Solanum viarum</i>	tropical soda apple	Category I	foliar	Razor+Chopper

Hilochee Wildlife Management Area



These maps of Hilochee WMA show infestations of cogon grass (above) and tropical soda apple (below). Note how the two species overlap in several areas.



Tenoroc Fish Management Area

County: Polk

PCL Size: 7,332 acres

Project ID: WC-037 8.3 acres \$25,430

Project Manager: Florida Fish and Wildlife Conservation Commission

Danon J. Moxley

3829 Tenoroc Mine Road, Lakeland, Florida 33805

Phone: 863-499-2421, Fax: 863-499-2692

E-mail: danon.moxley@fwc.state.fl.us

The Tenoroc Fish Management Area (Tenoroc) was a phosphate mine until the mid-1970s. The Hydrilla Lake tract is 141.1 acres in size; consisting of a 48.8-acre lake surrounded by 92.3 acres of reclaimed land. A band of Brazilian pepper intermixed with native plants surrounded the entire lake shoreline (2.4 miles). Chinese tallow also grew in small pockets along the shoreline. This vegetative band ranged from 20 to 30 feet in width, covering approximately 8.3 acres.

The FWC has a cooperative agreement with the Florida Division of Forestry (DOF) to help manage Tenoroc's uplands. The DOF developed a long-term reforestation plan for Tenoroc that includes planting a variety of native plants after the removal of invasive exotic species. Native species to be used along the shoreline include red maple (*Acer rubrum trilobum*), Dahoon holly (*Ilex cassine*), water oak (*Quercus nigra* and *Q. virginiana*), water hickory (*Carya aquatica*), bald cypress (*Taxodium distichum*) and wax myrtle (*Myrica cerifera*).

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Schinus terebinthifolius</i>	Brazilian pepper	Category I	cut stump	Garlon 3A
<i>Triadica sebifera</i>	Chinese tallow	Category I	cut stump	Garlon 3A



Tenoroc Fish Management Area



A wall of Brazilian pepper obscured Hydrilla Lake and interfered with pine seedling recruitment.

Removing invasive species is often the first step to restoring conservation lands in Florida.



Lake Wales Ridge Wildlife and Environmental Area

County: Polk

PCL Size: 13,259 acres

Project ID: WC-041 166 acres \$55,000

Project Manager: Fish and Wildlife Conservation Commission

Michael McMillian, Biological Scientist III

1630 Virginia Avenue, Lake Placid, Florida 33852

Phone: 863-699-3740, Fax: 863-699-3741

E-mail: mike.mcmillian@fwc.state.fl.us



The Mountain Lake Cutoff (Stuart) property is 185 acres of former ancient dune scrub. The scrub community supports several species of threatened and endangered plants and is home to the Florida scrub jay. Three federally listed threatened plant species are reported to occur on the Mountain Lake Cutoff site.

The project site is bordered by US 27 to the west, Mountain Lake Cutoff Road on the north, and Alternate US 27 on the east. A portion of the site still contains scrub habitat; however, approximately fifty percent of the site was overrun with exotics. The most extensive infestation occurred on the eastern side of the site bordering Alt US 27, where exotic plant coverage was an estimated sixty percent. Exotic coverage on the remaining areas of the site was estimated at thirty percent along the southern portion of the site, five to ten percent on the western side, three percent on the northern side, and twenty-five percent in the center portion of the site, which contains an old citrus grove.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Abrus precatorius</i>	rosary pea	Category I	foliar	Glypro
<i>Abrus precatorius</i>	rosary pea	Category I	cut stump	Garlon 4
<i>Albizia julibrissin</i>	mimosa	Category I	cut stump	Garlon 4
<i>Cinnamomum camphora</i>	camphor tree	Category I	cut stump	Garlon 4
<i>Eugenia uniflora</i>	Surinam cherry	Category I	basal	Garlon 4
<i>Imperata cylindrica</i>	cogon grass	Category I	foliar	Glypro+Chopper
<i>Lantana camara</i>	lantana	Category I	basal	Garlon 4
<i>Ligustrum sinense</i>	Chinese privet	Category I	basal	Garlon 4
<i>Melia azedarach</i>	Chinaberry	Category I	basal	Garlon 4
<i>Schinus terebinthifolius</i>	Brazilian pepper	Category I	basal	Garlon 4
<i>Triadica sebifera</i>	Chinese tallow	Category I	basal	Garlon 4
<i>Passiflora biflora</i>	passion vine	Category II	basal	Garlon 4

Circle B Bar Reserve

County: Polk

PCL Size: 1,267 acres

Project ID: WC-042 345 acres \$34,560

Project Manager: Polk County Natural Resources Division

Gaye Sharpe, Environmental Lands Coordinator

4177 Ben Durrance Road, Bartow, Florida 33830

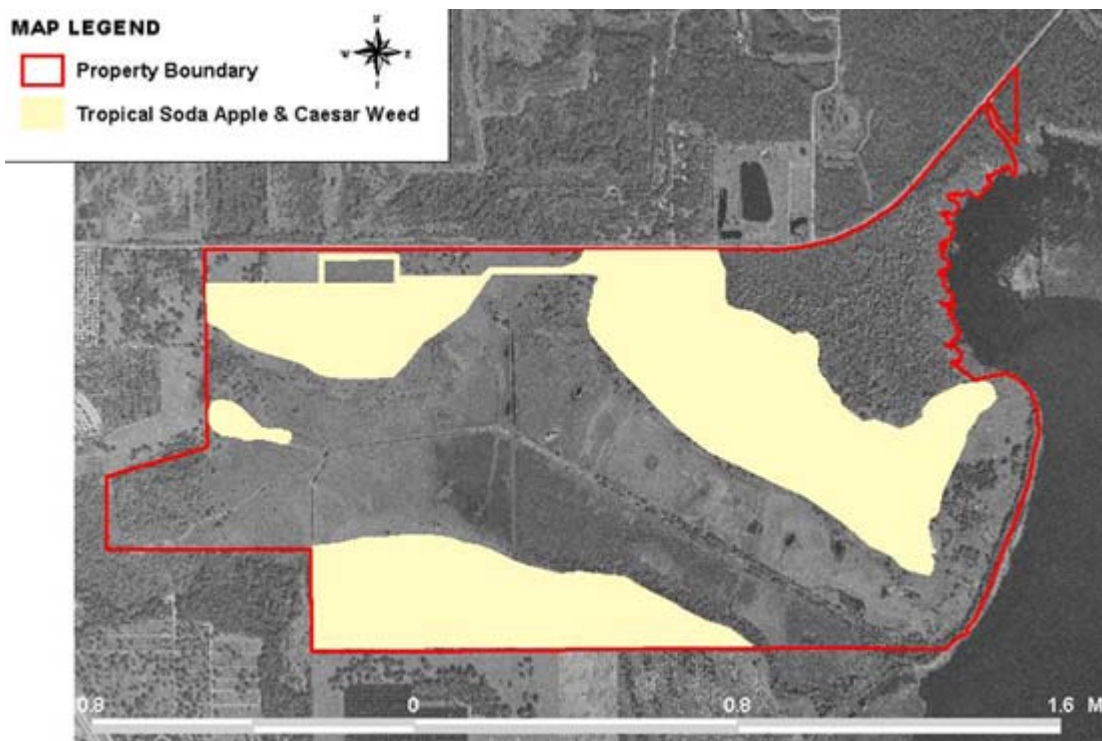
Phone: 863-534-7377 x203, Fax: 863-534-7374

E-mail: gayesharpe@polk-county.net

The Circle B Bar Reserve, located on the northwest shore of Lake Hancock, was a cattle ranch before public acquisition. The site consists of several vegetation communities such as cypress domes, wet prairie, mixed wetland hardwoods, bay swamp, live oak hammock, upland hardwood forest, and improved pasture. Two state-listed plant species, butterfly orchid (commercially exploited) and giant air plant (endangered), are found in the oak hammocks on the site.

With the removal of the cattle in 2002, there was a tremendous increase in some of the invasive species populations, such as cogon grass and Chinese tallow. Overall, the invasive exotic plants were widely dispersed in densities ranging from ten to ninety percent, with concentrations along the roadway, lake and swamp shoreline, and along the manmade berm. This project provided ground based maintenance control of primarily tropical soda apple and Caesar’s weed within the area treated during FY 2004.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Solanum viarum</i>	tropical soda apple	Category I	foliar	Rodeo+Garlon 4
<i>Urena lobata</i>	Caesar’s weed	Category II	foliar	Rodeo+Garlon 4



Kissimmee River Valley

County: Polk, Osceola, Okeechobee, Highlands, Glades

PCL Size: 36,879 acres

Project ID: WC-065 1,400 acres \$49,500

Project Manager: South Florida Water Management District

Jeff McLemore

205 N. Parrott Avenue, Okeechobee, Florida 34972-2916

Phone: 800-250-4200 x3022, Fax: 863-462-5269

Email: jmclemo@sfwmd.gov

The project area encompasses district-owned lands in the Kissimmee River Valley between Lake Kissimmee and Lake Okeechobee. Old World climbing fern (“lygodium”) in the project area was initially treated in 2003. Natural communities consist of mostly (90%) broad-leaved marsh, in addition to hardwood shrub, and live oak/palmetto hammock. The lands were purchased within the last 15 years to restore the Kissimmee River and its floodplain for improved water quality, increased water storage, and to reverse the degradation of the riverine habitat that occurred due to the channelization of the river.

Aquatic glyphosate is used for aerial and ground crew treatments of lygodium since most of the sites where the fern grows contain standing water at least part of the year. Lygodium infests primarily the floodplain marshes and adjacent hardwood shrub and hammock areas along the river. Most of the project area was treated by helicopter, with the remainder treated by ground crews. Contractors conducted the majority of the control effort, although district technicians also treat lygodium on the ground.

Helicopter application of glyphosate is quite accurate and is aided by the use of an agricultural-type GPS unit on board. Ground crews use backpack sprayers to treat lygodium on the ground after any vines leading to the canopy have been cut with machetes. Care is taken to aeri ally treat sites with trees (cypress and maple) during the dormant season to spare the trees any ill effects. Ground crews then return to treat any missed areas.

The re-treatment sites are located in Pools A, B, C, D, and E. The original infestation was very dense both on the ground and in the shrub and canopy layers and was on the verge of completely covering much of the 1,400-acre area. The Vegetation Management Division and other state and federal agencies have been very encouraged by the success this program has had in the past two years controlling lygodium. This success is believed to be a result of the restored section of the river (Pool C) floodplain holding water during the wet season, thus preventing the re-establishment of lygodium. Also, the district is not conducting controlled burns in areas of lygodium infestation and this is believed to further hamper the spread of spores.

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