

FLORIDA POWER & LIGHT CO.

ST. LUCIE POWER PLANT
AND TRANSMISSION LINE
THREATENED AND ENDANGERED
SPECIES SURVEY

Submitted by

FOSTER  WHEELER

FOSTER WHEELER ENVIRONMENTAL CORPORATION

February 29, 2001



FOSTER WHEELER ENVIRONMENTAL CORPORATION

Date: May 14, 2001

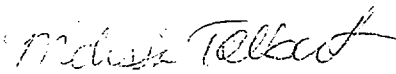
Ms. Tracy L. Bryant
Environmental Specialist
Florida Power & Light Company
700 Universe Blvd.
Juno Beach, FL 33408

SUBJECT: FPL ST. LUCIE POWER PLANT & TRANSMISSION LINE
Revised Threatened and Endangered Species Report 2001

Dear Ms. Bryant:

Enclosed is one revised copy of the St. Lucie Power Plant and Transmission Line Threatened and Endangered Species Survey Report. All comments have been addressed in this final edition. If you have any questions, please call Fred Shanholtzer at (561) 781-3417 or Melissa Tolbert at (561) 781-3431.

Sincerely,


Melissa Tolbert
Associate Ecologist

cc: T. Malone
F. Shanholtzer
K. Olsen

**PROTECTED SPECIES SURVEY REPORT FOR THE
FPL ST. LUCIE NUCLEAR POWER PLANT AND ITS
ASSOCIATED TRANSMISSION LINE CORRIDOR TO
THE MIDWAY SUBSTATION**

Submitted May 2001

By

**Foster Wheeler Environmental Corporation
759 South Federal Highway
Stuart, FL 34994**

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EXECUTIVE SUMMARY

Florida Power & Light Company (FPL) has contracted Foster Wheeler Environmental Corporation to conduct protected species surveys of the St. Lucie Plant site on Hutchinson Island in St. Lucie County, Florida and of the operational portion of the associated electrical transmission line right-of-way between the plant and the Midway Substation. FPL operates two nuclear-powered electric generating units, both of which are licensed and permitted by the Nuclear Regulatory Commission (NRC). The survey for protected species was undertaken as part of the relicensing program being conducted for the plant site. The scope of the survey involved upland and wetland vegetation communities and wildlife habitat types. The plant site protected species survey results were compared to the February, 1978 survey conducted at the site as part of the Operating License Environmental Report for Unit 2. The results of the protected species survey are presented in this document.

Several protected animal species were found to occur at the plant site and within the transmission line right-of-way. Most of these species are listed as Species-of-Special Concern and include wading birds common to the region. Brown pelican, white ibis, little blue heron, North American kestrel, are all relatively common to the area and readily use appropriate wetland and field habitats on and adjacent to the site and transmission line. The osprey, which is common to the region, was also observed at the plant site and on top of a power pole overlooking the St. Lucie River. This species is included because it is protected elsewhere in the state and the Florida Fish and Wildlife Conservation Commission has expressed an interest in following the recovery status of the species. Other protected species reported for the site from the breeding season period include the black skimmer and American oystercatcher (Species-of Special Concern) which nest along the intake canal shoreline and the least tern (Threatened) which nests atop buildings at the plant site.

There is a concentration of gopher tortoise (Species-of-Special Concern) burrows in the area east of Highway A1A in the vicinity of the intake and discharge canals on the plant site, a few in the scrub area west of the FEC railroad, and one in a disturbed area west of SR 707 within the transmission line right-of-way. Most burrows appeared active. A total of five individual tortoises were observed during the surveys. The federal and state Threatened eastern indigo snake has been observed on Hutchinson Island. This species commonly inhabits gopher tortoise burrows.

The only protected species of plants found at the power plant site were the inkberry (*Scavoela plumieri*) and prickly pear (*Opuntia stricta*). These species were found in the dune area. Beach erosion has eliminated much of the habitat for other potential species. State Threatened species of plants were found within the transmission line right-of-way. The yellow butterwort (*Pinguicula lutea*) was found in dry prairie/pine flatwoods areas (west of the Savannas State Preserve) in the vicinity of the maintenance road. The scrub mint (*Conradina grandiflora*) was locally common in the scrub area located west of the

FEC railroad. The satinleaf (*Chrysophyllum oliveforme*) was observed in the disturbed shrubby area just west of SR 707.

The plant site and transmission line right-of-way are being maintained in a condition conducive to sustaining habitats for the animal and plant species found or reported for the area. The biggest threat to protected species habitats at the site is the encroachment of exotic vegetation such as Brazilian pepper. A significant concentration of this species remains in the disturbed shrublands on the western portion of the plant site and in the ruderal areas within the transmission line right-of-way.

1.0 INTRODUCTION AND METHODS

Protected species status is based on species lists of the FWS (50 CFR 17.11-12), the FGFWFC (Section 39-27.003-005 F.A.C.), and the Florida Department of Agriculture and Consumer Services (DACS) (Preservation of Native Flora Act, Section 581.185-187, F.S.). Species listed by Wood, 1997; Coile, 2000 and FNAI, 2001 were considered in the project specific evaluation. The scope of the survey involved upland and wetland vegetation communities and wildlife habitat types.

Many of the protected plant and animal species listed for Florida are not expected to occur at the site or the transmission line right-of-way. This is due to either absence of species suitable habitat or distance of the project from a species known range. For conservative evaluation purposes, consideration was focused upon species whose known occurrence is within a one county coastal radius of St. Lucie County (including Indian River and Martin Counties). The protected species described below were found during field studies at the site or along the transmission line right-of-way or have been observed in the site vicinity in the past by project personnel.

Figure 1 shows the power plant site and vegetation communities that were inspected in the field on January 30, 2001. Because of the time of year many of the flowering plants were not in bloom. Additionally, beach and foredune vegetation was very limited because beach erosion had occurred well into the dune, as shown in Figure 2. Figures 3 through 5 show the transmission line right-of-way and vegetation communities that were inspected in the field on February 7 and 14, 2001. Appendix A documents the vertebrate species observed during the surveys.

2.0 RESULTS

2.1 General Results

Descriptions of vegetation community structure, vegetation species dominance and floral species composition are presented in this section. Within these communities is the potential for occurrence of faunal and floral protected species.

The summary status of protected species potential occurring on the project is presented in Table 1 for the plant site and Table 2 for the portion of FPL transmission line that is maintained for operational purposes. FPL owns a strip of land along the south side of the maintained area. No development or maintenance activities have been conducted on this land. Plant species listed in these tables include only those that occupy habitats found on the plant site or in and adjacent to the maintained transmission line right-of-way.

2.2 Power Plant Site

Ecological Setting

Terrestrial and wetland vegetation communities and land cover at the power plant site include the following types (Figure 1).

- Beach and Dune Community
- Red Mangrove Community
- Tropical Hammock Community
- Ruderal Landscape
- Maintained Shrublands and Fields

Beach and Dune Community – This linear community is situated in a narrow band along the shoreline of the Atlantic Ocean. At the time of the field survey wave action had eroded most of the beach. This erosion has removed much of the front dune habitat (Figure 2) to the extent that the dune irrigation system has been exposed. No vegetation was found rooted or extending from the dunes into the beach area. The remaining dune strand consisted of a variety of species such as sea oats (*Uniola paniculata*), sea grape (*Coccoloba uvifera*), salt marsh hay (*Spartina patens*), Australian pine (*Casuarina equisetifolia*), marsh ox-eye (*Borrchia frutescens*), beach sunflower (*Helianthus debilis*), marsh elder (*Iva frutescens*), bay bean (*Canavalia rosea*) and railroad vine (*Ipomoea pes-caprae*).

Red Mangrove Community – Large red mangrove (*Rhizophora mangle*) dominated stands occur at the plant site, as shown in Figure 1. Other species, including black mangrove (*Avicennia germinans*), white mangrove (*Laguncularia racemosa*), fish poison (*Dalbergia ecastophyllum*), giant leather fern (*Acrostichum danaeifolium*) occur at higher

elevations at the edges and within these stands. Several locations within the mangroves show the effects of the 1989 freeze in the area that killed mangroves and where revegetation has not occurred. Other small open areas in the mangroves are likely the result of lightning strikes that affect multiple trees because of the intertwined nature of their proproots. In each case, these open areas are inundated or are intertidal and function as mudflat habitats for wildlife.

Tropical Hammock Community – The plant site includes unusual tropical hammock communities east of Highway A1A. The largest tropical communities are located amid mangrove stands north of the discharge canal. The stands are unusual because of their occurrence this far north along the Atlantic Coast and because there is a distinct assemblage of tropical vegetation species rather than isolated examples of individual species. Prominent species in the tropical hammock include gumbo-limbo (*Bursera simaruba*), paradise tree (*Simarouba glauca*), white and Spanish stoppers (*Eugenia axillaris* and *E. foetida*), wild lime (*Zanthoxylum fagara*), white indigo berry (*Randia aculeata*), mastic (*Mastichodendron foetidissimum*), snowberry (*Chiococca alba*), and others. Wild lime and gumbo-limbo are example tropical species with individuals present on the site outside of a distinct tropical hammock.

Ruderal Landscape – Vegetation in these areas are characteristic of early secondary succession species which occur in an area after the land has been cleared, graded, or mowed. Species dominating these areas include grasses, composites, broomsedge and other herbaceous and small woody plants. These areas have often been used for agricultural purposes

Maintained Shrublands and Fields – With progression of ecological succession, a ruderal landscape will transition to shrublands and old fields. These areas on the site are infrequently mowed or are left in shrub condition. Locally dominant species include Brazilian pepper (*Schinus terebinthifolius*), coastal plain willow (*Salix caroliniana*), broomsedges (*Andropogon* sp.), nickerbean (*Caesalpinia bonduc*) and a large variety of shrub and ~~w~~ced species.

Protected Species Occurrence at the Plant Site

Animals - Several protected animal species were found to occur at the plant site. Most of these species are listed as Species-of-Special Concern and are wading birds common to the region. Brown pelican, white ibis, little blue heron, tricolored heron, North American kestrel, are all relatively common to the area and readily use appropriate wetland and field habitats on and adjacent to the site. In the past, wood storks, the snowy egret and roseate spoonbill have been observed at the plant site. The osprey was also observed at the site and is common to the region. This species is included because it is protected elsewhere in the state and the Florida Fish and Wildlife Conservation Commission has expressed an interest in following the recovery status of the species.

There is a concentration of gopher tortoise (Species-of-Special Concern) burrows in the area east of Highway A1A in the vicinity of the intake and discharge canals. Most of the burrows were observed along the eastern fence separating the dune from canal operations area. Land here is soft and elevated so that burrows are not likely to be flooded. Food resources for the gopher tortoise are readily available in the area of the burrows. A total of 43 burrows were observed in the vicinity of this fence. Most burrows appeared active. Four individual tortoises were observed during the survey. The federal and state Threatened eastern indigo snake has been observed on Hutchinson Island. This species commonly inhabits gopher tortoise burrows. Other protected species reported for the site from the breeding season period include the American oystercatcher (Species-of Special Concern) which nests along the intake canal shoreline and the least tern (Threatened) which nests atop buildings at the plant site.

Plants – The only protected species of plants found at the site were the inkberry (*Scavoela plumieri*) and prickly pear (*Opuntia stricta*). These species were found in the dune area. Several protected beach species, such as burrowing four-o'clock (*Okenia hypogaea*), have been observed at the site but were not found during the survey because beach erosion had eliminated much of habitat for these species. During a protected species survey in 1978, coastal vervain [*Verbena (Glandularia) maritima*] was found in the area behind the dunes. This species was not found during the current survey. Habitat conditions have not changed significantly since the 1978 survey. There is no obvious explanation why the species is not present in this area.

As noted above, the tropical hammocks are in themselves a resource to be protected. Their occurrence is rare in this part of Florida because development has historically occurred in uplands that likely included these species. Resource agencies such as the South Florida Water Management District, Treasure Coast Regional Planning Council, U.S. Environmental Protection Agency and Florida Department of Environmental Protection identified these hammocks as being significant at the FPL Martin site during its site certification process. FPL has recognized this valuable resource and included it as part of the Turtle Beach Nature Trail.

Conclusions

The plant site is being maintained in a condition conducive to sustaining habitats for the animal and plant species found or reported for the area. The biggest threat to protected species habitats at the site is the encroachment of exotic vegetation such as Brazilian pepper. The efforts to eradicate this species at the site are evident in many locations particularly in the tropical hammock areas and along much of the mangrove fringes. A significant concentration of this species remains in the disturbed shrublands on the western portion of the site. The protected species use of the plant site today is very similar to that noted in 1978.

2.3 Transmission Line Right-of-Way

Ecological Setting

Terrestrial and wetland vegetation communities and land cover for the transmission line right-of-way includes the following types (Figures 3 to 5).

- Sand Pine Scrub Dry
- Ruderal Landscapes
- Prairie/Pine Flatwoods
- Wet Prairie
- Isolated Marshes

Figures 3 to 5 also show the land cover adjacent to the transmission line right-of-way. In general, the adjacent land use and land cover has not changed much over the last twenty years.

Sand Pine Scrub – This community is located west of the FEC railroad (Figure 3). The canopy is dominated by sand pine (*Pinus clausa*) with an understory of sand live oak (*Quercus geminata*), myrtle oak (*Q. myrtifolia*), and buckthorn (*Sideroxylon tenax*). The ground cover included Madagascar periwinkle (*Catharanthus roseus*), prickly pear, milkwort (*Polygala grandiflora*), jointweed (*Polygonella robusta*), rock-rose (*Helianthemum nashii*), and *Cladonia* spp.

Ruderal Landscape – Pastures, abandoned agricultural lands, and disturbed sites are considered to be ruderal. Vegetation in these areas are characteristic of early secondary succession species which occur in an area after the land has been cleared, graded, or grazed. Species dominating these areas include grasses, composites, broomsedge and other herbaceous and small woody plants.

The area between the FEC railroad and SR 707 (Figure 3) is disturbed and dominated by shrubby species such as Brazilian pepper, rosary pea (*Abrus precatorius*) and hog plum (*Ximenia americana*). A few coastal hammock species were observed such as satinleaf (*Chrysophyllum oliveforme*), wild lime (*Zanthoxylum fagara*), and paradise tree (*Simarouba glauca*). Herbaceous species noted include camphorweed (*Heterotheca subaxillaris*), prickly pear (*Opuntia humifusa*), partridge pea (*Cassia chamaecrista*), dog fennel (*Eupatorium capillifolium*), Madagascar periwinkle (*Catharanthus roseus*) and lantana (*Lantana camara*).

The abandoned agricultural lands span the area from the St. Lucie River east to US Highway 1 (Figure 4). The area is overgrown with shrubby species such as Brazilian pepper (*Schinus terebinthifolius*), saltbush (*Baccharis* sp.), and herbaceous species such as cut-leaved evening primrose (*Oenothera lacinata*), pepper grass (*Lepidium virginicum*), ragweed (*Ambrosia artemisiifolia*), and beach sunflower (*Helianthus debilis*).

The abandoned farmland east of the river is a disturbed shrubby area dominated by red maple (*Acer rubrum*), coastal plain willow, Brazilian pepper, and wax myrtle, followed by scattered red bay (*Persea borbonia*), saw palmetto, and elderberry (*Sambucus canadensis*). The herbaceous species are similar to those described above.

The pastures span the area from the Midway Substation south to the Glades Road Cutoff (Figure 5). The pasture area is heavily grazed grassland with some scattered saw palmetto and wax myrtle (*Myrica cerifera*). The pasture area near the Glades Road Cutoff was wet to moist and was the area that the cows were grazing. This area contained wetland plants such as pickerelweed (*Pontederia cordata*), cattails (*Typha* sp.), smartweed (*Polygonum hydropiperoides*), dollarweed (*Hydrocotyle umbellata*), coastal plain willow (*Salix caroliniana*), and bulrush (*Juncus* sp.).

Dry Prairie/Pine Flâtwoods – Vegetation is dominated by a variety of grasses (*Aristida* sp. and *Andropogon* spp.) followed by saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), fetterbush (*Lyonia lucida*), staggerbush (*L. ferruginea*), *Hypericum* spp., cat briar (*Smilax auriculata*), muscadine grape (*Vitis rotundifolia*), and bracken fern (*Pteridium aquilinum*). These areas also include young slash pine (*Pinus elliottii*) scattered throughout the landscape. This community type was found intermixed with wet prairies and marshes (Figures 3-5).

Wet Prairie – These areas varied locally in species dominance and included the following species: red root (*Lacnanthes caroliniana*), St. John's wort (*Hypericum fasciculatum*), blue maidencane (*Amphicarpum muhlenbergianum*), pipewort (*Eriocaulon compressum*), bog buttons (*Lachnocaulon anceps*), *Dicanthelium* sp., yellow eyed grasses (*Xyris* spp.), and sundew (*Drosera capillaris*).

Isolated Marshes – The marshes varied in local dominance with the following species: sawgrass (*Cladium jamaicense*), pickerelweed, white water lily (*Nymphaea odorata*), spikerush (*Eleocharis* spp.), St. John's wort (*Hypericum fasciculatum*), cattails (*Typha* sp.), and bulrush (*Juncus* sp.) Typically, the wet prairie species mentioned above were observed on the fringes of the marshes.

Protected Species Occurrence for the Transmission Line

Animals – A few protected animal species were found to occur within the transmission line right-of-way. White ibis were observed in the pasture area near the Midway Substation. North American kestrel was observed in the ruderal area east of US Highway 1. Both of these animals are Species-of-Special Concern.

A gopher tortoise (Species-of-Special Concern) burrows were observed in the sand pine scrub area west of the FEC railroad. This area consists of sugar sand that is soft and well drained so that burrows are not likely to be flooded. Food resources for the gopher tortoise are readily available in the area of the burrows. A several burrows occur in this area. One tortoise was observed during the survey. The federal and state Threatened

eastern indigo snake was not observed, but it is potentially present because this species commonly inhabits gopher tortoise burrows.

Plants – State Threatened species of plants found within the transmission line right-of-way include the yellow butterwort (*Pinguicula lutea*), scrub mint (*Conradina grandiflora*) and satinleaf (*Chrysophyllum oliveforme*). The yellow butterwort was found in pine flatwoods areas (west of the Savannas State Preserve) in the vicinity of the maintenance road. The scrub mint was locally common in the scrub area located west of the FEC railroad. The satinleaf was observed in the disturbed shrubby area just west of SR 707.

Conclusions

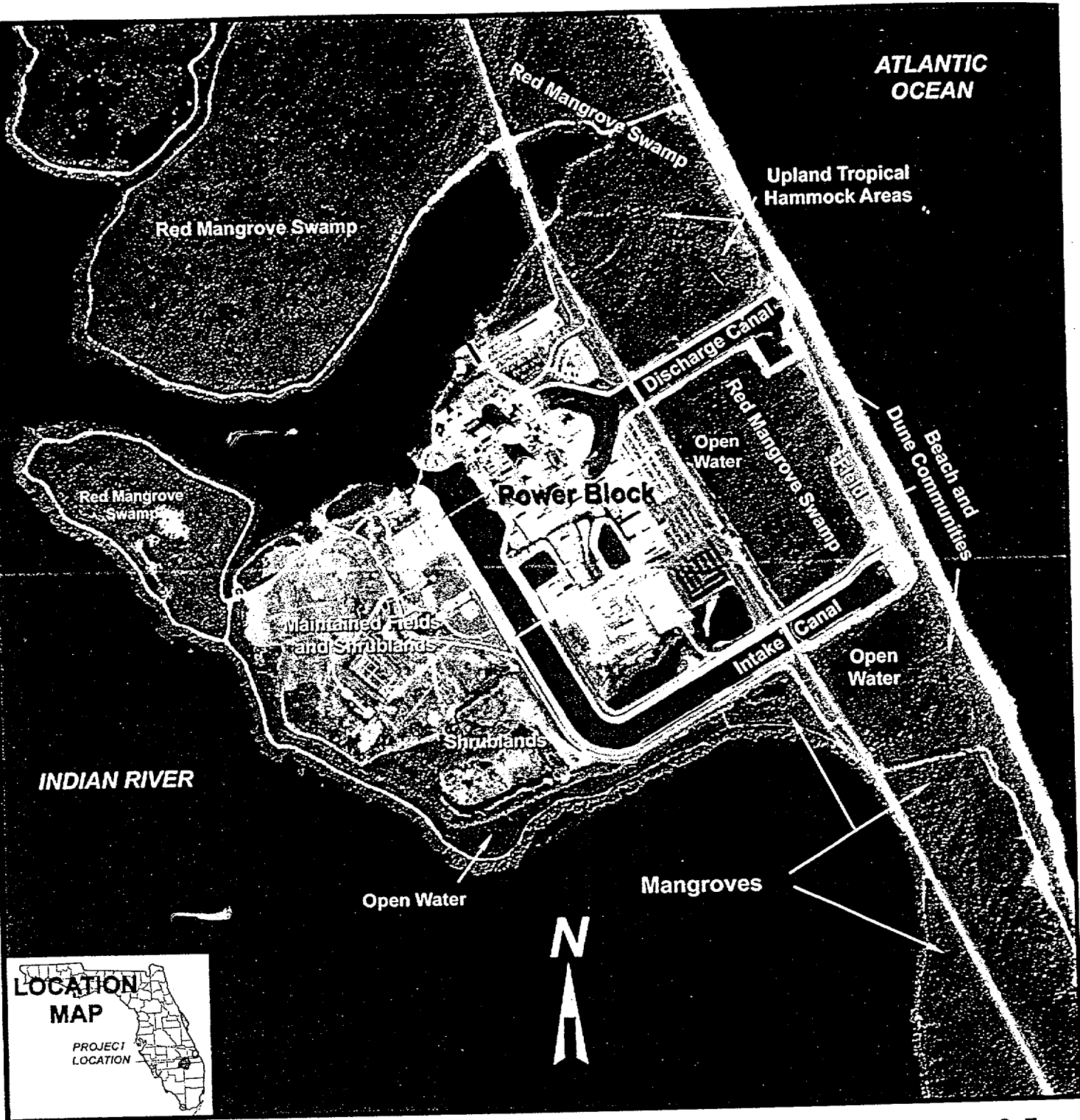
The transmission line right-of-way is being maintained in a condition conducive to sustaining habitats for the animal and plant species found in the area. The biggest threat to protected species habitats in these areas is the encroachment of exotic vegetation such as Brazilian pepper.

3.0 REFERENCES

- Ashton, R. E. Jr. and P. S. Ashton. 1985. Handbook of Reptiles and Amphibians of Florida - Part Two-Lizards, Turtles and Crocodilians. Windward Publishing, Inc. Miami, Florida.
- Ashton, R. E. Jr. and P. S. Ashton. 1988. Handbook of Reptiles and Amphibians of Florida - Part One-The Snakes. Windward Publishing, Inc. Miami, Florida
- Coile, Nancy C. 2000. Notes on Florida's Regulated Plant Index (Rule 5B-40), Botany Contribution No. 38 3rd edition. Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Gainesville, FL.
- Florida Natural Areas Inventory (FNAI). 2001. Species and natural community summary for Indian River, St. Lucie, and Martin Counties.
- Florida Power and Light Co. (FPL). 1979. Operating License Environmental Report for the St. Lucie Nuclear Power Plant.
- Florida Power and Light Co. (FPL). (No Date). Turtle Beach Nature Trail Visitor's Guide St. Lucie Power Plant.
- Kale, H. W. III, ed. 1978. Rare and Endangered Biota of Florida. In: P.C.H. Pritchard, series ed. Vol. II - Birds. University Presses of Florida. Gainesville, Florida.
- Kale, H. W. III, and D. S. Maehr. 1990. Florida's Birds. Pineapple Press. Sarasota, Florida.
- Lennartz and Henry, 1985. Endangered Species Recovery Plan: Red-Cockaded Woodpecker (*Picoides borealis*). U.S. Fish and Wildlife Service. Atlanta, GA.
- McDiarmid, R. W. 1978. Rare and Endangered Biota of Florida. In: P.C.H. Pritchard, series ed. Vol. III - Amphibians and Reptiles. University Presses of Florida. Gainesville, Florida.
- Murphy, T.M. 1984. Southeastern states bald eagle recovery plan. U.S. Fish and Wildlife Service Southeast Region Atlanta, GA. 63pp.
- Tobe, J., K. Burks, R. Cantrell, M. Garland, M. Sweeley, D. Hall, P. Wallace, G. Anglin, G. Nelson, J. Cooper, D. Bickner, K. Gilbert, N. Aymond, K. Greenwood and N. Raymond. 1998. Florida Wetland Plants - An Identification Guide. Florida Department of Environmental Protection, Tallahassee, FL 598pp.
- Ward, D. B., ed. 1979. Rare and Endangered Biota of Florida. In: P.C.H. Pritchard, series ed. Vol. V - Plants. University Presses of Florida. Gainesville, Florida.

Whitaker, J. O. 1980. The Audubon Society Field Guide to North American Mammals.
Alfred A. Knopf. New York, New York.

Wood, D. 1997. Official Lists of Endangered and Potentially Endangered Fauna and
Flora in Florida. Florida Fish and Wildlife Conservation Commission. Tallahassee,
Florida.



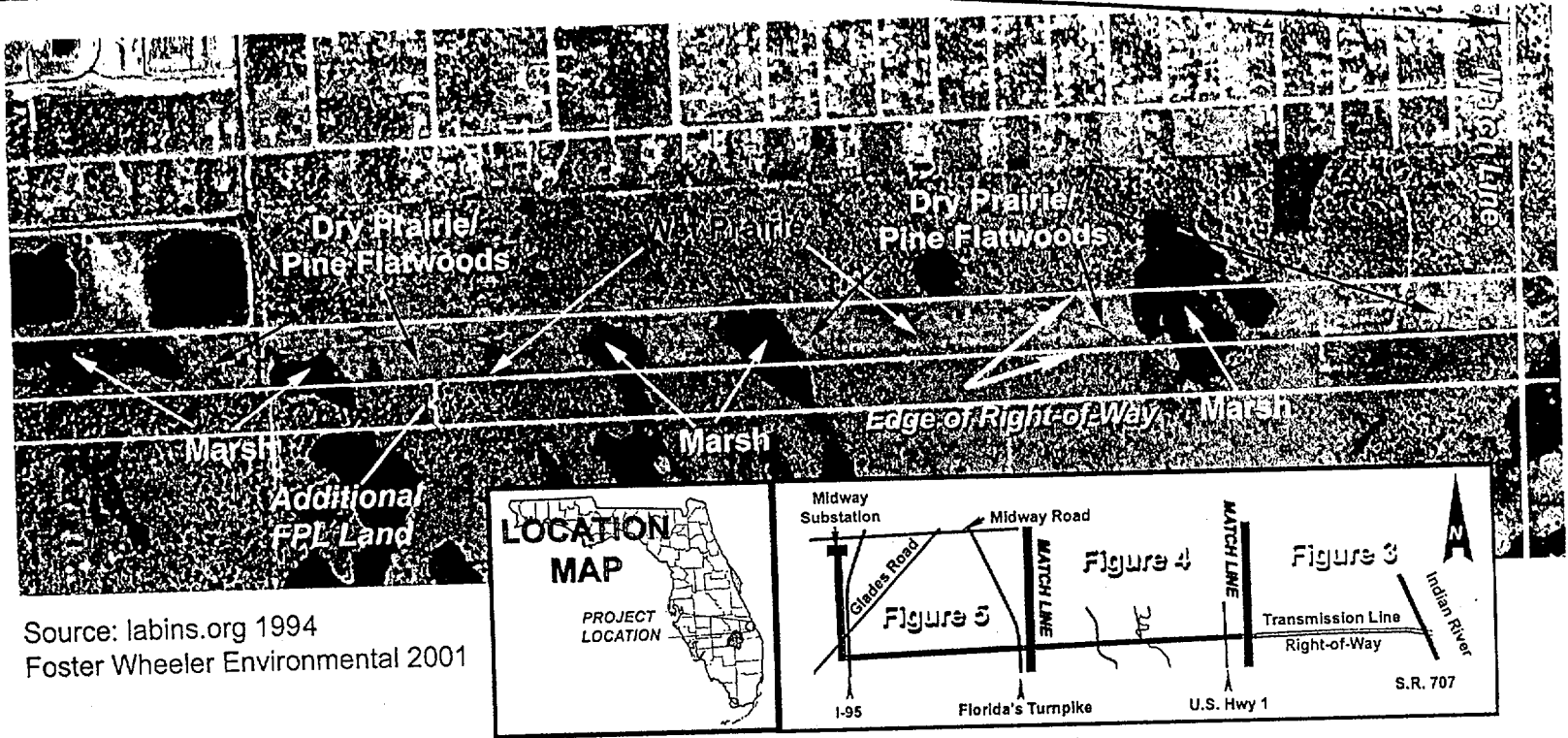
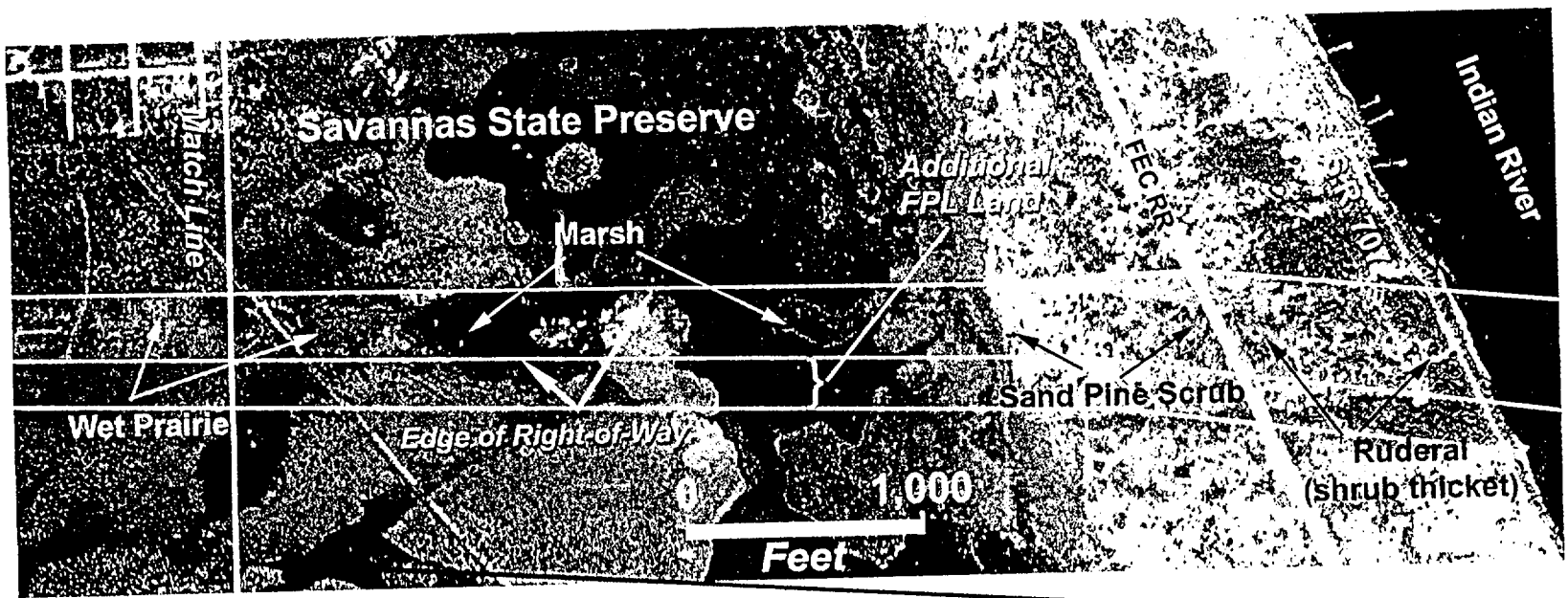
Source: labins.org 1994
Foster Wheeler Environmental 2001

Figure 1
FPL St. Lucie Power Plant
Vegetative Communities

FIGURE 2



**BEACH EROSION
AT EDGE OF THE SITE**



Source: labins.org 1994
Foster Wheeler Environmental 2001

Figure 3: FPL St. Lucie Transmission Line Right-of-Way Vegetative Communities

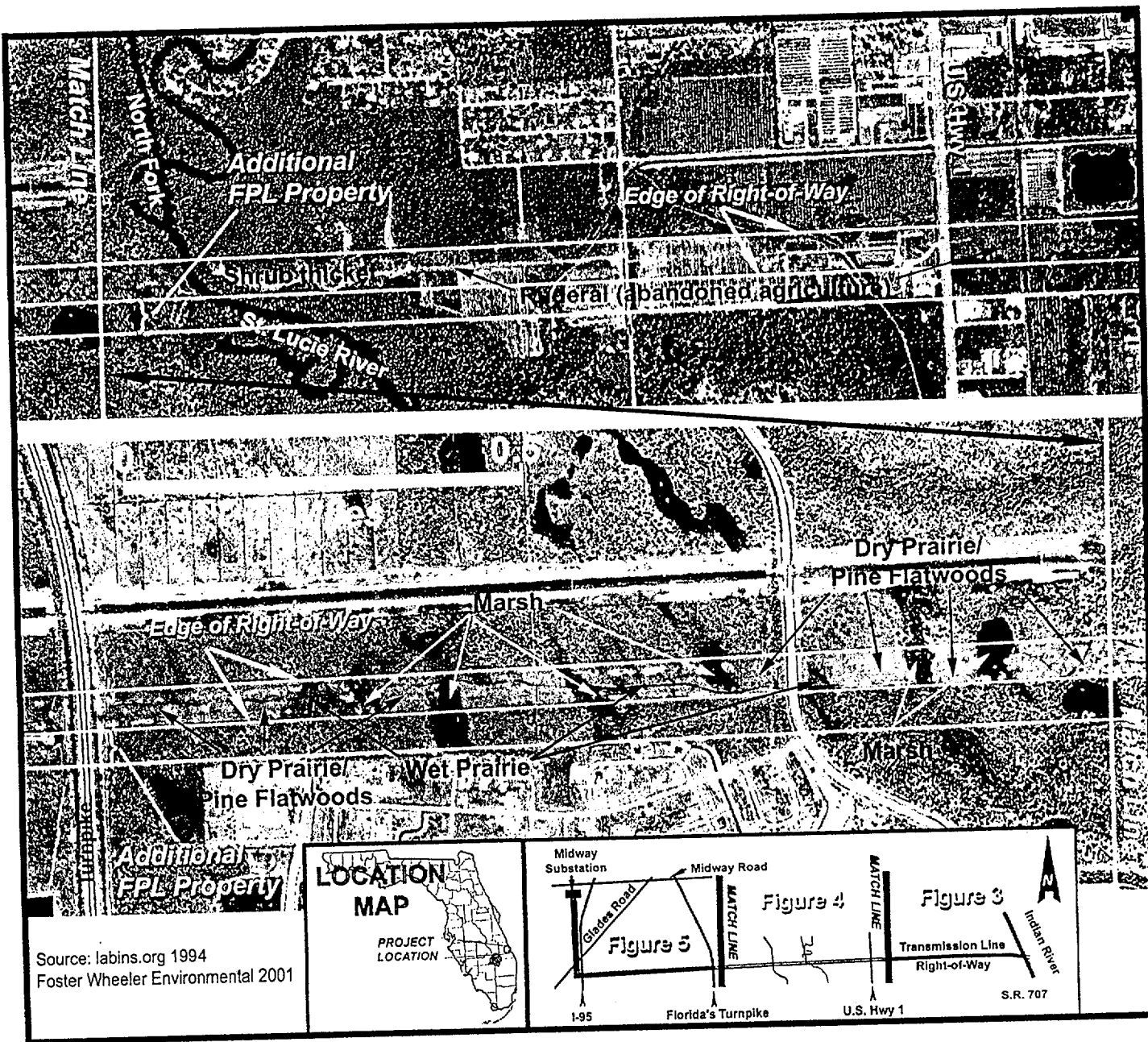


Figure 4: FPL St. Lucie Transmission Line Right-of-Way Vegetative Communities

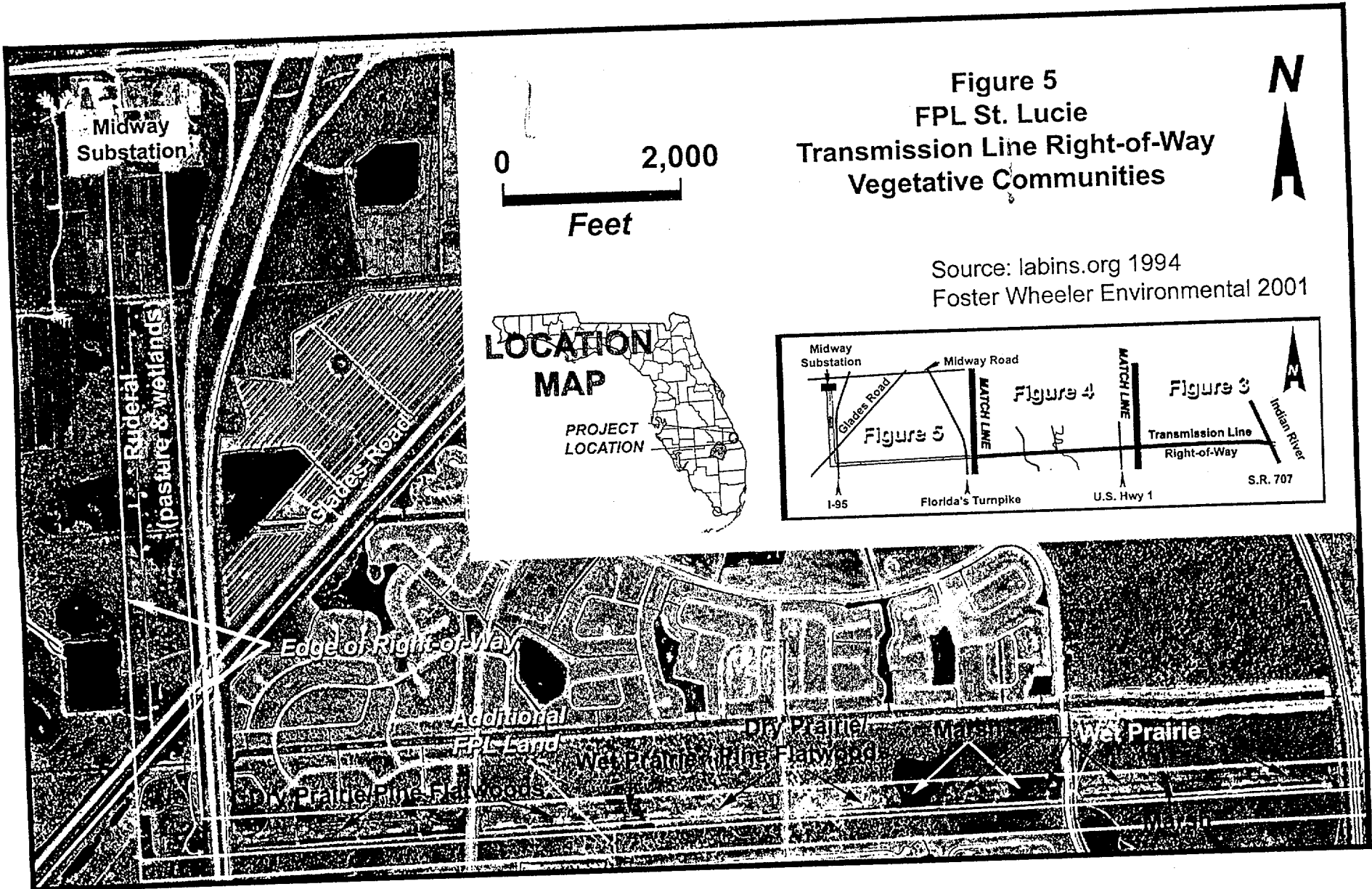


TABLE 1 - FPL ST. LUCIE POWER PLANT SITE
THREATENED AND ENDANGERED SPECIES

SPECIES	STATUS	PREFERRED HABITAT	SITE STATUS
MAMMALS			
Sherman's Fox Squirrel <i>Sciurus niger shermani</i>	FL-SSC	Mesic flatwoods' sandhills, scrubby flatwoods, upland pine forest, dome swamps; also ruderal	Marginal habitat present; species not observed.
BIRDS			
Roseate Spoonbill <i>Ajaia ajaja</i>	FL-SSC	Floodplains, swales, intertidal swamps and marshes; freshwater and estuarine wetlands	Reported (3)
Piping Plover <i>Charadrius melodus</i>	F-T; FI-T	Beach dune	Marginal habitat present; species not observed.
Little Blue Heron <i>Egretta caerulea</i>	FL-SSC	Shallow aquatic habitats and wetlands. In Florida, they range from the panhandle south to the Keys. Cypress (<i>Taxodium distichum</i>), southern willow (<i>Salix caroliniana</i>) and cabbage Palm (<i>Sabal Palmetto</i>) are among the more common trees used during the breeding season. These tree species occur in habitats ranging from fresh to saltwater. Little blue herons prefer to forage in freshwater habitats for the crustaceans, insects, small fish, frogs and lizards which form the major portion of their diet (6).	Observed in stormwater retention pond
Reddish Egret <i>Egretta rufescens</i>	FL-SSC	Marine and estuarine tidal swamps	Habitat present; species not observed.
Snowy Egret <i>Egretta thula</i>	FL-SSC	Shallow aquatic habitats and wetlands. It is found from Maine to Florida along the Atlantic Coast and to Texas along the Gulf. This egret nests in both inland and coastal colonies throughout peninsular Florida. Plant species typically chosen for nest sites include willow, buttonbush, and wax myrtle. Small fish and various invertebrates are among the more common food items.	Reported (3)
Tricolored Heron <i>Egretta tricolor</i>	FL-SSC	Shallow aquatic habitats and wetlands and can be found along the entire Atlantic and Gulf coasts to include the Caribbean and West Indies to northern Brazil. Willow, buttonbush, marsh elder, and wax myrtle are among the more common woody	Reported (3)

SPECIES	STATUS	PREFERRED HABITAT	SITE STATUS
		species used for nesting. Nesting may begin as early as February or as late as July (6). Small fish are the primary food source while a variety of invertebrates are also consumed to a lesser extent.	
White Ibis <i>Eudocimus albus</i>	FL-SSC	Freshwater and estuarine wetlands, wet grasslands	Observed in stormwater retention pond area and mangroves near Gate G
Peregrine Falcon <i>Falco peregrinus</i>	FL-E	Estuarine and freshwater marshes and open water habitats	Reported (3)
Southeastern Kestrel <i>Falco sparverius paulus</i>	FL-T	Open woodland and an open habitat bird preferring open Pine forest and clearings with dead trees. However, it can also be found along the open edges of river bottoms, coastal regions, suburban areas, and even in large cities. Large insects are the primary food item with small rodents and reptiles also being important prey items.	Observed near intake canal
American Oystercatcher <i>Haematopus palliatus</i>	FI-SSC	Beach dune; marine and estuarine rock outcrops	Reported (4); nests along intake canal banks
Bald Eagle <i>Haliaeetus leucocephalus</i>	F-E* FL-T	Large open areas with aquatic Feeding habitat nearby; nesting in tall trees or snags. (5) Occurs throughout the state. Nesting usually occurs near feeding areas along shorelines and over shallow water bodies. Nests are solitary and are usually in tall pine or cypress trees often with good visibility over the surrounding countryside. Although fish are this species' primary food source, other vertebrate prey may be captured. (6)	Habitat present; species not observed.
Wood Stork <i>Mycteria americana</i>	F-E FL-E	Shallow aquatic habitats and wetlands. Nesting and feeding occur in freshwater wetlands and brackish mangrove swamps. Food for this species includes small fish usually obtained from shallow water. Inland nesting is frequently in large cypress trees while mangrove islands provide nesting habitat in estuarine and marine environments (6). Shallow open water and isolated marsh lands represent potential feeding habitat for the wood stork, particularly under low water conditions when fish are concentrated. This habitat exists along ditches.	Reported (3)
Brown Pelican <i>Pelecanus occidentalis</i>	FL-SSC	Open marine and estuarine aquatic environments	Observed near stormwater pond and intake canal

SPECIES	STATUS	PREFERRED HABITAT	SITE STATUS
Burrowing Owl <i>Speotyto cunicularia</i>	FL-SSC	Sandhill, dry prairie, pastures and grasslands; ruderal	Habitat not present; species not observed.
Osprey <i>Pandion haliaetus</i>		Occurs at and near rivers, lakes and wetlands throughout the state. The population in the Keys is listed as a species of special concern. The osprey nests on tall structures near feeding areas or near the ground on islands with low predator populations (6). The species feeds upon fish.	Observed near stormwater pond and intake canal, and Gate G area
Black Skimmer <i>Rynchops niger</i>	FL-SSC	Feeds in open, generally shallow waters	Reported (3,4); nests on intake canal banks and the training building roof
Least Tern <i>Sterna antillarum</i>	FL-T	Open beaches, barren areas with pebbles or shell material.	Reported nesting on building rooftops and open sand and pebble areas (3)
REPTILES			
American Alligator <i>Alligator mississippiensis</i>	FL-SSC F-T(S/A)	Aquatic habitats and wetlands. federally classified as threatened through its similarity in appearance to the American crocodile (<i>Crocodylus acutus</i>), and a species of special concern in Florida, has populations existing throughout the state and over much of the southeastern United States coastal plain. This species is found in nearly all wetland and aquatic habitat types in Florida. Food for the alligator includes aquatic and wetland vertebrates and larger invertebrates (McDiarmid, 1978).	Habitat present; species not observed.
Atlantic Loggerhead Turtle <i>Caretta caretta</i>	FL-T F-T	Nests prepared in upper beach and lower dune areas	Reported (3)
Atlantic Green Turtle <i>Chelonia mydas mydas</i>	FL-E F-E	Nests prepared in upper beach and lower dune areas	Reported (3)
Leatherback Turtle <i>Dermochelys coriacea</i>	FL-E F-E	Nests prepared in upper beach and lower dune areas,	Reported (3)
Eastern Indigo Snake <i>Drymarchon corais couperi</i>	F-T FL-T	Upland and marginal wetland habitats. generally found in Florida and southeastern Georgia. Species habitat includes dry sandy areas, as well as moist vegetation communities. The indigo snake frequently uses gopher tortoise burrows as shelter in xeric habitats, in part to avoid desiccation. Food for this	Reported (3)

SPECIES	STATUS	PREFERRED HABITAT	SITE STATUS
		species includes a wide range of small upland vertebrates including other snakes (McDiarmid, 1978).	
Gopher Tortoise <i>Gopherus polyphemus</i>	FL-SSC	Open to partially open upland habitat. Species habitat includes dry, well drained soils covered with a variety of upland Pine and oak species, as well as old field vegetation communities. Vegetation cover is usually a habitat requirement. Gopher tortoises feed on Grasses, leaves, and other herbaceous matter. A variety of other species also use these burrows for shelter includes: eastern indigo snake (<i>Drymarchon corais couperi</i>) and gopher frog. Areas with flat topography and a high wet season water table would limit burrowing habitat.	Many burrows observed along intake gate
AMPHIBIANS - None			
PLANTS			
Barbed Wire Cactus <i>Acanthocereus (Cereus) pentagonus</i>	FL-T	Maritime hammocks, beaches	Habitat present; species not observed.
Sea Lavender <i>Argusia gnaphalodes</i>	FL-E	Beach dune; coastal strand; coastal rock barren	Habitat present; species not observed.
Curtiss' Milkweed <i>Asclepias curtissii</i>	FL-E	Terrestrial; scrub; scrubby flatwoods; xeric hammocks	Habitat present; species not observed.
Four-Petal Pawpaw <i>Asimina tetramera</i>	F-E; FL-E	Scrub	Habitat not present
Yellow Nickerbean <i>Caesalpinia major</i>	FL-E	Coastal sands, hammocks	Habitat present; species not observed.
Sand Dune Spurge <i>Chamaesyce cumulicola</i>	FL-E	Open areas in scrub, beach dune, maritime hammock, coastal strand	Habitat present; species not observed.
Satinleaf <i>Chrysophyllum oliviforme</i>	FL-T	Hammocks, thickets, pinelands	Habitat present; species not observed.
Large-flowered rosemary <i>Conradina grandiflora</i>	FL-T	Scrub, coastal strand in disturbed areas, scrubby flatwoods	Habitat present; species not observed.
Guina Plum <i>Drypetes lateriflora</i>	FL-T	Hammocks	Habitat present; species not observed.

SPECIES	STATUS	PREFERRED HABITAT	SITE STATUS
Dollar Orchid <i>Encyclia boothiana</i>	FL-E	Low limbs of trees in hammocks or thickets, marine tidal swamp; epiphytic	Habitat present; species not observed.
Black Torch <i>Erithalis fruticosa</i>	FL-T	Sand dunes, coastal hammocks	Habitat present; species not observed.
Fragrant Prickly Apple <i>Harrisia (Cereus) eriophora</i>	F-E, FL-E	Coastal hammocks, scrubby flatwoods	Habitat present; species not observed.
Prickly Applecactus <i>Harrisia (Cereus) gracilis</i> var. <i>simpsonii</i>	FL-E	Shell mounds, rockland hammocks, maritime hammocks	Habitat present; species not observed.
Beach Clustervine <i>Jacquemontia reclinata</i>	F-E; FL-E	Openings in coastal strands and beach dunes	Habitat present; species not observed.
Pineland Lantana <i>Lantana depressa</i>	FL-E	Pine rockland, coastal strand, coastal grassland, scrub, hammocks, beach berm, marl prairies	Habitat present; species not observed.
Simpson's Stopper <i>Myrcianthes fragrans</i>	FL-T	Hammocks	Habitat present; species not observed.
Burrowing four-o'clock <i>Okenia hypogaea</i>	FL-E	Beach, dune, coastal strand	Reported (4)
Hand Fern <i>Ophioglossum palmatum</i>	FL-E	Hammocks, epiphytic on cabbage palm	Marginal habitat present; species not observed.
Common Prickly Pear <i>Opuntia stricta</i>	FL-T	Shell mounds, coastal areas	Observed
Pepper (unnamed) <i>Peperomia humilis</i>	FL-E	Maritime hammock, upland hardwood forest, slough, hydric hammock; humus over calcareous substrate	Habitat present; species not observed.
Blackbead <i>Pithecellobium keyense</i>	FL-T	Hammocks, pinelands, sand dunes	Habitat present; species not observed.

SPECIES	STATUS	PREFERRED HABITAT	SITE STATUS
Widespread Polypody <i>Polypodium (Pecluma) dispersum</i>	FL-E	Hammocks	Habitat present; species not observed.
Plume Polypody <i>Polypodium (Pecluma) plumula</i>	FL-E	Hammocks	Habitat present; species not observed.
Swamp Plume Polypody <i>Polypodium (Pecluma) ptilodon</i>	FL-E	Hammocks, swamps	Habitat present; species not observed.
Night-flowering wild petunia <i>Remirea maritima</i>	FL-E	Beach dune, coastal dunes	Habitat present; species not observed.
Inkberry <i>Scaevola plumieri</i>	FL-T	Beaches, coastal strand	Observed
False Buttonweed <i>Spermacoce terminalis</i>	FL-T	Pinelands, coastal areas	Habitat present; species not observed.
Hoary Pea <i>Tephrosia angustissima</i> var. <i>curtissii</i>	FL-E	Coastal strand, beach dunes, pine rockland	Habitat present; species not observed.
Twisted and Banded Air Plant <i>Tillandsia flexuosa</i>	FL-T	Xeric hammock, scrub, shell mound, coastal berm, marine and estuarine tidal swamp; epiphytic	Habitat present; species not observed.
Coastal Vervain <i>Verbena (Glandularia) maritima</i>	FL-E	Coastal dune, coastal strand, pine rocklands	Reported (2)

REFERENCES:

- Coile, Nancy C. 2000. Notes on Florida's Regulated Plant Index (Rule 5B-40), Botany Contribution No. 38 3rd edition. Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Gainesville, FL.
- FPL, 1979 Operating License Environmental Report – Unit 2.
- FPL, (No Date) Turtle Beach Nature Trail Visitor's Guide
- FPL Staff communications
- Murphy, T.M. 1984. Southeastern states bald eagle recovery plan. U.S. Fish and Wildlife Service Southeast Region Atlanta, GA. 63pp.
- Kale, 1978
- McDiarmid, 1978

TABLE 2: FPL ST. LUCIE TRANSMISSION LINE RIGHT-OF-WAY
THREATENED AND ENDANGERED SPECIES

SPECIES	STATUS	PREFERRED HABITAT	SITE STATUS
MAMMALS			
Florida Panther <i>Felis concolor coryi</i>	F-E FL -E	Large undeveloped tracts of land with considerable shrub and middlestory cover. In Florida, this species is generally found in large undeveloped lands in the central parts of the state southward (Whitaker, 1980).	Marginal habitat present; species not observed.
Florida Mouse <i>Peromyscus floridanus</i>	FL-SSC	Scrub, sandhills, scrubby flatwoods	Habitat present; species not observed.
Sherman's Fox Squirrel <i>Sciurus niger shermani</i>	FL-SSC	Mesic flatwoods' sandhills, scrubby flatwoods, upland pine forest, dome swamps; also ruderal	Habitat present; species not observed.
BIRDS			
Roseate Spoonbill <i>Ajaia ajaja</i>	FL-SSC	Floodplains, swales, intertidal swamps and marshes; freshwater and estuarine wetlands	Habitat present; species not observed.
Florida Grasshopper Sparrow <i>Ammodramus savannarum floridanus</i>	F-E FL-E	Dry and wet prairies, short palmetto prairies	Habitat present; species not observed.
Florida Scrub Jay <i>Aphelocoma coerulescens coerulescens</i>	F-T FL-T	Scrub and scrubby flatwoods	Habitat present; species not observed.
Limpkin <i>Aramus guarauna</i>	FL-SSC	Marshes, lakes, slow moving streams and can be found throughout peninsular Florida where they favor slow-moving freshwater Rivers and streams, marshes and lake shores. (Kale, 1978).	Habitat present; species not observed.
Little Blue Heron <i>Egretta caerulea</i>	FL-SSC	Shallow aquatic habitats and wetlands. In Florida, they range from the panhandle south to the Keys. Cypress (<i>Taxodium distichum</i>), southern willow (<i>Salix caroliniana</i>) and cabbage Palm (<i>Sabal Palmetto</i>) are among the more common trees used during	Habitat present; species not observed.

SPECIES	STATUS	PREFERRED HABITAT	SITE STATUS
	1	the breeding season. These tree species occur in habitats ranging from fresh to saltwater. Little blue herons prefer to forage in freshwater habitats for the crustaceans, insects, small fish, frogs and lizards which form the major portion of their diet (Kale, 1978).	
Snowy Egret <i>Egretta thula</i>	FL-SSC	Shallow aquatic habitats and wetlands. It is found from Maine to Florida along the Atlantic Coast and to Texas along the Gulf. This egret nests in both inland and coastal colonies throughout peninsular Florida. Plant species typically chosen for nest sites include willow, buttonbush, and wax myrtle. Small fish and various invertebrates are among the more common food items.	Habitat present; species not observed.
Tricolored Heron <i>Egretta tricolor</i>	FL-SSC	Shallow aquatic habitats and wetlands and can be found along the entire Atlantic and Gulf coasts to include the Caribbean and West Indies to northern Brazil. Willow, buttonbush, marsh elder, and wax myrtle are among the more common woody species used for nesting. Nesting may begin as early as February or as late as July (Kale, 1978). Small fish are the primary food source while a variety of invertebrates are also consumed to a lesser extent.	Habitat present; species not observed.
White Ibis <i>Eudocimus albus</i>	FL-SSC	Freshwater and estuarine wetlands, wet grasslands	Species observed in wetlands within a pasture.
Peregrine Falcon <i>Falco peregrinus</i>	FL-E	Estuarine and freshwater marshes and open water habitats	Habitat present; species not observed.
North American Kestrel <i>Falco sparverius paulus</i>	FL-T	Open woodland and an open habitat bird preferring open Pine forest and clearings with dead trees. However, it can also be found along the open edges of river bottoms, coastal regions, suburban areas, and even in large cities. Large insects are the primary food item with small rodents and reptiles also being important prey items.	Species observed within the ruderal area east of US Highway 1.
Florida Sandhill Crane <i>Grus canadensis pratensis</i>	FL-T	Preferred habitat includes wet prairies, marshy lake margins, and low-lying improved pastures. Nesting activity is related to water level with eggs hatching normally in March and April. Sandhill cranes feed on a wide range of plants. They consume various grains, herbaceous foliage, underground stems, tubers, and roots. Invertebrates such as grasshoppers, beetles, caterpillars and snails along with certain amphibians and mammals make up the bulk of the animal portion of its diet (Kale, 1978).	Habitat present; species not observed.

SPECIES	STATUS	PREFERRED HABITAT	SITE STATUS
Bald Eagle <i>Haliaeetus leucocephalus</i>	F-E* FL-T	Large open areas with aquatic Feeding habitat nearby; nesting in tall trees or snags. (Murphy, T.M. 1984) Occurs throughout the state. Nesting usually occurs near feeding areas along shorelines and over shallow water bodies. Nests are solitary and are usually in tall pine or cypress trees often with good visibility over the surrounding countryside. Although fish are this species' primary food source, other vertebrate prey may be captured. (Kale, 1978)	Habitat present; species not observed.
Wood Stork <i>Mycteria americana</i>	F-E FL-E	Shallow aquatic habitats and wetlands. Nesting and feeding occur in freshwater wetlands and brackish mangrove swamps. Food for this species includes small fish usually obtained from shallow water. Inland nesting is frequently in large cypress trees while mangrove islands provide nesting habitat in estuarine and marine environments (Kale, 1978). Shallow open water and isolated marsh lands represent potential feeding habitat for the wood stork, particularly under low water conditions when fish are concentrated. This habitat exists along ditches.	Habitat present; species not observed.
Red-cockaded Woodpecker <i>Picoides borealis</i>	F-E* FL-T	Mature Pine stands over 125 acres with trees in excess of 30 to 60 years of age; minimal middlestory present. (Lennartz and Henry, 1985). In Florida, this bird is found throughout most of the state south to the Homestead area. Historically, red-cockaded woodpecker cavities have been found in a variety of Pine species. Trees chosen usually are advanced in age and infected by a fungus disease that softens its heartwood. Studies from different parts of the south found that the average cavity tree age ranged from 62 to 149 years with cavities rarely found in trees as young as 30 to 40 years (Hooper et al., 1980).	Habitat not present; species not observed.
Audubon's Crested Caracara <i>Polyborus plancus audubonii</i>	F-T FL-T	Open pasturelands, nests in scattered cabbage palms present in open grasslands	Marginal habitat present; species not observed.
Snail Kite <i>Rostrhamus sociabilis plumbeus</i>	F-E; FL-E	Marshes and swales	Habitat present; species not observed.
Burrowing Owl <i>Speotyto cunicularia</i>	FL-SSC	Sandhill, dry prairie, pastures and grasslands; ruderal	Habitat present; species not observed.

SPECIES	STATUS	PREFERRED HABITAT	SITE STATUS
Osprey <i>Pandion haliaetus</i>	See Text	Occurs at and near rivers, lakes and wetlands throughout the state. The population in the Keys is listed as a species of special concern. The osprey nests on tall structures near feeding areas or near the ground on islands with low predator populations (Kale, 1978). The species feeds upon fish.	Species observed near St. Lucie River.
REPTILES			
American Alligator <i>Alligator mississippiensis</i>	FL-SSC F-T(S/A)	Aquatic habitats and wetlands. federally classified as threatened through its similarity in appearance to the American crocodile (<i>Crocodylus acutus</i>), and a species of special concern in Florida, has populations existing throughout the state and over much of the southeastern United States coastal plain. This species is found in nearly all wetland and aquatic habitat types in Florida. Food for the alligator includes aquatic and wetland vertebrates and larger invertebrates (McDiarmid, 1978).	Habitat present; species not observed.
Eastern Indigo Snake <i>Drymarchon corais couperi</i>	F-T FL-T	Upland and marginal wetland habitats. Generally found in Florida and southeastern Georgia. Species habitat includes dry sandy areas, as well as moist vegetation communities. The indigo snake frequently uses gopher tortoise burrows as shelter in xeric habitats, in part to avoid dessication. Food for this species includes a wide range of small upland vertebrates including other snakes (McDiarmid, 1978).	Habitat present; species not observed.
Gopher Tortoise <i>Gopherus polyphemus</i>	FL-SSC	Open to partially open upland habitat. Species habitat includes dry, well drained soils covered with a variety of upland Pine and oak species, as well as old field vegetation communities. Vegetation cover is usually a habitat requirement. Gopher tortoises feed on Grasses, leaves, and other herbaceous matter. A variety of other species also use these burrows for shelter includes: eastern indigo snake (<i>Drymarchon corais couperi</i>) and gopher frog.	Species observed in Sand Pine Scrub area west of the FEC railroad.
Florida Pine Snake <i>Pituophis melanoleucus mugitus</i>	FL-SSC	Upland sandy forest habitat (Ashton and Ashton 1988). Found throughout most of northern and eastern Florida. It occupies sandy habitats such as longleaf Pine and turkey oak communities. The Pine snake feeds upon small mammals, birds, and other small vertebrates (Ashton and Ashton, 1988). Habitat loss is the primary reason for its population decline and listing as a species of special concern.	Marginal habitat present; species not observed.

SPECIES	STATUS	PREFERRED HABITAT	SITE STATUS
AMPHIBIANS			
Florida Gopher Frog <i>Rana capito aesopus</i>	FL-SSC	Burrows of other animals in dry habitats (Ashton and Ashton, 1988). Recorded throughout most of Florida. Its most common habitat association is in and around gopher tortoise burrows. The preferred habitat is dry but near enough to grassy ponds for breeding. The gopher frog feeds upon insects and toads.	Habitat present; species not observed.
PLANTS			
Barbed Wire Cactus <i>Acanthocereus (Cereus) pentagonus</i>	FL-T	Maritime hammocks, beaches	Marginal habitat present; species not observed.
Sea Lavender <i>Argusia gnaphalodes</i>	FL-E	Beach dune; coastal strand; coastal rock barren	Marginal habitat present; species not observed.
Curtiss' Milkweed <i>Asclepias curtissii</i>	FL-E	Terrestrial; scrub; scrubby flatwoods; xeric hammocks	Habitat present; species not observed.
Four-Petal Pawpaw <i>Asimina tetramera</i>	F-E; FL-E	Scrub	Habitat present; species not observed.
Yellow Nickerbean <i>Caesalpinia major</i>	FL-E	Coastal sands, hammocks	Habitat present; species not observed.
Many-flowered Grass Pink <i>Calopogon multiflorus</i>	FL-E	Damp pinelands and meadows (fire maintained)	Habitat present; species not observed.
Sand Dune Spurge <i>Chamaesyce cumulicola</i>	FL-E	Open areas in scrub, beach dune, maritime hammock, coastal strand	Habitat present; species not observed.
Satinleaf <i>Chrysophyllum oliviforme</i>	FL-T	Hammocks, thickets, pinelands	Species observed in disturbed area west of SR 707.
Perforate Reindeer Lichen <i>Cladonia perforata</i>	F-E; FL-E	Scrub, mesic flatwoods; found in full sun associated with rosemary sandhills	Habitat present; species not observed.
Piedmont Jointgrass <i>Coelorachis tuberculosa</i>	FL-T	Herbaceous wetlands, margins of ponds	Habitat present; species not observed.

SPECIES	STATUS	PREFERRED HABITAT	SITE STATUS
Large-flowered rosemary <i>Conradina grandiflora</i>	FL-T	Scrub, coastal strand in disturbed areas, scrubby flatwoods	Species observed in scrub area located west of the FEC railroad.
Lakela's Mint <i>Dicerandra immaculata</i>	F-E ; FL-E	Disturbed dry sandhills, yellow sand in sand pine scrub	Habitat present; species not observed.
Guina Plum <i>Drypetes lateriflora</i>	FL-T	Hammocks	Habitat present; species not observed.
Dollar Orchid <i>Encyclia boothiana</i>	FL-E	Low limbs of trees in hammocks or thickets, marine tidal swamp; epiphytic	Marginal habitat present; species not observed.
Black Torch <i>Erithalis fruticosa</i>	FL-T	Sand dunes, coastal hammocks	Marginal habitat present; species not observed.
Non-crested Coco <i>Eulophia (Pteroglossaspis) ecristata</i>	FL-T	Pine rockland, sand pine scrub, sandhills	Habitat present; species not observed.
Fragrant Prickly Apple <i>Harrisia (Cereus) eriophora</i>	F-E, FL-E	Coastal hammocks, scrubby flatwoods	Habitat present; species not observed.
Prickly Applecactus <i>Harrisia (Cereus) gracilis var. simpsonii</i>	FL-E	Shell mounds, rockland hammocks, maritime hammocks.	Habitat present; species not observed.
Beach Clustervine <i>Jacquemontia reclinata</i>	F-E; FL-E	Openings in coastal strands and beach dunes	Marginal habitat present; species not observed.
Pineland Lantana <i>Lantana depressa</i>	FL-E	Pine rockland, coastal strand, coastal grassland, scrub, hammocks, beach berm, marl prairies	Habitat present; species not observed.
Nodding Pinweed <i>Lechea cernua</i>	FL-T	Sand scrub openings	Habitat present; species not observed.
Pine Pinweed <i>Lechea divaricata</i>	FL-E	Scrub, scrubby flatwoods	Habitat present; species not observed.
Catesby's Lily <i>Lilium catesbaei</i>	FL-T	Wet prairies, hydric pine flatwoods, bogs	Habitat present; species not observed.
South Florida Flax <i>Linum carteri var. smallii</i>	FL-E	Mowed pine rockland, marl prairies, roadsides	Habitat present; species not observed.

SPECIES	STATUS	PREFERRED HABITAT	SITE STATUS
Simpson's Stopper <i>Myrcianthes fragrans</i>	FL-T	Hammocks	Habitat present; species not observed.
Celestial Lily <i>Nemastylis floridana</i>	FL-E	Clearings in swamps, marshes and wet pine flatwoods	Habitat present; species not observed.
Giant Sword Fern <i>Nephrolepis biserrata</i>	FL-T	Swamps, mesic hammocks, roadside, clearings	Habitat present; species not observed.
Burrowing four-o'clock <i>Okenia hypogaea</i>	FL-E	Beach, dune, coastal strand	Marginal habitat present; species not observed.
Dancing Lady Orchid <i>Oncidium bahamensis</i>	FL-E	Scrub; Epiphyte at base of rosemary (<i>Ceratiola ericoides</i>)	Habitat present; species not observed.
Hand Fern <i>Ophioglossum palmatum</i>	FL-E	Hammocks, epiphytic on cabbage palm	Habitat present; species not observed.
Common Prickly Pear <i>Opuntia stricta</i>	FL-T	Shell mounds, coastal areas	Habitat present; species not observed.
Pepper (unnamed) <i>Peperomia humilis</i>	FL-E	Maritime hammock, upland hardwood forest, slough, hydric hammock; humus over calcareous substrate	Marginal habitat present; species not observed.
Blue Butterwort <i>Pinguicula caerulea</i>	FL-T	Pine flatwoods, ditches, roadsides	Habitat present; species not observed.
Yellow Butterwort <i>Pinguicula lutea</i>	FL-T	Pine flatwoods, ditches, roadsides	Species observed in pine flatwoods near Savannas State Preserve.
Blackbead <i>Pithecellobium keyense</i>	FL-T	Hammocks, pinelands, sand dunes	Habitat present; species not observed.
Snowy Orchid <i>Platanthera nivea</i>	FL-T	Bogs, wet pine savannas and flatwoods, wet prairies	Habitat present; species not observed.
Rose Pogonia <i>Pogonia ophioglossoides</i>	FL-T	Swamps, pine savannas, prairies, flatwoods	Habitat present; species not observed.
Tiny Milkwort <i>Polygala smallii</i>	F-E; FL-E	Pine rockland, sandhill, scrubby flatwoods; found in sandy openings and disturbed areas, rosemary scrub	Habitat present; species not observed.

SPECIES	STATUS	PREFERRED HABITAT	SITE STATUS
Widespread Polypody <i>Polypodium (Pecluma) dispersum</i>	FL-E	Hammocks	Marginal habitat present; species not observed.
Plume Polypody <i>Polypodium (Pecluma) plumula</i>	FL-E	Hammocks	Marginal habitat present; species not observed.
Swamp Plume Polypody <i>Polypodium (Pecluma) ptilodon</i>	FL-E	Hammocks, swamps	Marginal habitat present; species not observed.
Pale-flowered Polystachya <i>Polystachya concreta</i>	FL-E	Strand swamps	Marginal habitat present; species not observed.
Bahama Ladder Brake <i>Pteris bahamensis</i>	FL-T	Pine rockland, edges of hammocks	Marginal habitat present; species not observed.
Inkberry <i>Scaevola plumieri</i>	FL-T	Beaches, coastal strand	Marginal habitat present; species not observed.
Scrub Bluestem <i>Schizachyrium niveum</i>	FL-E	Rosemary scrub	Marginal habitat present; species not observed.
False Buttonweed <i>Spermacoce terminalis</i>	FL-T	Pinelands, coastal areas	Habitat present; species not observed.
Lace-lipped Ladies' Tresses <i>Spiranthes lacinata</i>	FL-T	Swamps, marshes, flatwoods	Habitat present; species not observed.
Little Pearl-twist <i>Spiranthes tuberosa</i>	FL-T	Open pine-palmetto woods, pine flatwoods	Habitat present; species not observed.
Leafless Beaked orchid <i>Stenorrhynchos lanceolatus</i>	FL-T	Open pastures, roadside, wet pine flatwoods, sandhills	Habitat present; species not observed.
Hoary Pea <i>Tephrosia angustissima var. curtissii</i>	FL-E	Coastal strand, beach dunes, pine rockland	Marginal habitat present; species not observed.
Inflated Wild Pine <i>Tillandsia balbisiana</i>	FL-T	Hammocks, scrub, pineland, cypress swamp; epiphytic	Habitat present; species not observed.
Twisted and Banded Air Plant <i>Tillandsia flexuosa</i>	FL-T	Xeric hammock, scrub, shell mound, coastal berm, marine and estuarine tidal swamp; epiphytic	Habitat present; species not observed.

SPECIES	STATUS	PREFERRED HABITAT	SITE STATUS
Soft Leaved Wild Pine <i>Tillandsia valenzuelana</i>	FL-T	Hammocks, swamp; epiphytic	Marginal habitat present; species not observed.
Unscented Vanilla <i>Vanilla mexicana</i>	FL-E	Rockland, maritime, hydric hammock, bayhead; epiphytic	Marginal habitat present; species not observed.
Coastal Vervain <i>Verbena (Glandularia) maritima</i>	FL-E	Coastal dune, coastal strand, pine rocklands	Marginal habitat present; species not observed.
Tampa Vervain <i>Verbena (Glandularia) tampensis</i>	FL-E	Mesic flatwoods and hydric hammocks; edges and clearings, sandy soils, disturbed sites	Habitat present; species not observed.
Simpson's Zephyr Lily <i>Zephyranthes simpsonii</i>	FL-T	Dome swamps, wet flatwoods, wet prairies; found in ditches and wet pastures often in burned over areas	Habitat present; species not observed.

APPENDIX A **VERTEBRATES OBSERVED DURING SURVEYS**

BIRD SPECIES	POWER PLANT SITE	TRANSMISSION LINE
Double-crested Cormorant	X	
Brown Pelican	X	
Pied-billed Grebe	X	
Little Blue Heron	X	
Cattle Egret	X	
Great Egret	X	X
Great Blue Heron	X	X
Yellow-crowned Night Heron	X	
White Ibis	X	X
Mottled Duck	X	
Common Moorhen	X	
American Coot	X	
Killdeer	X	
Spotted Sandpiper	X	
Herring Gull	X	
Black-backed Gull	X	
Laughing Gull	X	
Ring-billed Gull	X	
Royal Tern	X	
Turkey Vulture	X	X
Black Vulture	X	
Osprey	X	X
Northern Harrier		X
American Kestrel	X	X
Eastern Belted Kingfisher	X	
Red-bellied Woodpecker	x	X
Eastern Phoebe	X	X
Tree Swallow		X
Blue Jay		X
American Robin		X
Gray Catbird		X
Northern Mockingbird		X
European Starling		X
Loggerhead Shrike		X
Yellow-throated Warbler	X	
Palm Warbler	X	X
Common Yellowthroat	X	
Northern Cardinal	X	
Eastern Meadowlark		X
Common Grackle		X
Boat-tailed Grackle		X
Mammal Species		
Raccoon	X	X
Eastern Cottontail Rabbit		X
Marsh Rabbit	X	
Deer		X
Reptile Species		
Green Anole	X	
Gopher Tortoise	X	X