# ENVIRONMENTAL ASSESSMENT

*for the*

## *J.W. Corbett Wildlife Management Area Proposed Land Transfer*

*Palm Beach and Martin Counties, Florida*

**JULY 2005**

*Prepared For:*

U.S. FISH & WILDLIFE SERVICE

DEPARTMENT OF THE INTERIOR

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# LIST OF ACRONYMS

| | |
|---|---|
| ADA | Application for Development Approval |
| AST | Aboveground Storage Tank |
| ATV | All Terrain Vehicle |
| BFE | Base Flood Elevation |
| BMP | Best Management Practice |
| the County | Palm Beach County |
| CERCLIS | Comprehensive Environmental Response, Compensation, and Liability and Information System List |
| CERP | Comprehensive Everglades Restoration Plan |
| CFA | Core Foraging Area |
| DEP | Florida Department of Environmental Protection |
| DERM | Department of Environmental Resources Management |
| DO | Development Order |
| DRI | Development of Regional Impact |
| EA | Environmental Assessment |
| EIS | Environmental Impact Statement |
| ELAPP | Environmental Lands Acquisition and Protection Program |
| EPA | Environmental Protection Agency |
| ESA | Endangered Species Act of 1973 |
| FAA | Federal Aviation Administration |
| FAC | Florida Administrative Code |
| FDA | U.S. Food and Drug Administration |
| FDHR | Florida Department of Historical Resources |
| FDOT | Florida Department of Transportation |
| FEMA | Federal Emergency Management Agency |
| FHWA | Federal Highway Administration |
| FIRM | Flood Insurance Rate Map |
| FNAI | Florida Natural Areas Inventory |
| FWC | Florida Fish and Wildlife Conservation Commission |
| FINDS | Facility Index System List |
| FLUCFCS | Florida Land Use, Cover, and Forms Classification System |
| FP&L | Florida Power and Light |
| FY | Fiscal Year |
| GIS | Geographic Information System |
| HSNA | Hungryland Slough Natural Area |
| JWCWMA | J.W. Corbett Wildlife Management Area |
| LOS | Level of Service |
| LRTP | Long Range Transportation Plan |
| MPO | Metropolitan Planning Organization |
| N/A | Not Applicable |
| NAC | Noise Abatement Criteria |
| NEPA | National Environmental Policy Act of 1969 |

## LIST OF ACRONYMS
## (CONTINUED)

| | |
|---|---|
| NMFS | National Marine Fisheries Service |
| NOPC | Notice of Proposed Change |
| NPDES | National Pollutant Discharge Elimination System |
| NPL | National Priorities List |
| NRHP | National Register of Historic Places |
| P&W/UTC | Pratt & Whitney Aircraft/United Technologies Corporation |
| PBCBRP | Palm Beach County Biotechnology Research Park |
| PD&E | Project Development and Environment |
| PL | Public Law |
| RCRA | Resource Conservation and Recovery Act |
| RCRIS-SQG | Resource Conservation and Recovery Information System |
| ROW | Right-of-Way |
| RPC | Regional Planning Council |
| RTA | Regional Transit Authority |
| the Service | U.S. Fish and Wildlife Service |
| SFWMD | South Florida Water Management District |
| SHPO | State Historic Preservation Officer |
| SQG | Small Quantity Generator |
| SWPPP | Stormwater Pollution Prevention Plan |
| TIP | Transportation Improvement Plan |
| TNM | Traffic Noise Model |
| TSRI | The Scripps Research Institute |
| the State | State of Florida |
| USACE | U.S. Army Corps of Engineers |
| USCG | U.S. Coast Guard |
| USGS | U.S. Geological Survey |
| WSR | Wild and Scenic Rivers |

# *Section 1.0*
# *PURPOSE AND NEED*

## *1.1 INTRODUCTION*

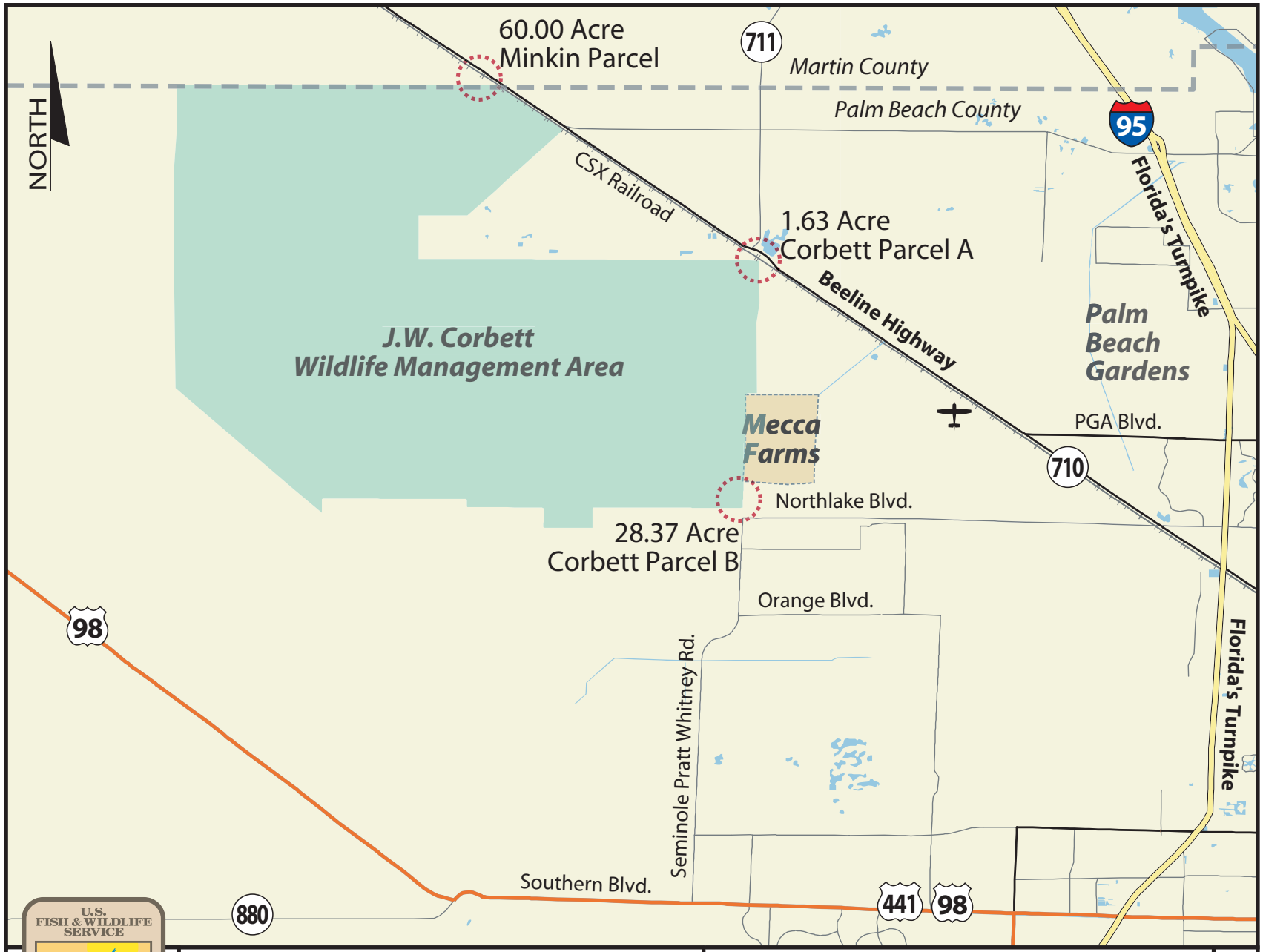
Palm Beach County, Florida (the County), in cooperation with the U.S. Fish and Wildlife Service (the Service, we, our), is preparing an Environmental Assessment (EA) to assess a proposed change in the use of lands within the J.W. Corbett Wildlife Management Area (JWCWMA) in Palm Beach County. Two tracts of JWCWMA land would be used for purposes other than which they were acquired with Federal funds. The proposed action is a transfer of easements, or rights of use, not a fee simple transfer of ownership, which is consistent with the Florida Fish and Wildlife Conservation Commission's (FWC) determination that no surplus lands exist on the JWCWMA. The wildlife-related values of those two tracts would be replaced by adding to the JWCWMA adjacent lands in Martin County, Florida.

This analysis considers the potential direct, indirect, and cumulative impacts associated with the proposed change in use of the JWCWMA lands, as well as the proposed mitigation for those impacts. A vicinity map of the study is depicted on **Figure 1-1**, Project Location Map.

The Service's need is to evaluate and respond to a request that we review for approval, the proposed change in use of the JWCWMA tracts and the replacement of those tracts. The Service's purpose is to maintain and enhance the ecological integrity and wildlife-related values of the JWCWMA and to respond to the request in a manner consistent with our mission, the goals of the Pittman-Robertson Wildlife Restoration Act of 1937, the Employment Act of 1946, the National Environmental Policy Act of 1969 (NEPA), and other statutes, regulations, and Executive Orders.

## *1.2 BACKGROUND*

In a letter dated August 2, 2004, the FWC asked the Service to review for approval the application from the County to the FWC requesting five easement areas on the JWCWMA. The request was made to the Service because acquisition of the JWCWMA was partially funded through the Pittman-Robertson Wildlife Restoration Act (16 US Code [USC] Chapter 669 et seq.). Pittman-Robertson Wildlife Restoration Act funds are generated from excise taxes on certain sporting/hunting equipment and administered through the Service. Accordingly, the Service shares responsibility for authorizing the change in land use and transfer that are to be analyzed.




U.S. FISH & WILDLIFE SERVICE
DEPARTMENT OF THE INTERIOR

**J.W. Corbett Wildlife Management Area**
**Proposed Land Transfer**
**Environmental Assessment**

**PROJECT LOCATION MAP**

Figure 1-1

The Scripps Research Institute (TSRI), based in La Jolla, California, has been considering the development of a new East Coast center for biomedical research, technology development, and drug design. The State of Florida (the State), desirous to cultivate a knowledge-based economy through the creation of a biomedical research institute and research cluster, has worked closely with TSRI on locating a potential facility site. After considering several potential locations statewide, a tract in Palm Beach County large enough to accommodate TSRI and any related businesses and support infrastructure that would be expected to follow has been selected and acquired.

The County purchased a 1,919.23-acre tract formerly called Mecca Farms in the north central portion of Palm Beach County, which entirely comprises the proposed future site of the Palm Beach County Biotechnology Research Park (PBCBRP). The site was chosen over other potential locations most significantly because of its size, amount of developable land, and proximity to the amenities offered in north Palm Beach County. The County has asserted, and the State has reviewed and accepted, that none of the other potential sites met the requirements of TSRI and the Palm Beach County Business Development Board.

It is the intention of the County to develop a sustainable and economically viable project by creating a master development plan that clusters land uses specifically to promote intellectual transfer between the researchers and scientists at TSRI and other related companies located nearby within the PBCBRP. Both the State and the County are providing economic stimulus packages to help establish the initial facility.

In May 2004, the County submitted a Development of Regional Impact (DRI) Application for Development Approval (ADA) for the PBCBRP project site (see **Figure 1-2**) to the State for subsequent approval. TSRI would occupy approximately 102.03 acres of the site.[1] Much of the remaining land would be made available to other biotechnology companies and related high technology industries and support infrastructure. The County also proposes to use a portion of the property to enhance surrounding environmentally-sensitive lands, meet regional water management goals, and to buffer nearby residents.

The County has determined that key infrastructure components of the proposed PBCBRP would occur off the PBCBRP project site. The County, with concurrence from FWC, has determined that there is no other reasonable alternative but to utilize parts of the JWCWMA, which adjoins the proposed PBCBRP, for these key infrastructure components.[2] The infrastructure plans call for the construction of a new Florida Power & Light (FP&L) substation and transmission poles/lines, modifications to the Corbett Canal, and the widening and extension of Seminole Pratt Whitney Road, all which are within the JWCWMA. The FWC also determined that the proposed change in use of the JWCWMA tracts is inconsistent with the purposes for which the tracts were acquired.[3]

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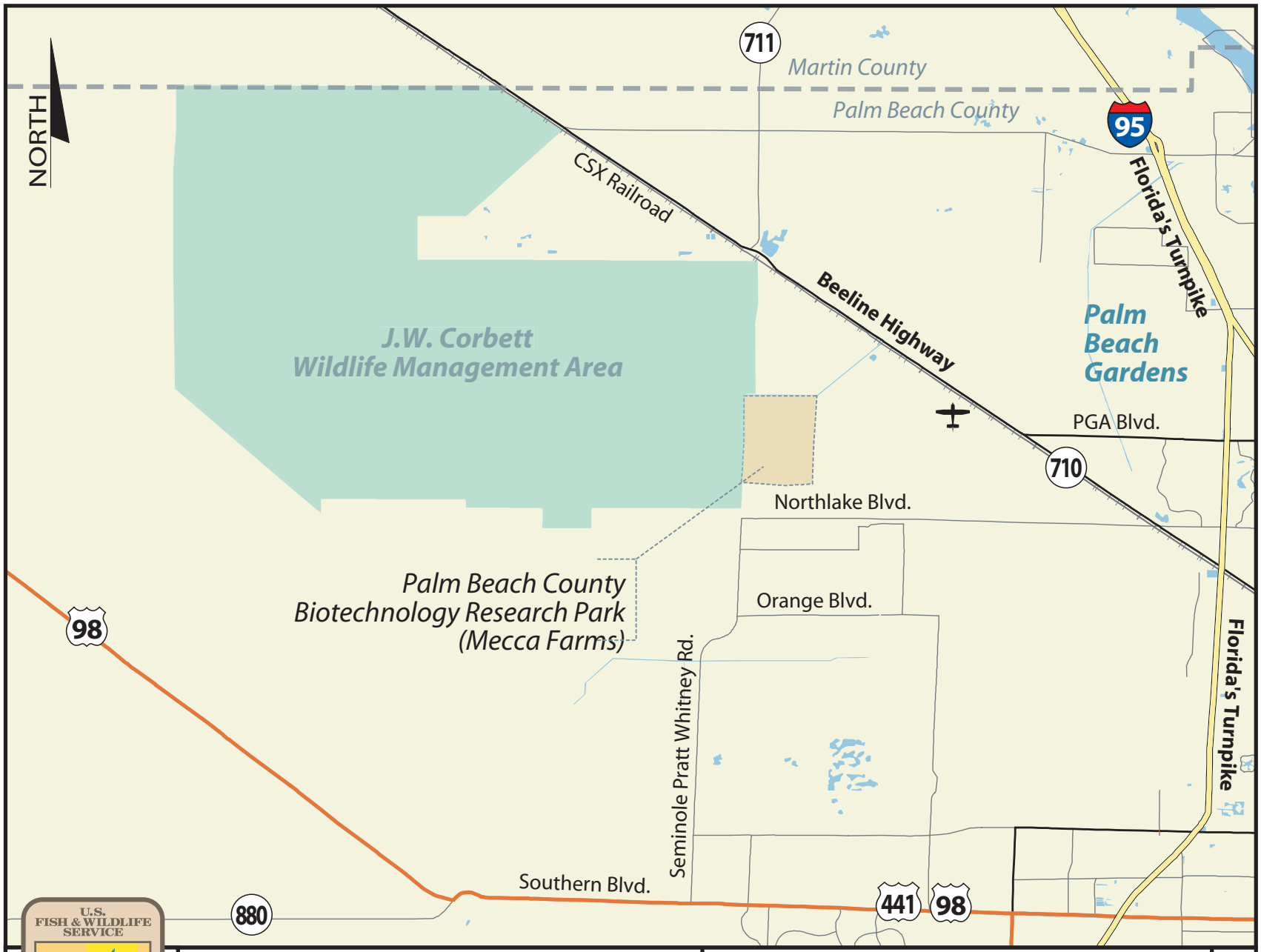
[1] PBCBRP ADA, Part II, Question 10, Page 10-1, May 10, 2004.
[2] Palm Beach County Request for JWCWMA Easements, June 3, 2004.
[3] FWC letter dated August 2, 2004.

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**PALM BEACH COUNTY**
**BIOTECHNOLOGY RESEARCH PARK**
**LOCATION MAP**

*Figure 1-2*

Plans to widen and extend Seminole Pratt Whitney Road and to modify the Corbett Canal existed as speculative plans before the PBCBRP proposal was developed. Widening and extending Seminole Pratt Whitney Road is included in the adopted 2030 Long Range Transportation Plan (LRTP) for Palm Beach County and the 2030 Adopted Cost Feasible Plan Map. The 2030 Thoroughfare Roadway Plan has also identified the widening and extension of Seminole Pratt Whitney Road as necessary to accommodate future growth in north central Palm Beach County. In addition, the Comprehensive Everglades Restoration Plan (CERP) calls for creating new waterway corridors to move water from the L-8 reservoir located south of the JWCWMA northward along the property to the existing C-18 canal and eventually to the Loxahatchee Slough and River. The proposed Master Plan for the PBCBRP shows a "flow way" to be constructed along its western boundary to accommodate the waterway corridor through its site. The proposed land transfer on the JWCWMA takes into account flow way alternatives being considered by CERP to improve flows to the Loxahatchee River.

## *1.3 SUMMARY OF PUBLIC PARTICIPATION, ISSUES, AND CONCERNS*

The scoping process indicates that there is broad public interest in a range of secondary and related cumulative effects of the proposal to transfer interests in approximately 30 acres of the JWCWMA to the County and receive a 60-acre tract of land as replacement land. That is, the public appears to view the proposed transfer of JWCWMA lands from the perspective of regional development trends. Furthermore, the public interest in development trends encompasses a wide range of factors, from traffic and pollution to infill of undeveloped areas.

This suggests that, to facilitate public involvement, our analysis should follow a presentation format that differs from the Service's traditional approach. Typically, the Service separates anticipated effects into direct, indirect (or secondary), and cumulative analyses. Direct and indirect effects are the activity-specific effects on resource, ecosystem, and human community components of interest for the analysis (Components or Indicators). Cumulative effects, on the other hand, are Component-based. Cumulative effects analyses start with an understanding of the general status and trends of the Component and try to predict how the activity would affect those trends; the influence could be neutral, synergistic, countervailing, additive, or subtractive.

The presentation format suggested by our scoping process is incorporated into the Environmental Consequences section of this document. The Service and other stakeholders and coordinating agencies must consider some specific Components, such as those that indicate how the proposal would affect the ecological integrity and wildlife-related values of the JWCWMA, so the Environmental Consequences section blends the Service's traditional presentation format with the public involvement format suggested in the scoping process. The scoping process also leads us to believe that this document successfully incorporates the planning, analytic, and public inputs, including public comments, that informed local, state, and Federal decisions related to various aspects of the PBCBRP proposal.

The Service, in conjunction with the FWC and the County, initiated an inclusive outreach program in conjunction with our analysis of the proposal. The Service provided opportunities for public comment and review of this EA and open house style public information meetings. The proposed land transfer is a small but related part of a larger development project that is controversial in the County.

Key elements of the project outreach program are discussed here. These outreach elements are comprehensive and form a framework to solicit and incorporate public involvement during our consideration of the proposed action.

### *1.3.1 EA ADVANCE NOTIFICATION PROCESS*

The Service, through the Advance Notification Process, informed Federal, state, and local government agencies of the outline of this EA and its scope. The Service initiated project coordination on November 16, 2004, by distribution of an Advance Notification package to the Florida Department of Environmental Protection (DEP) - Florida State Clearinghouse. The Service and DEP will ensure that the County's request for permission to change the authorized use of certain tracts within the JWCWMA and the related environmental documents are reviewed in accordance with the intergovernmental coordination and review procedures administered by the State Clearinghouse. Appendix A contains a copy of the Advance Notification package and the cover letter with the agency mailing list.

### *1.3.2 EA NOTICE OF AVAILABILITY*

The Service has advertised in the local Palm Beach Post newspaper the public availability of the EA. The Service has also noticed the public, media, elected officials, agencies, and special interest groups of the EA's availability through the use of individual notification letters, media packages, press releases, teleconferences, and creation of a dedicated internet web site (http://southeast.fws.gov).

### *1.3.3 EA PUBLIC INFORMATION MEETING*

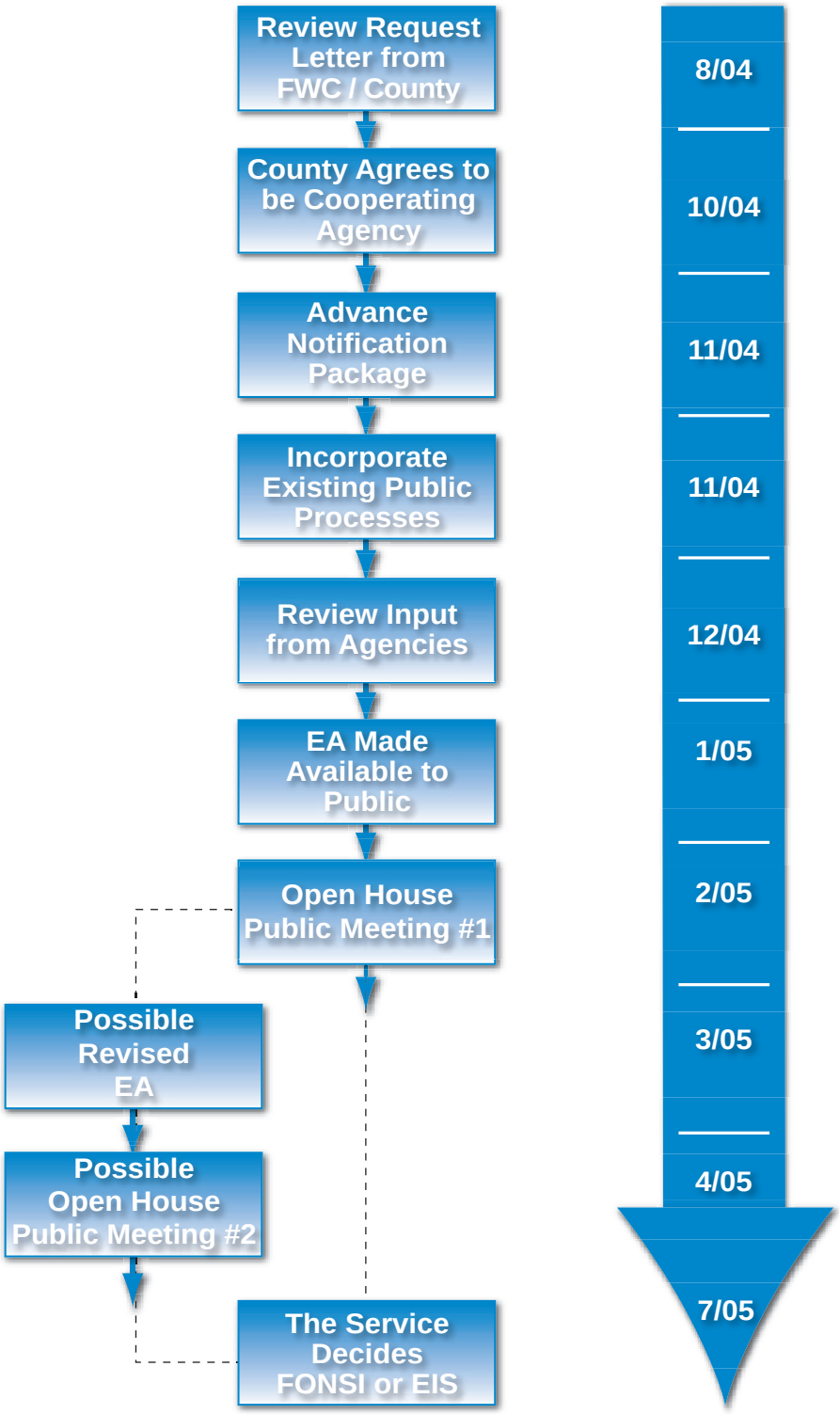
On February 2, 2005 (after 23 days of EA public availability), the Service conducted a Public Open House Meeting to allow the public to review and comment on the EA. The comment period for the EA remained open for 10 days after the Public Open House Meeting, with the comment period ending February 14, 2005 (public comment period was a total of 33 days). A total of 30 comments were received as a result of the Service's request for public comments. A summary of the meeting and copies of all comments are included in Appendix F. Appendix F also includes the Service's responses to the comments. The comments have been incorporated and text revised in the EA where appropriate.

### *1.3.4 REVISED EA PUBLIC NOTICE*

The Service is committed and has revised all or parts of this document where public comments or our analysis raised new information or issues that warranted such actions.

Based on comments we received during the public comment period and our own analysis of information presented in the EA, the Service determined that additional public review and comment was not warranted.

The Service's NEPA process and milestones are shown on **Figure 1-3**. The Service has determined that the proposal is unlikely to have a significant impact. Therefore, we have published an associated Finding of No Significant Impact (FONSI) based on this EA.




*J.W. Corbett Wildlife Management Area*
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US FISH AND WILDLIFE SERVICE
NEPA PROCESS AND MILESTONES

*Figure 1-3*

# *Section 2.0*
# *ALTERNATIVES*

## *2.1 INTRODUCTION*

As part of the EA process for analyzing the proposed JWCWMA land transfer, the following factors were taken into consideration:

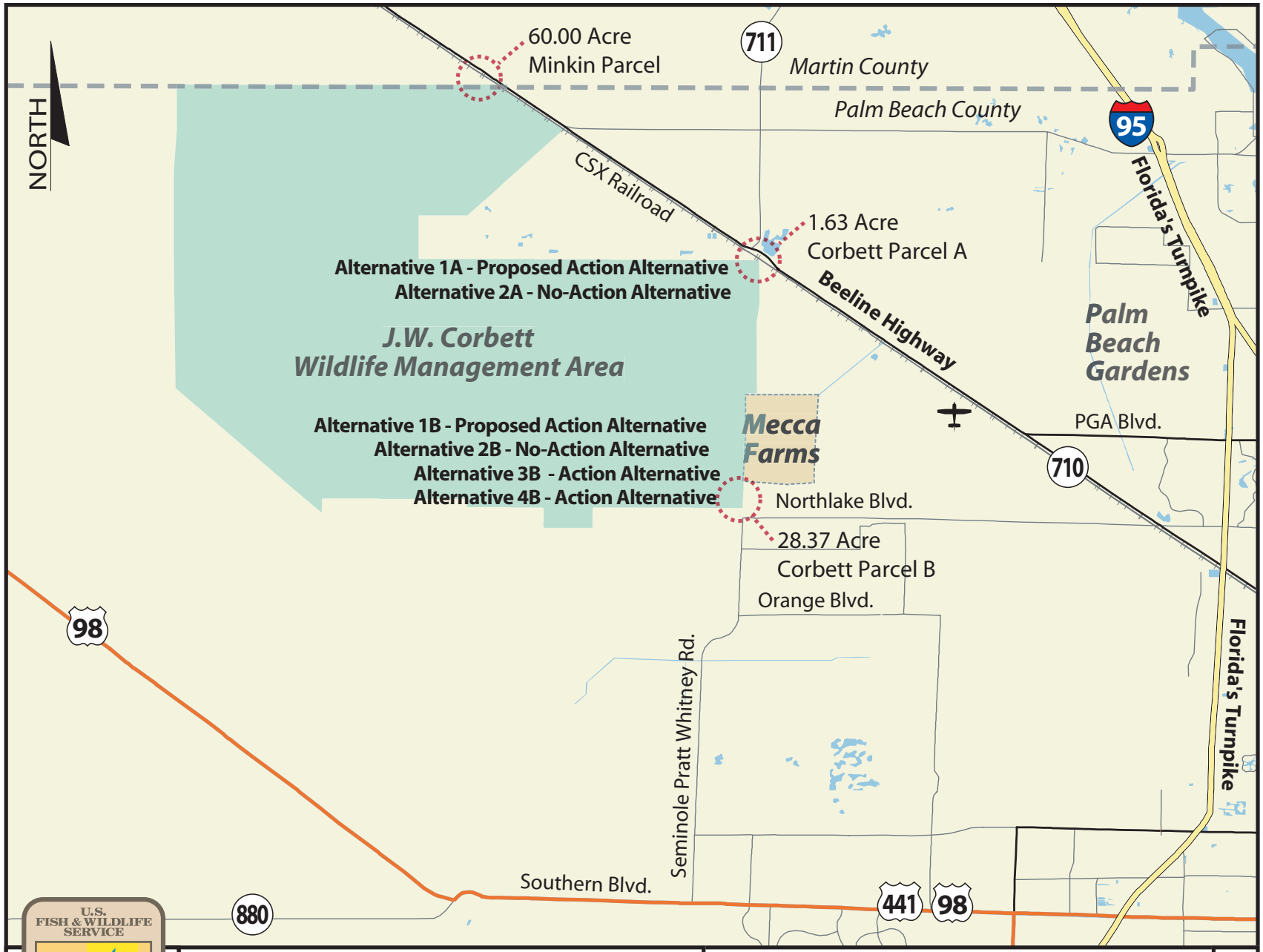
- **Engineering:** The design and location of the proposed improvement facilities;
- **Environmental:** Social, cultural, natural and physical factors; and
- **Public Involvement:** Needs and concerns of the local community.

The following sections describe the viable alternatives that were considered and could fulfill the purpose and need for the proposed action.

The proposed action includes a change in the use of lands within the JWCWMA. Two tracts of JWCWMA land (Corbett Parcel A and Corbett Parcel B) located in Palm Beach County, Florida, would be used for purposes other than those for which they were acquired; the wildlife-related values of those tracts would be replaced through the addition of lands adjoining the JWCWMA in Martin County, Florida (see Section 1.0, Purpose and Need, and Figure 1-1, Project Location Map). The change in land use within Corbett Parcels A and B and the associated replacement of wildlife-related values through the addition of Martin County lands would accommodate key infrastructure components of the proposed PBCBRP.

There are alternative actions for each of the JWCWMA parcels under evaluation in this EA. **Figure 2-1** shows the alternative actions for Corbett Parcels A and B. To enhance our analysis, we consider alternatives to the proposed Parcel A transfer independent of the proposed Parcel B transfer. Thus, we have two alternatives that comprise the proposed transfer (1A and 1B), two alternatives that comprise our no-action alternative (2A and 2B), and two alternative configurations of Parcel B that could address our need and partially address the County's goals (3B and 4B). Listed below are the alternatives discussed in this section:

- **Parcel A Alternative 1A:** This alternative is identified as the proposed action alternative and would require the transfer of 1.63 acres of JWCWMA land;
- **Parcel A Alternative 2A:** This alternative is identified as the no-action alternative and would not require any land from the JWCWMA;
- **Parcel B Alternative 1B:** This alternative is identified as the proposed action alternative and would require the transfer of 28.37 acres of JWCWMA land;

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**ALTERNATIVE ACTION LOCATIONS**

*Figure 2-1*

- **Parcel B Alternative 2B:** This alternative is identified as the no-action alternative and would not require any land from the JWCWMA;
- **Parcel B Alternative 3B:** This alternative is an optional action alternative and would require the transfer of 8.11 acres of JWCWMA land; and
- **Parcel B Alternative 4B:** This alternative is an optional action alternative and would require the transfer of 5.44 acres of JWCWMA land.

# *2.2 ALTERNATIVES*

## *2.2.1 CORBETT PARCEL A ALTERNATIVES*

### *2.2.1.1 Alternative 1A*

The Service, in coordination with Palm Beach County and the Florida Department of Transportation (FDOT), has modified the size of the proposed Parcel A easement transfer as a result of discussions initiated through the Advanced Notification process. The total acreage believed necessary for the proposed realignment of the Seminole Pratt Whitney Road extension is 1.63 acres. The proposed transfer of Parcel A has been increased from the FWC's request of 1.25 acres to 1.63 acres. This modification would accommodate the typical section of a staged two-lane and four-lane roadway, and if ultimately necessary a six-lane roadway. The modified proposal takes advantage of the present process to ensure a holistic analysis instead of piece-mealing easement requests. The proposal would approve the FWC's current request, and would pre-approve FWC authorization of an additional easement transfer request, which is anticipated to coincide with the start of construction of the realignment of the Seminole Pratt Whitney Road extension. The FWC's original request to approve the transfer of easements on 1.25 acres at Parcel A will not be considered because of information gained during the Advanced Notification process.

Alternative 1A is the proposed action alternative for Corbett Parcel A (see **Figure 2-2**). Located at the northeast corner of the JWCWMA, this 1.63-acre parcel would accommodate the construction of a future two-lane, expandable to four- or six-lane divided, connection of Seminole Pratt Whitney Road to the Beeline Highway (State Road 710 [SR 710]). South of Parcel A, the County is proposing a four-lane roadway, expandable to six lanes, through the Mecca property to its south boundary, and from there continuing south as a six-lane roadway to Northlake Boulevard. In order for Seminole Pratt Whitney Road to connect to SR 710, it is necessary to cross existing CSX railroad tracks; the proposed action calls for utilizing the existing railroad crossing at the Pratt Whitney facility entrance. The CSX rail crossing would be upgraded as necessary to safely accommodate the additional lanes in accordance with the County, FDOT, and CSX rules and regulations. In order to make the westerly turn required to align with the existing crossing, it is necessary to cross a corner of the JWCWMA; this crossing results in the 1.63-acre impact.

#### *2.2.1.2 Alternative 2A*

Alternative 2A is the no-action alternative for Parcel A (see **Figure 2-3**) and would not involve an easement across the JWCWMA. This concept would place the new alignment for the Seminole Pratt Whitney Road extension entirely to the east of Parcel A on County-owned lands, cross the CSX railroad line above-grade, and interchange with SR 710 without any direct impact to the JWCWMA. Due to the close proximity of the potential new CSX crossing to the CSX spur track immediately to the east, and the existing Pratt-Whitney facility road crossing to the west, a grade-separated crossing of CSX would be required. This grade-separated crossing would require a minimum 23.5-foot clearance over the railroad. Approximately 19 to 20 trains per day use this section of CSX railroad line and it is also an AMTRAK route.

### *2.2.2 CORBETT PARCEL B ALTERNATIVES*

#### *2.2.2.1 Alternative 1B*

Alternative 1B is the proposed action alternative for Corbett Parcel B (see **Figure 2-4**). This alternative would utilize an easement across the southeast corner of the JWCWMA. The easement would include 4.73 acres to accommodate the proposed 60-foot widening of Seminole Pratt Whitney Road including an underground power distribution line; 13.91 acres to allow for the construction of a 150-foot "canal/flow way" (i.e., Corbett Canal) by the South Florida Water Management District (SFWMD) as part of the CERP Project; 3.36 acres for the construction of a 40-foot canal maintenance area; and 6.37 acres to accommodate an electrical substation for FP&L adjacent to the existing power line transmission corridor. The canal maintenance area on the east side of the proposed Corbett Canal would also provide for a hiking/biking/equestrian trail (activities trail) to a proposed trailhead located immediately east of the JWCWMA South Entrance. The total acreage that would be impacted in the JWCWMA for this alternative is 28.37 acres. In addition to the JWCWMA impacts, the expansion of Seminole Pratt Whitney Road south of the JWCWMA to Northlake Boulevard would require the taking of land from six residential properties on the west side of Seminole Pratt Whitney Road.

#### *2.2.2.2 Alternative 2B*

Alternative 2B is the no-action alternative for Parcel B (see **Figure 2-5**). This alternative accepts County assertions that all of the right-of-way for the expansion of Seminole Pratt Whitney Road within a 60-foot right-of-way would be obtained from properties on the east side of the existing Seminole Pratt Whitney Road, including residential lots in the area known as "The Acreage" between Northlake Boulevard and the Mecca property.[4] The electrical substation would be sited on 7.13 acres at the northeast corner of the intersection of the existing electrical transmission lines and Seminole Pratt Whitney Road. Underground power distribution lines would be run within a 60-foot additional FP&L easement north from the substation to the PBCBRP site. This alternative would have no involvement with the JWCWMA adjacent to and south of the PBCBRP site. This alternative does not include any accommodation for a canal/flow way or an activities trail.

[4] Memorandum from Palm Beach County to U.S. Fish and Wildlife Service, December 28, 2004.

The Service accepts, for the purpose of this analysis, the County's assertion that condemnation of the 60-foot road right-of-way and 60-foot utility easement would be required from several residential properties fronting on the east side of the existing Seminole Pratt Whitney Road from Northlake Boulevard north to the Mecca property. County condemnation proceedings for approximately eight residential properties (whole takes) would be required for the substation and roadway right-of-way.[5] A total of 20 residential properties would be directly impacted by condemnation under this alternative.

#### *2.2.2.3 Alternative 3B*

Alternative 3B would include the 60-foot expansion of Seminole Pratt Whitney Road on the east side of the existing roadway (requiring condemnation of right-of-way from 17 residential lots in The Acreage) and two new overhead power transmission lines in the JWCWMA to connect to a proposed utility pod in the PBCBRP (see **Figure 2-6**). One of the new overhead transmission lines would be a single circuit transmission line within a 30-foot easement (4.02 acres) that would run along the west side of Seminole Pratt Whitney Road north to an electric substation within the PBCBRP. The second proposed overhead transmission line within a 60-foot easement (4.09 acres) would be a single circuit from the existing transmission corridor in the JWCWMA east to the electric substation in the PBCBRP, a distance of approximately 3,000 feet, with an above-grade patrol road for maintenance purposes. This alternative does not include any accommodation for a canal/flow way or an activities trail. The total acreage that would be impacted in the JWCWMA for this alternative is 8.11 acres. In addition to the 8.11 acres directly impacted, this alternative creates, from a management perspective, a completely isolated 138-acre parcel of property within the JWCWMA bordered by the existing and proposed FP&L transmission line easements.

#### *2.2.2.4 Alternative 4B*

Alternative 4B would include the 60-foot expansion of Seminole Pratt Whitney Road on the east side of the existing roadway (requiring right-of-way taking from 17 residential lots in The Acreage) and a new power transmission line in the JWCWMA to connect to a proposed utility pod in the PBCBRP (see **Figure 2-7**). The new transmission line would run from the existing transmission corridor in the JWCWMA east to the substation in the PBCBRP, a distance of approximately 3,000 feet. The corridor for this transmission line would be 80 feet in width and requires 5.44 acres of land from the JWCWMA. This alternative does not include any accommodation for a canal/flow way or an activities trail. The total acreage that would be impacted in the JWCWMA for this alternative is 5.44 acres. In addition to the 5.44 acres directly impacted, this alternative creates, from a management perspective, a completely isolated 138-acre parcel of property within the JWCWMA bordered by the existing and proposed FP&L transmission line easements.

[5] Chapter 361.01, Florida Statutes (F.S.), 2004.

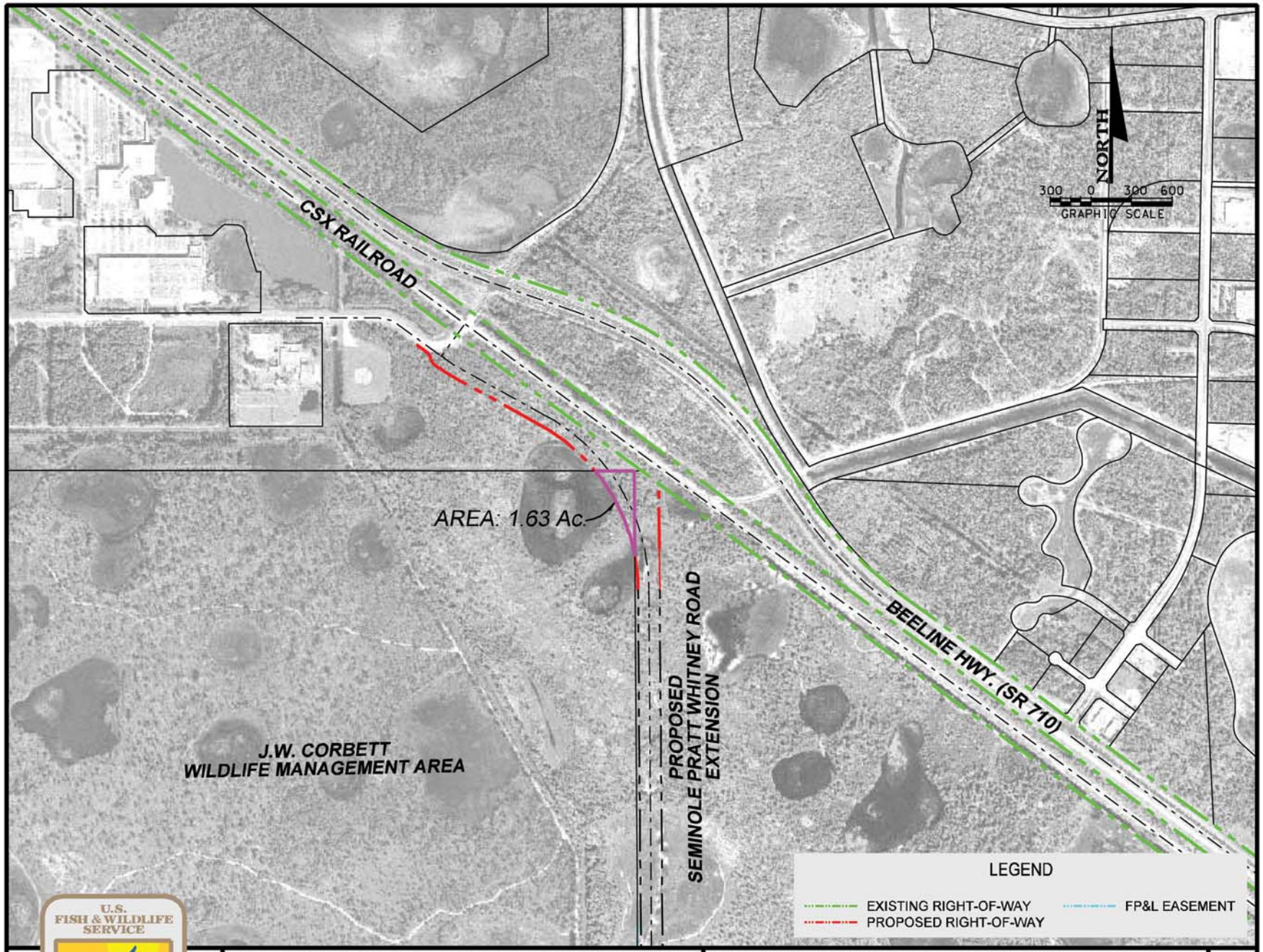
The direct, indirect (secondary), and cumulative impacts to the JWCWMA associated with the land transfer and easement actions are discussed in the Environmental Consequences section of this report.

**Table 2-1** provides a summary of the alternatives.

**TABLE 2-1**
**SUMMARY OF ALTERNATIVES**

| | Alternative 1A | Alternative 2A | Alternative 1B | Alternative 2B | Alternative 3B* | Alternative 4B* |
|---|---|---|---|---|---|---|
| Total Land (acres) | 11.55 | 20.19 | 30.66 | 15.95 | 14.51 | 11.84 |
| JWCWMA Land (acres) | 1.63 | 0 | 28.37 | 0 | 8.11 | 5.44 |
| Outside JWCWMA Land (acres) | 9.92 | 20.19 | 2.29 | 15.95 | 6.40 | 6.40 |
| Residential Relocations | 0 | 0 | 0 | 8 | 5 | 5 |
| Non-JWCWMA Parcels Impacted | 2 | 4 | 6 | 20 | 17 | 17 |
| CSX Crossing | At-Grade | Above-Grade | N/A | N/A | N/A | N/A |

* Impacts associated with Alternatives 3B and 4B do not include the additional 138-acre parcel isolated within the JWCWMA.

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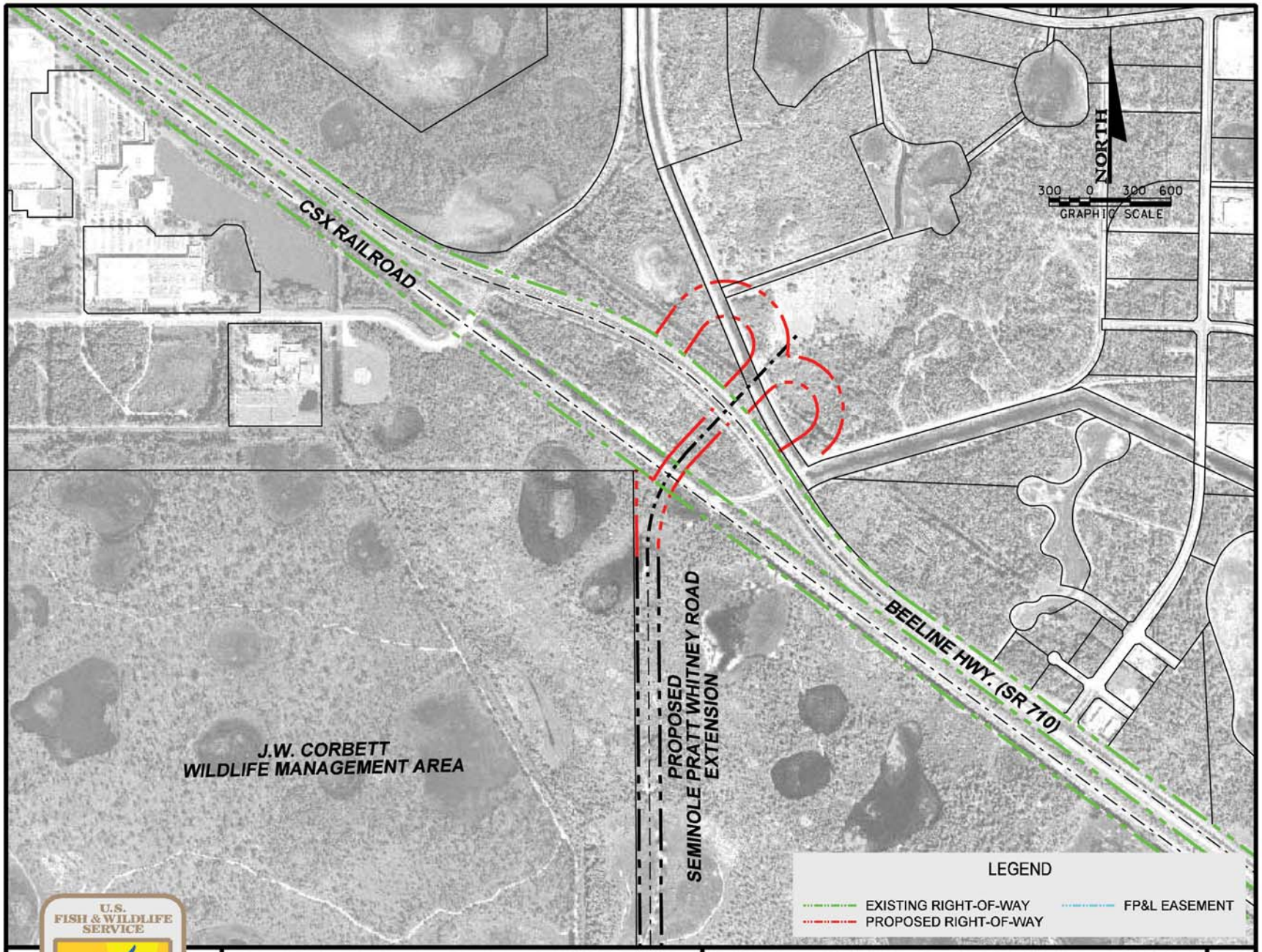
*J.W. Corbett Wildlife Management Area*
*Proposed Land Transfer*
*Environmental Assessment*

ALTERNATIVE 1-A

*Figure 2-2*

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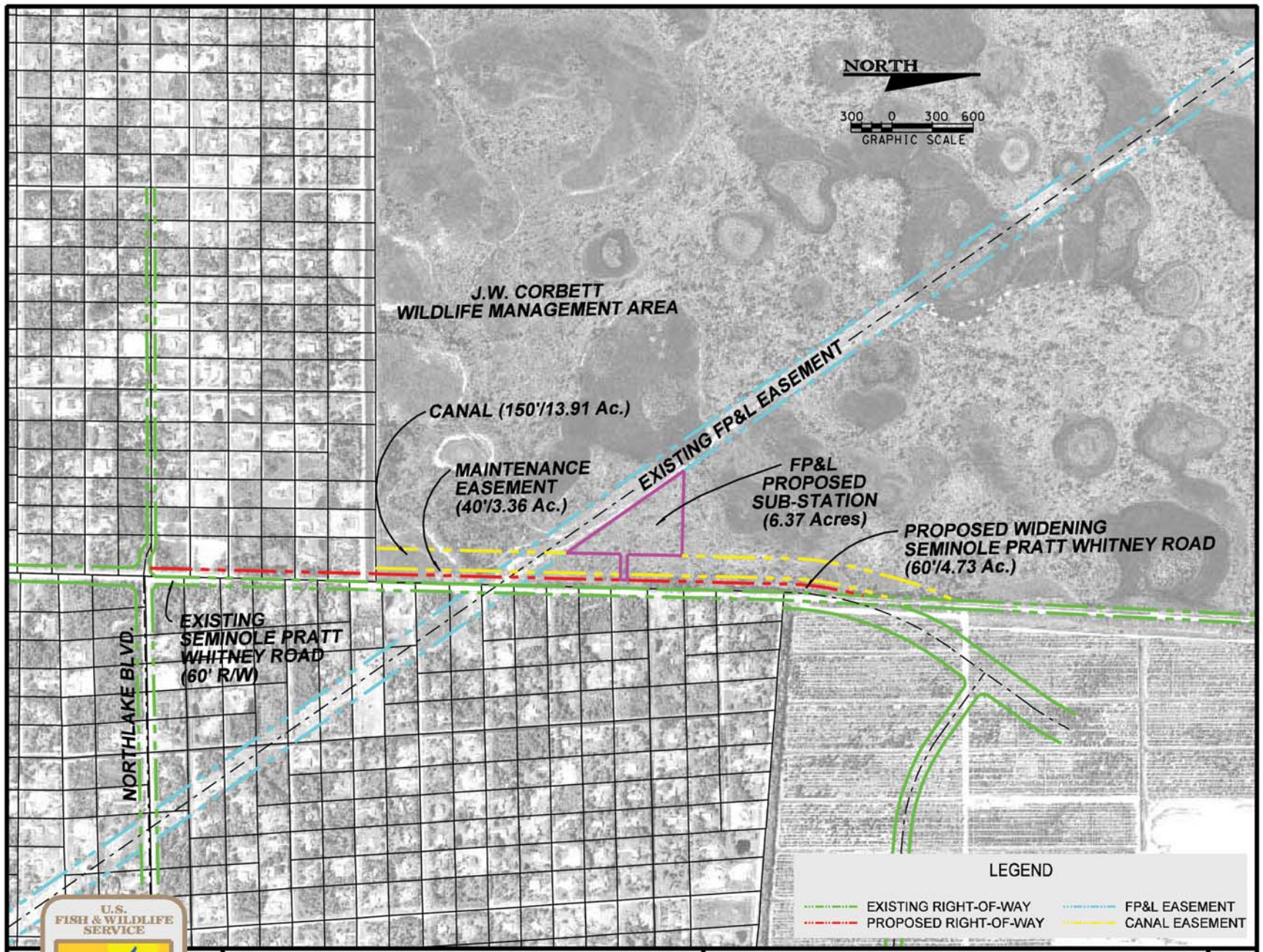
ALTERNATIVE 2-A
(NO ACTION)

*Figure 2-3*

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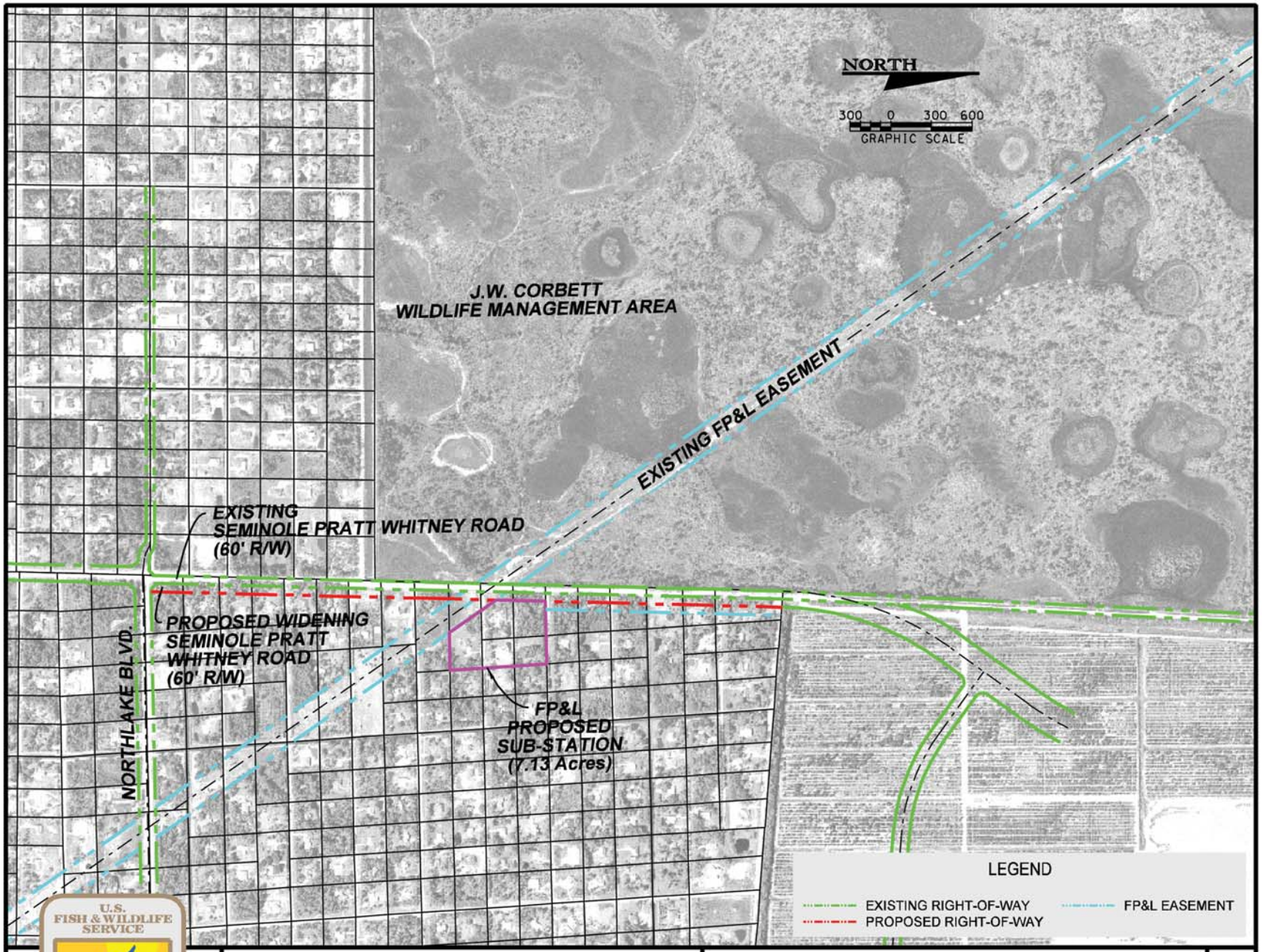
ALTERNATIVE 1-B

*Figure 2-4*

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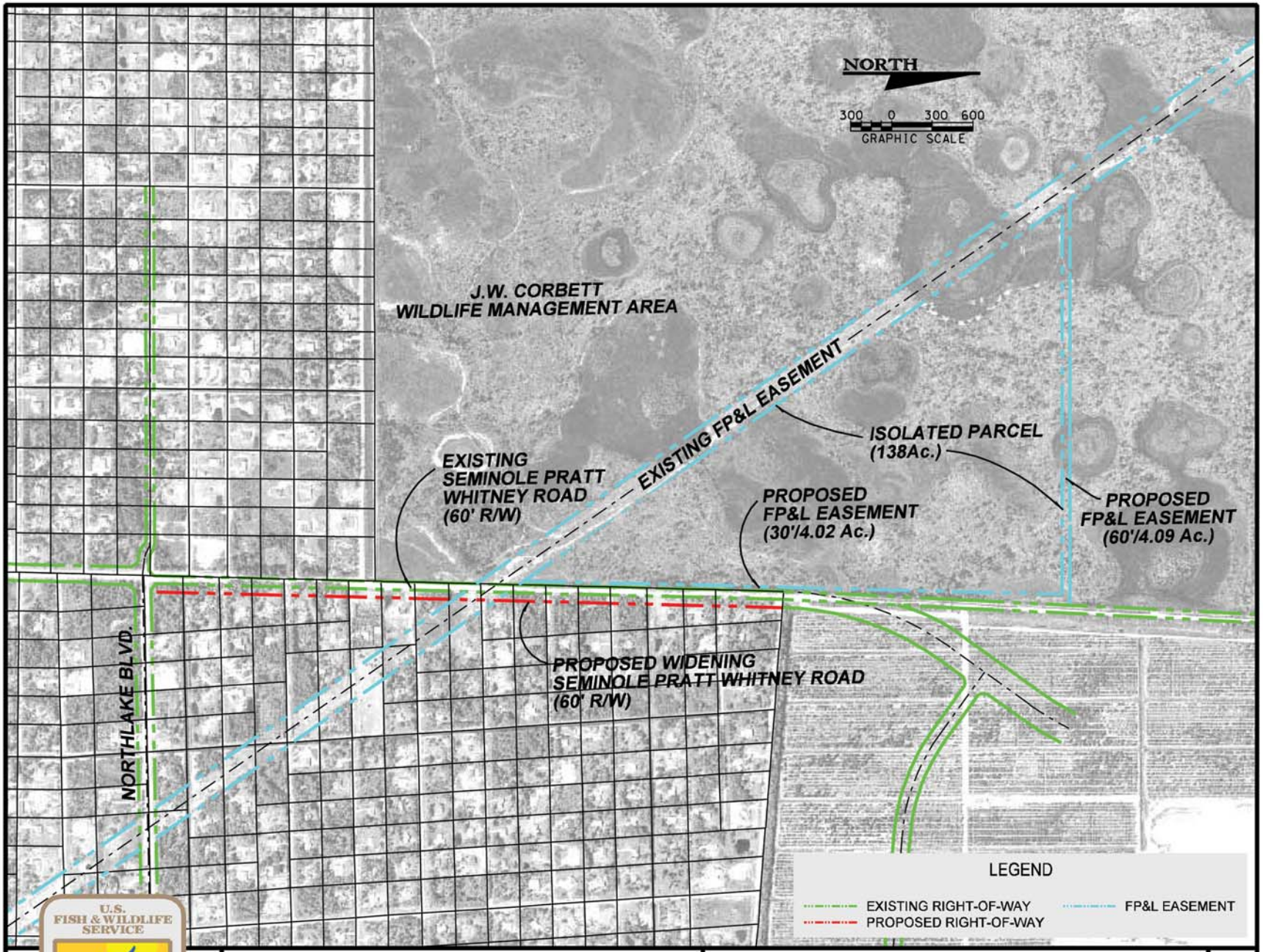
ALTERNATIVE 2-B
(NO ACTION)

*Figure 2-5*

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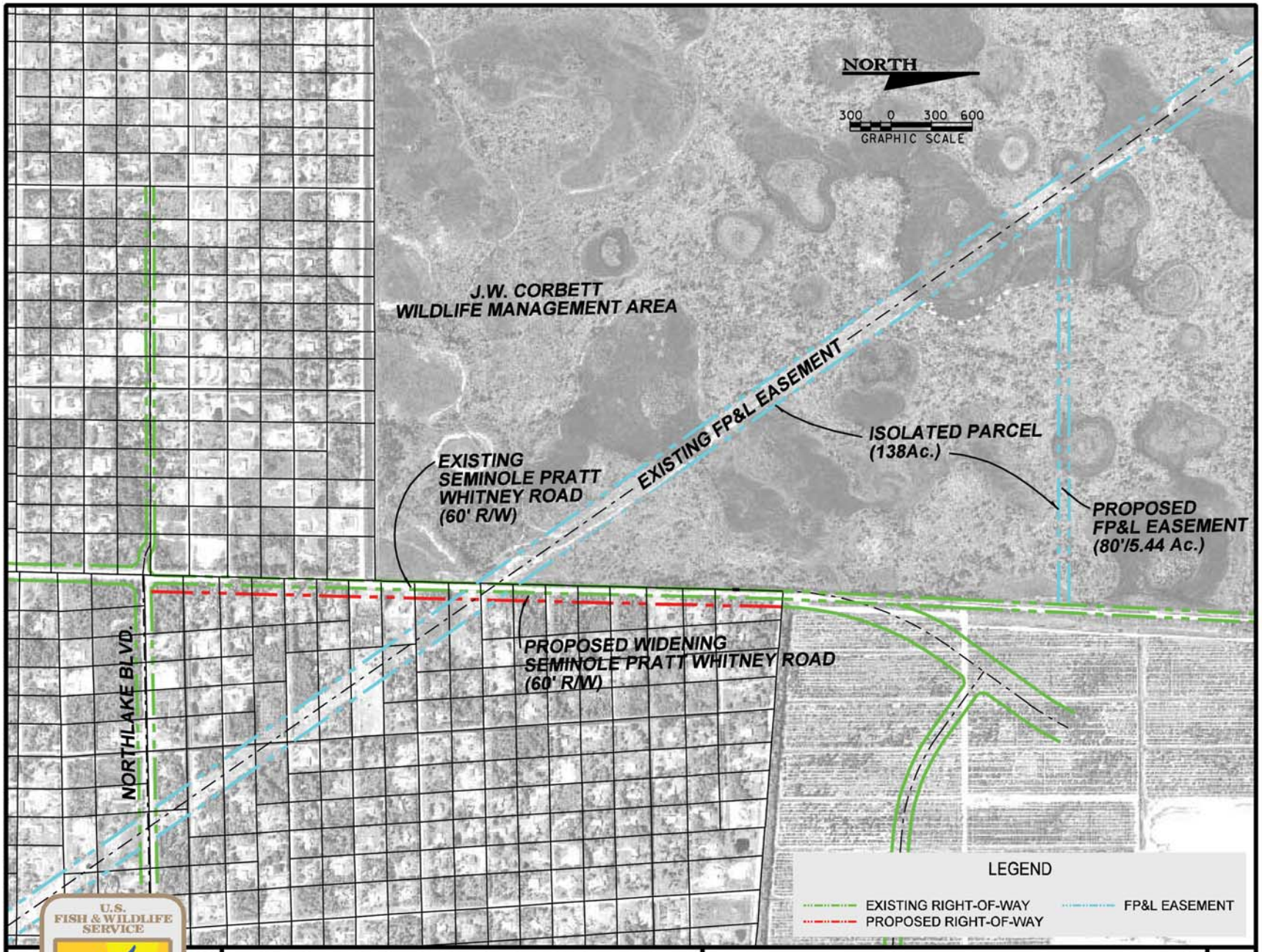
ALTERNATIVE 3-B

*Figure 2-6*

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ALTERNATIVE 4-B

*Figure 2-7*

# Section 3.0
# AFFECTED ENVIRONMENT

## 3.1 SOCIAL AND ECONOMIC RESOURCES

Social and economic resources are defined as those resources relating to the built, human environment. This section summarizes the existing conditions which are present in the area of the proposed action.

### 3.1.1 LAND USE

Existing land uses in the area surrounding the proposed action consists of the following:

- Rural Residential (The Acreage),
- Conservation (JWCWMA/Hungryland Slough Natural Area/Unit 11 [HSNA]),
- Transportation (Palm Beach County General Aviation Airport),
- Industrial (Pratt-Whitney Complex), and
- Agricultural (Mecca Farms/Vavrus Ranch).

The predominate land use in the area is conservation, with the JWCWMA being the single, largest land acreage placed under conservation.

### 3.1.2 COMMUNITY COHESION

There are eight public schools in the general vicinity of the proposed action:

- Acreage Pines Elementary School - 14200 Orange Boulevard, Loxahatchee;
- Frontier Elementary School - 6701 180th Avenue North, Loxahatchee;
- Golden Grove Elementary School - 5959 140th Avenue North, Royal Palm Beach;
- Grassy Waters Elementary School - 3550 North Jog Road, West Palm Beach;
- Jupiter Farms Elementary School - 17400 Haynie Lane, Jupiter;
- Osceola Creek Middle School - 6775 180th Avenue North, Loxahatchee;
- Pierce Hammock Elementary School - 14255 Hamlin Boulevard, Loxahatchee; and

- Western Pines Middle School - 5949 140th Avenue North, Royal Palm Beach.

There are six fire rescue stations in the general vicinity of the proposed action:

- Station #14 - 16749 Jupiter Farms Road, Jupiter;
- Station #17 - 8130 North Jog Road, West Palm Beach;
- Station #26 - 6085 Avocado Boulevard, West Palm Beach;
- Station #22 - 5060 Seminole Pratt Whitney Road, Loxahatchee;
- Station #21 - 14200 Okeechobee Boulevard, West Palm Beach; and
- Station #28 (HQ) - 1040 Royal Palm Beach Boulevard, Royal Palm Beach.

There is one hospital in the general vicinity of the proposed action:

- Palms West Hospital - 13001 Southern Boulevard, Loxahatchee.

All of these community services are depicted on **Figure 3-1**.

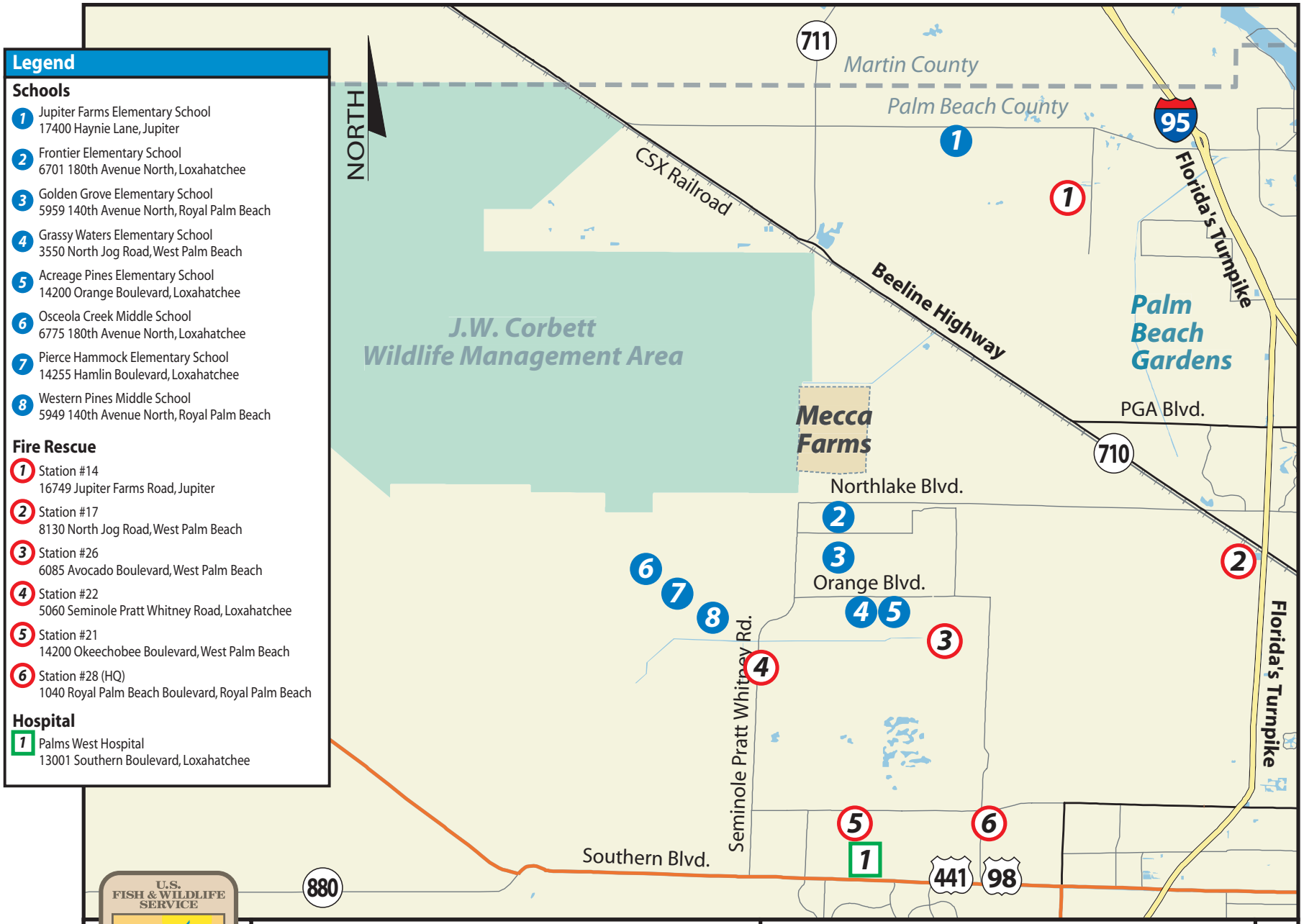
### *3.1.3 DEMOGRAPHICS*

There are six census tracts (78.06, 78.08, 78.09, 78.22, 79.03, and 79.06) in the general vicinity of the proposed action, as shown on **Figure 3-2**. **Table 3-1** provides a summary of the demographic characteristics of the area.

**TABLE 3-1**
**PALM BEACH COUNTY**
**2000 CENSUS POPULATION, HOUSEHOLDS, INCOME, AND AGE BY CENSUS TRACT**

| Census Tract | Population | Households | Median Income | Race | | | Hispanic Origin | Age | | | Poverty Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | White | Black | Other | | <5 | 5-17 | >65 | |
| Palm Beach County | 1,131,184 | 474,175 | $45,062 | 894,207 | 156,055 | 80,922 | 140,675 | 5,157 | 16,890 | 10,480 | 9.9% |
| 78.06 | 2,947 | 1,280 | $89,734 | 2,842 | 28 | 77 | 78 | 92 | 367 | 1,136 | 2.1% |
| 78.08 | 4,139 | 1,291 | $66,657 | 3,647 | 253 | 239 | 430 | 299 | 1,042 | 196 | 3.7% |
| 78.09 | 3,631 | 1,172 | $58,152 | 3,286 | 109 | 236 | 403 | 214 | 815 | 264 | 8.9% |
| 78.22 | 5,894 | 1,923 | $72,129 | 5,700 | 50 | 144 | 219 | 350 | 1,434 | 316 | 2.8% |
| 79.03 | 5,629 | 1,717 | $58,770 | 4,919 | 422 | 288 | 779 | 554 | 1,413 | 192 | 5.5% |
| 79.06 | 13,484 | 4,283 | $66,514 | 11,682 | 999 | 803 | 1,357 | 1,163 | 3,147 | 747 | 2.6% |
| Area Totals/ Averages | 35,724 | 11,666 | $68,659 | 32,076 | 1,861 | 1,781 | 3,266 | 2,672 | 8,218 | 2,851 | 4.3% |
| Percentage of Palm Beach County | 3.2% | 2.5% | N/A | 3.6% | 1.2% | 2.2% | 2.3% | 51.8% | 48.7% | 27.2% | N/A |

Source: US Census, 2000.

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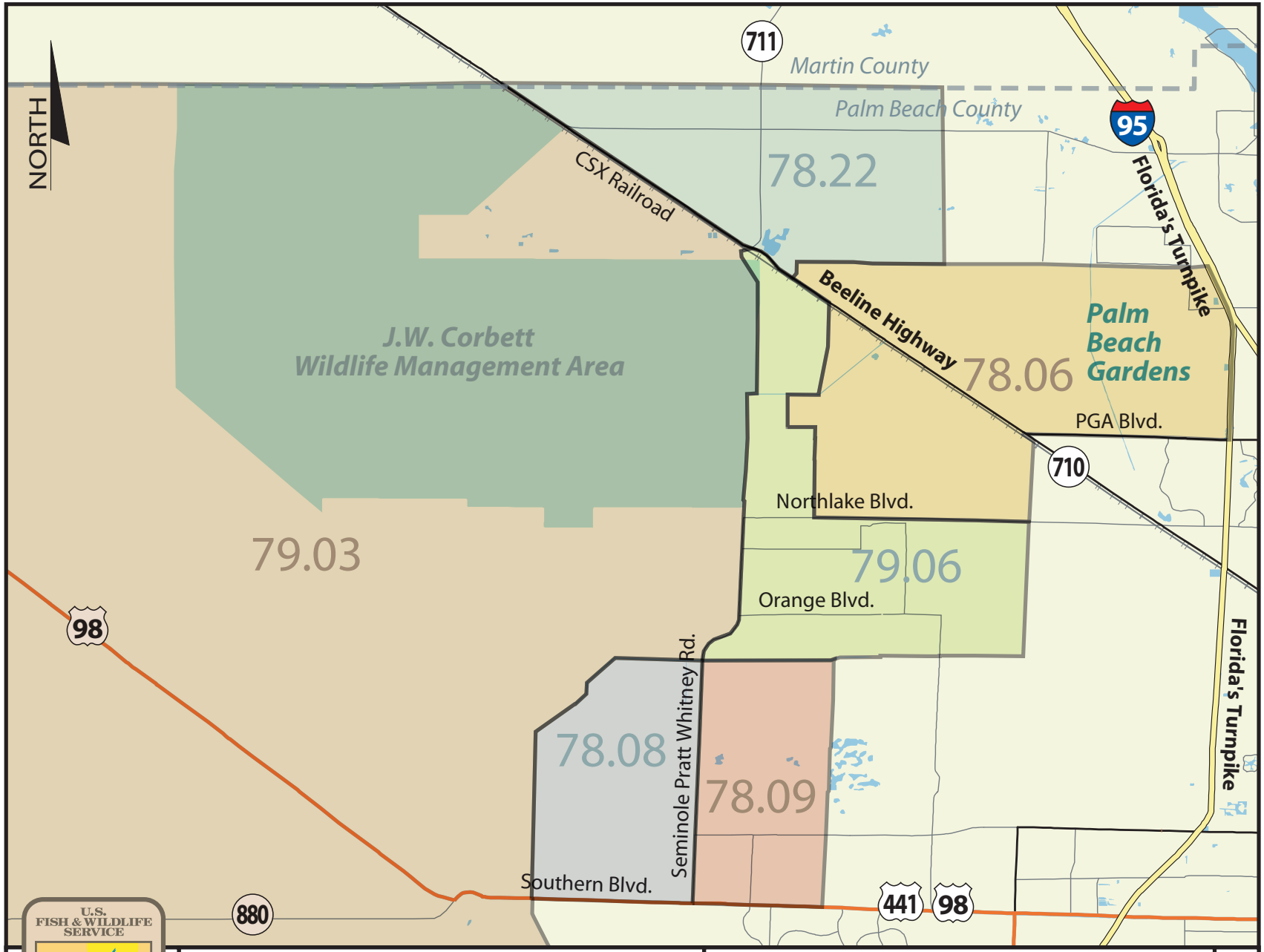
*Proposed Land Transfer*
*Environmental Assessment*

**SCHOOLS / FIRE RESCUE / HOSPITALS LOCATION MAP**

*Figure 3-1*

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**2000 U.S. CENSUS**
**CENSUS TRACTS**

*Figure 3-2*

### *3.1.4 UTILITIES AND RAILROADS*

Several surface and subsurface utility providers are present in the general vicinity of the proposed action. The following list identifies those utilities known to be present.

- FP&L - Electrical - Surface,
- Florida Public Utilities Company - Natural Gas - Subsurface,
- Bell South - Telephone/Fiber Optics - Surface and Subsurface,
- Adelphia Cable - Cable Television - Surface and Subsurface,
- Comcast Cable - Cable Television - Surface and Subsurface, and
- Palm Beach County/Municipal - Potable Water and Sewer - Subsurface.

CSX Transportation owns and operates a primary rail line that parallels the south side of SR 710 and a spur line that generally parallels the west side of SR 711 to the north.

## *3.2 CULTURAL RESOURCES*

A Draft Cultural Resources Assessment Survey (CRAS) was completed for the project, a copy of which is contained in Appendix B. The Draft CRAS is currently under review for technical comments by the Florida State Historic Preservation Officer (SHPO). The following summarizes the findings of that report.

### *3.2.1 HISTORIC SITES/DISTRICTS*

There are no potentially eligible or eligible historic sites or district for listing on the National Register of Historic Places (NRHP) in the general vicinity of the proposed action or any alternative action.

### *3.2.2 ARCHAEOLOGICAL SITES*

The three Corbett land transfer parcels are non-contiguous and include two parcels (Parcels A and B) in Palm Beach County which encompass 1.63 acres and 28.37 acres, respectively. The third parcel, the Minkin Parcel, encompasses 60 acres and is in Martin County on the Palm Beach County line. The parcels are within Section 24 of Township 41 South, Range 40 East; Sections 12 and 13 of Township 42 South, Range 40 East; and Section 30, Township 40 East, Range 40 South. In addition, six alternative plans for proposed right-of-way modifications and a proposed FP&L substation were assessed.

The parcels are within or adjacent to the JWCWMA. Parcel A and the Minkin Parcel are next to SR 710 and Parcel B is at the southeast corner of the JWCWMA (see Figure 1-1).

Parcels A and B are seasonally inundated pine flatwoods. Disturbances to Parcel A include a firebreak across it. Parcel B also has been impacted by bulldozing possibly associated with the FP&L transmission line and construction of the adjacent Seminole Pratt Whitney Road. The Minkin Parcel is in an excellent natural state characterized with inundated pine flatwoods and several cypress ponds. The alternative plan parcels are located in the area of Seminole Pratt Whitney Road. No cabbage palm or oak hammocks, areas often associated with archaeological sites, were found on any of the parcels or alternatives within the JWCWMA. For further detail on this area, please refer to Sections 4.0 and 5.0 of the Draft CRAS.

### *3.2.3 RECREATION AREAS*

The JWCWMA is owned by the State and managed by the FWC. It is a 60,288-acre parcel with an activities trail, primitive and RV camping, and hunting and fishing. There are two points of access to the JWCWMA: one on SR 710 on the west side of the Pratt Whitney Complex (North Entrance) and a South Entrance accessible via the Mecca Farms property north of 100th Avenue.

Contained within the boundaries of the JWCWMA is the Corbett Trail segment of the Florida Trail. The Florida Trail is a system of established and planned trails that stretch from the Everglades north along the center of the state to the Panhandle then west towards Pensacola.

A 0.25-mile buffer is designated for hunting areas on the JWCWMA. **Figure 3-3** identifies trails, camping areas, and those areas designated for the hunting season of 2004-2005.

### *3.2.4 VISUAL/AESTHETICS*

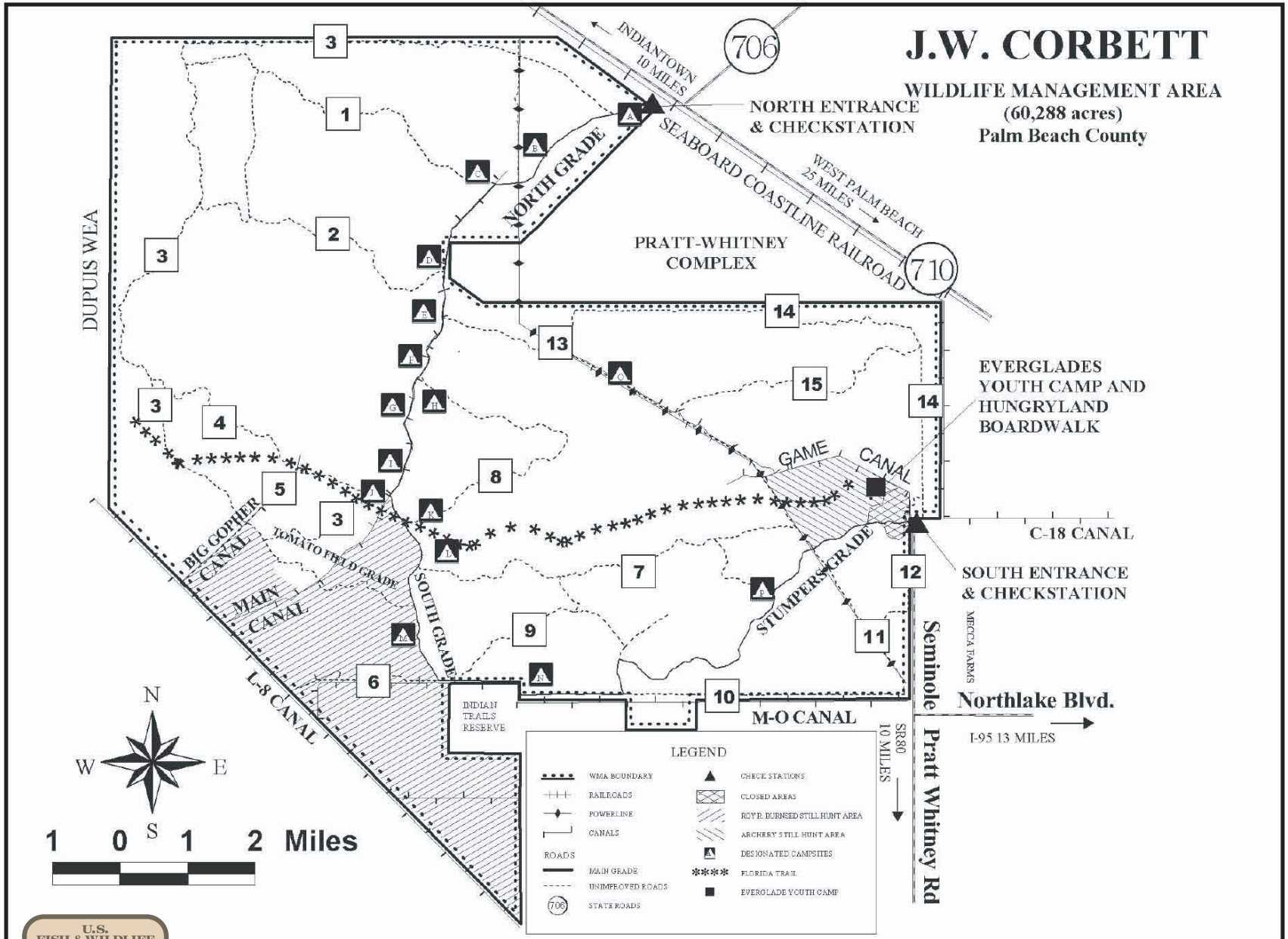
The existing viewshed in the general vicinity of the proposed action consists of the open, natural areas of the JWCWMA; a sand mining operation on the former Mecca Farm groves; and improved citrus groves. An existing FP&L power transmission corridor can be seen traversing the JWCWMA to the west of the general area.

## *3.3 PHYSICAL RESOURCES*

### *3.3.1 AIR QUALITY*

The Southeast Florida Airshed, including Palm Beach, Miami-Dade, and Broward counties, was originally designated as a moderate nonattainment area. The airshed was redesignated to attainment effective April 25, 1995. Once redesignated, it entered a Maintenance Period for purposes of conformity.

The Palm Beach County Metropolitan Planning Organization (MPO) has determined that the implementation of the 2030 LRTP will contribute to the annual emission reductions when compared to the 1990 base year network and that the same is true for all years of analysis. The emissions expected from the implementation of the 2030 LRTP are consistent with the motor vehicle emissions budgets for Palm Beach County that the MPO found in the approved Maintenance Plan.




*Source: Florida Fish & Wildlife Conservation Commission*

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**JWCWMA MAP**

*Figure 3-3*

# *3.4 NATURAL RESOURCES*

## *3.4.1 WETLANDS*

Pursuant to Executive Order 11990 entitled Protection of Wetlands, Federal actions should avoid, to the extent possible, the long- and short-term adverse impacts associated with the destruction or modification of wetlands and avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. In accordance with this order, an assessment of wetlands, which may be affected by one or more of the project alternatives, has been undertaken.

Wetlands are defined by the U.S. Army Corps of Engineers (USACE) (Federal Register 1982) and the U.S. Environmental Protection Agency (EPA) (Federal Register 1980) as:

> *"Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bog, and similar areas."*

In order to determine the extent of wetlands, the USACE follows procedures found within the Corps of Engineers Wetland Delineation Manual (Technical Report Y-87-1). In accordance with this document, the USACE uses three characteristics of wetlands when determining wetland limits: vegetation, soil, and hydrology. Unless an area has been altered or is a rare natural situation, wetland indicators of all three characteristics must be present during some portion of the growing season for an area to be a wetland.

Utilizing USACE guidelines, project alternatives were assessed for the presence of jurisdictional wetlands. To accomplish this task, site-specific information was first obtained and reviewed. Information reviewed included:

- U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey of Palm Beach County Area, Florida (1978) and Soil Survey of Martin County Area, Florida (1981);
- Florida Association of Professional Soil Classifiers, Hydric Soils of Florida Handbook (1990);
- Blue-line and black-line aerial photographs of the study areas (scale and year varied);
- Florida Department of Transportation, Florida Land Use, Cover, and Forms Classification System Handbook (FLUCFCS) (3rd ed., 1999); and
- U.S. Fish and Wildlife Service, Classification of Wetlands and Deepwater Habitats of the United States (Cowardin *et. al*., 1979).

On November 17 and 22-24, 2004, field reviews of project alternatives were conducted. The purpose of these reviews was to verify and refine jurisdictional wetland boundaries and to determine the general quality of wetlands found within the project alternatives. The information below was derived from those field reviews in conjunction with existing site-specific data collected and reviewed as part of this EA. Wetlands were classified using both the FLUCFCS (3rd ed. FDOT, 1999) and the Service's Classification of Wetlands and Deepwater Habitats of the United States (Cowardin *et. al*., 1979).

Based on data and field reviews, it was determined that eight wetland types were present within the area of project alternatives. Descriptions of each of these wetland types are provided below and the acreage of each within each project alternative is presented in **Tables 3-2 and 3-3** for Parcel A and Parcel B alternatives, respectively. Also provided in these tables is the percent of the alternative represented by that specific wetland type. **Figures 3-4 through 3-9** depict the boundaries of jurisdictional wetlands found within Alternatives 1A through 4B, respectively. Detailed discussions of jurisdictional wetlands within each project alternative are provided in Appendix C.

In general, wetlands found within project alternatives are comprised of both forested and herbaceous systems. Wetland quality varies from land parcel and alternative with high quality wetlands being located generally within areas with less human effect. Invasive alien plant species, primarily melaleuca (*Melaleuca quinquenervia*) and Brazilian pepper (*Schinus terebinthfolius*), are present within specific wetland types.

As shown in Table 3-2, jurisdictional wetlands comprise 4.67 acres (40.4 percent) of Alternative 1A and 5.90 acres (29.2 percent) of Alternative 2A. Within Alternative 1A, jurisdictional wetlands consisted of a mix of hydric pine flatwoods and freshwater marsh. Alternative 2A jurisdictional wetlands consisted of a more diverse mix of wetland types. However, jurisdictional wetlands within this alternative exhibited greater degrees of impact and higher percentages of invasive alien species. The dominant wetland types within this alternative are streams and waterways (drainage canals) and exotic wetland hardwoods, which comprised 3.39 acres of the jurisdictional wetlands found within this alternative.

Jurisdictional wetland acreages within Parcel B alternatives vary greatly due to the area contained within each alternative and the specific actions associated with each alternative (see Table 3-3). The total area contained within Alternative 1B greatly exceed that of other Parcel B alternatives due to the inclusion of a new 150-foot canal/flow way and a new 40-foot canal maintenance area within this alternative. No modeling for CERP has been completed to date, however, Alternative 1B takes into account flow way alternatives being considered by CERP to improve flows to the Loxahatchee River. As a result of these project features, jurisdictional wetland acreage associated with this alternative exceeds acreages found within Alternatives 2B, 3B, and 4B. Total jurisdictional wetland acreage within Alternative 1B is 16.21 acres, the majority of which consists of hydric pine flatwoods and freshwater marsh located within the JWCWMA. Total jurisdictional wetland acreages associated with the three remaining Parcel B alternatives vary from 3.65 acres (Alternative 2B) to 3.59 acres (Alternative 4B) to 5.75 acres (Alternative 3B).

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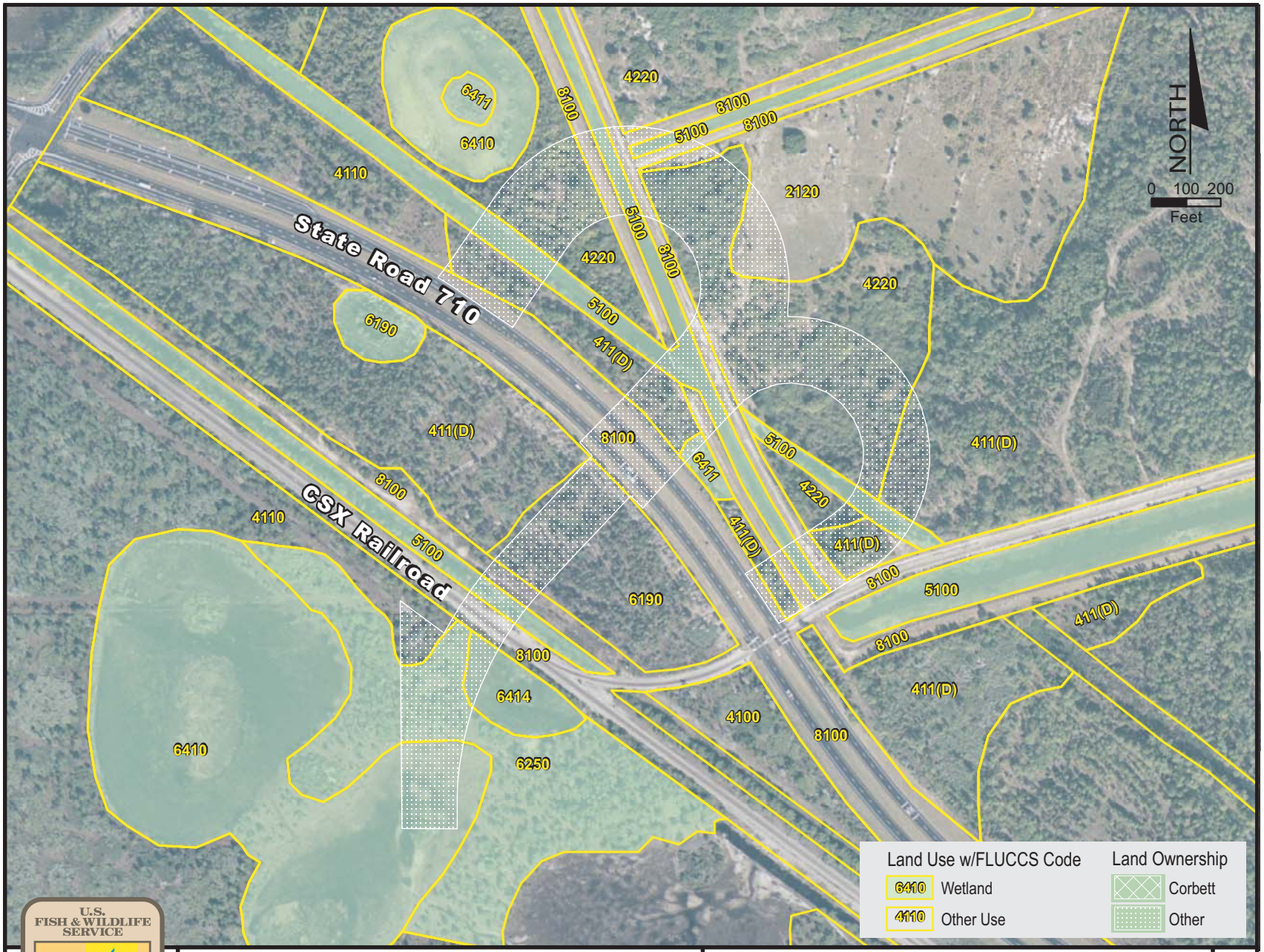
**ALTERNATIVE 1-A**
**WETLANDS MAP**

*Figure 3-4*

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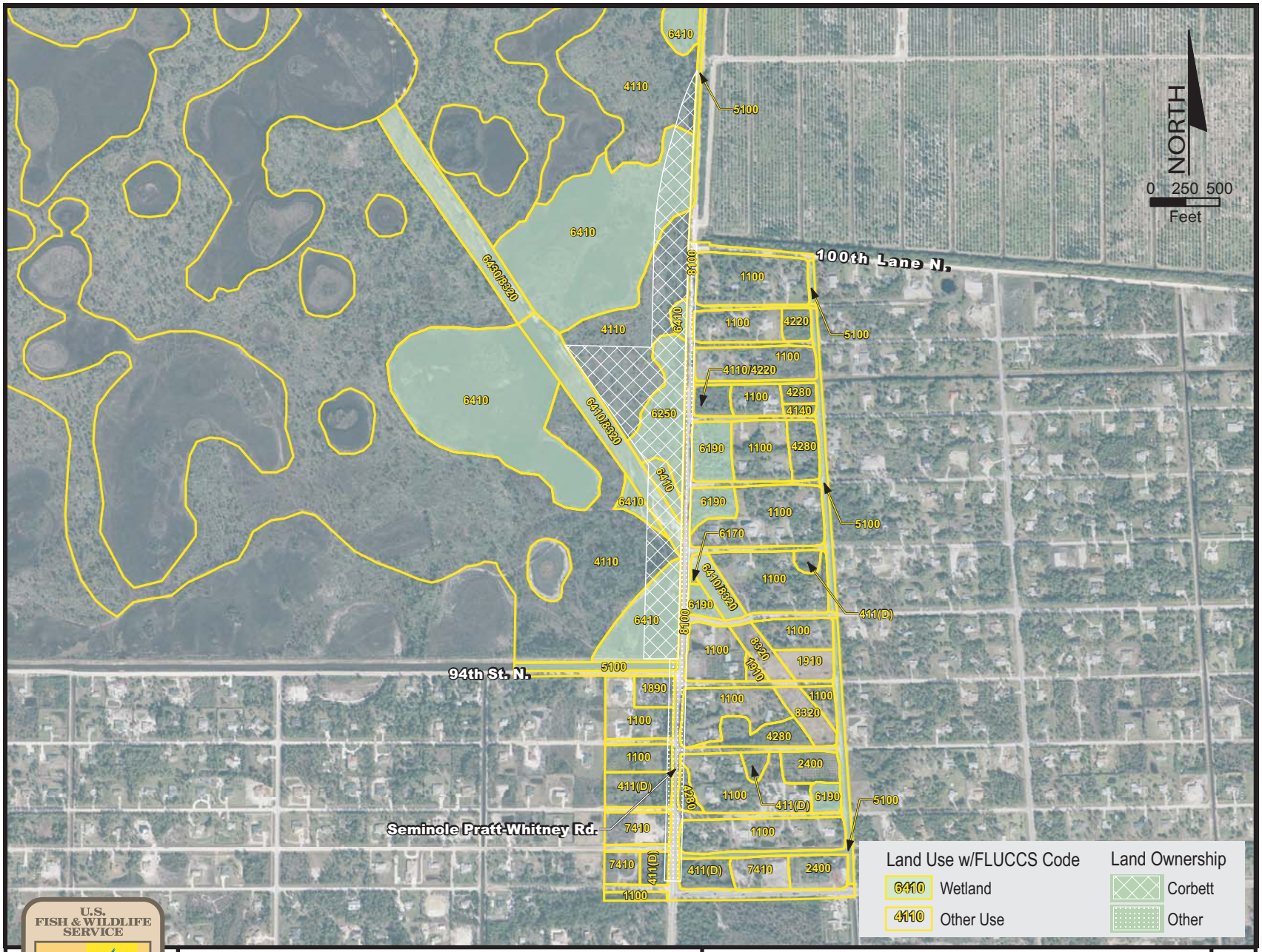
**ALTERNATIVE 2-A**
**WETLANDS MAP**

*Figure 3-5*

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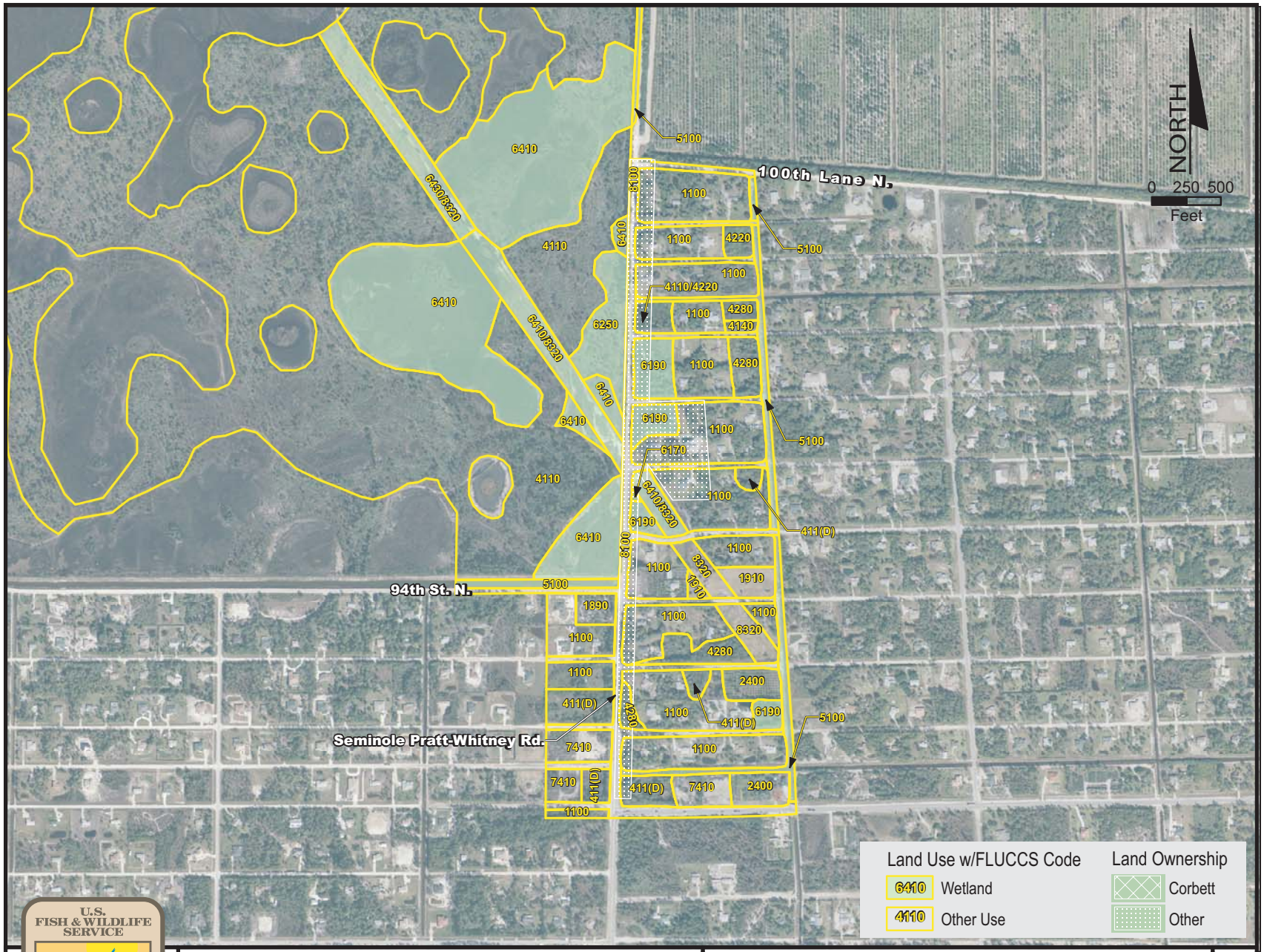
**ALTERNATIVE 1-B**
**WETLANDS MAP**

*Figure 3-6*

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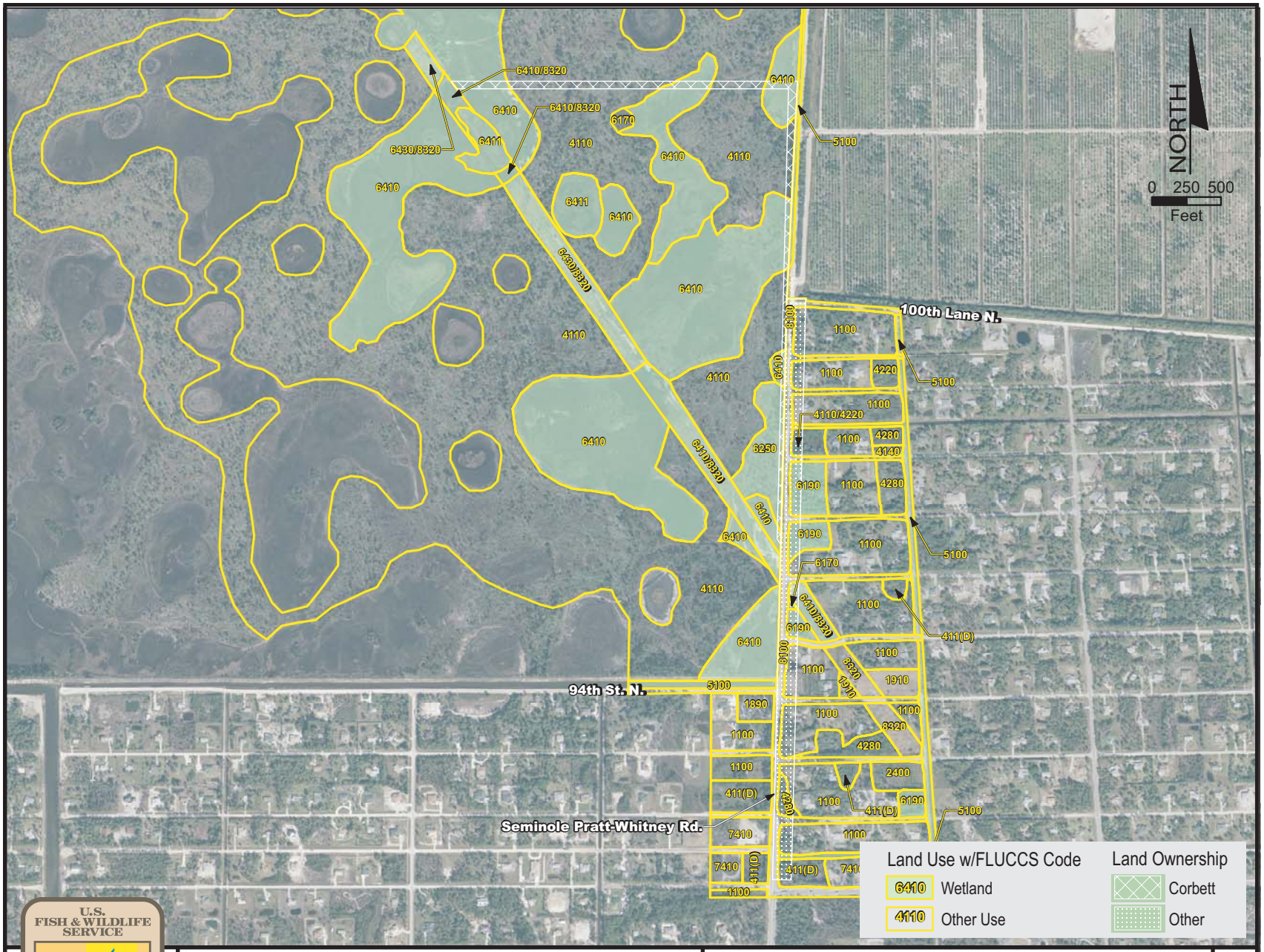
**ALTERNATIVE 2-B**
**WETLANDS MAP**

*Figure 3-7*

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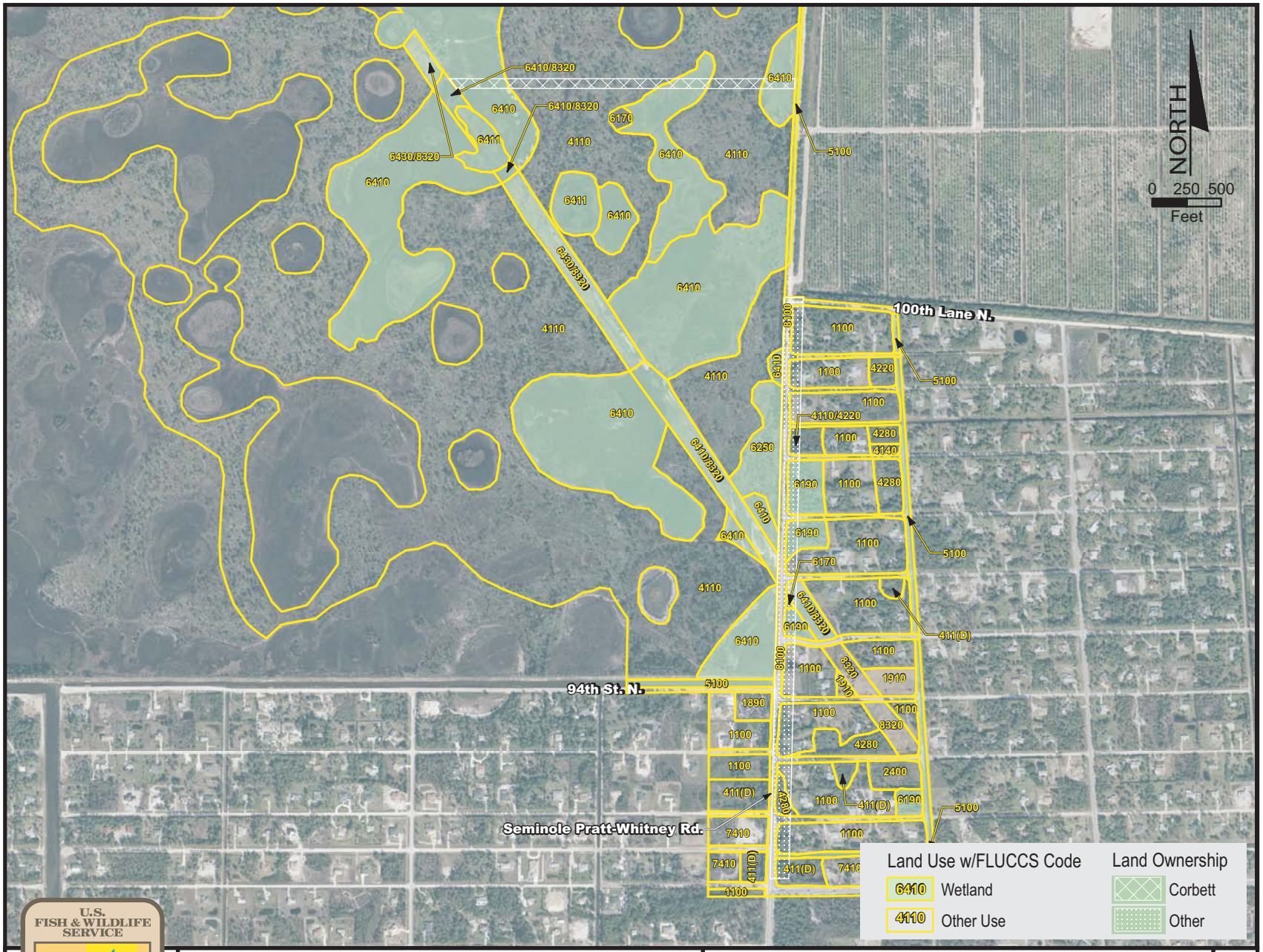
**ALTERNATIVE 3-B**
**WETLANDS MAP**

*Figure 3-8*

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**ALTERNATIVE 4-B**
**WETLANDS MAP**

*Figure 3-9*

**TABLE 3-2**
**JURISDICTIONAL WETLANDS WITHIN CORBETT PARCEL A ALTERNATIVES**
**FLUCFCS AND USFWS CLASSIFICATIONS AND ACREAGES**

| Classification Name | FLUCFCS Classification* | USFWS Classification** | Acreage of Classification | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Alternative 1A | | | | Alternative 2A | | | |
| | | | Within JWCWMA | Outside JWCWMA | Total | Percent of Alternative | Within JWCWMA | Outside JWCWMA | Total | Percent of Alternative |
| Streams and Waterways | 510 | PUB3H | ---- | ---- | ---- | ---- | ---- | 1.94 | 1.94 | 9.6% |
| Exotic Wetland Hardwoods | 619 | PFO3C | ---- | ---- | ---- | ---- | ---- | 1.45 | 1.45 | 7.2% |
| Hydric Pine Flatwoods | 625 | PFO4B | 1.17 | 1.90 | 3.07 | 26.6% | ---- | 1.22 | 1.22 | 6.0% |
| Freshwater Marsh | 641 | PEM1C | 0.43 | 1.17 | 1.60 | 13.8% | ---- | 0.96 | 0.96 | 4.8% |
| Sawgrass Marsh | 6411 | PEM1C | --- | --- | --- | --- | --- | 0.07 | 0.07 | 0.3% |
| Maidencane Marsh | 6414 | PEM1C | ---- | ---- | ---- | ---- | ---- | 0.26 | 0.26 | 1.3% |
| **Total** | | | **1.60** | **3.07** | **4.67** | **40.4%** | **----** | **5.90** | **5.90** | **29.2%** |

* Based on the FLUCFCS (3rd ed.) (FDOT).
** Based on the Classification of Wetlands and Deepwater Habitats of the United States (Cowardin *et. al.*, 1979).

**TABLE 3-3**
**JURISDICTIONAL WETLANDS WITHIN CORBETT PARCEL B ALTERNATIVES**
**FLUCFCS AND USFWS CLASSIFICATIONS AND ACREAGES**

| Classification Name | FLUCFCS* Classification | USFWS** Classification | Acreage of Classification: Alternative 1B Within JWCWMA | Alternative 1B Outside JWCWMA | Alternative 1B Total | Alternative 1B % of Alt | Alternative 2B Within JWCWMA | Alternative 2B Outside JWCWMA | Alternative 2B Total | Alternative 2B % of Alt | Alternative 3B Within JWCWMA | Alternative 3B Outside JWCWMA | Alternative 3B Total | Alternative 3B % of Alt | Alternative 4B Within JWCWMA | Alternative 4B Outside JWCWMA | Alternative 4B Total | Alternative 4B % of Alt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Streams and Waterways | 510 | PUB3H | ---- | 0.08 | 0.08 | 0.3% | ---- | 0.14 | 0.14 | 0.9% | ---- | 0.10 | 0.10 | 0.7% | ---- | 0.10 | 0.10 | 0.8% |
| Mixed Wetland Hardwoods | 617 | PFO3C | ---- | ---- | ---- | ---- | ---- | 0.07 | 0.07 | 0.4% | ---- | 0.07 | 0.07 | 0.5% | ---- | 0.07 | 0.07 | 0.6% |
| Exotic Wetland Hardwoods | 619 | PFO3C | ---- | --- | --- | --- | ---- | 3.28 | 3.28 | 20.6% | ---- | 1.26 | 1.26 | 8.7% | ---- | 1.26 | 1.26 | 10.6% |
| Hydric Pine Flatwoods | 625 | PFO4B | 5.80 | ---- | 5.80 | 18.9% | ---- | ---- | ---- | ---- | 0.78 | ---- | 0.78 | 5.4% | ---- | ---- | ---- | ---- |
| Freshwater Marsh | 641 | PEM1C | 8.97 | 0.03 | 9.00 | 29.4% | ---- | ---- | ---- | ---- | 3.33 | ---- | 3.33 | 22.9% | 1.95 | --- | 1.95 | 16.5% |
| Sawgrass Marsh | 6411 | PEM1C | --- | --- | --- | --- | --- | --- | --- | --- | 0.05 | --- | 0.05 | 0.3% | 0.05 | --- | 0.05 | 0.4% |
| Freshwater Marsh/ Electric Power Transmission Line | 641/832 | PEM1C | 1.33 | ---- | 1.33 | 4.3% | ---- | 0.16 | 0.16 | 1.0% | ---- | 0.16 | 0.16 | 1.1% | ---- | 0.16 | 0.16 | 1.4% |
| **Total** | | | **16.10** | **0.11** | **16.21** | **52.9%** | **----** | **3.65** | **3.65** | **22.9%** | **4.16** | **1.59** | **5.75** | **39.6%** | **2.00** | **1.59** | **3.59** | **30.3%** |

* Based on the FLUCFCS (3rd ed.) (FDOT).
** Based on the Classification of Wetlands and Deepwater Habitats of the United States (Cowardin *et. al.*, 1979).

## Wetland Habitat Classification Descriptions

### Streams and Waterways
**FLUCFCS: 510**
**USFWS: Palustrine, Unconsolidated bottom, Mud, Permanently Flooded (PUB3H)**

This habitat category includes rivers, creeks, canals, and other linear water bodies. Within the project alternatives, this habitat type consists of man-made drainage canals with slopes that are vegetated with cocoplum (*Chrysobalanus icaco*), slash pine (*Pinus elliottii*), false buttonweed (*Spermacoce* sp.), sandmat (*Chamaesyce harta*), ragweed (*Ambrosia artemisiifolia*), and napier grass (*Pennisetum purpureum*). The edges of the drainage canals are vegetated with red ludwigia (*Ludwigia repens*), spike rush (*Eleocharis cellulosa*), and torpedo grass (*Panicum repens*). The central portions of the canals are 3 to 4 feet in depth and vegetated with spatter-dock (*Nuphar lutea*) or are unvegetated open water.

The types of soils through which these man-made channels were constructed include Boca fine sand, Wabasso fine sand, and Riviera fine sand, depressional.

### Mixed Wetland Hardwoods
**FLUCFCS: 617**
**USFWS: Palustrine, Forested, Broad-Leaved Evergreen, Seasonally Flooded (PFO3C)**

Mixed wetland hardwoods are characterized as wetlands dominated by a variety of hardwood species, none of which comprise a 66 percent dominance of the canopy. Within the project alternatives, this habitat type is represented by forested wetlands with low shrubby canopies consisting of pond apple (*Annona glabra*), dahoon holly (*Ilex cassine*), wax myrtle (*Myrica cerifera*), Carolina willow (*Salix caroliniana*), and saltbush (*Baccharis halimifolia*). The understory is dominated by herbaceous species such as swamp fern (*Blechnum serrulatum*), Virginia chain fern (*Woodwardia virginica*), sawgrass (*Cladium jamaicense*), arrowhead (*Sagittaria lancifolia*), flat sedge (*Cyperus* spp.), broomsedge (*Andropogon viriginicus*), and false buttonweed.

The soil types present within this community is Riviera fine sand, depressional.

### Exotic Wetland Hardwoods (Melaleuca)
**FLUCFCS: 619**
**USFWS: Palustrine, Forested, Broad-Leaved Evergreen, Seasonally Flooded (PFO3C)**

This wetlands classification is characterized as a forested area dominated by one or more exotic species. The exotic wetland hardwoods found within the project alternatives appear to be transitioning into complete monocultures of melaleuca. These forested areas also have slash pine, cabbage palm (*Sabal palmetto*), dahoon holly, and wax myrtle in the sub-canopy. The understory is dominated by saw palmetto (*Serenoa repens*), false buttonweed, swamp fern, sawgrass, maidencane (*Panicum hemitomon*), button snakeroot (*Eryngium yuccifolium*), arrowhead, and spikerush.

The types of soils found within this community type include Wabasso fine sand and Riviera fine sand, depressional.

**Hydric Pine Flatwoods**
**FLUCFCS: 625**
**USFWS: Palustrine, Forested, Needle-leaved Evergreen, Saturated (PFO4B)**

This land use class is common throughout southern and central Florida and is characterized by a canopy of either longleaf (*Pinus palustris*) or slash pine. The major distinguishing feature that separates the hydric pine flatwoods from pine flatwoods is the presence of a thick underbrush of saw palmetto within the pine flatwoods. Within the hydric pine flatwoods of the project alternatives, saw palmetto is replaced by a sub-canopy consisting of swamp bay (*Persea palustris*), gallberry (*Ilex glabra*), wax myrtle, cocoplum, saltbush, and myrsine (*Rapanea punctata*). The understory of this habitat type is dominated by herbaceous species such as swamp fern, hatpins (*Eriocaulon compressum*), bog buttons (*Lachnocaulon minus*), broomsedge (*Andropogon virginicus*), false buttonweed, beakrush (*Rhynchospora* spp.), red root (*Lachnanthes caroliana*), tickseed (*Coreopsis* sp.), wire grass (*Aristida stricta*), and grape vine (*Vitis rotundifolia*). Saw palmetto is also found intermittently throughout this habitat type. Pine trees throughout this community type were damaged by recent storm events. Small amounts of melaleuca were also observed within the hydric pine flatwoods.

The soil type present within this community type is Riviera fine sand, depressional.

**Freshwater Marsh**
**FLUCFCS: 641**
**USFWS: Palustrine, Emergent Marsh, Persistent, Seasonally Flooded (PEM1C)**

This land use class is characterized as non-forested areas that are dominated by herbaceous wetlands plant species with shrubby vegetation usually along the perimeters. Within the project alternatives, the herbaceous plant species that are present within freshwater marshes include broomsedge, maidencane, pickerelweed (*Pontederia cordata*), beakrush, plume grass (*Erianthus giganteus*), water dropwort (*Oxypolis filiformis*), bog buttons, water hyssops (*Bacopa monnieri*), spikerush, and yellow-eyed grass (*Xyris* sp.). Shrub species concentrated around the perimeter of the marshes include St. John's wort (*Hypericum* spp.), buttonbush (*Cephalanthus occidentalis*), corkwood (*Stillingia aquatica*), red bay (*Persea borbonia*), myrsine, dahoon holly, Carolina willow, and wax myrtle.

Marshes within the project alternatives are flooded throughout much of the year with the exception of dry season drought periods. Soils within this community type are typically comprised of Riviera fine sand, depressional.

**Sawgrass Marsh**
**FLUCFCS: 6411**
**USFWS: Palustrine, Emergent Marsh, Persistent, Seasonally Flooded (PEM1C)**

This land use class is characterized as a non-forested area that is dominated by sawgrass. Within the project alternatives, this habitat occurs as a pure stand of sawgrass located in the center of the maindencane marsh, as described below.

The type of soil within this community type is Riviera fine sand, depressional.

**Maidencane Marsh**
**FLUCFCS: 6414**
**USFWS: Palustrine, Emergent Marsh, Persistent, Seasonally Flooded (PEM1C)**

This land use class is characterized as non-forested areas that are dominated by maidencane. Maidencane marsh is found only within Alternative 2A. Additional herbaceous plant species within this wetland type include pickerelweed, cattails (*Typha* spp.), arrowhead, dog fennel (*Eupatorium* sp.), and beakrush.

This marsh category is inundated throughout the year except during dry season drought periods. The type of soil within this community type is Riviera fine sand, depressional.

**Freshwater Marsh/Electric Power Transmission Lines**
**FLUCFCS: 641/832**
**USFWS: Palustrine, Emergent Marsh, Persistent, Seasonally Flooded (PEM1C)**

This land use category consists of freshwater marsh located within an existing electric transmission line corridor. Within the project alternatives, these marshes are dominated by maidencane, pickerelweed, torpedo grass, water dropwort, arrowhead, false buttonweed, flat sedge (*Cyperus* spp.), button snakeroot, yellow-eyed grass, and spikerush. Rattlesnake master, swamp fern, bladderwort (*Sesbania vesicaria*), and primrose willow (*Ludwigia peruviana*) comprise minor components of the herbaceous stratum.

This habitat most likely was hydric pine flatwoods, which were cleared during the construction of the transmission lines. The type of soil within this community type is Riviera fine sand, depressional.

### *3.4.2 WATER QUALITY*

The project study area is situated on the Surficial Aquifer. The Surficial Aquifer, which is an unconfined aquifer, is classified as G-II and is the main source for potable water in Palm Beach County and south Florida. This aquifer is directly recharged from rainfall as well as surface water bodies.

The JWCWMA has numerous wetlands. These wetlands, most of which are seasonal, typically consist of grass prairies that become submerged during the wet season. Surface water drainage flow patterns are generally from west to east within the study area. The SFWMD C-18 canal is located along the eastern portion of the project study area. North of the C-18 canal is the HSNA, also known as Unit 11. South of the project study area is a network of drainage canals associated with The Acreage. These drainage canals are operated and maintained by the Indian Trail Improvement District. According to the USACE, Unit 11, which contains numerous wetlands, is a regional off-site mitigation area which is in the process of being restored.

The SFWMD C-18 canal, which discharges into the Southwest Fork of the Loxahatchee River, is used to drain the HSNA to the north and areas east of the project study area. Both surface water levels and groundwater levels in this general area are controlled and maintained by the SFWMD C-18 canal. The surface water bodies described above provide recharge to the Surficial Aquifer during the wet season.

The Loxahatchee River, located approximately 10 miles downstream of the project study area, is a designated National Wild and Scenic River (WSR). Being designated as a WSR, it is, therefore, also listed by the Florida Division of Forestry as an Outstanding Florida Water.

The Loxahatchee River and its upstream watershed are located within northern Palm Beach and southern Martin counties. The river originates in the Loxahatchee Slough, flows north and then east and southeast into the Jupiter inlet where it then discharges into the Atlantic Ocean. The Loxahatchee River consists of three forks: North, Northwest, and Southwest. These three freshwater tributaries drain into the Loxahatchee River Estuary, which opens into the Atlantic Ocean. The drainage basin for the Loxahatchee River is approximately 200 square miles.

The surface water in the upper or westernmost portion of the SFWMD C-18 canal is classified as Class I per the Florida Administrative Code (FAC) Chapter 62-302, and extends along the eastern portion of the project study area. The surface water in the lower or eastern portion of the SFWMD C-18 canal from the salinity barrier to the Southwest Fork of the Loxahatchee River is classified as Class II. The Southwest, Northwest, and North Forks of the Loxahatchee River are also classified as Class II.

The groundwater and surface water quality conditions in the project study area were evaluated based on their respective classifications as given in FAC Chapter 62-520, Groundwater Classes, Standards, and Exemptions, and FAC Chapter 62-302, Surface Water Quality Standards, respectively.

According to FAC Chapter 62-520, the Surficial Aquifer in the northern Palm Beach County area is classified as Class G-II. The SFWMD C-18 canal is classified as Class I per FAC Chapter 62-302 and the waters in wetlands in the JWCWMA are Class III, as are the surface waters in the drainage canals of The Acreage to the south.

### *3.4.3 WILD AND SCENIC RIVERS*

The Loxahatchee River, located approximately 10 miles downstream of the project study area, is a designated WSR. Being designated as a WSR, it is, therefore, also listed by the Florida Division of Forestry as an Outstanding Florida Water.

The Loxahatchee River and its upstream watershed are located within northern Palm Beach and southern Martin counties. The river originates in the Loxahatchee Slough, flows north and then east and southeast into the Jupiter inlet where it then discharges into the Atlantic Ocean. The Loxahatchee River consists of three forks: North, Northwest, and Southwest. These three freshwater tributaries drain into the Loxahatchee River Estuary, which opens into the Atlantic Ocean. The drainage basin for the Loxahatchee River is approximately 200 square miles.

The river has often been referred to as the “last free flowing river in southeast Florida.” In 1985, the Northwest Fork of the Loxahatchee River became Florida’s first Federally-designated WSR. Being designated as a WSR, it is, therefore, also listed by the Florida Division of Forestry as an Outstanding Florida Water. The Northwest Fork of the Loxahatchee River is located approximately 10 miles downstream of the project study area.

Local drainage, lowered water tables, diverted flows, dredging, channelization, and urban development have reduced the amount of fresh water available to the River and have altered natural flow patterns significantly. In February 2003, SFWMD adopted a proposed amendment to Rule 40E-8, FAC, relative to setting minimum flows and levels for the Loxahatchee River and Estuary.

The project study area is located in sub-basin 4, C-18/Corbett drainage area of the Loxahatchee watershed as defined by SFWMD. The C-18 canal was constructed to develop land in the area for agriculture. The west leg of the C-18 canal drains the Hungryland Slough and the east leg drains the Loxahatchee Slough. Much of the water that historically remained in the Loxahatchee Slough or entered the Northwest Fork is now lost to tide via the C-18 canal.

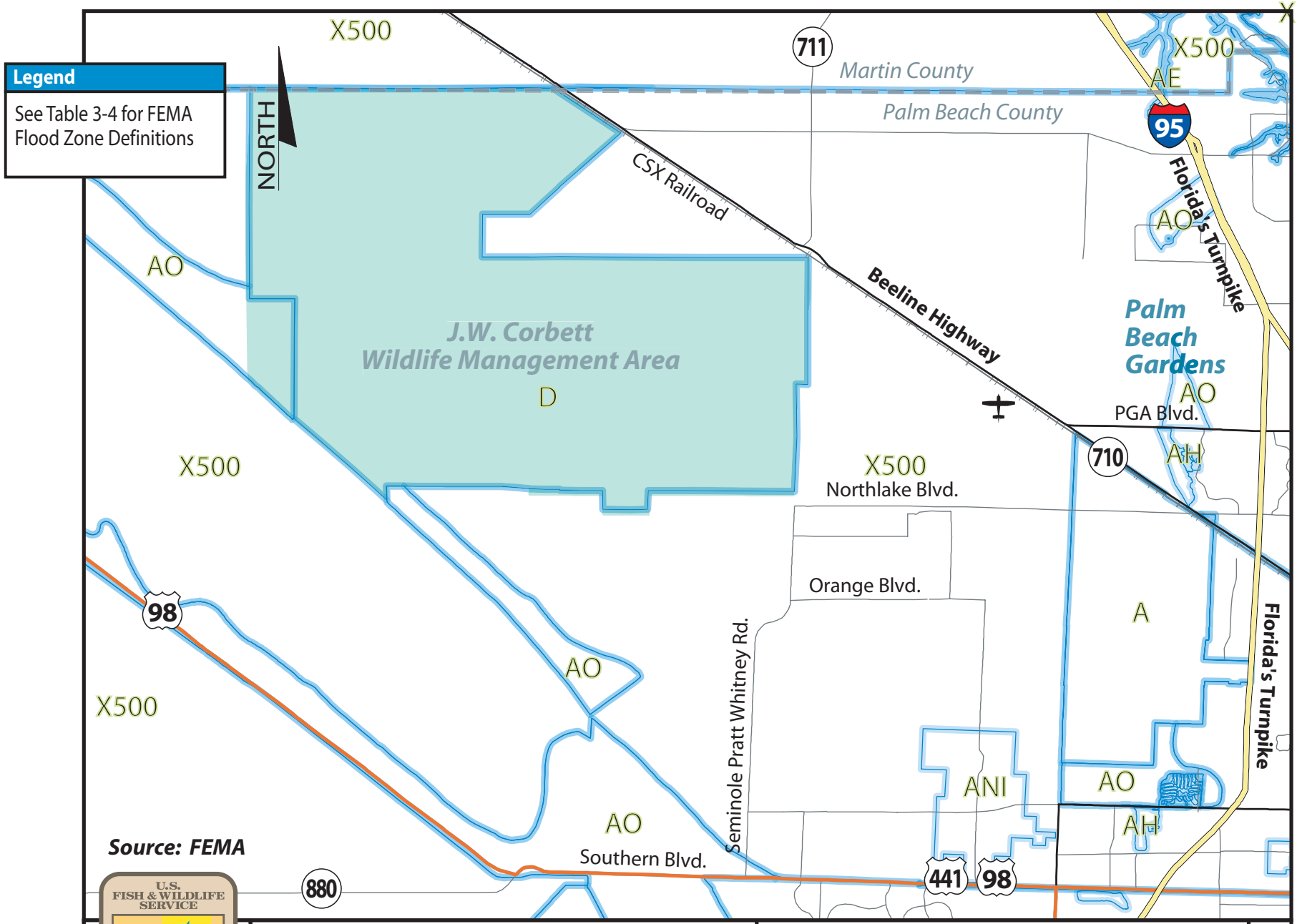
### *3.4.4 FLOODPLAINS*

Examination of Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs), Community Panel Numbers 120192-0050B (Palm Beach County) and 120161-0475B (Martin County) indicate that the JWCWMA parcel areas and the Minkin Parcel are located within FEMA Zone D (an area of undetermined but possible flood hazards) and Zone X500 (an area inundated by 500-year flooding, an area inundated by 100-year flooding with an average depth of less than 1 foot or with drainage areas less than 1 square mile, or an area protected by levees from 100-year flooding). Floodplains in the project study area are depicted on **Figure 3-10**. Flood hazard zone designations can be found in **Table 3-4**, which follows the Floodplain Map.

### *3.4.5 WILDLIFE AND HABITAT*

#### *3.4.5.1 Introduction*

Project alternatives were assessed to determine the types and general condition of natural habitats and man dominated land uses present within each alternative. In addition, each alternative was assessed for the presence of, or the potential use by, Federal and state listed protected species. To accomplish these assessments, site-specific information was collected prior to field reviews. Information used included the specific information listed within Section 3.4.1, Wetlands, as well as: the Florida Natural Areas Inventory (FNAI), Palm Beach County Endangered Species Occurrence Summary (January 2004), Martin County Endangered Species Occurrence Summary (January 2004), and information obtained from the FWC Eagle Nest Locator website. On November 17 and 22-24, 2004, field reviews of the project alternatives were conducted. The purpose of these reviews was to verify and refine habitat boundaries, to determine the general condition of existing habitats, and to review the project alternatives for protected species. Results of in-house and field reviews are presented below.

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**FEMA FLOODPLAIN MAP**

*Figure 3-10*

**TABLE 3-4**
**FEMA FLOOD HAZARD ZONE DESIGNATIONS**

| Value | Description |
|---|---|
| V | An area inundated by 100-year flooding with velocity hazard (wave action); no BFEs have been determined. |
| VE | An area inundated by 100-year flooding with velocity hazard (wave action); BFEs have been determined. |
| A | An area inundated by 100-year flooding, for which no BFEs have been determined. |
| AE | An area inundated by 100-year flooding, for which BFEs have been determined. |
| AO | An area inundated by 100-year flooding (usually sheet flow on sloping terrain), for which average depths have been determined; flood depths range from 1 to 3 feet. |
| AOVEL | An alluvial fan inundated by 100-year flooding (usually sheet flow on sloping terrain), for which average flood depths and velocities have been determined; flood depths range from 1 to 3 feet. |
| AH | An area inundated by 100-yar flooding (usually an area of ponding), for which BFEs have been determined; flood depths range from 1 to 3 feet. |
| A99 | An area inundated by 100-year flooding, for which no BFEs have been determined. This is an area to be protected from the 100-year flood by a Federal flood protection system under construction. |
| D | An area of undetermined but possible flood hazards. |
| AR | An area inundated by flooding, for which BFEs or average depths have been determined. This is an area that was previously, and will again, be protected from the 100-year flood by a Federal flood protection system whose restoration is Federally funded and underway. |
| X500 | An area inundated by 500-year flooding; an area inundated by 100-year flooding with average depths of less than 1 foot or with drainage areas less than 1 square mile; or an area protected by levees from the 100-year flooding. |
| X | An area that is determined to be outside the 100- and 500-year floodplains. |
| 100IC | An area where the 100-year flooding is contained within the channel banks and the channel is too narrow to show to scale. An arbitrary channel width of 3 meters is shown. BFEs are not shown in this area, although they may be reflected on the corresponding profile. |
| 500IC | An area where the 500-year flooding is contained within the channel banks and the channel is too narrow to show to scale. An arbitrary channel width of 3 meters is shown. |
| FWIC | An area where the floodway is contained within the channel banks and the channel is too narrow to show to scale. An arbitrary channel width of 3 meters is shown. BFEs are not shown in this area, although they may be reflected on the corresponding profile. |
| FPQ | An area designated as a “Flood Prone Area” on a map prepared by the U.S. Geological Survey (USGS) and the Federal Insurance Administration. This area has been delineated based on available information on past floods. This is an area inundated by 100-year flooding for which no BFEs have been determined. |
| ANI | Area not included. |

BFE = Base Flood Elevation

### *3.4.5.2 Habitats*

Based on site-specific data and field reviews, it was determined that a total of 15 habitat types and three land use types are present within the project alternatives. Of the 15 habitat types present, eight are considered wetland and seven are considered upland habitats. Descriptions of the wetland types found within the project alternative are presented in Section 3.4.1, Wetlands, of this EA. Descriptions of the seven upland habitat types and three land use types found within the project alternatives are presented below. Acreages of each habitat, including wetlands, and land uses found within the project alternatives are provided in **Tables 3-5 and 3-6**, for Parcel A and Parcel B alternatives, respectively. **Figures 3-11 through 3-16** depict the boundaries of habitats and land uses found within Alternatives 1A through 4B, respectively.

Upland areas found within Alternative 1A consisted of pine flatwoods. Within this alternative, this habitat type comprised 6.88 acres (59.6 percent) of the alternative. Upland habitats within Alternative 2A were dominated by disturbed habitat types, which comprised 9.80 acres (48.5 percent) of this alternative. Upland habitat types within Parcel B alternatives were more diverse in number. However, additional upland habitats found within these alternatives exhibited varying degrees of human disturbance. Within Alternatives 1B, 3B, and 4B, pine flatwoods comprised the majority of the upland areas, while upland areas located within Alternative 2B were comprised of habitats that exhibited varying degrees of human disturbance.

**<u>Upland Habitat Classification Descriptions</u>**

**Unimproved Pastures**
**FLUCFCS: 212**

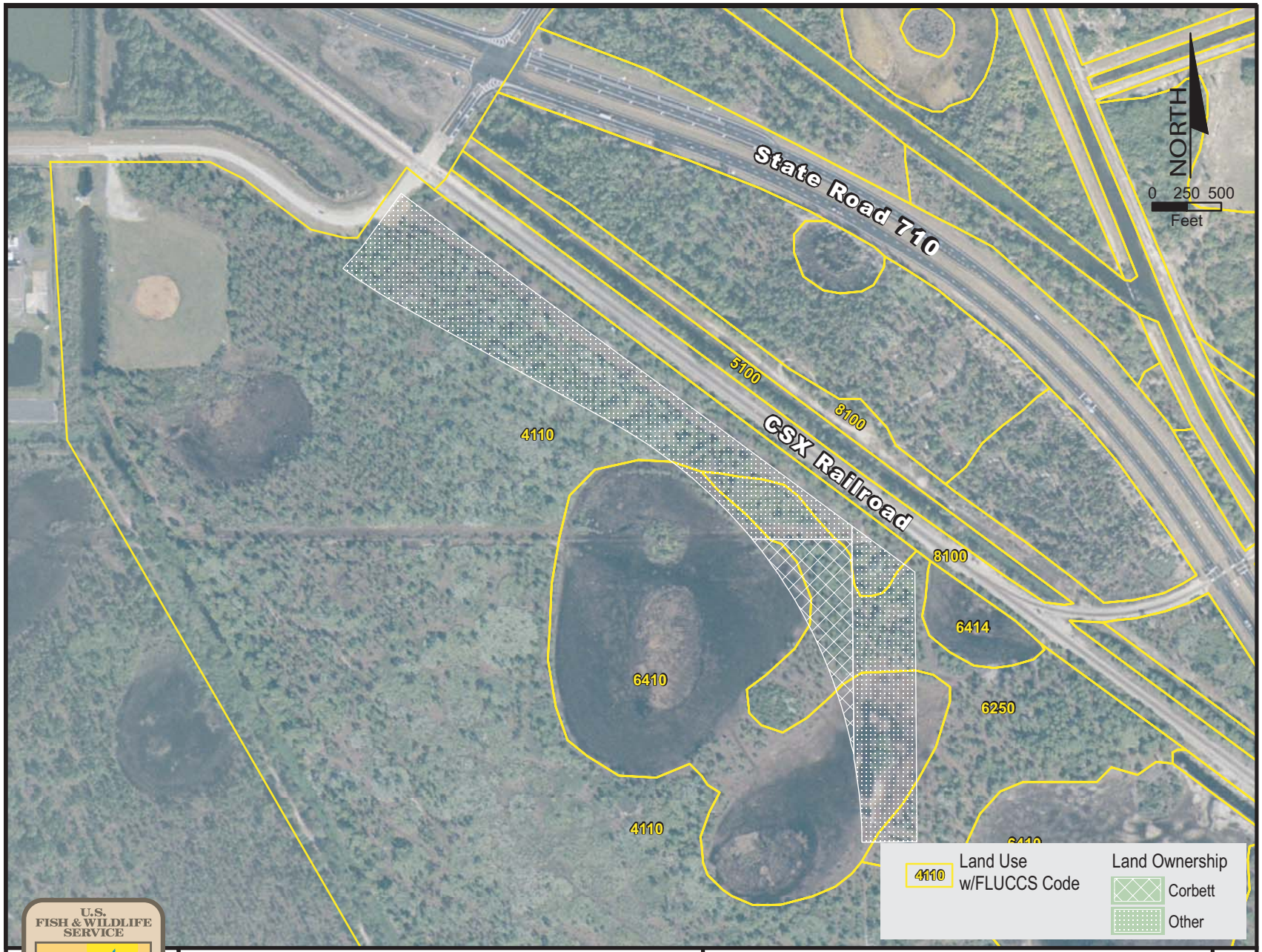
This land use class is characterized as cleared land with major stands of trees and brush where native grasses have been allowed to develop. Within Alternative 2A, this unimproved pasture is dominated with false buttonweed, dog fennel, and bahia grass. Brazilian pepper is also present as a shrub within this habitat.

The type of soil found within this community is Pineda fine sand.

**Pine Flatwoods**
**FLUCFCS: 411**

Pine flatwoods are characterized by a canopy of either longleaf or slash pine. All pine flatwoods communities found within the project alternatives are dominated by slash pine. Native vegetation present within the sub-canopy of these communities includes gallberry, wax myrtle, cocoplum, saltbush, beautyberry, and myrsine. In some areas, thick stands of saw palmetto dominated the mid-story. Understory components include saw palmetto, swamp fern, hatpins, bog buttons, broomsedge, tick seed, wiregrass, red root, soft rush (*Juncus effusus*), false buttonweed, yellow-eyed grass, and grape vine.

The soil type typically found within this habitat type is Wabasso fine sand.

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**ALTERNATIVE 1-A**
**HABITAT MAP**

*Figure 3-11*

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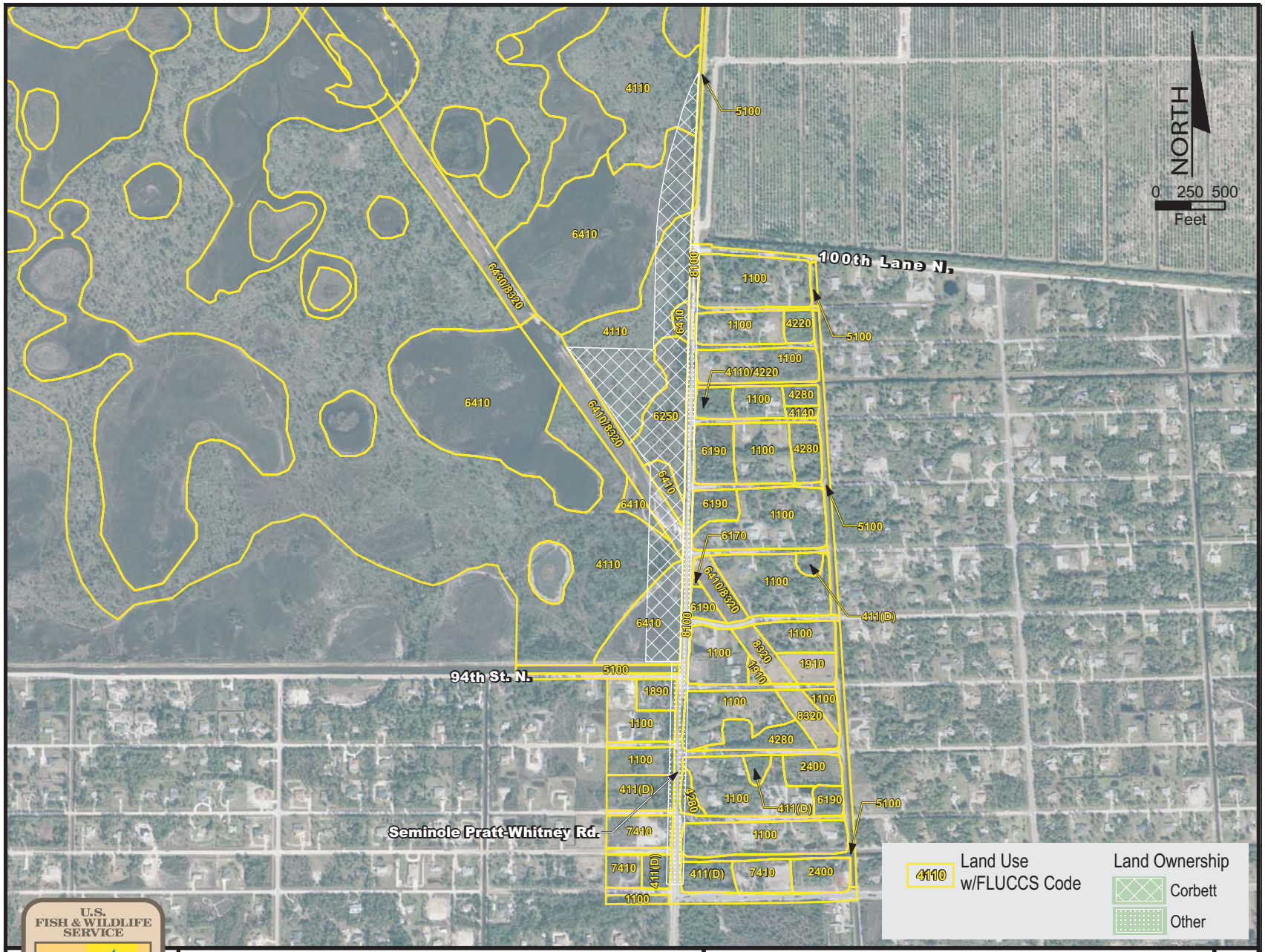
**ALTERNATIVE 2-A**
**HABITAT MAP**

*Figure 3-12*

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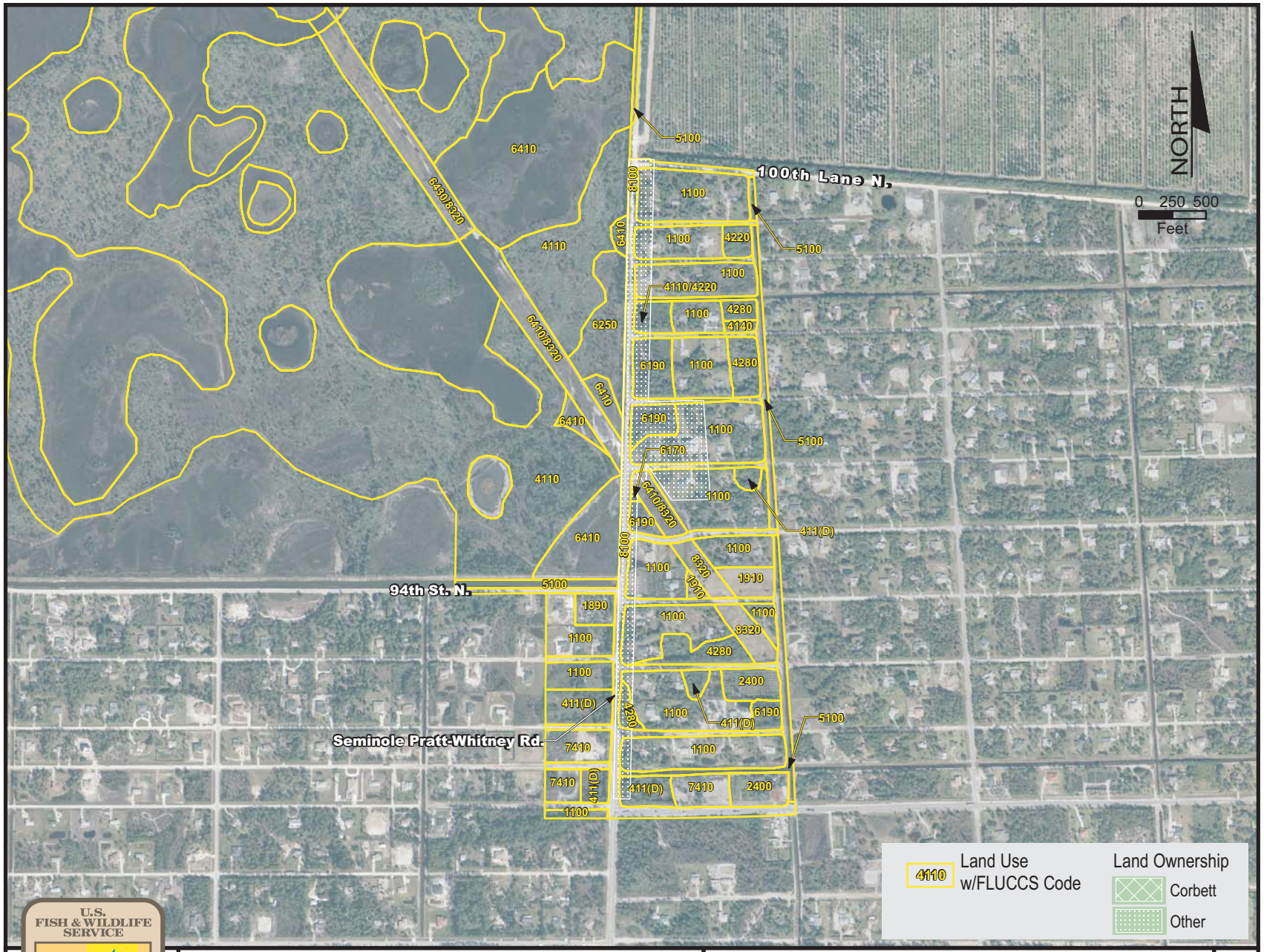
**ALTERNATIVE 1-B**
**HABITAT MAP**

*Figure 3-13*

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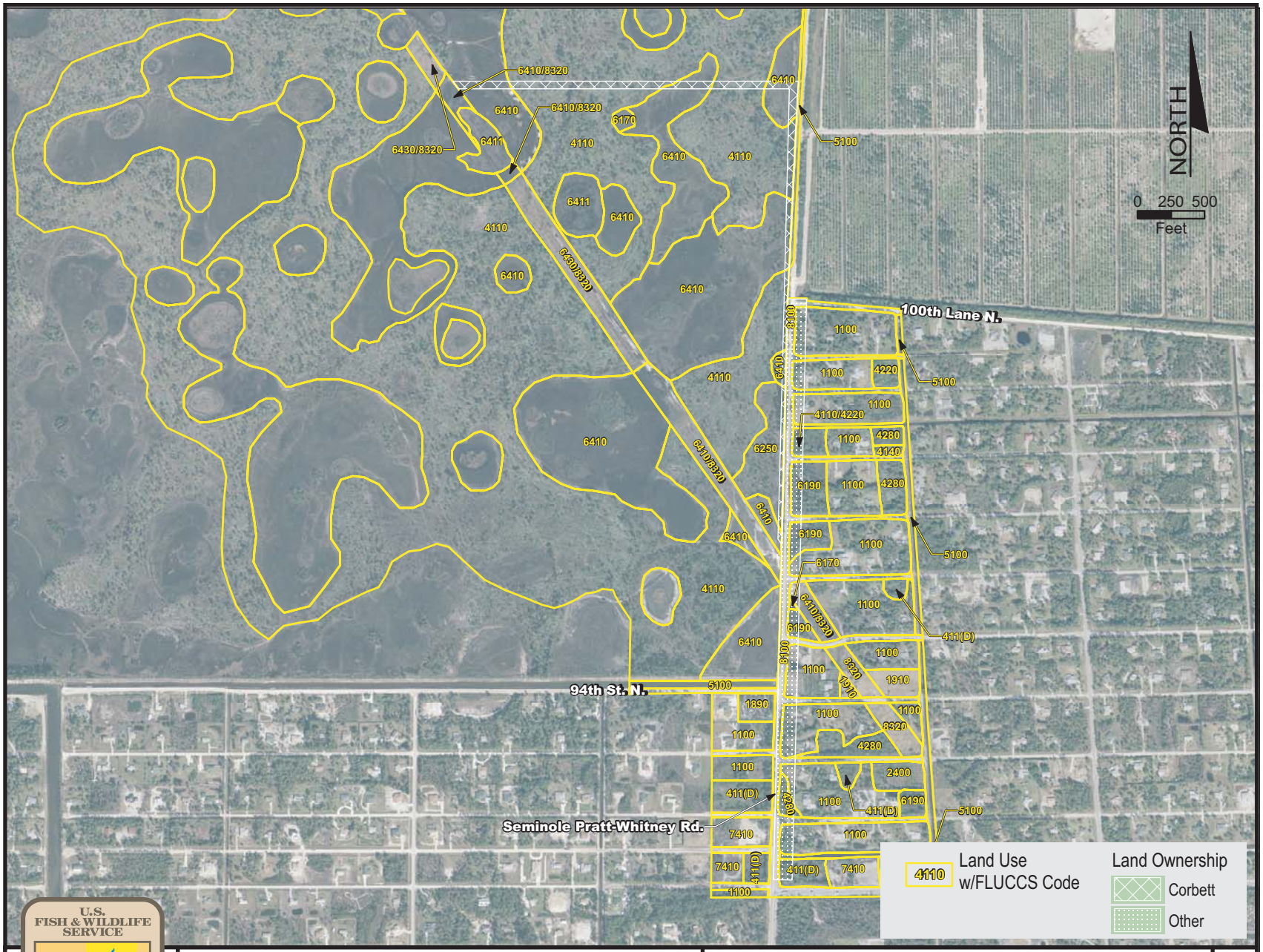
**ALTERNATIVE 2-B**
**HABITAT MAP**

*Figure 3-14*

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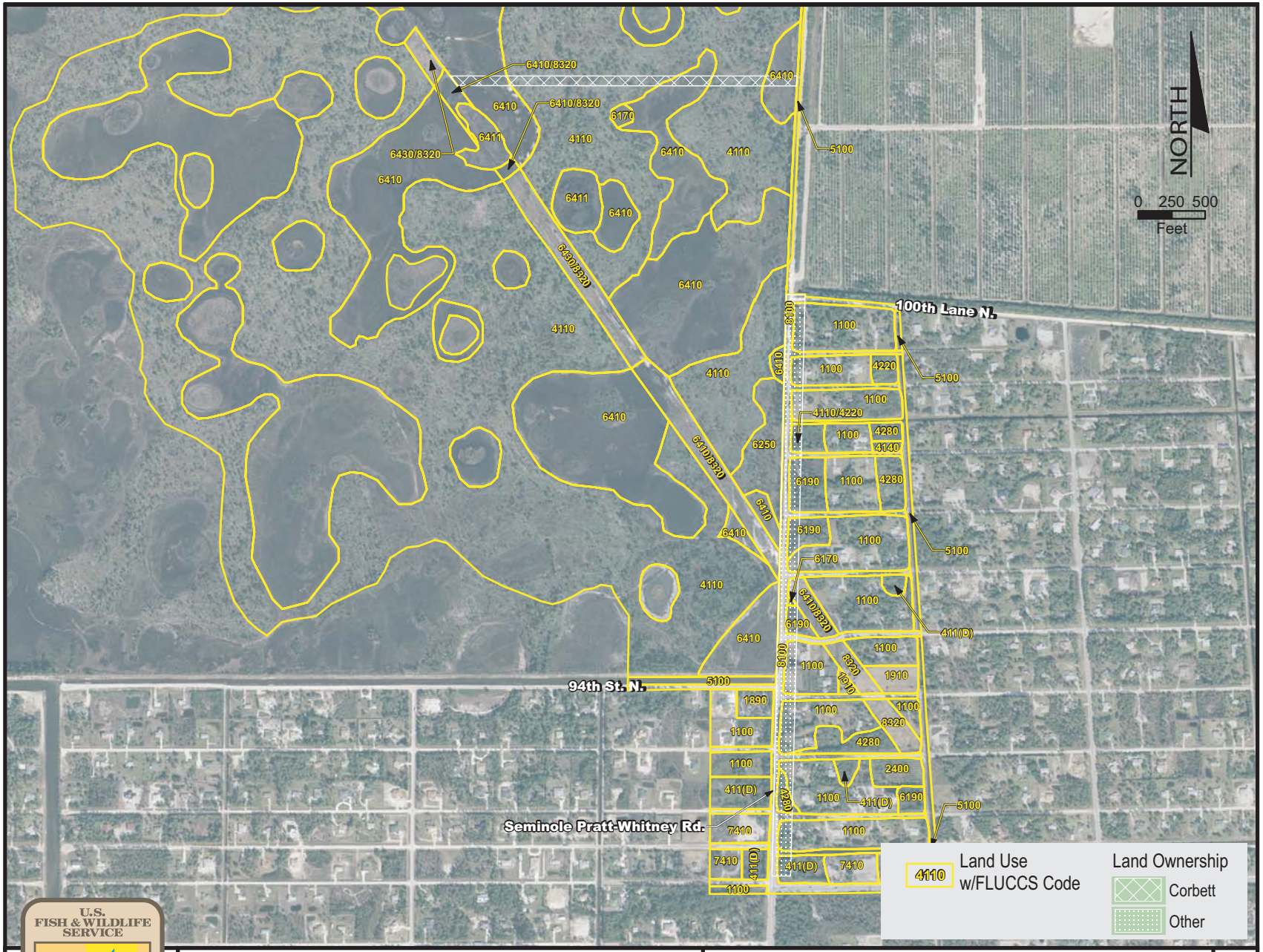
**ALTERNATIVE 3-B**
**HABITAT MAP**

*Figure 3-15*

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**ALTERNATIVE 4-B**
**HABITAT MAP**

*Figure 3-16*

**TABLE 3-5**
**HABITAT TYPES WITHIN CORBETT PARCEL A ALTERNATIVES**
**FLUCFCS AND USFWS CLASSIFICATIONS AND ACREAGES**

| Classification Type | Classification Name | FLUCFCS Classification* | USFWS Classification** | Acreage of Classification | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Alternative 1A | | | Alternative 2A | | |
| | | | | Within JWCWMA | Outside JWCWMA | Total | Within JWCWMA | Outside JWCWMA | Total |
| Wetlands | Streams and Waterways | 510 | PUB3C | ---- | ---- | ---- | ---- | 1.94 | 1.94 |
| | Exotic Wetland Hardwoods | 619 | PFO3C | ---- | ---- | ---- | ---- | 1.45 | 1.45 |
| | Hydric Pine Flatwoods | 625 | PFO4B | 1.17 | 1.90 | 3.07 | ---- | 1.22 | 1.22 |
| | Freshwater Marsh | 641 | PEM1C | 0.43 | 1.17 | 1.60 | ---- | 0.96 | 0.96 |
| | Sawgrass Marsh | 6411 | PEM1C | ---- | ---- | ---- | ---- | 0.07 | 0.07 |
| | Maidencane Marsh | 6414 | PEM1C | --- | --- | --- | --- | 0.26 | 0.26 |
| **Subtotal** | | | | **1.60** | **3.07** | **4.67** | **----** | **5.90** | **5.90** |
| | | | | | | | | | |
| Uplands | Unimproved Pastures | 212 | N/A | --- | --- | --- | --- | 0.85 | 0.85 |
| | Pine Flatwoods | 411 | N/A | 0.03 | 6.85 | 6.88 | ---- | 0.35 | 0.35 |
| | Pine Flatwoods (Disturbed) | 411(d) | N/A | --- | --- | --- | --- | 2.77 | 2.77 |
| | Brazilian Pepper | 422 | N/A | --- | --- | --- | --- | 7.03 | 7.03 |
| **Subtotal** | | | | **0.03** | **6.85** | **6.88** | **----** | **11.00** | **11.00** |
| | | | | | | | | | |
| Land Uses | Transportation | 810 | N/A | ---- | ---- | ---- | ---- | 3.29 | 3.29 |
| **Subtotal** | | | | **----** | **-----** | **----** | **----** | **3.29** | **3.29** |
| | | | | | | | | | |
| **Total** | | | | **1.63** | **9.92** | **11.55** | **----** | **20.19** | **20.19** |

* Based on the FLUCFCS (3rd ed.) (FDOT).
** Based on the Classification of Wetlands and Deepwater Habitats of the United States (Cowardin *et. al.*, 1979).

**TABLE 3-6**
**HABITAT TYPES WITHIN CORBETT PARCEL B ALTERNATIVES**
**FLUCFCS AND USFWS CLASSIFICATIONS AND ACREAGES**

| Classification Type | Classification Name | FLUCFCS Classification* | USFWS Classification** | Acreage of Classification | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Alternative 1B | | | Alternative 2B | | | Alternative 3B | | | Alternative 4B | | |
| | | | | Within JWCWMA | Outside JWCWMA | Total | Within JWCWMA | Outside JWCWMA | Total | Within JWCWMA | Outside JWCWMA | Total | Within JWCWMA | Outside JWCWMA | Total |
| Wetlands | Stream and Waterways | 510 | PUB3H | ---- | 0.08 | 0.08 | --- | 0.14 | 0.14 | --- | 0.10 | 0.10 | --- | 0.10 | 0.10 |
| | Mixed Wetland Hardwoods | 617 | PFO3C | ---- | ---- | ---- | --- | 0.07 | 0.07 | --- | 0.07 | 0.07 | --- | 0.07 | 0.07 |
| | Exotic Wetland Hardwoods | 619 | PFO3C | ---- | --- | --- | --- | 3.28 | 3.28 | --- | 1.26 | 1.26 | --- | 1.26 | 1.26 |
| | Hydric Pine Flatwoods | 625 | PFO4B | 5.80 | ---- | 5.80 | --- | --- | --- | 0.78 | --- | 0.78 | --- | --- | --- |
| | Freshwater Marsh | 641 | PEM1C | 8.97 | 0.03 | 9.00 | --- | --- | --- | 3.33 | --- | 3.33 | 1.95 | --- | 1.95 |
| | Sawgrass Marsh | 6411 | PEM1C | --- | --- | --- | --- | --- | --- | 0.05 | --- | 0.05 | 0.05 | --- | 0.05 |
| | Freshwater Marsh/ Electric Power Transmission Line | 641/832 | PEMIC | 1.33 | --- | 1.33 | --- | 0.16 | 0.16 | --- | 0.16 | 0.16 | --- | 0.16 | 0.16 |
| **Subtotal** | | | | **16.10** | **0.11** | **16.21** | **---** | **3.65** | **3.65** | **4.16** | **1.59** | **5.75** | **2.00** | **1.59** | **3.59** |
| | | | | | | | | | | | | | | | |
| Uplands | Flatwoods | 411 | N/A | 12.27 | ---- | 12.27 | --- | --- | --- | 3.95 | --- | 3.95 | 3.44 | --- | 3.44 |
| | Flatwoods (Disturbed) | 411(d) | N/A | ---- | 0.37 | 0.37 | --- | 0.26 | 0.26 | --- | 0.26 | 0.26 | --- | 0.26 | 0.26 |
| | Exotic Flatwoods | 411/422 | N/A | ---- | ---- | ---- | --- | 0.59 | 0.59 | --- | 0.27 | 0.27 | --- | 0.27 | 0.27 |
| | Cabbage Palm | 428 | N/A | ---- | --- | --- | --- | 0.37 | 0.37 | --- | 0.37 | 0.37 | --- | 0.37 | 0.37 |
| | Disturbed Land | 741 | N/A | ---- | 0.18 | 0.18 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subtotal** | | | | **12.27** | **0.55** | **12.82** | **---** | **1.22** | **1.22** | **3.95** | **0.90** | **4.85** | **3.44** | **0.90** | **4.34** |
| | | | | | | | | | | | | | | | |
| Land Uses | Residential, Low Density | 110 | N/A | ---- | 0.34 | 0.34 | --- | 9.26 | 9.26 | --- | 2.92 | 2.92 | --- | 2.92 | 2.92 |
| | Other Recreational | 189 | N/A | ---- | 0.19 | 0.19 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Transportation | 810 | N/A | ---- | 1.10 | 6.65 | --- | 1.82 | 1.82 | --- | 0.99 | 0.99 | --- | 0.99 | 0.99 |
| **Subtotal** | | | | **----** | **1.63** | **1.63** | **---** | **11.08** | **11.08** | **---** | **3.91** | **3.91** | **---** | **3.91** | **3.91** |
| | | | | | | | | | | | | | | | |
| **Total** | | | | **28.37** | **2.29** | **30.66** | **---** | **15.95** | **15.95** | **8.11** | **6.40** | **14.51** | **5.44** | **6.40** | **11.84** |

* Based on the FLUCFCS (3rd ed.) (FDOT).
** Based on the Classification of Wetlands and Deepwater Habitats of the United States (Cowardin *et. al.*, 1979).

**Pine Flatwoods (Disturbed)**
**FLUCFCS: 411(d)**

This habitat classification represents pine flatwoods whose sub-canopy and groundcover have been disturbed to varying degrees by human activities. This habitat type is characterized by a canopy dominated by slash pine with lesser amounts of cabbage palm, cocoplum, red bay, myrsine, or beautyberry also present. Additional native species within the sub-canopy and shrub layer include myrsine, cocoplum, red bay, wax myrtle, and beautyberry. The herbaceous groundcover includes swamp fern, false buttonweed, goldenrod, and grape vine. Also present within this habitat type are exotic species such as Brazilian pepper, lantana, and old world climbing fern.

The soils in this community type are Riviera fine sand and Pinellas fine sand.

**Exotic Flatwoods**
**FLUCFCS: 411/422**

This habitat classification is characterized as disturbed pine flatwoods with large amounts of Brazilian pepper present. These forested areas also have small amounts of saw palmetto and myrsine present within the sub-canopy. Exotic old world climbing fern was also observed within this habitat type. However, dense pine needle leaf-litter and allelopathic compounds produced by the Brazilian pepper restrict groundcover within this habitat.

This community type, which is primarily found within residential areas adjacent to the JWCWMA, can be characterized as remnant flatwoods with extensive human disturbance in the sub-canopy and understory.

The soil type within this community type is Riviera fine sand, depressional.

**Brazilian Pepper**
**FLUCFCS: 422**

This land use category is characterized as disturbed land dominated by Brazilian pepper. Within Alternative 2A, these forested areas also have small amounts of slash pine, sabal palmetto, and laurel oak within the canopy and wax myrtle, dog fennel, Boston fern (*Nephrolepis* sp.), giant flatsedge (*Cyperus giganteus*), and saltbush present within the sub-canopy/groundcover.

The type of soil within this community type is Pineda fine sand and Riviera fine sand, depressional.

**Cabbage Palm**
**FLUCFCS: 428**

The canopy of this forest community type is dominated by cabbage palm. The cabbage palm communities within the project alternatives also include a wide variety of hardwood species, such as American beautyberry, myrsine, cocoplum, and wild coffee. Saw palmetto dominates large patches within some areas. Other areas have a ruder understory as a result of clearing activities. Slash pine was also sporadically distributed throughout this habitat type.

The soils in this community type consist of Riviera fine sand and Pinellas fine sand.

**Disturbed Land**
**FLUCFCS: 741**

This land use category includes lands that have been changed due primarily to human activity. Disturbed lands are found only within Alternative 1B and consist of vacant housing lots with dredge material fill piles. This habitat is dominated by early colonizing species and its intended use is unknown.

The soils within this community type consist of Riviera fine sand.

**Land Use Classification Descriptions**

**Transportation**
**FLUCFCS: 810**

The transportation classification is defined as those facilities used for the movement of people and goods. Within Alternative 2A, transportation facilities consist of both rail and road facilities.

**Residential, Low Density**
**FLUCFCS: 110**

This land use category is defined as having less than two dwelling units per acre. Within Alternative 1B, this land use classification consists of residential areas located south of the JWCWMA. The type of soil within this land use type is Riviera fine sand and Pineda sand.

**Other Recreational**
**FLUCFCS: 189**

This land use category includes those areas whose physical structure indicates that active user-orientated recreation is or could be occurring within the given physical area. Within Alternative 1B, this land use consists of an area utilized by go-carts, ATVs, or similar recreational-type vehicles. A recreational vehicle track traverses the majority of the site. The type of soil within this community type is Riviera fine sand.

### *3.4.5.3 Wildlife*

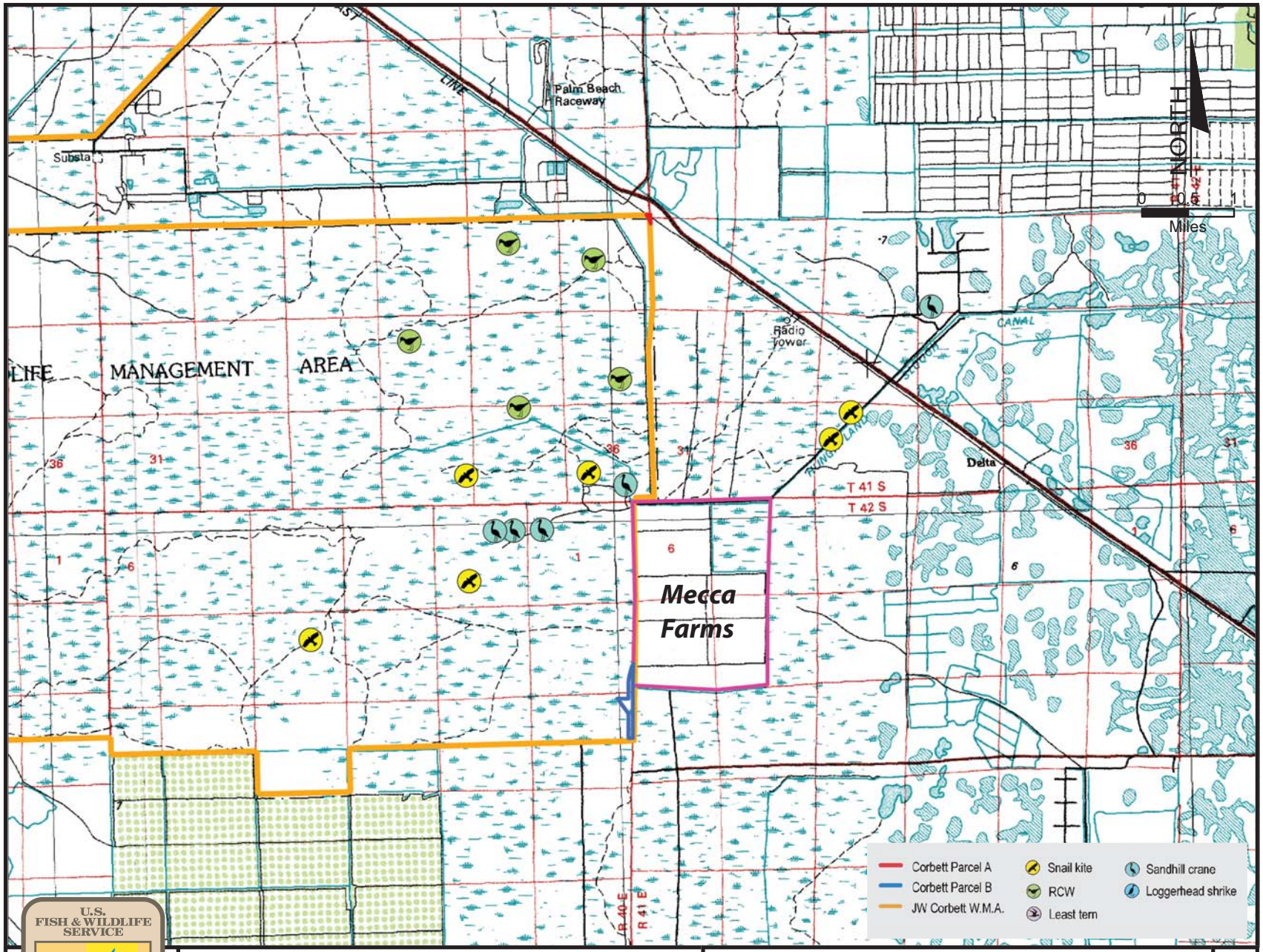
**Threatened and Endangered Species**

The Endangered Species Act of 1973 (ESA), as amended, requires that all Federal agencies undertake programs for the conservation of endangered and threatened species and are prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its "critical habitat." A species may be classified as "endangered" when it is in danger of extinction within the foreseeable future throughout all or a significant portion of its range. A "threatened" classification is provided to those animals and plants likely to become endangered within the foreseeable future throughout all or a significant portion of their ranges. Critical habitat is defined as a geographic area containing the physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. In accordance with the ESA, all alternatives associated with this project were evaluated to determine if they would result in impacts to protected species or their "critical habitat."

State listed species are those plant and animal species protected by the State of Florida pursuant to Chapter 68A-27 FAC (animals) and Chapter 581.185 FS (plants). State listed species can be classified as endangered, threatened, or species of special concern. With respect to state listed animal species, endangered animal species are those species, subspecies, or isolated population of a species or subspecies which are so few or depleted in number or so restricted in range or habitat due to any man-made or natural factors that it is in imminent danger of extinction. Threatened species are those species, subspecies, or isolated population of a species or subspecies that is facing a very high risk of extinction in the future. Species of special concern are those species, subspecies, or isolated population of a species or subspecies that is facing a moderate risk of extinction in the future. State listed plant species are endangered if the species is in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973, as amended. Threatened plant species are those species that are in rapid decline in the number of plants within the state but have not so decreased in number as to cause them to be endangered. State listed plant species may also be considered commercially exploited if the species is subject to being removed in significant numbers from native habitats in the state and sold or transported for sale.

The project alternatives were evaluated for the potential occurrences of Federal and state listed threatened and endangered plant and animal species, Federal candidate species, and state listed species of special concern. In order to better assess the potential for occurrence of these species, information on critical habitat, eagle nest sites, Federal or listed protected species, or candidate species that may occur within one mile of the project area was requested from FNAI. In addition, information on wood stork rookeries that may occur within an 18.6-mile radius of the study area, the core foraging area (CFA) for wood stork rookeries, was also requested. A review of the Audubon Society Christmas bird counts for Palm Beach County was also undertaken. However, the closest Christmas bird count area was located east of I-95 and within a coastal area of the county. As a result, it was determined that this information would not be useful in the assessment of the project areas. Coordination with FWC personnel located at the JWCWMA was also undertaken. Information received is provided in Appendix C. Based on the information received from FNAI, the documented occurrences of protected species within the geographic area of the project alternatives are presented on **Figure 3-17**. In addition, wood stork rookeries located within 18.6 miles of the project alternatives are presented on **Figure 3-18**.

Using collected data, as well as field reviews of the project alternatives, a determination of those Federal and state protected species that have the potential to occur within one or more of the alternatives was undertaken. A list of those protected species that have the potential to occur within project alternatives are provided in **Table 3-7**. At the request of FWC staff located at the JWCWMA, an additional nine state listed plant species and one state listed animal species not noted within the FNAI occurrence data set were added to Table 3-7. These ten species are noted in Table 3-7. Table 3-7 also provides a brief description of each species, their Federal and state protection status, their potential for occurrence in the project study area, and their habitat preferences. The probability of occurrence is listed as low, moderate, or high and is based on the

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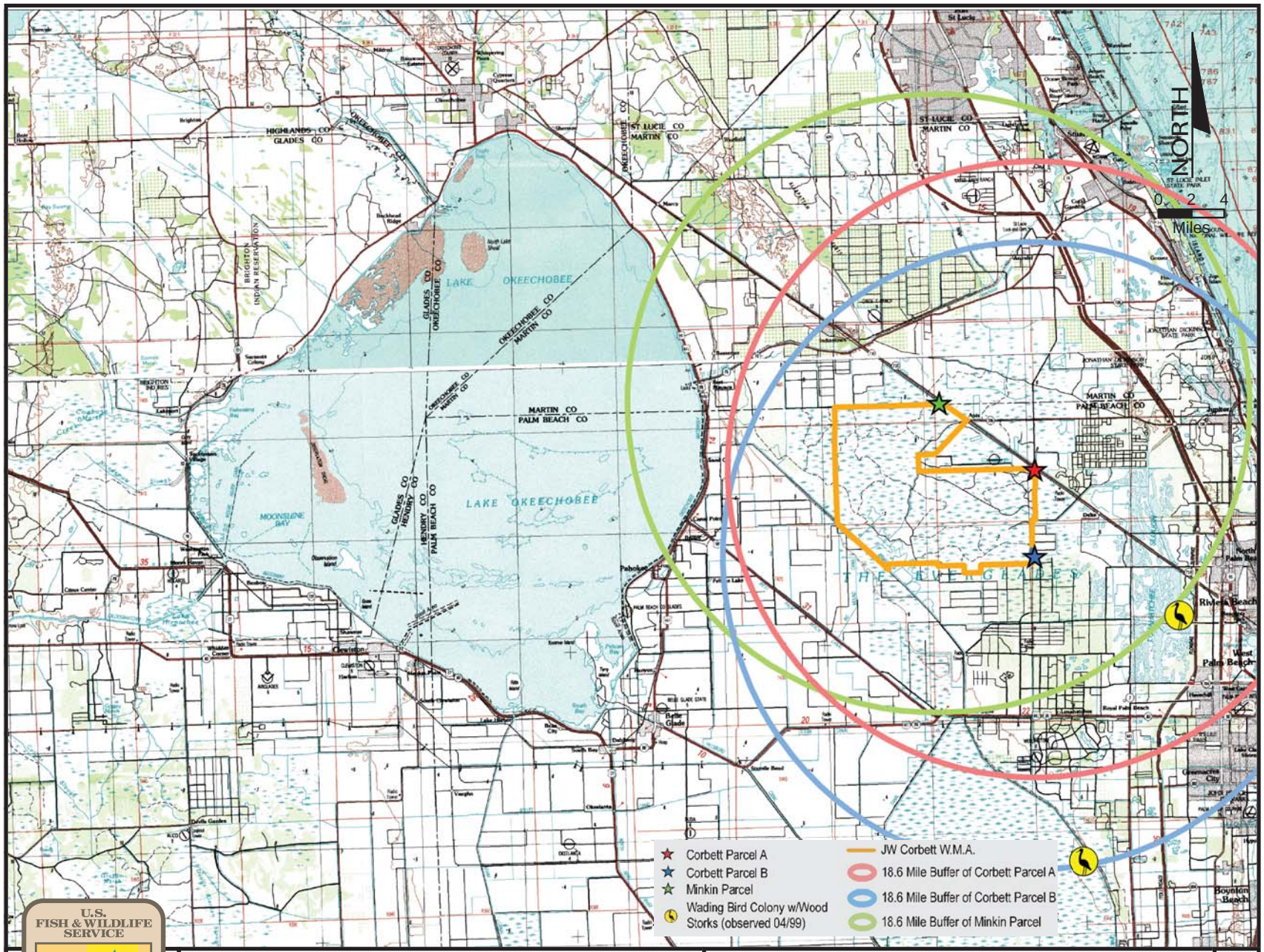
**DOCUMENTED THREATENED OR ENDANGERED SPECIES**

*Figure 3-17*

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**DOCUMENTED WOOD STORK ROOKERIES**

*Figure 3-18*

habitat requirements of each species and the documented occurrence of the species within one mile of the project corridor. A low listing indicates that potentially suitable habitat exists but no documented sitings have occurred within one mile of the project study area. A moderate listing indicates that suitable habitat exists and the species is documented to occur within one mile of the project study area. A high listing indicates that suitable habitat exists and the species was observed during field reviews within the project study area. Listing of probability of occurrence for 19 species were revised from the draft EA based on comments from FWC staff located on the JWCWMA. These 19 species are noted in Table 3-7.

**TABLE 3-7**
**PROTECTED SPECIES THAT MAY OCCUR WITHIN ONE OR MORE ALTERNATIVES**

| Species | Designated Status | | | Habitat Preference | Potential for Occurrence On-Site |
|---|---|---|---|---|---|
| | USFWS | FWC | FDA | | |
| **PLANTS** | | | | | |
| Giant leather fern[1, 3]<br>*Acrostichum danaeifolium* | | | C | Brackish and freshwater marshes (coastal) | Low[2] |
| Pine pink orchid[1]<br>*Bletia purpurea* | | | T | Hardwood hammocks | Low[2] |
| Bearded grass pink[1]<br>*Calopogon barbatus* | | | T | Wet pine flatwoods | Moderate[2] |
| Long strap fern[1]<br>*Campyloneurum phyllitidus* | | | E | Hardwood hammocks | Low[2] |
| Piedmont jointgrass<br>*Coelorachis tuberculosa* | | | LT | Flatwoods, cypress swamp edges, pond margins, marshes | Low |
| Butterfly orchid[1]<br>*Encyclia rampensis* | | | C | Hardwood hammocks, swamps, sloughs | Low[2] |
| Rein orchid[1]<br>*Habenaria distans* | | | E | Hardwood hammocks | Moderate[2] |
| Catesby's lily[1]<br>*Lilium catesbaei* | | | T | Moist pine flatwoods, savannas | Moderate[2] |
| Celestial lily<br>*Nemastylis floridana* | | | LE | Wet flatwoods, prairies, marshes, cabbage palm hammock edges | Low |
| Hand fern<br>*Ophioglossum palmatum* | | | LE | "Boots" or old leaf bases of cabbage palms | Low |
| Cutthroat grass<br>*Panicum abscissum* | | | LE | Cutthroat seeps, depression marshes, wet flatwoods | Low |
| Terrestrial peperomia<br>*Peperomia humilis* | | | LE | Maritime hammock, upland hardwood forest, hydric hammock, mangrove swamp | Low |
| Snowy orchid[1]<br>*Platanthera nivea* | | | T | Wet pine flatwoods | Low[2] |
| Rose pogonia[1]<br>*Pogonia ophioglossoides* | | | T | Marshes, wet pine flatwoods | Low[2] |
| Giant orchid<br>*Pteroglossaspis ecristata* | | | LT | Sandhill, scrub, pine flatwoods, pine rocklands | Low |
| Fahkahatchee ladies' tresses<br>*Sacoila lanceolata var. paludicola* | | | LT | Swamps and hydric hammocks | Low |
| **AMPHIBIAN** | | | | | |
| Gopher frog<br>*Rana capito* | | S | | Xeric or scrub habitats adjacent to ephemeral wetlands | Low |

**TABLE 3-7 (CONTINUED)**
**PROTECTED SPECIES THAT MAY OCCUR WITHIN ONE OR MORE ALTERNATIVES**

| Species | Designated Status | | | Habitat Preference | Potential for Occurrence On-Site |
|---|---|---|---|---|---|
| | USFWS | FWC | FDA | | |
| **REPTILIAN** | | | | | |
| American alligator *Alligator mississippiensis* | T (S/A) | S | | Wetland habitats including streams, ponds, lakes, freshwater marshes, and ditches | High[2] |
| Eastern indigo snake *Drymarchon corais couperi* | | T | | Mangrove swamps, wet prairies, xeric pinelands, scrub | Moderate[2] |
| Florida pine snake *Pituophis melanoleucus mugitus* | | S | | Sandhill, scrubby flatwoods, xeric hammocks | Low |
| Gopher tortoise *Gopherus polyphemus* | | S | | Xeric or scrub habitats | Low |
| **AVIAN** | | | | | |
| Bald eagle *Haliaeetus leucocephalus* | T | T | | Large open water bodies, saltwater marshes, dry prairies, mixed pine, hardwood forests, wet prairies, marshes, pine flatwoods, sandhills | Moderate[2] |
| Crested caracara *Caracara cheriway* | T | T | | Open areas of dry prairie and pasture with cabbage palm groupings | Low |
| Florida burrowing owl *Athene cunicularia floridana* | | S | | Prairies, sandhills, farms, or airfields | Low |
| Florida sandhill crane *Grus canadensis pratensis* | | T | | Open terrain, lake and river margins, prairies, sloughs | High |
| Least tern[1] *Sterna antillarum* | | T | | Beaches, lagoons, bays, estuaries | Moderate[2] |
| Limpkin *Aramus guarauna* | | S | | Freshwater marshes, swamps, springs and spring runs, pond and river margins | High[2] |
| Little blue heron *Egretta caerulea* | | S | | Mudflats, coastal beaches, mangrove swamps, hardwood and cypress swamps, wet prairies | High |
| Peregrine falcon *Falco peregrinus* | | E | | Lake and river margins, salt marshes, dry prairies, wet prairies and marshes, coastal ponds, sloughs | Low |
| Red-cockaded woodpecker *Picoides borealis* | E | T | | Mature pine flatwoods | Moderate |
| Roseate spoonbill *Ajaia ajaja* | | S | | Mudflats, fresh and saltwater marshes, flats, mangroves, herbaceous wetlands, ditches | Moderate[2] |
| Snail kite *Rostrhamus sociablis plumbeus* | E | E | | Open and shallow freshwater marshes and lakes | Moderate[2] |
| Snowy egret *Egretta thula* | | S | | Mudflats, coastal beaches, mangrove swamps, hardwood and cypress swamps, wet prairies | High[2] |
| Southeastern American kestrel *Falco sparverius paulus* | | T | | Pine scrub, dry prairies, mixed pine and hardwood forests, pine flatwoods | High |
| Wood stork *Mycteria americana* | E | E | | Fresh and saltwater marshes, tidal flats, wet prairies, cypress swamps | High[2] |
| Tricolored heron *Egretta tricolor* | | S | | Mudflats, coastal beaches, mangrove swamps, hardwood and cypress swamps, wet prairies | High |
| White ibis *Eudocimus albus* | | S | | Freshwater marshes, mangrove swamps, shallow lakes, wet prairies, cypress and hardwood swamps | High[2] |

**TABLE 3-7 (CONTINUED)**
**PROTECTED SPECIES THAT MAY OCCUR WITHIN ONE OR MORE ALTERNATIVES**

| Species | Designated Status | | | Habitat Preference | Potential for Occurrence On-Site |
|---|---|---|---|---|---|
| | USFWS | FWC | FDA | | |
| **MAMMALIAN** | | | | | |
| Florida mouse *Podomys floridanus* | | S | | Sand pine scrub in an early successional stage, longleaf pine oak, scrubby flatwoods | Low |
| Florida panther *Puma concolor coryi* | E | E | | Extensive blocks of mostly forested communities | Low |
| Sherman's fox squirrel *Sciurus niger shermani* | | S | | Longleaf pine-turkey oak sandhills and flatwoods | Low |
| Florida black bear *Ursus americanus floridanus* | | T | | Forest habitat generalist | Low |

**Legend:**

USFWS = U.S. Fish and Wildlife Service
FWC = Florida Fish and Wildlife Conservation Commission
FDA = Florida Department of Agriculture

E = Endangered
T = Threatened
S = Species of Special Concern
C = Commercially Exploited
(S/A) = Threatened/Similarity of Appearance

Low = Little or no suitable habitat; no documented occurrence of species within one mile of study area.
Moderate = Potential suitable habitat exists within project study area, but species was not found; species documented within one mile of study area.
High = Suitable habitat exists on-site and species observed on-site.

[1] Added at the request of FWC.
[2] Potential for occurrence ranking as determined by FWC.
[3] Not listed within April 22, 2004 update of Chapter 5B-40 FAC but included at request of FWC.

Based on information collected and field reviews of project alternatives and utilizing the definitions for low, moderate, and high probabilities discussed above or FWC requested probabilities, it was determined that 18 protected species had a moderate or high probability to occur within one or more of the project alternatives. These species include seven state listed species of special concern, four state listed threatened species, one state and Federal listed threatened species (bald eagle), one state listed threatened and Federal listed endangered species (red-cockaded woodpecker), and two Federal and state listed endangered species (wood stork and snail kite). It should be noted that the closest recorded red-cockaded woodpecker cluster is located approximately 0.75-mile southwest of Parcel A, which makes Parcel A well outside the typical home territory of this cluster. However, using the definitions discussed above, this species received a moderate potential for occurrence within the Parcel A alternatives.

While given a medium probability listing based on input from FWC staff, one additional Federally listed species that may be of concern is the eastern indigo snake. While not documented within the area of the project alternatives, this species has a potential to be present within the project alternatives and to utilize the various habitats within the alternatives. In addition, because the project alternatives fall within the CFA of documented wood stork rookeries, the potential for wood storks to utilize wetlands found within the project alternatives also exists.

**Other Wildlife Considerations**

During the November 2004 field reviews, two general types of direct wildlife survey methodologies were employed: pedestrian transects and stationary observation points. Wildlife observations were conducted from 8:00 a.m. to 6:00 p.m. (dusk). Random pedestrian transects were conducted throughout each vegetative community type found within each project alternative and wildlife observations were recorded. The presence and location of wildlife indicators (e.g., tracks, burrows, scat) were also recorded. A total of 13 observation stations were established within the JWCWMA for Alternatives 1B, 2B, 3B, and 4B and four observation stations were established in Alternatives 1A and 2A. Wildlife activity was observed independently by three observers for approximately 20 minutes at each observation station. Wildlife observed during field reviews are listed in **Table 3-8**. No Federal or state listed protected plant species were observed during the field reconnaissance.

While the east coast of Florida is a major flyway for many migratory bird species, only the southeasterrn American kestrel and the sandhill crane were observed within the area of project alternatives. However, it was not determined if the individuals observed were migratory or native birds. Additional migratory species have the potential to utilize the habitats within the project alternatives for feeding and/or roosting but none of the habitats within the project alternatives are unique as they relate to migratory birds nor are they rare within the region. In addition, the utilization of the lands within the project alternatives will not impact existing long-term monitoring efforts such as the Christmas bird counts, as none of the existing Christmas bird count sampling areas are located within or adjacent to any project alternative.

No non-native animal species were observed during field review of the project alternatives. However, some evidence of feral pigs was found within areas adjacent to project alternatives. Exotic plant species observed within project alternatives consisted primarily of melaleuca and Brazilian pepper. Both of these species are common invasive species and their spread has resulted in extensive impacts to native habitats throughout central and south Florida. These invasive species were most common in habitats that had been previously impacted by past human activities (i.e., clearing, grading, etc.).

**TABLE 3-8**
**WILDLIFE OBSERVED WITHIN PROJECT ALTERNATIVES**

| Common Name | Scientific Name | Location/Number/Activity Observed |
|---|---|---|
| Red-winged blackbird | *Agelaius phoeniceus* | Alternatives 1B, 3B, 4B - JWCWMA / 4 / Flying Over Emergent Marsh |
| Anhinga | *Anhinga anhinga* | Alternatives 1B, 3B, 4B - JWCWMA / 1 / Flying Overhead in Southeast Corner of Site |
| Great egret | *Ardea alba* | Alternatives 1B, 3B, 4B - JWCWMA / 5 / Foraging in Emergent Marsh |
| Red-shouldered hawk | *Buteo lineatus* | Alternatives 1B, 3B, 4B - JWCWMA / 1 / Flying Overhead |
| Green heron | *Butorides virescens* | Alternatives 1B, 3B, 4B - JWCWMA / 1 / Foraging in Emergent Marsh |
| Belted kingfisher | *Ceryle alcyon* | Alternatives 1B, 3B, 4B - JWCWMA and Alternative 1A / 3 / Flying Overhead and Perched on Tree |
| Black vulture | *Coragyps atratus* | Alternatives 1B, 3B, 4B - JWCWMA / >5 / Flying Overhead |
| Virginia opossum | *Didelphis virginiana* | Alternatives 1B, 3B, 4B - JWCWMA / Tracks in Saturated Soils |
| Little blue heron | *Egretta caerulea* | Alternatives 1B, 3B, 4B - JWCWMA / 1 / Adjacent to Drainage Canal |
| Tricolored heron | *Egretta tricolor* | Alternative 1A / 1 / Foraging in Emergent Marsh |
| Southeastern American kestrel | *Falco sparverius paulus* | Alternatives 1B, 3B, 4B - JWCWMA / 1 / Flying Overhead |
| Sandhill crane | *Grus canadensis* | Alternative 1A / 2 / foraging in emergent marsh |
| Mud turtle | *Kinosternon subrubrum* | Alternatives 1B, 3B, 4B - JWCWMA / 1 / Submerged in Emergent Marsh |
| Osprey | *Pandion haliaetus* | Alternatives 1B, 3B, 4B - JWCWMA / 2 / Flying Overhead |
| Glossy ibis | *Plegadis falcinellus* | Alternatives 1B, 3B, 4B - JWCWMA / 1 / Flying Over Pine Flatwoods |
| Apple snail | *Pomacea paludosa* | Alternatives 1B, 3B, 4B - JWCWMA / 2 / Within Marsh |
| Common raccoon | *Procyon lotor* | Alternatives 1B, 3B, 4B - JWCWMA / Observed Tracks |
| Red-bellied turtle | *Psedemys nelsoni* | Alternatives 1B, 3B, 4B - JWCWMA / 1 / Submerged on Powerline Easement |
| Florida softshell turtle | *Trionyx ferox* | Alternatives 1B, 3B, 4B - JWCWMA / 1 / Adjacent to Drainage Canal |

In general, the wildlife habitat value of the natural areas within the alternatives located within the JWCWMA can be classified as moderate to high with each area providing some level of roosting and foraging habitat for many faunal species. Migratory and resident wading birds in particular would find these areas valuable for foraging during the majority of the year. Small and large mammals such as the white-tailed deer (*Odocoileus virginianus*) and raccoon (*Procyon lotor*) would readily use these habitats for foraging. In addition, reptiles and amphibians such as the red bellied turtle (*Psedemys nelsoni*) and oak toad (*Bufo quercicus*) would use these habitats for foraging and reproduction.

However, the natural areas within each alternative are adjacent to residential development and/or roadways that provide negative effects to wildlife. Anthropogenic effects such as roadkill, litter, and off-road vehicles usage are all evident within the natural areas of all alternatives.

Within the areas surrounding the project alternatives, wildlife utilization is high with multiple large tracts of publicly held land present. In addition to the 60,000-acre JWCWMA, additional publicly held tracts within the northern section of Palm Beach County and southern section of Martin County (see **Figure 3-19**) include:

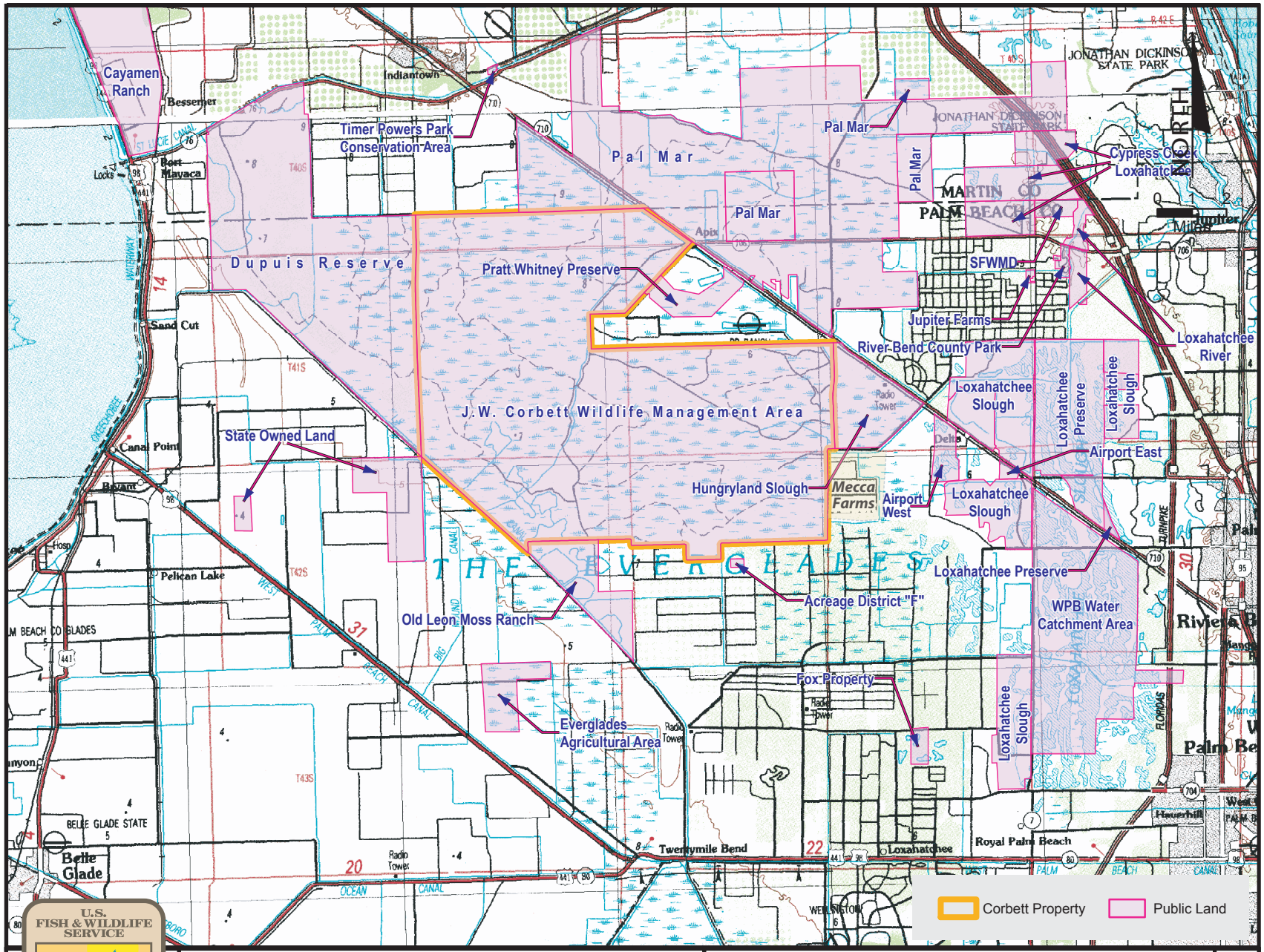
- Hungryland Slough,
- Dupuis Reserve,
- Pal Mar,
- Cypress Creek/Loxahatchee,
- Loxahatchee River,
- Loxahatchee Slough,
- Loxahatchee Preserve,
- Pratt/Whitney Preserve,
- Cayamen Ranch,
- Everglades Agricultural Area,
- Airport East/Airport West,
- West Palm Beach Water Catchment Area, and
- Additional smaller tracts.

Taken with the JWCWMA, these listed tracts encompass over 170,000 acres of land that are managed for wildlife utilization and provide habitat for many animal and plant species. As shown on **Figure 3-19**, these tracts contain many different habitat types and are interconnected forming corridors that allow movement of wildlife between the various tracts.

As replacement for the 30 acres of JWCWMA lands proposed for transfer, a 60-acre parcel of land known as the Minkin Parcel is proposed. This tract of land is located adjacent to the northern boundary of the JWCWMA and within the Pal Mar designated acquisition area. This tract is described and discussed in greater detail in Section 4.5.7.4, Loss of JWCWMA Lands, and in the Environmental Assessment Technical Memorandum (Appendix C).

### *3.4.6 FARMLANDS*

Approximately 500+ acres of the Mecca Farms site remains in active citrus grove use. There are no other active or future designated agricultural land uses in the general vicinity of the proposed actions. As discussed in Section 3.1.1, Land Use, existing and future land uses are composed of Rural Residential, Recreational, Conservation, and Industrial.




U.S. FISH & WILDLIFE SERVICE

DEPARTMENT OF THE INTERIOR

*J.W. Corbett Wildlife Management Area*
*Proposed Land Transfer*
*Environmental Assessment*

**PUBLIC LANDS MAP**

*Figure 3-19*

# *Section 4.0*
# *ENVIRONMENTAL CONSEQUENCES*

Environmental consequences are defined as those impacts and effects that are directly related to the proposed action, alternative actions, and the no-build action.

## *4.1 SUMMARY OF EFFECTS*

This analysis identifies a number of environmental effects that are reasonably likely to result from secondary actions related to the alternative under consideration. These include alterations of wetlands, change in public access to JWCWMA, traffic density and patterns, noise, and more. We neither identify nor recommend mitigation measures for environmental effects that are not clearly and unambiguously linked to the alternative, that are more specifically related to actions subsequent to the Services' decision, and for which the analysis suggests are not significant. For example, the downstream effects associated with the exact alignment of the widening of the Seminole Pratt Whitney Road extension will be mitigated by project sponsors during the permit application process. In this way, we avoid redundancy with existing statutory and regulatory processes.

The presentation format of this analysis has been modified to enhance the public's role in this analysis based on the results of the public scoping process. The Service's traditional format, which distinguishes direct, indirect (40 Code of Federal Regulations [CFR] Section 1508.8), and cumulative (40 CFR Section 1508.7) effects is merged in some discussions with a broader discussion of total effects. Total effects include direct and indirect effects on Components (previously defined as resource, ecosystem, and human community components of interest for this analysis) and cumulative effects.

The Executive Office of the President - Council on Environmental Quality (CEQ) provides definitions for direct, indirect/secondary, and cumulative effects in 40 CFR 1508.

- Direct effects (40 CFR Section 1508.8(a)) are defined as "caused by the action and occur at the same time and place." An example of a direct effect is found in Section 4.5.1.2, Wetlands, Alternative 1A (direct effects to 2.22 acres of wetlands).

- Indirect/secondary effects (40 CFR Section 1508(b)) are defined as "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." An example of an indirect/secondary effect is found in Section 4.4.1, Noise, Alternatives 1B, 2B, 3B, and 4B (noise impacts from future traffic).

- Cumulative effects (40 CFR Section 1508.7) are defined as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. A discussion of cumulative effects is found in Section 4.6, Cumulative Effects.

Total effects are analyzed in terms that provide the community and decision maker with the information most relevant to the decision to be made. The Service believes the total effects approach is consistent with the CEQ recommendations (CEQ, 1997; NEPA Task Force, 2003). **Table 4-1** is a comparative matrix of all actions considered in this analysis and their associated impacts. The following sections provide detail in support of the information in Table 4-1.

The County asserts that the Service and reviewers should assume it would apply eminent domain, if necessary, to accomplish its PBCBRP development objective in the analysis of alternatives. This means that the PBCBRP, including constructing and populating much of Mecca Farms, road and infrastructure creation, and other development, will occur as proposed regardless of our decision. Based on the County's assertion, this analysis presumes that development trends in Palm Beach County, the PBCBRP itself, and related infrastructure and other impacts are common to all alternatives. Since there would be no distinction between alternatives, we do not address those issues that are common to all alternatives.

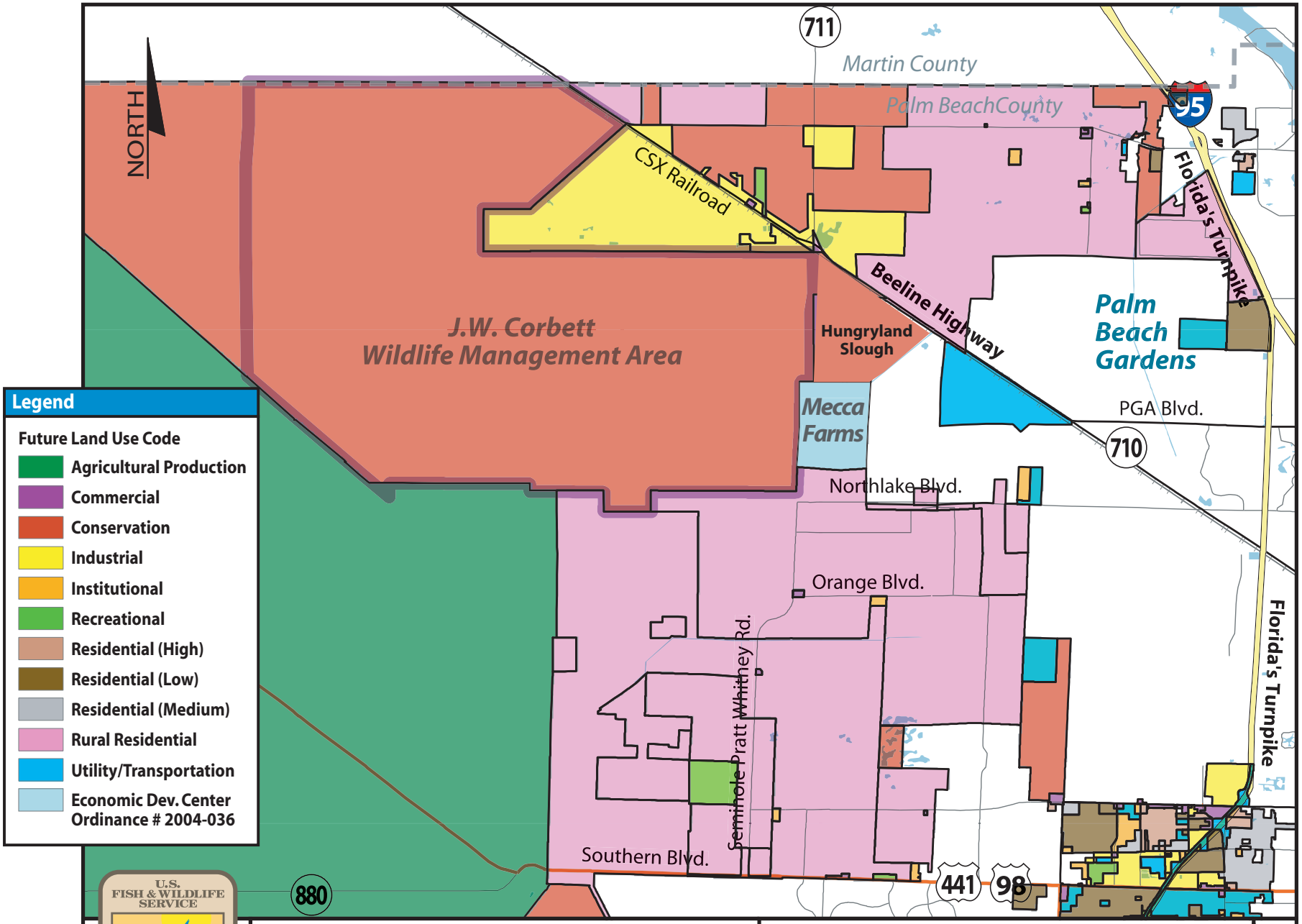
## *4.2 SOCIAL AND ECONOMIC RESOURCES*

### *4.2.1 LAND USE CHANGES*

Changes in existing or approved future land uses are anticipated with any of the proposed alternatives. Specific changes in recreation land uses associated with the JWCWMA are also discussed in Section 4.3.3, Recreation Areas. **Figure 4-1** depicts the currently approved Palm Beach County Future Land Use Map for the area surrounding the proposed action and all other alternatives.

**Alternative 1A**

At the JWCWMA, 1.63 acres of land would be converted from conservation use to transportation use. However, no recreational facilities would be adversely impacted by this alternative. The planned extension of Seminole Pratt Whitney Road north of PGA Boulevard to SR 710 is incorporated into both the Palm Beach County Five-Year Road Program (adopted December 7, 2004) and the Proposed Cost Feasible Plan Highway Network for the Palm Beach County 2030 LRTP (adopted in 2004). Therefore, there is a change in land use associated with the extension of Seminole Pratt Whitney Road north of PGA Boulevard to SR 710.




*J.W. Corbett Wildlife Management Area*
*Proposed Land Transfer*
*Environmental Assessment*

**FUTURE LAND USE**

*Figure 4-1*

Source: Palm Beach County Comprehensive Plan, Future Land Use Element, 2004.

**TABLE 4-1**
**SUMMARY OF IMPACTS BY ALTERNATIVE**

| Impact Topics | Alternative 1A | Alternative 2A | Alternative 1B | Alternative 2B | Alternative 3B | Alternative 4B |
|---|---|---|---|---|---|---|
| **Social or Economic Resources** | | | | | | |
| Land Use Changes | Yes | Yes | Yes | Yes | Yes | Yes |
| Community Cohesion | No | No | No | Yes | Yes | Yes |
| Relocation Potential | No | No | No | Yes - 8 | Yes - 5 | Yes -5 |
| Controversy Potential | Low | High | Low | High | High | High |
| Utilities | No | No | No | No | No | No |
| Railroads | No | Yes | No | No | No | No |
| **Cultural Resources** | | | | | | |
| Historic Sites/Districts | No | No | No | No | No | No |
| Archaeological Sites | No | No | No | No | No | No |
| Recreation Areas[1] | Yes - 1.63 acres | No | Yes - 28.37 acres | No | Yes - 146.11 acres | Yes - 143.44 acres |
| **Physical Resources** | | | | | | |
| Noise Sensitive Sites | No | No | Yes - 6 | Yes - 9 | Yes - 9 | Yes - 9 |
| Contamination (#/Rank) | No | 1/Low | No | No | No | No |
| **Natural Resources** | | | | | | |
| Wetlands | Yes - 4.67 acres | Yes - 5.90 acres | Yes - 16.21 acres | Yes - 1.22 acres | Yes - 4.85 acres | Yes - 4.34 acres |
| Water Quality | No | No | Positive | No | No | No |
| Wild and Scenic Rivers | No | No | Positive | No | No | No |
| Floodplains | No | No | Positive | No | No | No |
| Wildlife and Habitat[2] | Yes - 6.88 acres | Yes - 11.00 acres | Yes - 12.82 acres | Yes - 1.50 acres | Yes - 5.17 acres | Yes - 4.68 acres |
| **Cumulative Effects** | No | No | No | No | No | No |

No = No adverse impact.
Yes = Adverse impact.
Positive = Positive impact.
[1] 2 to 1 mitigation proposed for Alternatives 1A and 1B by acquisition of the Minkin Parcel.
[2] Habitat acreage does not include wetlands.

**Alternative 2A**

No property from the JWCWMA would be converted from conservation use and no recreational facilities would be adversely impacted by this alternative. The planned extension of Seminole Pratt Whitney Road north of PGA Boulevard to SR 710 is incorporated into both the Palm Beach County Five-Year Road Program (adopted December 7, 2004) and the Proposed Cost Feasible Plan Highway Network for the Palm Beach County 2030 LRTP (adopted in 2004). Therefore, there is a change in land use associated with the extension of Seminole Pratt Whitney Road north of PGA Boulevard to SR 710.

**Alternative 1B**

At the JWCWMA, 28.37 acres of land would be converted from conservation use to use for the widening of Seminole Pratt Whitney Road, FP&L electrical substation, and canal/flow way with recreational trail. No recreational facilities would be adversely impacted by this alternative. The conversion of residential land use in this area for the expanded road right-of-way was already incorporated into both the Palm Beach County Five-Year Road Program (adopted December 7, 2004) and the Proposed Cost Feasible Plan Highway Network for the Palm Beach County 2030 LRTP (adopted in 2004). The County asserts it has eminent domain authority and implies that it will use that authority. However, part of the land proposed for the canal/flow way maintenance area would provide for an activities trail connecting to a new trailhead at the JWCWMA South Entrance.

**Alternative 2B**

No property from the JWCWMA would be converted from conservation use. No recreational facilities would be adversely impacted by this alternative. There would be a conversion of residential land use from Northlake Boulevard to 100th Avenue with the 60-foot widening of Seminole Pratt Whitney Road east of the existing right-of-way, and the development of a new FP&L power substation and 60-foot power distribution easement north of the proposed FP&L substation. The conversion of residential land use in this area for the expanded road right-of-way was already incorporated into both the Palm Beach County Five-Year Road Program (adopted December 7, 2004) and the Proposed Cost Feasible Plan Highway Network for the Palm Beach County 2030 LRTP (adopted in 2004). The County asserts it has eminent domain authority and implies that it will use that authority. Therefore, there is an anticipated land use change associated with the expanded roadway.

**Alternative 3B**

At the JWCWMA, 8.11 acres of land would be converted from conservation use to use for two FP&L power distribution corridors. However, this alternative additionally impacts 138 acres of the JWCWMA by creating an isolated area that the FWC would have difficulty maintaining, especially for the use of controlled burns. This maintenance impact would adversely affect the passive recreational and wildlife and habitat value of the isolated 138-acre parcel. There would be a conversion of residential land use from Northlake Boulevard to 100th Avenue with the 60-foot widening of Seminole Pratt Whitney Road east of the existing right-of-way. The

conversion of residential land use in this area was already incorporated into both the Palm Beach County Five-Year Road Program (adopted December 7, 2004) and the Proposed Cost Feasible Plan Highway Network for the Palm Beach County 2030 LRTP (adopted in 2004). The County asserts it has eminent domain authority and implies that it will use that authority. Therefore, there is an anticipated land use change associated with the expanded roadway.

**Alternative 4B**

At the JWCWMA, 5.44 acres of land would be converted from conservation use to use for a power transmission corridor. However, this alternative additionally impacts 138 acres of the JWCWMA by creating an isolated area that the FWC would have difficulty maintaining, especially for the use of controlled burns. This maintenance impact would adversely affect the passive recreational and wildlife and habitat value of the 138-acre parcel. There would be a conversion of residential land use from Northlake Boulevard to 100th Avenue with the 60-foot widening of Seminole Pratt Whitney Road east of the existing right-of-way. The conversion of residential land use in this area was already incorporated into both the Palm Beach County Five-Year Road Program (adopted December 7, 2004) and the Proposed Cost Feasible Plan Highway Network for the Palm Beach County 2030 LRTP (adopted in 2004). The County asserts it has eminent domain authority and implies that it will use that authority. Therefore, there is an anticipated land use change associated with the expanded roadway.

### *4.2.2 COMMUNITY COHESION*

**Alternative 1A**

The extension and expansion of Seminole Pratt Whitney Road is part of the approved Palm Beach County 2030 LRTP and does not transect or traverse any existing or planned community or neighborhood. No adverse impacts are anticipated related to community cohesion.

**Alternative 2A**

The extension and expansion of Seminole Pratt Whitney Road is part of the approved Palm Beach County 2030 LRTP and does not transect or traverse any existing or planned community or neighborhood. No adverse impacts are anticipated related to community cohesion.

**Alternative 1B**

This alternative would require the acquisition of property from six residential parcels on the west side of Seminole Pratt Whitney Road in the established community known as The Acreage. Acquisition of these properties would adversely impact those homes fronting Seminole Pratt Whitney Road. The County asserts it has eminent domain authority and implies that it will use that authority.

The accommodation for the FP&L power transmission corridor avoids any impacts to the existing and planned communities in the general vicinity of the proposed action.

**Alternatives 2B, 3B, and 4B**

These alternatives would require the acquisition of property from approximately 17 to 20 parcels and the relocation of approximately five to eight residences in the established community locally known as The Acreage. Acquisition of these properties would adversely impact not only the homes taken but those homes now fronting the power transmission corridor. The County asserts it has eminent domain authority and implies that it will use that authority.

### *4.2.3 RELOCATION POTENTIAL*

**Alternative 1A**

As noted in Section 4.2.2, Community Cohesion, the extension and expansion of Seminole Pratt Whitney Road is part of the approved Palm Beach County 2030 LRTP and does not require the relocation of any residences and/or businesses.

**Alternative 2A**

As noted in Section 4.2.2, the extension and expansion of Seminole Pratt Whitney Road is part of the approved Palm Beach County 2030 LRTP and does not require the relocation of any residences and/or businesses.

**Alternative 1B**

Utilization of JWCWMA property for the FP&L power transmission corridor would not require the relocation of any residences and/or businesses. Acquisition of land from six residential parcels south of the JWCWMA would not require the relocation of any residences and/or businesses.

**Alternative 2B**

As noted in Section 4.2.2, utilization of property for the FP&L power transmission corridor and new electrical substation and the expansion of Seminole Pratt Whitney Road to the east would impact approximately 20 properties and would require the relocation of approximately eight residences. The County asserts it has eminent domain authority and implies that it will use that authority.

**Alternatives 3B and 4B**

Utilization of property for the FP&L power transmission corridor to the east and the expansion of Seminole Pratt Whitney Road would impact approximately 17 parcels and would require the relocation of approximately five residences. The County asserts it has eminent domain authority and implies that it will use that authority.

### *4.2.4 COMMUNITY SERVICES*

Community services are not anticipated to be adversely affected by the proposed action or any of the proposed alternatives. Extension and expansion of Seminole Pratt Whitney Road would provide a benefit to response times for several fire rescue stations in the area because of new direct access to SR 710.

### *4.2.5 TITLE VI CONSIDERATIONS*

This project has been developed in accordance with the Civil Rights Act of 1964, as amended by the Civil Rights Act of 1988, and provides that no person has on the grounds of race, color, religion, sex, national origin, marital status, handicap, or family composition been excluded from participation in, or been denied the benefits of, or been otherwise subject to discrimination under any program of the Federal, state, and/or local government.

As detailed in Section 3.1.3, Demographics, those census tracts immediately adjacent to the proposed actions and all other proposed alternatives contain a very small percentage of the overall Palm Beach County population of minorities, elderly, and those below the poverty rate. However, those populations that do live within these census tracts are not adversely affected by any of the proposed actions or alternative actions.

### *4.2.6 ENVIRONMENTAL JUSTICE*

Executive Order 12898 (February 11, 1994) states:

> ". . . [t]o the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States. . ."

Table 3-1 summarized the demographics of those census tracts in the general vicinity of the proposed action and all other proposed alternatives. **Table 4-2** provides a comparison of median income, minority populations, and poverty level between Palm Beach County and those census tracts in the general vicinity of the proposed action. It does not appear that any of the alternatives would adversely affect any minority population.

**TABLE 4-2**
**COMPARISON OF PALM BEACH COUNTY AND PROXIMATE CENSUS TRACTS**
**MEDIAN INCOME, MINORITY POPULATIONS, AND POVERTY LEVELS**

| | Total Population | Black | Other | Hispanic Origin | Median Income[1] | Poverty Level[2] |
|---|---|---|---|---|---|---|
| Palm Beach County | 1,131,184 | 156,055 | 80,922 | 140,675 | $45,062 | 9.9% |
| Area Total | 35,724 | 1,861 | 1,781 | 3,266 | $68,659 | 4.3% |
| Census Tract 78.06 | 2,947 | 28 | 77 | 78 | $89,734 | 2.1% |
| Census Tract 78.08 | 4,139 | 253 | 239 | 430 | $66,657 | 3.7% |
| Census Tract 78.09 | 3,631 | 109 | 236 | 403 | $58,152 | 8.9% |
| Census Tract 78.22 | 5,894 | 50 | 144 | 219 | $72,129 | 2.8% |
| Census Tract 79.03 | 5,629 | 422 | 288 | 779 | $58,770 | 5.5% |
| Census Tract 79.06 | 13,484 | 999 | 803 | 1,357 | $66,514 | 2.6% |

Source: U.S. Census, 2000.
[1] Median income for the "Area Total" is an average of the six census tracts noted.
[2] Poverty level for the "Area Total" is an average percentage of the six census tracts noted.

Additionally, Section 4-4 of Executive Order 12898 requires:

> "Federal agencies, whenever practicable and appropriate, shall collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence."

None of the property utilized in any of the alternatives supports a fishing and/or hunting opportunity that is not available elsewhere in the immediate vicinity contained within the 60,288-acre JWCWMA. Parcels A and B are within the 1,000-foot buffer separating hunting areas from residential areas. Due to its relatively small size and proximity to SR 710, it is unlikely that hunting activities would be allowed on the Minkin Parcel.

Based on the information from the 2000 Census, it is anticipated that neither the proposed action nor any of the other alternatives would result in any adverse Environmental Justice consequences.

### *4.2.7 UTILITIES AND RAILROADS*

**Alternative 1A**

No adverse impacts are anticipated to utilities or railroads. Alternative 1A utilizes the existing at-grade rail crossing into the Pratt-Whitney complex to gain access to SR 710 and does not require a new crossing.

**Alternative 2A**

No adverse impacts are anticipated to utilities. This concept would place the new alignment for the Seminole Pratt Whitney Road extension entirely to the east of Parcel A on County-owned lands, cross the CSX railroad line above-grade, and interchange with SR 710 without any direct impact to the JWCWMA. Due to the close proximity of the potential new CSX crossing to the CSX spur track immediately to the east, and the existing Pratt-Whitney facility road crossing to the west, a grade-separated crossing of CSX would be required. This grade-separated crossing would require a minimum 23.5-foot clearance over the railroad. Approximately 19 to 20 trains per day use this section of CSX railroad line and it is also an AMTRAK route.

**Alternatives 1B, 2B, 3B, and 4B**

These alternatives are not anticipated to adversely impact any of the utilities discussed in Section 3.1.4, nor do they adversely impact the CSX corridor.

### *4.2.8 CONTROVERSY POTENTIAL*

Controversy can be defined as either scientific uncertainty or public perception. In the state of Florida, there are several layers of permitting and approval processes that must be completed before any action is taken. Development of mitigative measures is part of these processes and is intended to compensate for any uncertainty associated with the action and/or subsequent impacts. Therefore, for the purpose of this analysis, controversy is defined by public perception and potential public reaction to the proposed action.

**Alternative 1A**

Minor controversy is anticipated with the proposed action related to the conversion of use of lands in the JWCWMA from a wildlife management usage to a transportation use. However, the 2:1 replacement land requirement that is being proposed for the transfer and conversion of land is anticipated to offset some of the controversy.

**Alternative 2A**

Minor controversy is anticipated from the general public. Some controversy is anticipated from CSX related to this alternative because of the potential for a new Seminole Pratt Whitney Road above-grade rail crossing and interchange with SR 710.

**Alternative 1B**

Minor controversy is anticipated with the proposed action related to the conversion of use of lands in the JWCWMA from a wildlife management usage to a power transmission corridor. However, the amenities (e.g., new activities trail, new trailhead to the Corbett Trail segment of the Florida Trail, and Loxahatchee flow way improvements) are anticipated to offset some of the controversy.

**Alternatives 1B, 2B, 3B, and 4B**

As discussed in Sections 4.2.2 and 4.2.3, these alternatives would require the acquisition of property from approximately 17 to 20 parcels in The Acreage and require the relocation of approximately eight residences. The County asserts it has eminent domain authority and implies that it will use that authority. It is anticipated that this requirement would be a catalyst to controversy related to these alternatives.

## *4.3 CULTURAL RESOURCES*

### *4.3.1 HISTORIC SITES/DISTRICTS*

A Draft CRAS, conducted in accordance with the procedures contained in 36 CFR Part 800 and including background research and a field survey, was performed for the project. No historical sites or properties were identified, nor are any expected to be encountered during subsequent project development. No resources listed or eligible for listing on the NRHP have been identified. In a letter dated December 13, 2004, the SHPO concurred with these findings and determined that the land transfer would have no effect on historic properties listed, or eligible for listing on the NRHP or otherwise of historical or archaeological value. A copy of the letter is included in Appendix B.

### *4.3.2 ARCHAEOLOGICAL SITES*

No archaeological sites occur on the parcels. All three parcels and alternatives were inspected and determined to be low probability areas for archaeological sites. None contained any evidence of any archaeological or historical sites, features, or artifacts. No structures occur on the parcel.

In the unlikely event that isolated archaeological artifacts, features, or sites are encountered, then relevant reviewing agencies and the consultant archaeologist should be contacted. If human remains are encountered, then the guidelines of F.S. Chapter 872.05, the Unmarked Human Remains Act, would apply.

A Draft CRAS, conducted in accordance with the procedures contained in 36 CFR Part 800 and including background research and a field survey, was performed for the project. No archaeological sites or properties were identified, nor are any expected to be encountered during subsequent project development. No resources listed or eligible for listing on the NRHP have been identified. In a letter dated December 13, 2004, the SHPO concurred with these findings and determined that the land transfer would have no effect on historic properties listed, or eligible for listing on the NRHP or otherwise of historical or archaeological value. A copy of the letter is included in Appendix B.

### *4.3.3 RECREATION AREAS*

Hunting and fishing opportunities at the JWCWMA are ranked by FWC and the County as "fair." Many of the surrounding public lands provide higher quality opportunities. Parcels A and B are peripheral to the overall JWCWMA and would not diminish any game species and, therefore, have a negligible effect on hunting. Additionally, Parcels A and B are within the current 0.25-mile safety buffer and hunting is prohibited.

**Alternative 1A**

At the JWCWMA, 1.63 acres of land would be converted from conservation use to transportation use. However, no recreational facilities would be adversely impacted by this alternative.

**Alternative 2A**

No property from the JWCWMA would be converted from conservation use to transportation use. No recreational facilities would be adversely impacted by this alternative.

**Alternative 1B**

At the JWCWMA, 28.37 acres of land would be converted from conservation use to use for a power transmission corridor, electrical substation, and flow way. No recreational facilities would be adversely impacted by this alternative. However, part of the land needed for the maintenance area for the canal would provide for an activities trail to a new trailhead at the JWCWMA South Entrance.

**Alternative 2B**

No property from the JWCWMA would be converted from conservation use to use for a power transmission corridor. Since the existing access to the South Entrance of the JWCWMA is not defined by a legal easement north of 100th Avenue, access to the JWCWMA could be adversely impacted by this alternative.

**Alternative 3B**

At the JWCWMA, 8.11 acres of land would be converted from conservation use to use for a power transmission corridor. However, this alternative additionally impacts 138 acres by creating an isolated area that the FWC would have difficulty maintaining, especially for the use of controlled burns. This maintenance impact would adversely impact the passive recreational value of the 138-acre parcel.

**Alternative 4B**

At the JWCWMA, 5.44 acres of land from the JWCWMA would be converted from conservation use to use for a power transmission corridor. However, this alternative additionally impacts 138 acres by creating an isolated area that the FWC would have difficulty maintaining, especially for the use of controlled burns. This maintenance impact would adversely impact the passive recreational value of the 138-acre parcel.

### *4.3.4 VISUAL/AESTHETICS*

**Alternative 1A**

Alternative 1A may have minimal adverse visual and aesthetic impacts for Corbett users on the northeastern part of the JWCWMA as a result of the construction of the extension of Seminole Pratt Whitney Road. However, the Pratt Whitney Plant, Seaboard Coastline Railroad, and the Beeline Highway are already existing in the same general area and are visible to the JWCWMA users in this area.

**Alternative 2A**

This concept would place the new alignment for the Seminole Pratt Whitney Road extension entirely to the east of Parcel A on County-owned lands, cross the CSX railroad line above-grade, and interchange with SR 710. Due to the close proximity of the potential new CSX crossing to the CSX spur track immediately to the east, and the existing Pratt-Whitney facility road crossing to the west, a grade-separated crossing of CSX would be required. This grade-separated crossing would require a minimum 23.5-foot clearance over the railroad. The proposed elevated roadway would be visible to motorists and users of the JWCWMA facilities. Alternative 2A would have an adverse impact on the existing viewshed.

**Alternative 1B**

The addition of a new power substation would affect the viewsheds along the eastern edge of the JWCWMA. However, the underground transmission lines would be in association with the Alternative 1B Seminole Pratt Whitney Road expansion. The co-location of the extended and expanded Seminole Pratt Whitney Road and the underground power transmission lines, and the planned landscape buffering of the new electrical substation would assist in minimizing any adverse impacts.

**Alternative 2B**

Power transmission lines and a new electrical substation would be placed on the east side of the improved Seminole Pratt Whitney Road. This would place the new FP&L facilities adjacent to homes. Alternative 2B would have an adverse impact on the existing viewshed.

**Alternative 3B**

A single circuit overhead power transmission line would be placed in the JWCWMA in a 30-foot easement on the west side of Seminole Pratt Whitney Road, from the existing power lines north, to connect to a new proposed utility pod in the PBCBRP. A second proposed single circuit overhead transmission line, within a 60-foot easement, would run from the existing transmission corridor in the JWCWMA east to the proposed electric substation in the PBCBRP, a distance of approximately 3,000 feet, with an above-grade patrol road for maintenance purposes (see Figure 2-6). The proposed overhead power transmission lines would be visible to motorists and users of the JWCWMA facilities. Alternative 3B would have an adverse impact on the existing viewshed.

**Alternative 4B**

A new power transmission line would be placed in the JWCWMA to connect to a proposed utility pod in the PBCBRP (see Figure 2-7). The new transmission line would run from the existing transmission corridor in the JWCWMA east to the substation in the PBCBRP, a distance of approximately 3,000 feet. The corridor for this transmission line would be 80 feet in width. The proposed overhead power transmission lines would be visible to motorists and users of the JWCWMA facilities. Alternative 4B would have an adverse impact on the existing viewshed.

## *4.4 PHYSICAL RESOURCES*

### *4.4.1 NOISE*

**Alternatives 1A and 2A**

Noise sensitive receivers are defined as properties where frequent human use occurs and where a lowered noise level would be of benefit. There are no noise sensitive receivers in the vicinity of Alternatives 1A and 2A.

**Alternatives 1B, 2B, 3B, and 4B**

The portion of Seminole Pratt Whitney Road adjacent to Alternatives 1B, 2B, 3B, and 4B is proposed to be improved from a two-lane to a six-lane facility from Northlake Boulevard to the northern boundary of the PBCBRP and a new two- to four-lane roadway from the northern boundary of the PBCBRP to the vicinity of SR 710. This is not a Federally-funded project; however, since it involves a roadway, FDOT and FHWA guidelines are being cited regarding traffic noise impacts. Regulations dealing with the impacts of traffic noise and noise abatement criteria established by the FHWA and in the CFR pertain only to areas of frequent human use.

Land uses such as residences, motels, schools, churches, recreation areas, and parks are considered incompatible with highway noise levels above 66.0 decibels on the "A" scale (dBA) (current FDOT Project Development and Environment [PD&E] Manual). Noise sensitive land uses in the vicinity of these alternatives consist of single-family residences and a recreation area. In order to determine the potential for noise-related impacts resulting from the proposed action, 66.0 dBA noise contours were developed for the future improved roadway facility. These noise contours delineate the distance from the centerline of the improved roadway to where the FHWA Activity Category B Noise Abatement Criteria (NAC) is expected to occur in the future with the Seminole Pratt Whitney Road improvements. Using Level of Service C (LOS C) traffic, the noise contour was determined using the FHWA Traffic Noise Model (TNM). The 66.0 dBA contour was predicted to extend 160 feet from the centerline of the proposed improved Seminole Pratt Whitney Road. **Figure 4-2** shows the 66.0 dBA contour based on the worst case for Alternatives 1B, 2B, 3B, and 4B.

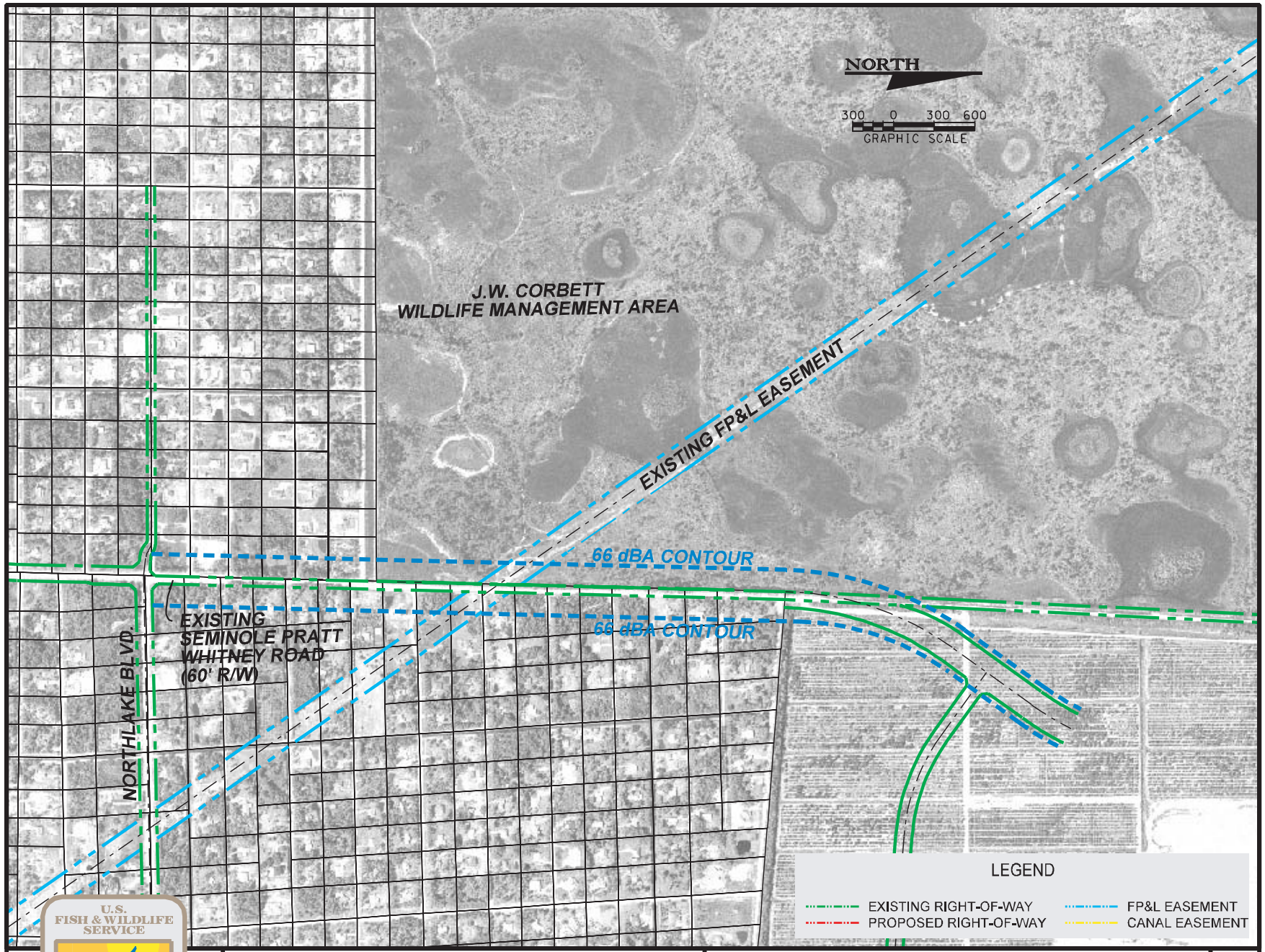
Six noise sensitive sites in Alternative 1B and nine in Alternatives 2B, 3B, and 4B were identified as having the potential to be affected by traffic-related noise adjacent to Seminole Pratt Whitney Road. The identified sites are all single-family residences. There are currently no areas of frequent human use such as picnic areas, located within the 66.0 dBA noise contour in the JWCWMA. Noise abatement measures considered for the noise sensitive sites predicted to experience traffic noise levels that approach, meet, or exceed the NAC include traffic management, alternative roadway alignments, property acquisition, and noise barriers.

The abatement measures that were determined to be potentially reasonable and feasible are property acquisition and noise barriers. For Alternatives 1B, 2B, 3B, and 4B, noise barriers were evaluated. In order to be effective in reducing traffic noise, a noise barrier must be relatively long, continuous (without intermittent openings), and sufficiently tall to provide the necessary reduction in noise levels. For Alternatives 1B, 2B, 3B, and 4B, there are numerous intermittent driveways and side streets that would cause breaks in noise barriers thereby making them ineffective. An alternative noise mitigation strategy is right-of-way acquisition to remove impacted residential properties. This large-sale property acquisition would be costly and highly controversial. Therefore, noise barriers and property acquisition were determined to be not feasible.

In no case does the 66.0 dBA contour extend more than 100 feet into the JWCWMA. Therefore, traffic noise impacts to wildlife and recreational area users would be negligible.

### *4.4.2 AIR QUALITY*

The project is in an area that was redesignated as an attainment area and entered into a Maintenance Period on April 25, 1995. In order to comply with the Clean Air Act Amendments of 1990, the Palm Beach County MPO has produced an Air Quality Conformity Determination Report for the current FY 2005-2009 Transportation Improvement Plan (TIP). The roadway priorities reflected previous MPO direction concerning projects of major concern in addition to

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NOISE CONTOURS

*Figure 4-2*

congestion (i.e., emergency evacuation, continuity, connection to major facilities). Even though all roadways were considered regardless of ownership, the MPO elected to provide priorities on state roads only to FDOT since the County priorities on county roads are included in an aggressive public road improvement program. Seminole Pratt Whitney Road is a county facility and improvements to this facility are included in the adopted 2030 LRTP and the Roadway Thoroughfare Plan in the Palm Beach County Comprehensive Plan. Fire management activities on the JWCWMA may cause minor short-term air quality impacts in the form of smoke and particulates. These impacts would be minimized by adherence to Best Management Practices (BMPs) as prescribed in the JWCWMA Conceptual Management Plan. The proposed land transfer would not have an adverse effect on Palm Beach County air quality.

### *4.4.3 CONSTRUCTION*

Construction activities associated with all of the alternatives would result in temporary air, noise, water quality, traffic flow, and visual impacts for those residents and travelers within the immediate vicinity of the project. These construction impacts are summarized below.

The air quality impact would be temporary and would primarily be in the form of emissions from diesel-powered construction equipment and dust from embankment and haul road areas. Air pollution associated with the creation of airborne particles would be effectively controlled through the use of watering or the application of calcium chloride in accordance with FDOT's 2004 Standard Specifications for Road and Bridge Construction, and through the use of BMPs.

Noise and vibration impacts would be from heavy equipment movement and construction activities, such as vibratory compaction of embankments. Noise control measures would include those contained in FDOT's 2004 Standard Specifications for Road and Bridge Construction.

Water quality impacts resulting from erosion and sedimentation would be controlled in accordance with FDOT's 2004 Standard Specifications for Road and Bridge Construction, and through the use of BMPs.

Maintenance of traffic and sequence of construction would be planned and scheduled so as to minimize traffic delays throughout the project. Signs would be used as appropriate to provide notice of road closures and other pertinent information to the traveling public. The local news media would be notified in advance of road closings and other construction-related activities which could excessively inconvenience the community so that motorists and residents can plan their day and travel routes in advance. Access to all properties and residences would be maintained to the extent practical through controlled construction scheduling. Traffic delays would be controlled to the extent possible where many construction operations are in progress at the same time. The contractor, whenever practical, would maintain one lane of traffic in each direction and comply with the BMPs of FDOT.

For the residents and property owners along the project's right-of-way, some of the materials stored for the project may be visually displeasing; however, this would be a temporary condition and should pose no substantial problem in the long-term.

Construction of the roadway, substation, transmission towers, and flow way may require excavation of unsuitable material (muck), placement of embankments, and use of materials such as limerock, asphaltic concrete, and Portland cement concrete. Demucking would be controlled by Section 120 of FDOT's 2004 Standard Specifications for Road and Bridge Construction. Disposal would be on-site in detention areas or off-site. The removal of debris would be in accordance with local and state standards. The contractor is responsible for his methods of controlling pollution on haul roads, borrow pits, other material pits, and areas used for disposal of waste materials from the project. Temporary erosion control features as specified in FDOT's 2004 Standard Specifications for Road and Bridge Construction, Section 104, would consist of temporary grassing, sodding, mulching, sandbagging, slope, drains, sediment checks, artificial covering, and berms.

In addition to the above noted, the following specific construction impact mitigation measures would be implemented:

- The contractor would use static rollers for compaction of embankment, sub-grade, base, asphalt, etc.
- Pile driving operations, if any, would be restricted to the hours of 7:00 a.m. to 9:00 p.m. to avoid interfering with any adjacent noise sensitive land uses.
- If necessary, pre-formed pile holes would be required where they are in proximity to vibration sensitive land uses to minimize vibration transfer.
- Back-up alarm noise from heavy equipment and trucks would be minimized by requiring the contractor to operate in forward passes or a figure-eight pattern when dumping, spreading, or compacting materials.
- Restriction of operating hours for lighting the construction areas would be determined and required of the contractor prior to beginning construction activities requiring lighting.
- Coordination with the local law enforcement agencies would be undertaken prior to commencing construction activities to ensure that construction-related impacts are minimized or adequately mitigated.

### *4.4.4 CONTAMINATION*

A Contamination Screening Evaluation (CSE) was conducted for the project alternatives (as described in Section 2.0). The purpose of the CSE is to evaluate the likelihood of environmental contamination present upon, below, or in the immediate vicinty of the three subject parcels and the associated alternatives. The CSE is provided in Appendix D and summarized below.

In order to identify and evaluate sites containing hazardous materials, petroleum products, or other sources of potential environmental contamination, the following tasks were conducted:

- Review of the Phase I Environmental Site Assessments conducted on the 1.63-acre Corbett Parcel A, the 28.37-acre Corbett Parcel B, and the 60-acre Minkin Parcel, which were provided by the County.
- Review computer database files within the Phase I Environmental Site Assessments generated by FirstSearch Technology Corporation and review computer data base files provided by Environmental Data Resource, Inc. for the six alternatives: 1A, 2A, 1B, 2B, 3B, and 4B.
- Lists were queried to determine whether sites, listed in EPA or DEP environmental records, were present within specified search radii.
- Evaluate historical aerial photographs of the parcels taken in 1953, 1965, 1973, 1974, 1978, 1981, 1984, 1987, 1989, 1994, 1997, 1998, 2000, and 2003.
- Conduct field inspections of the three parcels and the six alternatives in order to evaluate each site for the presence of abandoned structures and/or historical operations, solid wastes, and areas where potential non-hazardous and/or hazardous wastes may have been discarded.

The three parcels and Alternatives 1A, 2A, and 1B involve undeveloped lands and do not have buildings or structures; therefore, no asbestos or lead-based paint surveys were required on these parcels. No surveys for potential asbestos-containing materials or lead-based paint were conducted on the residential houses or outbuildings associated with Alternatives 2B, 3B, or 4B. It is recommended that these surveys be performed should the demolition of any houses and buildings be required.

The results of the CSE for each alternative are provided in the following section.

#### *4.4.4.1 Corbett Parcel A Alternatives*

**Alternative 1A**

Parcels associated with this alternative are not listed on any of the Federal or state environmental databases, indicating that there is no current or former use involving the manufacture, storage, or disposal of hazardous or toxic materials or wastes. These parcels have been undeveloped since at least 1953.

Located approximately 0.25-mile west northwest of the parcel is the Pratt & Whitney Aircraft/United Technologies Corporation (P&W/UTC) facility. This facility, which comprises approximately 7,000 acres, is listed on the National Priorities List (NPL) but was reportedly dropped by the EPA from the proposed NPL in 1989. The facility has an unregulated landfill, documented soil, groundwater, and surface water contamination. Assessment and corrective actions are currently being conducted at various areas on the facility. The identified impacts do

not extend off-site. Due to the distance of the P&W/UTC facility from the parcel (approximately 1,300 feet to the west northwest), the impacts identified at the facility do not pose an environmental concern to this parcel. **Figure 4-3** illustrates the location of the P&W/UTC with respect to the 1.63-acre Corbett Parcel A.

**Alternative 2A**

Parcels associated with this alternative are not listed on any of the Federal or state environmental databases, indicating that there is no current or former use involving the manufacture, storage, or disposal of hazardous or toxic materials or wastes. Prior to 1953, a set of railroad (CSX) tracks were constructed across the central portion of the parcel. Prior to 1953, the parcel was undeveloped. There were no reported spills or discharges along this portion of the railroad tracks.

As part of railway regular maintenance, herbicides are typically applied along the railway corridors to manage the vegetation along the railroad tracks. Due to the regular application of herbicides along the railroad tracks, there is a potential for a buildup of residual pesticides. The potential chemicals of concern are arsenic and herbicides. Based on this potential, the railroad tracks and right-of-way pose a LOW potential to impact the project. Between 1953 and 1964, SR 710 was constructed on the north side of the CSX railroad tracks. There were no reported spills or discharges along this portion of the road.

Located approximately 0.75-mile northwest of the property is the P&W/UTC facility. As stated above, this 7,000-acre facility was reportedly dropped by the EPA from the proposed NPL in 1989. The facility has an unregulated landfill, documented soil, groundwater, and surface water contamination. Assessment and corrective actions are currently being conducted at various areas on the facility. The identified impacts do not extend offsite. Due to the distance of the P&W/UTC facility from the parcel (approximately 4,000 feet to the northwest), the impacts identified at the facility do not pose an environmental concern to this parcel. Figure 4-3 illustrates the location of the P&W/UTC with respect to Alternative 2A.

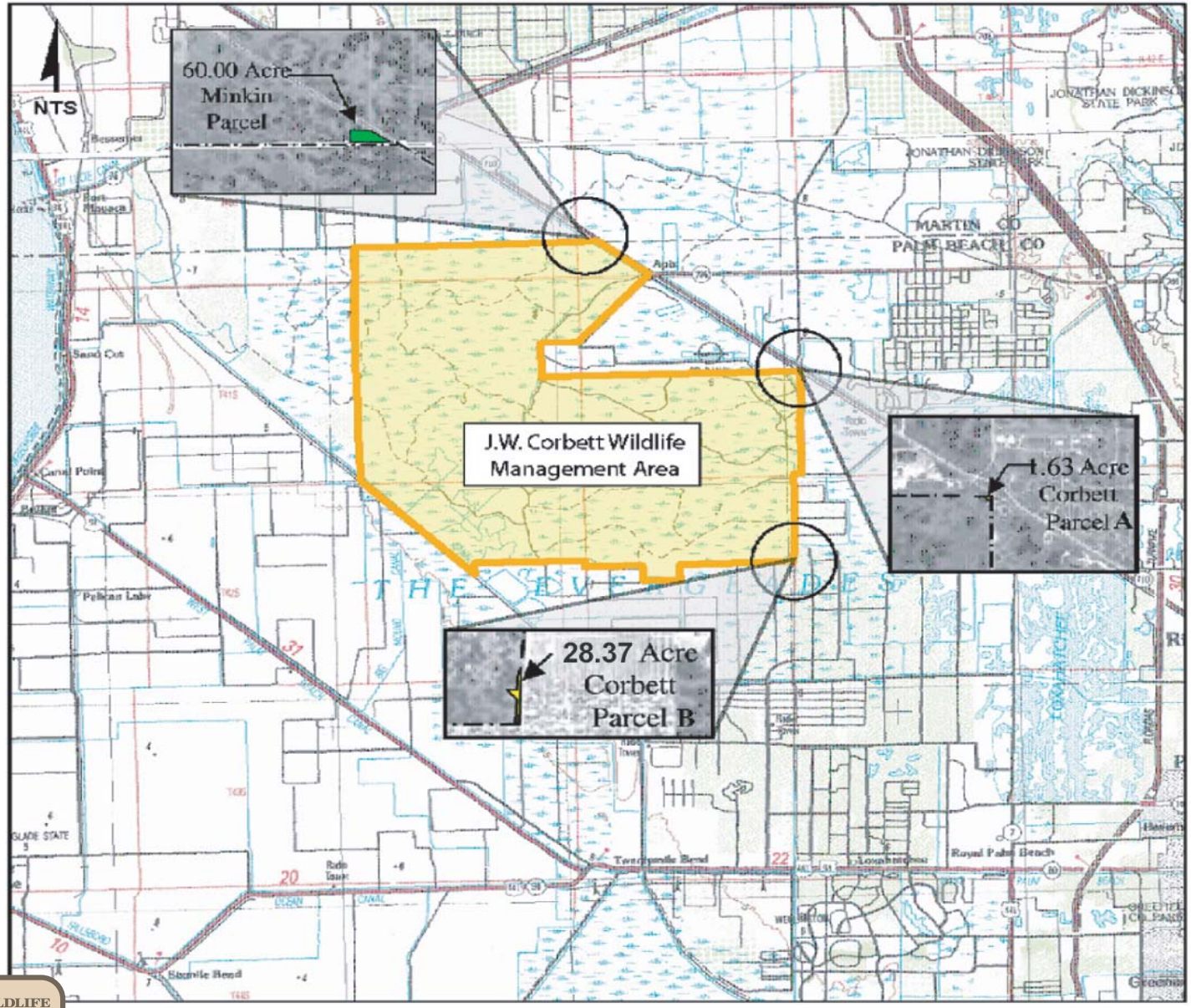
#### *4.4.4.2 Corbett Parcel B Alternatives*

**Alternative 1B**

Parcels associated with this alternative are not listed on any of the Federal or state environmental databases, indicating that there is no current or former use involving the manufacture, storage, or disposal of hazardous or toxic materials or wastes.

Between 1965 and 1974, northwest-southeast trending overhead electrical power lines were constructed. These power lines and easement, approximately 200 feet wide, traverse the parcel approximately 1,000 feet north of the south property boundary. The remainder of the parcel has been undeveloped since at least 1953.

Located northeast from the north portion of the parcel, across Seminole Pratt Whitney Road, is the Mecca Farms Citrus Grove, which is no longer operating as a citrus grove. Mecca

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**CONTAMINATION MAP**

***Figure 4-3***

Farms, Inc. is listed as a RCRA Small Quantity Generator (SQG) and currently maintains 12 ASTs associated with the irrigation and water control pump stations and 10 ASTs at the refueling area and maintenance shop. These ASTs store various petroleum products. Although there were no reported leaks or discharges reported on the databases that were searched during the Phase II Environmental Site Assessment conducted in 2003 at the Mecca Farms Citrus Grove by URS, petroleum impacted soils were identified at two of the irrigation pump stations and at the vehicle refueling area. Information provided by Palm Beach County Facilities Development and Operations have documented that the petroleum impacts identified at the Mecca Farms Citrus Grove have been remediated. Based on this information, the previously identified impacts at the Mecca Farms Citrus Grove do not pose an environmental concern to this parcel. Figure 4-3 illustrates the location of Mecca Farms Citrus Grove with respect to the 28.37-acre Corbett Parcel B.

**Alternatives 2B, 3B, and 4B**

Parcels associated with these alternatives are not listed on any of the Federal or state environmental databases, indicating that there is no current or former use of the parcel involving the manufacture, storage, or disposal of hazardous or toxic materials or wastes.

Between 1965 and 1974, an unpaved road (Seminole Pratt Whitney Road) is observed generally running north-south along the lower portion of three parcels and northwest-southeast trending overhead electrical power lines were constructed in a northwest-southeast orientation. These power lines and easement, approximately 200 feet wide, traverses the parcels. Rows of trees (citrus groves) were observed along the northeast portion of the parcels beginning in 1973. Prior to construction of the road and power lines and cultivation, the parcels were undeveloped since at least 1953. By 1974, east-west dirt roads and a drainage canal system had been constructed on the southeast portion of the parcels (The Acreage). Between 1981 and 1987, Seminole Pratt Whitney Road was extended northward to the SFWMD C-18 canal. Single-family residences were observed on the southeast portions of the parcels by 1994.

Located northeast and east from the north portions of these alternatives, across Seminole Pratt Whitney Road, is the Mecca Farms Citrus Grove. Mecca Farms, Inc. is listed as a RCRA SQG and currently maintains 12 ASTs associated with the irrigation and water control pump stations and 10 ASTs at the refueling area and maintenance shop. These ASTs store various petroleum products. As stated above, no reported leaks or discharges were reported on the databases that were searched. However, during the Phase II Environmental Site Assessment conducted at the Mecca Farms Citrus Grove by URS, petroleum impacted soils were identified at two of the irrigation pump stations and at the vehicle refueling area. Information provided by Palm Beach County Facilities Development and Operations have documented that the petroleum impacts identified at the Mecca Farms Citrus Grove have been remediated. Based on this information, the previously identified impacts at the Mecca Farms Citrus Grove do not pose an environmental concern to this parcel. Figure 4-3 illustrates the location of Mecca Farms Citrus Grove with respect to the alternatives in Corbett Parcel B.

**Minkin Parcel**

This parcel is not listed on any of the Federal or state environmental databases referenced above, indicating that there is no current or former use of the parcel involving the manufacture, storage, or disposal of hazardous or toxic materials or wastes. The parcel has been undeveloped since at least 1953.

#### *4.4.4.3 Summary*

Each of the alternatives was assigned a degree of risk for potential contamination impact: NO, LOW, MEDIUM, or HIGH. These ratings, in general, are based on the current FDOT PD&E Manual. Alternative 2A has a LOW ranking due to the presence of the CSX railroad. The remaining five alternatives and the Minkin Parcel had a NO ranking. Two off-site operations were listed within one mile of the project alternatives. Both of the operations had a NO ranking due to the distance from the parcels. **Table 4-3** is a summary of the CSE.

The findings of this evaluation are based upon the review of Phase I Environmental Site Assessments conducted on three parcels that were provided to URS and Phase I Environmental Site Assessments conducted on the six alternatives by URS and site inspections by URS. The intent of this survey is to provide a preliminary guide for identifying potential contamination on the parcels and alternative parcels. The identification of potential contamination on a parcel in this report does not necessarily indicate that the parcel contains environmental contamination, but only that there is a potential for environmental contamination to occur. Subsurface soil and/or groundwater investigations may be required to determine the existence of contamination on Alternative 2A. Because no areas of potential environmental concerns were identified on the other five parcels, no subsurface soil/groundwater investigations are recommended on these parcels.

### *4.4.5 NAVIGATION*

Based on comments received during the EA comment period, there are waters within the project vicinity that may be considered navigable. Therefore, consultation with the U.S. Army Corps of Engineers should take place prior to any activities.

## *4.5 NATURAL RESOURCES*

### *4.5.1 WETLANDS*

#### *4.5.1.1 Introduction*

Impacts associated with this project can be defined as man-induced activities such as clearing vegetation, dredging and filling wetlands, and leveling land for construction activities. Because all areas located within each alternative would be utilized for the construction of the proposed project, all alternatives associated within this EA would result in impacts to jurisdictional wetlands. However, the specific wetland types impacted by each alternative and acreages of impact vary greatly. Each alternative and its specific jurisdictional wetland impacts are discussed below. The type and acreage of jurisdictional wetland impacts associated within each alternative are presented in **Tables 4-4 and 4-5** for Parcel A and Parcel B alternatives, respectively.

**TABLE 4-3**
**CONTAMINATION SCREENING SITE SUMMARY**

| Parcel/ Alternative Name | Database Number/ List | Facility ID Number | Database and Field Review Comments | Concern | Rank |
|---|---|---|---|---|---|
| Alternative 1A | None | None | Undeveloped | None | No |
| Alternative 2A | None | None | Undeveloped/CSX Railroad | Arsenic, Herbicides | Low |
| Alternative 1B | None | None | Majority of parcel undeveloped | None | No |
| Alternative 2B | None | None | Single-family residences, citrus groves | None | No |
| Alternative 3B | None | None | Northern portion undeveloped | None | No |
| Alternative 4B | None | None | Single-family residences, citrus groves, northern portion undeveloped | None | No |
| Minkin Parcel | None | None | Undeveloped | None | No |
| Pratt Whitney | CERCLIS | FLD001447952 | Located 0.25 to 0.5 mile north northwest of Corbett Parcel A. Non NPL Site. Various assessment and corrective action activities at facility. | Solvents, Dioxin, PCBs, Metals, Jet Fuel | No |
| Mecca Farms, Inc. Grove | RCRIS-SQG/ FINDS | FL0001000744 | Located 0.5 to 1 mile east northeast. No violations found. | None | No |
| | | 509200303 | Currently maintains 12 AST associated with irrigation and pump stations and 10 ASTs at the refueling area. Minor soil impacts identified during Phase II Environmental Site Assessment. | Petroleum | No |

CERCLIS = Comprehensive Environmental Response, Compensation, and Liability and Information System List.
RCRIS-SQG = Resource Conservation and Recovery Information System.
FINDS = Facility Index System List.

**TABLE 4-4**
**JURISDICTIONAL WETLANDS IMPACTS WITHIN CORBETT PARCEL A ALTERNATIVES**
**FLUCFCS AND USFWS CLASSIFICATIONS AND ACREAGES**

| Classification Name | FLUCFCS Classification* | USFWS Classification** | Acreage of Classification | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Alternative 1A | | | | Alternative 2A | | | |
| | | | Within JWCWMA | Outside JWCWMA | Total | Percent of Alternative Wetlands | Within JWCWMA | Outside JWCWMA | Total | Percent of Alternative Wetlands |
| Streams and Waterways | 510 | PUB3H | ---- | ---- | ---- | ---- | ---- | 1.94 | 1.94 | 32.9% |
| Exotic Wetland Hardwoods | 619 | PFO3C | ---- | ---- | ---- | ---- | ---- | 1.45 | 1.45 | 24.6% |
| Hydric Pine Flatwoods | 625 | PFO4B | 1.17 | 1.90 | 3.07 | 65.7% | ---- | 1.22 | 1.22 | 20.7% |
| Freshwater Marsh | 641 | PEM1C | 0.43 | 1.17 | 1.60 | 34.3% | ---- | 0.96 | 0.96 | 16.3% |
| Sawgrass Marsh | 6411 | PEM1C | --- | --- | --- | --- | --- | 0.07 | 0.07 | 1.1% |
| Maidencane Marsh | 6414 | PEM1C | ---- | ---- | ---- | | ---- | 0.26 | 0.26 | 4.4% |
| **Total** | | | **1.60** | **3.07** | **4.67** | **100%** | **----** | **5.90** | **5.90** | **100%** |

* Based on the FLUCFCS (3rd ed.) (FDOT).
** Based on the Classification of Wetlands and Deepwater Habitats of the United States (Cowardin e*t. al*., 1979).

**TABLE 4-5**
**JURISDICTIONAL WETLANDS IMPACTS WITHIN CORBETT PARCEL B ALTERNATIVES**
**FLUCFCS AND USFWS CLASSIFICATIONS AND ACREAGES**

| Classification Name | FLUCFCS* Classification | USFWS** Classification | Acreage of Classification | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Alternative 1B | | | | Alternative 2B | | | | Alternative 3B | | | | Alternative 4B | | | |
| | | | Within JWCWMA | Outside JWCWMA | Total | % of Alt Wetlands | Within JWCWMA | Outside JWCWMA | Total | % of Alt Wetlands | Within JWCWMA | Outside JWCWMA | Total | % of Alt Wetlands | Within JWCWMA | Outside JWCWMA | Total | % of Alt Wetlands |
| Streams and Waterways | 510 | PUB3H | ---- | 0.08 | 0.08 | 0.5% | ---- | 0.14 | 0.14 | 3.8% | ---- | 0.10 | 0.10 | 1.7% | ---- | 0.10 | 0.10 | 2.8% |
| Mixed Wetland Hardwoods | 617 | PFO3C | ---- | ---- | ---- | ---- | ---- | 0.07 | 0.07 | 1.9% | ---- | 0.07 | 0.07 | 1.2% | ---- | 0.07 | 0.07 | 1.9% |
| Exotic Wetland Hardwoods | 619 | PFO3C | ---- | --- | --- | --- | ---- | 3.28 | 3.28 | 89.9% | ---- | 1.26 | 1.26 | 21.9% | ---- | 1.26 | 1.26 | 35.1% |
| Hydric Pine Flatwoods | 625 | PFO4B | 5.80 | ---- | 5.80 | 35.8% | ---- | ---- | ---- | ---- | 0.78 | ---- | 0.78 | 13.6% | ---- | ---- | ---- | ---- |
| Freshwater Marsh | 641 | PEM1C | 8.97 | 0.03 | 9.00 | 55.5% | ---- | ---- | ---- | ---- | 3.33 | ---- | 3.33 | 57.9% | 1.95 | ---- | 1.95 | 54.3% |
| Sawgrass Marsh | 6411 | PEM1C | --- | --- | --- | --- | --- | --- | --- | --- | 0.05 | --- | 0.05 | 0.9% | 0.05 | --- | 0.05 | 1.4% |
| Freshwater Marsh/ Electric Power Transmission Line | 641/832 | PEM1C | 1.33 | ---- | 1.33 | 8.2% | ---- | 0.16 | 0.16 | 4.4% | ---- | 0.16 | 0.16 | 2.8% | ---- | 0.16 | 0.16 | 4.5% |
| **Total** | | | **16.10** | **0.11** | **16.21** | **100%** | **----** | **3.65** | **3.65** | **100%** | **4.16** | **1.59** | **5.75** | **100%** | **2.00** | **1.59** | **3.59** | **100%** |

* Based on the FLUCFCS (3rd ed.) (FDOT).
** Based on the Classification of Wetlands and Deepwater Habitats of the United States (Cowardin *et. al*., 1979).

#### *4.5.1.2 Wetland Impacts*

**Corbett Parcel A Alternatives**

**Alternative 1A**

Utilization of Alternative 1A for the construction of the connection of Seminole Pratt Whitney Road to SR 710 would result in the loss of 4.67 acres of jurisdictional wetlands. These wetlands consist of a mix of hydric pine flatwoods (3.07 acres) and freshwater marsh (1.60 acres).

**Alternative 2A**

Utilization of Alternative 2A for the construction of the connection of Seminole Pratt Whitney Road to SR 710 would result in the loss of 5.90 acres of jurisdictional wetlands. More than half of these impacts would occur to wetlands that have been previously impacted by human activities. These impacted wetlands consist of streams and waterways (man-made canals) and exotic wetland hardwoods, which comprise 3.39 acres of the wetlands found within the alternative.

**Corbett Parcel B Alternatives**

**Alternative 1B**

Alternative 1B is the proposed action alternative. Impacts to jurisdictional wetlands associated with this alternative would occur, not only for the expansion of Seminole Pratt Whitney Road and the construction of a new power substation, but also for the construction of a new 150-foot canal/flow way and a new 40-foot canal maintenance area. The proposed canal maintenance area would also be used as an activities trail. As a result of these added project features, wetland impacts associated with this alternative are much greater than any other Parcel B alternative.

Utilization of this alternative would result in impacts to 16.21 acres of jurisdictional wetlands. The majority of these impacts (16.10 acres) would occur to hydric pine flatwoods and freshwater marsh located within the JWCWMA. The remainder of these impacts would occur within man-dominated areas located to the south and east of the JWCWMA.

**Alternative 2B**

Alternative 2B represents this parcel's no-action alternative. Utilization of this alternative would result in no impacts to the JWCWMA. In addition, construction of the proposed canal or the activities trail associated with Alternative 1B would also not occur as part of this alternative. As a result, the overall amount of property needed for this alternative is reduced, resulting in a corresponding reduction in wetland areas affected.

Utilization of Alternative 2B would result in 3.65 acres of jurisdictional wetland impacts. Of these impacts, the majority (3.58 acres) would occur within wetlands with some degree of human disturbance. These wetlands are located within man-dominated areas located south and east of the JWCWMA.

**Alternative 3B**

Jurisdictional wetland impacts associated with Alternative 3B would result from the construction of two new power transmission lines within the JWCWMA and the expansion of Seminole Pratt Whitney Road within man-dominated areas located south and east of the JWCWMA. As with Alternative 2B, this alternative does not include the construction of the activities trail associated with Alternative 1B. As a result of the use of two separate corridors for activities associated with the proposed project, this alternative results in greater impacts to jurisdictional wetlands than Alternative 2B. However, because project features associated with Alternative 1B would not occur with this alternative, this alternative results in fewer impacts to jurisdictional wetlands than Alternative 1B.

Utilization of Alternative 3B would result in impacts to 5.75 acres of jurisdictional wetlands. The majority of these wetlands are associated with the JWCWMA (4.16 acres). Jurisdictional wetland impacts within the JWCWMA would occur to a mix of hydric pine flatwoods and freshwater marsh. Impacts outside the JWCWMA (1.59 acres) would occur in wetlands that have been impacted by past human activities and are located within man-dominated areas.

**Alternative 4B**

Alternative 4B consists of the construction of one new power transmission line within the JWCWMA and the expansion of Seminole Pratt Whitney Road within man-dominated areas located south and east of the JWCWMA. As with Alternative 2B, this alternative does not include the construction of the activities trail associated with Alternative 1B. While similar to Alternative 3B, this alternative would have fewer impacts to the JWCWMA.

Utilization of this alternative would result in impacts to 3.59 acres of jurisdictional wetlands, of which the majority consist of freshwater marsh located within the JWCWMA (2.00 acres) and exotic wetland hardwoods located within man-dominated areas south and east of the JWCWMA (1.26 acres). The remainder of wetland impacts associated with this alternative would occur to a mix of disturbed wetland types located outside the JWCWMA (0.55 acres).

### *4.5.2 WATER QUALITY*

#### *4.5.2.1 Corbett Parcel A Alternatives*

**Alternative 1A**

The proposed roadway would be designed to include water quality treatment from runoff from the project area prior to discharge to off-site areas per SFWMD 40E-4, FAC requirements. Surface water drainage flow patterns would be maintained by the installation of cross-drains at existing ditches, low areas, and wetland areas within the proposed construction area per SFWMD permit requirements.

**Alternative 2A**

The proposed roadway would be designed to include water quality treatment from runoff from the project area prior to discharge to off-site areas per SFWMD 40E-4, FAC requirements. Surface water drainage flow patterns would be maintained by the installation of cross-drains at existing ditches, low areas, and wetland areas within the proposed construction area as per SFWMD permit requirements.

#### *4.5.2.2 Corbett Parcel B Alternatives*

**Alternative 1B**

The proposed roadway and FP&L substation would be designed to include water quality treatment from runoff from the project area prior to discharge to off-site areas per SFWMD 40E-4, FAC requirements. Surface water drainage flow patterns would be maintained by the installation of cross-drains at existing ditches, low areas, and wetland areas within the proposed construction area per SFWMD permit requirements.

The proposed canal/flow way and canal maintenance trail area would allow connection of the canals and storage reservoirs proposed by the SFWMD CERP Project to be connected to the Northwest Fork of the Loxahatchee River via the PBCBRP and the west leg of the C-18 canal.

**Alternative 2B**

The proposed expansion of Seminole Pratt Whitney Road and power line corridor would be constructed from properties on the east side of the existing Seminole Pratt Whitney Road, including residential lots in The Acreage.

The proposed roadway and FP&L power line and substation would be designed to include water quality treatment from runoff from the project area prior to discharge to off-site areas per SFWMD 40E-4, FAC requirements. Surface water drainage flow patterns would be maintained by the installation of cross-drains at existing ditches, low areas, and wetland areas within the proposed construction area per SFWMD permit requirements.

This alternative does not include any accommodation for a canal/flow way or maintenance berm trail.

**Alternative 3B**

The proposed expansion of Seminole Pratt Whitney Road would be constructed from properties on the east side of the existing Seminole Pratt Whitney Road, including residential lots in The Acreage.

The proposed two new power transmission lines in the JWCWMA would require access/ maintenance roads for construction and maintenance of the power lines.

The proposed roadway and FP&L power line roadways would be designed to include water quality treatment from runoff from the project area prior to discharge to off-site areas per SFWMD 40E-4, FAC requirements. Surface water drainage flow patterns would be maintained by the installation of cross-drains at existing ditches, low areas, and wetland areas within the proposed construction area per SFWMD permit requirements.

This alternative does not include any accommodation for a canal/flow way or maintenance berm trail.

**Alternative 4B**

The proposed expansion of Seminole Pratt Whitney Road would be constructed from properties on the east side of the existing Seminole Pratt Whitney Road, including residential lots in The Acreage. Some new impervious area from the proposed roadway could be offset by the existing residential lot impervious area.

The proposed two new power transmission lines in the JWCWMA would require unpaved access/maintenance roads for construction and maintenance of the power lines.

The proposed roadway and FP&L power line roadways would be designed to include water quality treatment from runoff from the project area prior to discharge to off-site areas per SFWMD 40E-4, FAC requirements. Surface water drainage flow patterns would be maintained by the installation of cross-drains at existing ditches, low areas, and wetland areas within the proposed construction area per SFWMD permit requirements.

This alternative does not include any accommodation for a canal/flow way or maintenance berm trail.

### *4.5.3 WILD AND SCENIC RIVERS*

#### *4.5.3.1 Corbett Parcel A Alternatives*

**Alternative 1A**

Since the Northwest Fork of the Loxahatchee River is located approximately 10 miles downstream of the project study area, no WSR impacts would occur as a result of this alternative. Water quality for this alternative is discussed in Section 4.5.2, Water Quality.

**Alternative 2A**

Since the Northwest Fork of the Loxahatchee River is located approximately 10 miles downstream of the project study area, no WSR impacts would occur as a result of this alternative. Water quality for this alternative is discussed in Section 4.5.2, Water Quality.

#### *4.5.3.2 Corbett Parcel B Alternatives*

**Alternative 1B**

The proposed canal/flow way would allow the canals and storage reservoirs to be connected to the Northwest Fork of the Loxahatchee River via the PBCBRP and the west leg of the C-18 canal. This flow way alternative is being considered by CERP to improve flows to the Loxahatchee River.

Water quality for this alternative is discussed in Section 4.5.2, Water Quality.

**Alternative 2B**

Since the Northwest Fork of the Loxahatchee River is located approximately 10 miles downstream of the project study area, no WSR impacts would occur as a result of this alternative. Water quality for this alternative is discussed in Section 4.5.2, Water Quality.

This alternative does not include any accommodation for a canal/flow way or maintenance berm trail.

**Alternative 3B**

Since the Northwest Fork of the Loxahatchee River is located approximately 10 miles downstream of the project study area, no WSR impacts would occur as a result of this alternative. Water quality for this alternative is discussed in Section 4.5.2, Water Quality.

This alternative does not include any accommodation for a canal/flow way or maintenance berm trail.

**Alternative 4B**

Since the Northwest Fork of the Loxahatchee River is located approximately 10 miles downstream of the project study area, no WSR impacts would occur as a result of this alternative. Water quality for this alternative is discussed in Section 4.5.2, Water Quality.

This alternative does not include any accommodation for a canal/flow way or maintenance berm trail.

### *4.5.4 FLOODPLAINS*

#### *4.5.4.1 Corbett Parcel A Alternatives*

**Alternative 1A**

Since this alternative is located in Zone D, areas as identified by FEMA on the FIRM maps, no floodplain impacts are anticipated as a result of this alternative. If SFWMD permitting floodplain impacts are identified during final design, floodplain compensation would be provided per SFWMD requirements.

**Alternative 2A**

Since this alternative is located in Zone D, areas as identified by FEMA on the FIRM maps, no floodplain impacts are anticipated as a result of this alternative. If SFWMD permitting floodplain impacts are identified during final design, floodplain compensation would be provided per SFWMD requirements.

#### *4.5.4.2 Corbett Parcel B Alternatives*

**Alternative 1B**

Since this alternative is located in Zone D, areas as identified by FEMA on the FIRM maps, no floodplain impacts are anticipated as a result of this alternative. If SFWMD permitting floodplain impacts are identified during final design, floodplain compensation would be provided per SFWMD requirements.

**Alternative 2B**

Since this alternative is located in Zone X500, an area inundated by 500-year flooding as identified by FEMA on the FIRM maps, no floodplain impacts are anticipated as a result of this alternative. If SFWMD permitting floodplain impacts are identified during final design, floodplain compensation would be provided per SFWMD requirements.

**Alternative 3B**

Since this alternative is located in Zones D and X500, areas as identified by FEMA on the FIRM maps, no floodplain impacts are anticipated as a result of this alternative. If SFWMD permitting floodplain impacts are identified during final design, floodplain compensation would be provided per SFWMD requirements.

**Alternative 4B**

Since this alternative is located in Zone D and X500, areas as identified by FEMA on the FIRM maps, no floodplain impacts are anticipated as a result of this alternative. If SFWMD permitting floodplain impacts are identified during final design, floodplain compensation would be provided per SFWMD requirements.

### *4.5.5 COASTAL ZONE CONSISTENCY*

The project has been determined to be consistent with Florida's Coastal Zone Management Program.

### *4.5.6 COASTAL BARRIER ISLANDS*

The project does not involve coastal barrier islands.

### *4.5.7 WILDLIFE AND HABITAT*

#### *4.5.7.1 Introduction*

As stated in Section 4.4.1, impacts associated with this project can be defined as man-induced activities such as clearing vegetation, dredging and filling wetlands, and leveling land for construction activities. Because all areas located within each alternative would be utilized for the construction of the proposed project, all alternatives associated within this EA would result in impacts to natural habitats and potentially wildlife species. However, the specific habitats impacted by each alternative and acreages of impact would vary greatly. Each alternative and its specific habitat impacts are discussed below. The type and acreage of impacts associated within each alternative are presented in **Tables 4-6 and 4-7** for Parcel A and Parcel B alternatives, respectively. In addition, a discussion of the loss of land by the JWCWMA and methods proposed to replace this loss is also provided.

#### *4.5.7.2 Habitat Impacts*

**<u>Parcel A Alternatives</u>**

**Alternative 1A**

Utilization of Alternative 1A for the construction of the connection of Seminole Pratt Whitney Road to SR 710 would result in the loss of 11.55 acres of natural habitats. Of these impacts, wetland habitats comprise 4.67 acres and upland habitats comprise 6.88 acres.

Impacts to the JWCWMA as a result of the utilization of this alternative would include the loss of 1.63 acres of land. This area is comprised of a mix of wetland (1.60 acres) and upland (0.03 acres) habitats.

**Alternative 2A**

Utilization of Alternative 2A for the construction of the connection of Seminole Pratt Whitney Road to SR 710 would require 20.19 acres of land, of which 16.90 acres are comprised of natural habitats. The remaining 3.29 acres are comprised of transportation corridors. Use of this alternative would result in the loss of the 16.90 acres of natural habitats found within the boundaries of this alternative. Of these impacts, the majority would occur to wetland and upland habitats that have been previously impacted by man-induced activities such as clearing, excavation of drainage canals, and alteration of hydrology.

Utilization of this alternative would not result in any impacts to the JWCWMA.

**TABLE 4-6**
**HABITAT TYPES WITHIN CORBETT PARCEL A ALTERNATIVES**
**FLUCFCS AND USFWS CLASSIFICATIONS AND ACREAGES**

| Classification Type | Classification Name | FLUCFCS Classification* | USFWS Classification** | Acreage of Classification | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Alternative 1A | | | Alternative 2A | | |
| | | | | Within JWCWMA | Outside JWCWMA | Total | Within JWCWMA | Outside JWCWMA | Total |
| Wetlands | Streams and Waterways | 510 | PUB3H | ---- | ---- | ---- | ---- | 1.94 | 1.94 |
| | Exotic Wetland Hardwoods | 619 | PFO3C | ---- | ---- | ---- | ---- | 1.45 | 1.45 |
| | Hydric Pine Flatwoods | 625 | PFO4B | 1.17 | 1.90 | 3.07 | ---- | 1.22 | 1.22 |
| | Freshwater Marsh | 641 | PEM1C | 0.43 | 1.17 | 1.60 | ---- | 0.96 | 0.96 |
| | Sawgrass Marsh | 6411 | PEM1C | ---- | ---- | ---- | ---- | 0.07 | 0.07 |
| | Maidencane Marsh | 6414 | PEM1C | --- | --- | --- | --- | 0.26 | 0.26 |
| **Subtotal** | | | | **1.60** | **3.07** | **4.67** | **----** | **5.90** | **5.90** |
| | | | | | | | | | |
| Uplands | Unimproved Pasture | 212 | N/A | --- | --- | --- | --- | 0.85 | 0.85 |
| | Pine Flatwoods | 411 | N/A | 0.03 | 6.85 | 6.88 | ---- | 0.35 | 0.35 |
| | Pine Flatwoods (Disturbed) | 411(d) | N/A | --- | --- | --- | --- | 2.77 | 2.77 |
| | Brazilian Pepper | 422 | N/A | --- | --- | --- | --- | 7.03 | 7.03 |
| **Subtotal** | | | | **0.03** | **6.85** | **6.88** | **----** | **11.00** | **11.00** |
| | | | | | | | | | |
| Land Uses | Transportation | 810 | N/A | ---- | ---- | ---- | ---- | 3.29 | 3.29 |
| **Subtotal** | | | | **----** | **-----** | **----** | **----** | **3.29** | **3.29** |
| | | | | | | | | | |
| **Total** | | | | **1.63** | **9.92** | **11.55** | **----** | **20.19** | **20.19** |

* Based on the FLUCFCS (3rd ed.) (FDOT).
** Based on the Classification of Wetlands and Deepwater Habitats of the United States (Cowardin e*t. al*., 1979).

**TABLE 4-7**
**HABITAT TYPES WITHIN CORBETT PARCEL B ALTERNATIVES**
**FLUCFCS AND USFWS CLASSIFICATIONS AND ACREAGES**

| Classification Type | Classification Name | FLUCFCS Classification* | USFWS Classification** | Acreage of Classification | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Alternative 1B | | | Alternative 2B | | | Alternative 3B | | | Alternative 4B | | |
| | | | | Within JWCWMA | Outside JWCWMA | Total | Within JWCWMA | Outside JWCWMA | Total | Within JWCWMA | Outside JWCWMA | Total | Within JWCWMA | Outside JWCWMA | Total |
| Wetlands | Stream and Waterways | 510 | PUB3H | ---- | 0.08 | 0.08 | --- | 0.14 | 0.14 | --- | 0.10 | 0.10 | --- | 0.10 | 0.10 |
| | Mixed Wetland Hardwoods | 617 | PFO3C | ---- | ---- | ---- | --- | 0.07 | 0.07 | --- | 0.07 | 0.07 | --- | 0.07 | 0.07 |
| | Exotic Wetland Hardwoods | 619 | PFO3C | ---- | --- | --- | --- | 3.28 | 3.28 | --- | 1.26 | 1.26 | --- | 1.26 | 1.26 |
| | Hydric Pine Flatwoods | 625 | PFO4B | 5.80 | ---- | 5.80 | --- | --- | --- | 0.78 | --- | 0.78 | --- | --- | --- |
| | Freshwater Marsh | 641 | PEM1C | 8.97 | 0.03 | 9.00 | --- | --- | --- | 3.33 | --- | 3.33 | 1.95 | --- | 1.95 |
| | Sawgrass Marsh | 6411 | PEM1C | --- | --- | --- | --- | --- | --- | 0.05 | --- | 0.05 | 0.05 | --- | 0.05 |
| | Freshwater Marsh/ Electric Power Transmission Line | 641/832 | PEMIC | 1.33 | --- | 1.33 | --- | 0.16 | 0.16 | --- | 0.16 | 0.16 | --- | 0.16 | 0.16 |
| **Subtotal** | | | | **16.10** | **0.11** | **16.21** | **---** | **3.65** | **3.65** | **4.16** | **1.59** | **5.75** | **2.00** | **1.59** | **3.59** |
| Uplands | Flatwoods | 411 | N/A | 12.27 | ---- | 12.27 | --- | --- | --- | 3.95 | --- | 3.95 | 3.44 | --- | 3.44 |
| | Flatwoods (Disturbed) | 411(d) | N/A | ---- | 0.37 | 0.37 | --- | 0.26 | 0.26 | --- | 0.26 | 0.26 | --- | 0.26 | 0.26 |
| | Exotic Flatwoods | 411/422 | N/A | ---- | ---- | ---- | --- | 0.59 | 0.59 | --- | 0.27 | 0.27 | --- | 0.27 | 0.27 |
| | Cabbage Palm | 428 | N/A | ---- | --- | --- | --- | 0.37 | 0.37 | --- | 0.37 | 0.37 | --- | 0.37 | 0.37 |
| | Disturbed Land | 741 | N/A | ---- | 0.18 | 0.18 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subtotal** | | | | **12.27** | **0.55** | **12.82** | **---** | **1.22** | **1.22** | **3.95** | **0.90** | **4.85** | **3.44** | **0.90** | **4.34** |
| Land Uses | Residential, Low Density | 110 | N/A | ---- | 0.34 | 0.34 | --- | 9.26 | 9.26 | --- | 2.92 | 2.92 | --- | 2.92 | 2.92 |
| | Other Recreational | 189 | N/A | ---- | 0.19 | 0.19 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Transportation | 810 | N/A | ---- | 1.10 | 1.10 | --- | 1.82 | 1.82 | --- | 0.99 | 0.99 | --- | 0.99 | 0.99 |
| **Subtotal** | | | | **----** | **1.63** | **1.63** | **---** | **11.08** | **11.08** | **---** | **3.91** | **3.91** | **---** | **3.91** | **3.91** |
| **Total** | | | | **28.37** | **2.29** | **30.66** | **---** | **15.95** | **15.95** | **8.11** | **6.40** | **14.51** | **5.44** | **6.40** | **11.84** |

* Based on the FLUCFCS (3rd ed.) (FDOT).
** Based on the Classification of Wetlands and Deepwater Habitats of the United States (Cowardin *et. al*., 1979).

## Parcel B Alternatives

### Alternative 1B

Alternative 1B is the proposed action alternative for Parcel B. Impacts to wetlands associated with this alternative would occur not only for the expansion of Seminole Pratt Whitney Road and the construction of a new power substation, but also for the construction of a new 150-foot canal/flow way associated with the SFWMD CERP Project and a new 40-foot canal maintenance area. The proposed canal maintenance area would also be used as an activities trail. As a result of these project features, the overall area needed for this alternative is much greater than any other Parcel B alternative.

Utilization of this alternative would result in impacts to 30.66 acres of natural habitats. Of these impacts, 16.21 acres would occur to wetlands and 12.82 acres would occur to upland habitats. An additional 1.63 acres of impacts would occur to existing man-dominated land uses. The majority of natural habitats impacted by this alternative consist of pine flatwoods, hydric pine flatwoods, and freshwater marsh associated with the JWCWMA. Most remaining impacts are associated with natural habitats that are located within man-dominated areas located to the south and east of the JWCWMA.

Impacts to the JWCWMA as a result of this alternative would be 28.37 acres. While the majority of this land is of high quality, the area proposed for use is located within the southeastern corner of the JWCWMA. As a result, management of this area through the use of controlled burns and other standard techniques is difficult. In addition, during field reviews of this area, signs of unauthorized entry and damage to the area were observed.

### Alternative 2B

Alternative 2B represents the parcel's no-action alternative. Utilization of this alternative would result in no impacts to the JWCWMA. In addition, construction of the proposed canal or the activities trail associated with Alternative 1B would not occur. As a result, the overall amount of property needed for this alternative is reduced, resulting in a corresponding reduction in natural habitat affected.

Utilization of Alternative 2B would result in the loss of 4.87 acres of natural habitat. Of these impacts, 3.65 acres would occur to wetland habitats and 1.22 acres would occur to upland habitats, all of which have been impacted by past human activities. The remaining 11.08 acres of impacts associated with this alternative would occur in man-dominated land uses. Wildlife utilization within the natural habitats impacted by this alternative has been greatly reduced by man-induced impacts, which have resulted in the removal of native vegetation and the establishment of invasive alien species.

Utilization of Alternative 2B would require no change in land use within the JWCWMA.

**Alternative 3B**

Habitat impacts associated with Alternative 3B would result from the construction of two new power transmission lines within the JWCWMA and the expansion of Seminole Pratt Whitney Road within man-dominated areas located south and east of the JWCWMA. As with Alternative 2B, this alternative does not include the canal or the activities trail associated with Alternative 1B. As a result of the use of two separate corridors for activities associated with the proposed project, this alternative results in greater impacts to natural habitats than Alternative 2B. However, because project features associated with Alternative 1B would not occur with this alternative, this alternative results in fewer impacts to natural habitats than Alternative 1B.

Utilization of Alternative 3B would result in impacts to 10.6 acres of natural habitats. The majority of these natural habitat impacts (8.11 acres) is associated with the JWCWMA and is a result of the proposed construction of new power transmission lines. Impacts within the JWCWMA would occur to a mix of pine flatwoods, hydric pine flatwoods, and freshwater marsh. Impacts outside the JWCWMA (2.49 acres) would occur in upland and wetland habitats which have been impacted by past human activities and which are located within man-dominated areas.

Loss of lands within the JWCWMA as a result of the use of Alternative 3B would be 8.11 acres. In addition to these impacts, the construction of a new east-west power transmission line as part of this alternative would result in the isolation of approximately 138 acres of the JWCWMA located south of the proposed transmission line corridor. As a result, the ability to manage this area through the use of controlled burns would be extremely difficult. Correspondence with FP&L has indicated that controlled burns near the proposed transmission line could result in the "tripping" of the line as a result of smoke and ionized air associated with burn activities. Tripping of the line would result in the loss of power transmission through the line.

The inability to utilize controlled burns within this area of the JWCWMA would require the use of alternative management strategies such as mechanical methods for management of vegetative community types and use of herbicides to control invasive alien species. These methods are typically more labor intensive and costly than controlled burns.

**Alternative 4B**

Alternative 4B consists of the construction of one new power transmission line within the JWCWMA and the expansion of Seminole Pratt Whitney Road within man-dominated areas located south and east of the JWCWMA. While similar to Alternative 3B, this alternative would have fewer impacts to the JWCWMA.

Utilization of this alternative would result in impacts to 7.93 acres of natural habitats. Of these impacts, 3.59 acres would occur to wetland habitats and 4.34 acres would occur to upland habitats. An additional 3.91 acres of impacts would occur to man-dominated land use types. Natural habitats within this alternative consist of freshwater marsh and pine flatwoods associated with the JWCWMA and upland and wetland habitats located outside of the JWCWMA that have been impacted by past human activities.

Alternative 4B would result in the loss of 5.45 acres of the JWCWMA. This acreage consists of freshwater marsh (1.95 acres), sawgrass marsh (0.05 acres), and pine flatwoods (3.45 acres) located within the proposed east-west power transmission line corridor. Utilization of these areas would result in many of the same impacts as discussed under Alternative 3B, including reduced ability to manage areas of the JWCWMA located south of the transmission line corridor.

#### *4.5.7.3 Wildlife Impacts*

In accordance with the ESA Public Law (PL) 93-205, as amended, the project area was assessed for the presence of, or potential use by, Federal or state listed protected species and for the presence of critical habitat. As a result of this assessment, one species listed as endangered by the Service and FWC (wood stork) had a high probability of occurrence, one species listed as endangered by the Service and the FWC (snail kite) had a moderate probability of occurrence, one species listed as endangered by the Service and threatened by the FWC has a moderate probability of occurrence (red-cockaded woodpecker), and one species listed as threatened by the Service and the FWC (bald eagle) has a moderate probability of occurrence. Additionally, two wood stork rookeries were found to occur within 18.6 miles of one or more project alternatives. No critical habitat was present within any project alternative.

Because the red-cockaded woodpecker typically has a home territory that does not extend more than 0.5-mile from its cavity trees, it is unlikely that the red-cockaded woodpecker would utilize habitats found within any of the project alternatives. As a result, it is believed that the project would have no effect on the red-cockaded woodpecker.

Project alternatives are located within the CFA of two documented wood stork rookeries. As a result, wetlands located within the project alternatives may be utilized by this species as foraging habitat. In order to ensure that these rookeries would not be impacted by the proposed project, mitigation for any wetland impacts associated with selected project alternatives would be in conformance with all Federal and state regulatory requirements. As a result of this, it is believed that the project may affect, but is not likely to adversely affect, the wood stork.

While no known active bald eagle nest occurs within one mile of the project alternatives, this species was given a moderate potential of occurrence at the request of the FWC. The habitats located within the project alternatives are not optimal foraging or nesting habitat for this species. In addition, no large open water bodies are located within or adjacent to any of the project alternatives. As a result, it is believed that the project would have no effect on the bald eagle.

The snail kite and eastern indigo snake have the potential to utilize natural habitats located within the area of the project alternatives. While these species were not observed during field reviews or documented as occurring within one mile of the project alternatives, because there is a potential for their occurrence, the following criteria would be implemented prior to or during construction activities:

- Prior to the start of any construction, the selected project alternatives will be surveyed for the presence of snail kites and their nests. In addition, no construction would occur within 1,500 feet of any identified nest during the nesting season (approximately January 15 through June 30).

- Standard eastern indigo snake protection measures will be implemented during construction activities occurring within the selected project alternatives. These conditions include the development and implementation of an education plan for construction personnel and the development of an eastern indigo snake monitoring report.

As a result of the utilization of these criteria, it is believed that the project may affect, but is not likely to adversely affect, the snail kite or the eastern indigo snake.

In addition to the Federal listed species discussed above, it was determined that two state listed threatened plant species (bearded grass pink, Catesby's lily) and one state listed endangered plant species (Rein orchid) have a moderate potential to be found within the project alternatives. In order to ensure that these species, and other state listed plant species, are protected, the County has agreed to implement the following criteria prior to the start of construction:

- Prior to the start of any construction, the selected project alternatives will be surveyed for the presence of any state listed plant species. If any protected plant species are found, appropriate relocation and/or take permits and approvals will be obtained. If appropriate, plants will be relocated prior to the start of construction.

Utilization of project alternatives by wildlife species were observed during November 2004 field reviews. During these reviews, bird, mammal, and reptile/amphibian species were observed within upland and wetland habitats located within the project alternatives. Species observed include those state listed species discussed above. While these habitats provide some level of roosting and foraging habitat for many of these species, no bird rookeries or nesting areas were observed within any alternative. However, reptile and amphibian species may utilize these habitats for reproduction.

The widening of Seminole Pratt Whitney Road my increase the likelihood of road kill of many common species found on the JWCWMA (such as deer, raccoon, etc.) However, the road widening will require environmental permits from both Federal (USACE) and state (SFWMD) regulatory agencies. As part of the review of these permit applications, the Service and the FWC will have the opportunity to review the proposed roadway widening plan and recommend modifications and/or additions to the plan which will minimize impacts to wildlife. Additions and modifications to the plans could include measures to minimize these impacts either through design or management changes.

Because of the extensive network of publicly held lands within the area and the proposed addition of the 60-acre Minkin Parcel to the JWCWMA, discussed below, impacts to wildlife as a result of the proposed project are anticipated to be negligible.

### *4.5.7.4 Loss of JWCWMA Lands*

The proposed project includes the change in use of two tracts of land located within the JWCWMA and totaling 30.00 acres (i.e., Corbett Parcels A and B). This change in land use, if approved, would be accomplished through the use of land use easements from the FWC to the County. As a result of this easement, the use of the 30.00 acres of JWCWMA lands would change from managed conservation lands to man dominated uses, including roadways, an electrical power substation, a canal/flow way, and a canal maintenance area, which would also be used as an activities trail. To compensate for the loss of conservation lands within the JWCWMA, the County proposes to provide an existing 60-acre tract of land located adjacent to the JWCWMA's northern boundary. This tract of land is located in Martin County and is known as the Minkin Parcel. The Minkin Parcel is a natural area consisting of hydric pine flatwoods, freshwater marsh, and cypress stands. The Martin County current and future land use maps show the land use on the Minkin Parcel as agricultural. In addition, this parcel is listed on the long-term acquisition plan for the JWCWMA.

**Habitat Description**

The 60-acre Minkin Parcel is located at the southern terminus of Martin County adjacent to the JWCWMA northern boundary. Within the boundaries of the 60-acre parcel, there are four separate habitat classifications. These habitat classifications include hydric pine flatwoods, cypress, freshwater marsh, and sawgrass marsh. Descriptions of each of these habitat types are provided below as well as their FLUCFCS and Service classifications. The existing habitat types found on the Minkin Parcel are depicted on **Figure 4-4**. Acreages of each habitat type are provided in **Table 4-8**.

**TABLE 4-8**
**FLUCFCS CLASSIFICATIONS AND ACREAGES FOR MINKIN PARCEL**

| Classification Type | Classification Name | FLUCFCS Classification* | USFWS Classification** | Acreage within Parcel | Percent of Total Area |
|---|---|---|---|---|---|
| Wetlands | Cypress | 621 | PFO2C | 7.54 | 12.5% |
| | Hydric Pine Flatwoods | 625 | PFO4B | 13.78 | 23.0% |
| | Freshwater Marsh | 641 | PEM1C | 34.81 | 58.0% |
| | Sawgrass Marsh | 6411 | PEM1C | 3.88 | 6.5% |
| **Total** | | | | **60.00** | **100%** |

* Based on the FLUCFCS (3rd ed.) (FDOT).
** Based on the Classification of Wetlands and Deepwater Habitats of the United States (Cowardin e*t. al*., 1979).

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**MINKIN PARCEL**
**HABITAT MAP**

*Figure 4-4*

**Wetland Habitat Classifications**

**Cypress**
**FLUCFCS: 621**
**USFWS: Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded (PFO2C)**

This land use class is characterized by a canopy of bald or pond cypress (*Taxodium distichum* and *T. ascendens*, respectively). Within the Minkin Parcel, pond cypress dominates the canopy of this wetland classification. Additional native species found within the sub-canopy include swamp bay and dahoon holly. The shrub lay and herbaceous lay is dominated by sawgrass, arrowhead, and maidencane.

The type of soil found within this community is Riviera fine sand, depressional.

**Hydric Pine Flatwoods**
**FLUCFCS: 625**
**USFWS: Palustrine, Forested, Needle-Leaved Evergreen, Saturated (PFO4B)**

This land use class is characterized by a canopy of slash pine. Within the Minkin Parcel, native vegetation also observed within the sub-canopy and shrub lay of this habitat type includes gallberry, wax myrtle, cocoplum, cabbage palm, pond cypress, and myrsine. The groundcover includes swamp fern, royal fern (*Osmunda regalis*), and broom grass. Saw palmetto is also sparsely dispersed throughout this habitat type.

The type of soil found within this community is Hallandale sand and Pineda sand.

**Freshwater Marsh**
**FLUCFCS: 641**
**USFWS: Palustrine, Emergent Marsh, Persistent, Seasonally Flooded (PEM1C)**

This land use class is characterized as non-forested areas that are dominated by herbaceous plant species with small amounts of shrubby vegetation usually along the perimeters. Within the Minkin Parcel, dominant herbaceous vegetation includes maidencane, pickerelweed, southern beakrush (*Rhynchospora microcarpa*), broom grass, water hyssops, floating-hearts (*Nymphoides aquatica*), bladderwort, and water dropwort.

This marsh is flooded throughout the year except during drought conditions. The type of soil found within this community is Riviera fine sand, depressional.

**Sawgrass Marsh**
**FLUCFCS: 6411**
**USFWS: Palustrine, Emergent Marsh, Persistent, Seasonally Flooded (PEM1C)**

This land use classification is characterized as non-forested areas that are dominated by sawgrass. This sawgrass marsh within the Minkin Parcel consists of dense monocultures of sawgrass with scattered cypress.

This marsh is flooded for extended period during the year. The type of soil found within this community is Floridana fine sand, depressional.

### *4.5.8 FARMLANDS*

The proposed action and all other alternatives are located in the West Palm Beach area of Palm Beach County, which is considered by the State to be an urban area. None of the property affected by the proposed action or any of the other alternatives is currently utilized for agricultural uses. Further, the County's Future Land Use Map does not designate any of the properties in the proposed action or any of the alternatives as agricultural. Therefore, no adverse impacts to farmlands are anticipated.

## *4.6 CUMULATIVE EFFECTS*

A Cumulative Effects Analysis was conducted for the project, a copy of which is contained in Appendix E. The following summarizes the finding of that analysis.

The CEQ regulations (40 CFR Section 1500-1508) implementing the procedural provisions of NEPA, as amended (42 USC Section 4321 et. seq.) define cumulative effects as:

> "…the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR Section 1508.7)."

Cumulative effects analyses were conducted by:

- Envisioning the proposed action in conjunction with existing trends and identifying differences, if they exist;
- Examining existing trends in urbanization, infrastructure, and the PBCBRP regardless of the proposed action;
- Reviewing the effects of existing trends, with and without the proposed action, on the JWCWMA and its management; and
- Reviewing the role of the DRI process (see Appendix E).

Our analysis suggests that none of the alternatives we are considering affect the trends in regional development, including the proposed PBCBRP, or suburban encroachment on the JWCWMA. This means that our action would have negligible impact on the potential cumulative effects that our scoping process identifies as most important to the public.

This cumulative effects analysis identifies a number of environmental effects that are reasonably likely to occur as a result of secondary actions related to the alternatives under consideration, as well as those environmental effects that would happen without the proposed project. These include alterations of wetlands, a change in public access to the JWCWMA, traffic density and patterns, noise, and more. We neither identify nor recommend mitigation measures for environmental effects that are not clearly and unambiguously linked to the alternatives, that are more specifically related to actions subsequent to the Services' decision, and that the analysis

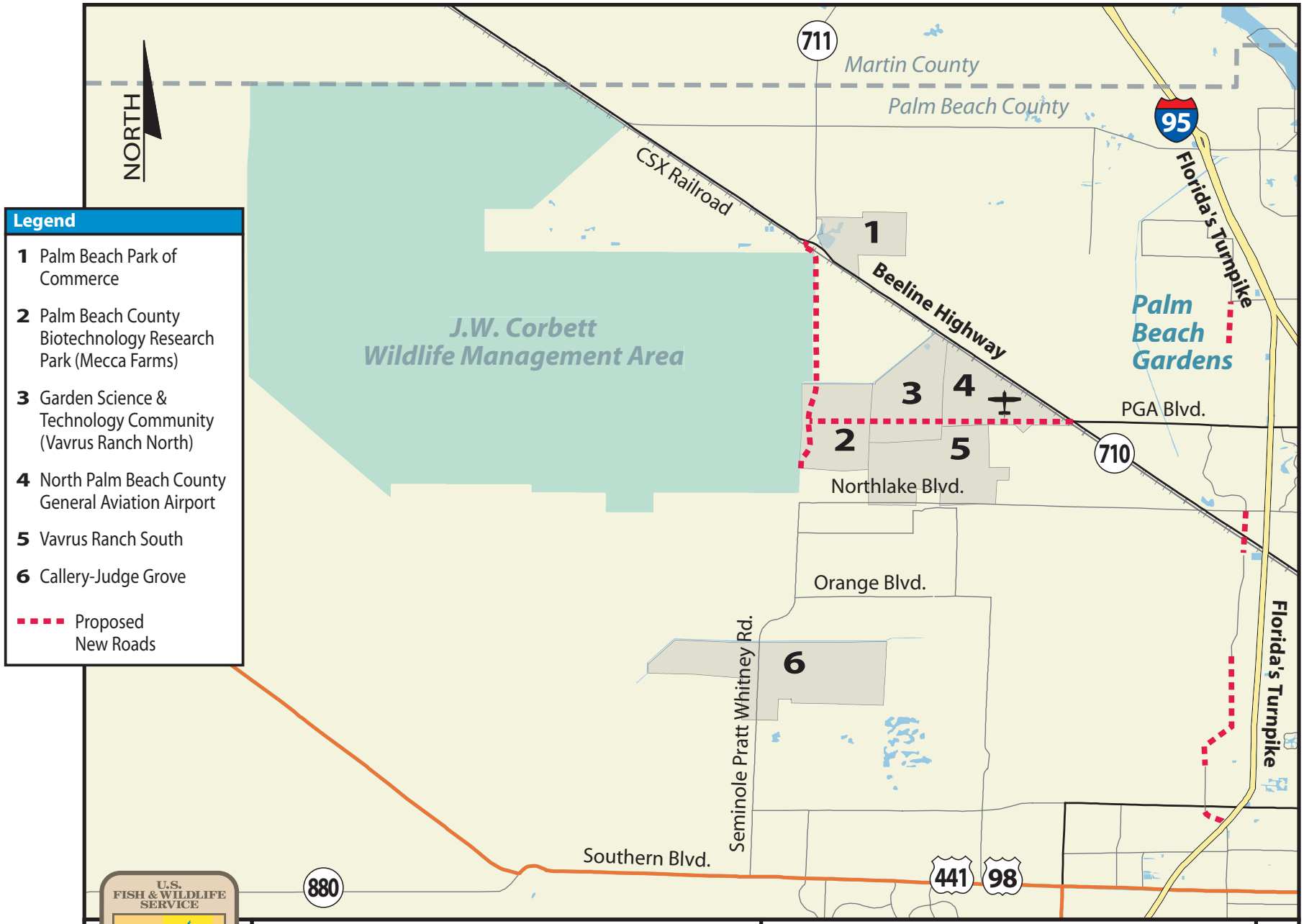
suggests are not significant. For example, the downstream effects associated with the exact alignment of the widening of the Seminole Pratt Whitney Road extension will be mitigated by project sponsors during the permit application process. In this way, we avoid redundancy with existing statutory and regulatory processes. Our analysis suggests that none of the alternatives we are considering affect the trends in regional development, including the proposed PBCBRP, or suburban encroachment on the JWCWMA. This means that our action would have negligible impact on the potential cumulative effects that our scoping process identifies as most important to the public.

The geographic area of influence for the analysis of cumulative effects was determined by the network of roads used in the various DRI traffic studies (Figure 3-1). Since the DRIs are in a similar geographic area of the County, the studied roadway links and intersections are as they appear in the traffic studies. Transportation networks are one of the critical issues studied by the DRI. The traffic studies allow for the projection of future traffic with and without the proposed project. Additionally, the traffic studies illustrate the capacity of the roadways with projected improvements to intersections and lane capacity.

Our scoping process suggests that the myriad side effects of creation of the PBCBRP on the Mecca Farms site and effects on the recreational values of the JWCWMA are the public's important concerns. The present analysis indicates that none of those effects can be attributed to the proposal, nor to any of the alternatives we are considering. The County asserts that the PBCBRP will be sited on Mecca Farms, in the same general timeframe and configuration, regardless of our decision about the proposed transfer. To support this statement, the County implies that it would use eminent domain authority to condemn private properties. Further, the loss of wildlife-related values in Parcels A and B would be compensated for (2:1) with the addition of the Minkin Parcel to the JWCWMA.

There is also reason to believe that statutory and regulatory processes already in place in Florida would partially or fully offset any adverse cumulative impacts that we have not anticipated. This is particularly true of the DRI process, which is outlined in **Table 4-9**.

The proposed development of the PBCBRP is a DRI and would occur with or without the proposed JWCWMA land transfer. There are other unassociated DRI and sub-DRI developments located within proximity to the JWCWMA land transfer and the PBCBRP, which are shown on **Figure 4-5**. DRIs, as discussed in detail in Section 3.1.1 of Appendix E, are large-scale, mixed-use developments that do not conform completely to a single land use designation. Because of this and their size, a review and approval process has been legislatively established. In the area of the proposed action, there are several approved and pending DRIs that were in various stages of approval prior to the announcement of the PBCBRP. Some DRIs have changed their names (a common practice) to capitalize on proximity to the PBCBRP but they have not altered their internal land use map.

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**DEVELOPMENTS OF REGIONAL IMPACT**

Figure 4-5

**TABLE 4-9**
**DRI REVIEW PROCESS: AGENCIES, REVIEWS, IMPACTS, AND MITIGATION**

| DRI Review Category | Mitigation Measures | Reviewing Agencies | Review and Permit(s) for Impacts |
|---|---|---|---|
| Air Quality | Provision for Transit<br>Monitoring Program | FDOT<br>FDEP<br>Palm Beach County<br>Treasure Coast RPC | Base Level Established<br>Air Quality Monitoring |
| Airports | Noise Monitoring<br>Air Quality Monitoring | FDOT<br>FAA (if DRI is an airport) | |
| Botanical | Habitat Creation<br>Habitat Enhancement | FWC<br>Palm Beach County<br>SFWMD<br>Palm Beach County DERM | Botanical Assessment<br>Aquatic Plant - SFWMD |
| Ecologic | Habitat Creation<br>Habitat Enhancement | FWC<br>USACE (Wetlands)<br>SFWMD (Wetlands) | Ecologic Assessment<br>Habitat Management Plan |
| Energy | | Palm Beach County<br>Treasure Coast RPC | Letter of Availability |
| Health Care | Funds for Additional Beds<br>Donation of Land | Palm Beach County | Certificate of Need Review |
| Historical/ Archaeological | Cultural Resource Management Plan | FDHR | Cultural Resource Review |
| Housing | Housing Set-Asides<br>Payment for Housing | Palm Beach County<br>Treasure Coast RPC | East Central Florida RPC<br>Housing Methodology |
| Hurricane | Evacuation Plan<br>Mitigation Plan | Palm Beach County<br>Emergency Operations | Palm Beach County Policy<br>State of Florida Policy |
| Other - Planning | Comprehensive Plan Amendment<br>Text Amendment<br>Map Amendment | Palm Beach County<br>Treasure Coast RPC | |
| Potable Water | Conservation Measures<br>Alternate Water Resources<br>Xeriscape Regulations | Palm Beach County<br>Treasure Coast RPC<br>FDEP<br>Florida Department of Health<br>SFWMD | Consumptive Use Permit<br>Environmental Resource Permit |
| Schools | Land Donation<br>Funds for Student Stations | Palm Beach County<br>School Board | Letter of Capacity |
| Solid Waste | Recycling Policies<br>Additional Capacity | Palm Beach County | Letter of Capacity<br>Solid Waste Concurrency |
| Stormwater | Treatment/Attenuation<br>Floodplain Compensation | Palm Beach County<br>Treasure Coast RPC<br>SFWMD | Surface Water Management |
| Transit | Transit Improvements<br>Additional Capacity<br>ROW Dedication | FDOT<br>Palm Beach County<br>Treasure Coast RPC<br>Palm Beach MPO | |
| Transportation | Roadway Improvements<br>Additional Capacity<br>ROW Dedication | FDOT<br>Palm Beach County<br>Treasure Coast RPC | FDOT Permits<br>Transportation Concurrency |
| Wastewater | Additional Capacity<br>Extension of Central Lines | Palm Beach County<br>Treasure Coast RPC<br>FDEP | Letter of Capacity<br>FDEP Permits<br>Environmental Resource Permit |
| Wildlife | Habitat Creation<br>Habitat Enhancement | FWC<br>Palm Beach County | Wildlife Assessment<br>Management Plan |

**TABLE 4-9 (CONTINUED)**
**DRI REVIEW PROCESS: AGENCIES, REVIEWS, IMPACTS, AND MITIGATION**

| DRI Review Category | Mitigation Measures | Reviewing Agencies | Review and Permit(s) for Impacts |
|---|---|---|---|
| **Other Categories** | | | |
| Industrial Plants | | FDEP<br>Local Government Agency | |
| Mining Operations | Mitigation:<br>Create Habitat<br>Enhance Habitat | FDEP<br>Local Government Agency<br>Local Water Management District | Consumptive Use Permit<br>Environmental Resource Permit |
| Petroleum Storage | | FDEP<br>Local Government Agency<br>Florida Department of Agriculture | Environmental Resource Permit |
| Port Facilities | | FDOT<br>FDEP | |
| Theme Parks | | RPC<br>Local Government<br>FDOT | |

DERM = Department of Environmental Resources Management
FAA = Federal Aviation Administration
FDEP = Florida Department of Environmental Protection
FDHR = Florida Department of Historical Resources
FDOT = Florida Department of Transportation
MPO = Metropolitan Planning Organization
ROW = Right-of-Way
USACE = U.S. Army Corps of Engineers

Each DRI identifies directly related impacts on resources. Regulatory agencies respond to the proposed DRI and potential effects it may have on the environment by requiring mitigation and management that would not create a net loss of resources. There are cases where the DRI improves and enhances resources by creating new capacity, enhanced mitigation, improving roadways or intersections, increasing the safety of an area by adding public safety resources, linking hydrological resources, enhancing and creating habitat, and providing a variety of housing stock.

Every DRI is required by Florida Statutes to monitor its development and effects on the area and summarize their findings in an Annual Report submitted to the applicable Regional Planning Council (RPC) and reviewing agencies. For example, the methodology for traffic, air quality, and water quality are established in the Development Order (DO) and executed per the Agreement. The Annual Report monitors mitigation, phases of development, entitlements, and compliance with the DO; thus ensuring all cumulative impacts are mitigated.

Any significant changes that may occur to the DRI over an established threshold would trigger a Notice of Proposed Change (NOPC). The NOPC process would allow regulatory agencies to review the proposed change(s) and their potential effects, permitting revisions to the DO, including adjustment of mitigation if needed.

Many developments in Florida fall below the threshold of a DRI. However, each of these sub-DRI developments is required to obtain permits for regulated activities, regardless of size, a breakdown of which is shown in **Table 4-10**. Sub-DRIs are developments which do not meet the threshold limit as established by the Florida Statutes Chapter 380. The Treasure Coast Regional Planning Council (TCRPC) is coordinator of the submittal and review of DRIs in Palm Beach County in addition to local, state, and applicable Federal agencies. **Table 4-11** addresses the DRI threshold level for different development types. While not all of the development types may occur within our area of concern, they were listed to illustrate the scope of development that is regulated through the DRI process.

Developments that do not meet the minimum DRI threshold criteria are not reviewed as a DRI. However, if it is a mixed use (multi-use) development with two or more uses, then the sum of the land uses is totaled to determine if it will be reviewed as a DRI. Certain municipalities have additional criteria and reviews for developments that do not meet the minimum DRI thresholds.

A positive effect of the DRI process are the required improvements to existing public facilities such as roads, water and wastewater plants, schools, parks and additional open space. While the DRI itself will add additional users of these facilities, the DRI review process requires that the DO outline all of the mitigation and/or improvements that must be made in order for the DRI to be approved and built.

**TABLE 4-10**
**PERMITTING PROCESS AND REQUIREMENTS FOR SUB-DRI DEVELOPMENTS**

| Category | Reviewing Agencies | Review/Permits | Mitigation Measures |
|---|---|---|---|
| Botanical | Palm Beach County DERM<br>SFWMD<br>FDA<br>USFWS/NMFS | Protected Species - Biological Assessment/Biological Opinion/Incidental Take Permit<br>Trees - Tree Removal Permit | Habitat Creation<br>Habitat Enhancement<br>Habitat Preservation<br>Tree Replacement |
| Wildlife | Palm Beach County DERM<br>FWC<br>USFWS/NMFS | Protected Species - Biological Assessment/Biological Opinion/Incidental Take Permit | Habitat Creation<br>Habitat Enhancement<br>Habitat Preservation |
| Ecologic | Palm Beach County DERM<br>SFWMD/FDEP (Wetlands)<br>USACE (Wetlands) | 404 Dredge and Fill Permit<br>Environmental Resource Permit | Wetlands Creation<br>Wetlands Enhancement<br>Habitat Preservation |
| Stormwater | SFWMD<br>FDEP | Environmental Resource Permit<br>NPDES - SWPPP | Stormwater Treatment<br>Stormwater Attenuation<br>Floodplain Compensation |
| Cultural and Historic | SHPO | Cultural Resource Clearance | Documentation<br>Recordation<br>Preservation |

FDA = U.S. Food and Drug Administration
USFWS = U.S. Fish and Wildlife Service
NMFS = National Marine Fisheries Service
SHPO = State Historic Preservation Office
NPDES = National Pollutant Discharge Elimination System
SWPPP = Stormwater Pollution Prevention Plan

**TABLE 4-11**
**DRI THRESHOLDS FOR PALM BEACH COUNTY, FLORIDA,**
**PER SECTION 380.0651, FLORIDA STATUTES**

| Development Type | DRI Threshold[1] |
|---|---|
| Residential | 3,000 units. |
| Airports | • New airport; new commercial service at airport with paved runways.<br>• New passenger terminal facility; lengthening an existing runway 25%.<br>• Increasing the number of gates by 25% or three (whichever is greater). |
| Attraction | • Single performance: 2,500 parking spaces or 10,000 permanent seats; or<br>• Serial performance: 1,000 parking spaces or 4,000 permanent seats. |
| Movie Theater | 8 screens, 2,500 seats, 1,500 parking spaces. |
| Hospitals | • 600+ beds or will service citizens of more than one county.<br>• All facilities less than 101 beds are exempt. |
| Industrial | 320 acres or 2,500 parking spaces. |
| Mining | • Removes/disturbs more than 100 acres annually; or<br>• Water consumption equals more than 3 million gallons per day. |
| Office | • 300,000 SF gross; or<br>• 600,000 SF gross in an area suitable for an increase in threshold intensity. |
| Port and Marina Facilities | • Wet storage of more than 150 sport/pleasure watercraft and/or commercial fishing; or<br>• Dry storage of more than 200 sport/pleasure watercraft and/or commercial fishing; or<br>• Wet and dry storage of more than 150 sport/pleasure watercraft on any freshwater lake or any lake designated an Outstanding Florida Water - except Lake Okeechobee; or<br>• Wet or dry storage of more than 50 sport/pleasure watercraft of 40 feet in length or less; or<br>• The wet or dry storage of more than 300 personal watercraft or commercial fishing at a facility constructed prior to July 1, 1985. |
| Petroleum Storage Facility | • Any facility with storage capacity of over 50,000 barrels within 1,000 feet of any navigable water; or<br>• Any other facility with storage capacity of over 200,000 barrels; or<br>• All facilities that are consistent with a comprehensive plan or comprehensive port master plan are exempt. |
| Retail | 400,000 SF gross or 2,500 parking spaces. |
| Hotel | • 350+ units; or<br>• 750+ units in an area suitable for increased threshold intensity. |
| Recreation Vehicle Development | 500+ spaces. |
| Multiuse Development | • Two or more land uses- sum of the thresholds is greater than 145%; or<br>• Three or more land uses with at least 100 dwelling units or 15% of the applicable threshold and the sum of the thresholds is greater than 160%. |
| Schools | • 5,000+ full time students; or<br>• Physical expansion that would increase the student population by 20%; but<br>• Does not apply to campus master plan adopted by the University's board of trustees. |
| Single Owner Development | Two or more developments with the same ownership shall be aggregated and treated as a single development when they are physically proximate to each other and:<br>• There is a reasonable clones in time between the completion of 80% or less of one development and the submission to a governmental agency of a master plan for another development; or<br>• The voluntary sharing of infrastructure; or<br>• A common advertising scheme or promotional plan. |

Sources: Florida Statutes 380.0651 and Treasure Coast Regional Planning Council.

[1] Developments greater than this value are considered DRIs.

A negative effect may be the unforeseen impacts of similar-sized developments that may occur near the subject DRI. Increased real estate values due to the development may make market-rate housing scarce. More information on non-DRI impacts is discussed in Section 3.2.1.1 of Appendix E, Overall Trends.

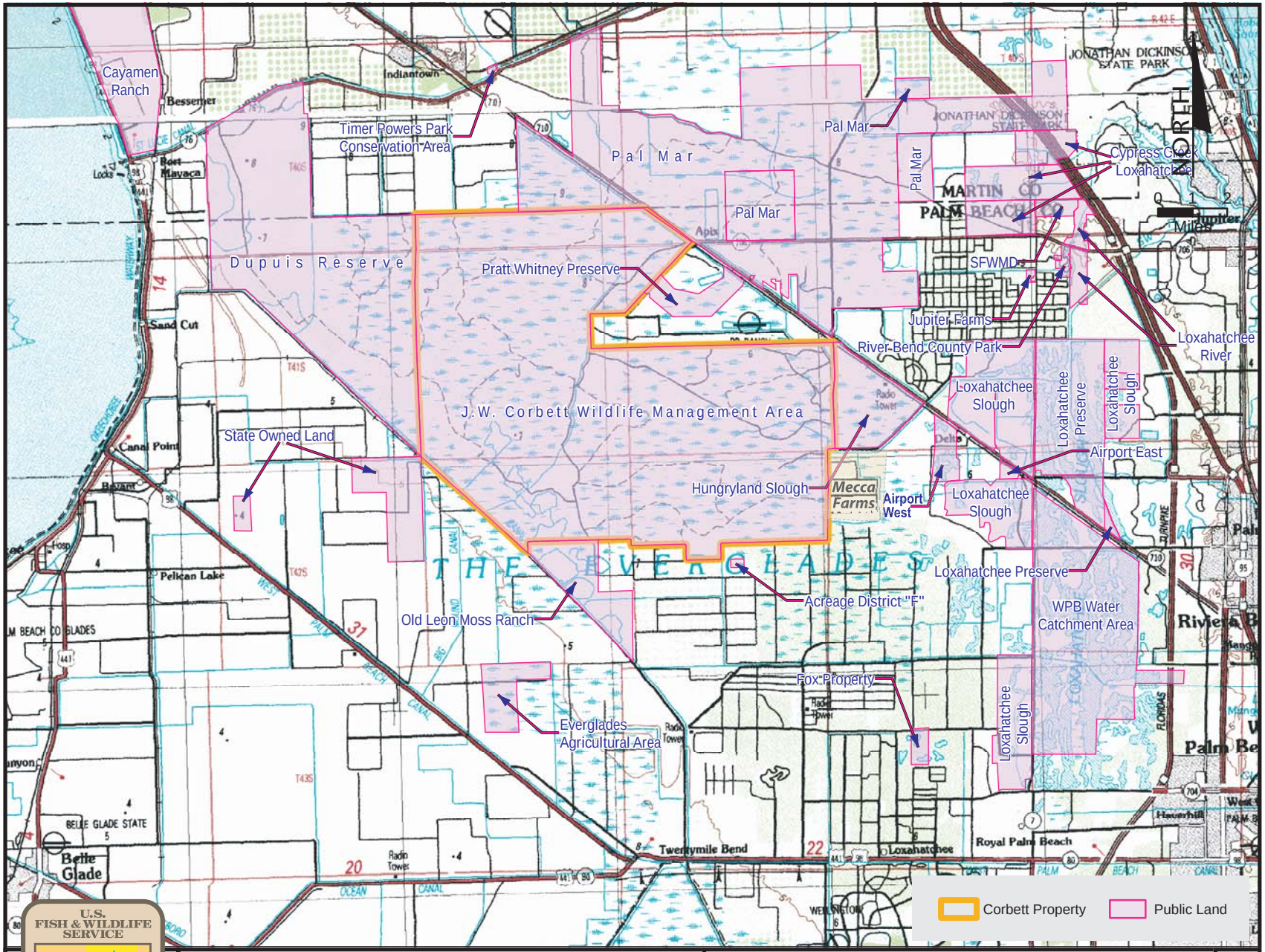
Concurrency is a determination of the proposed project's impact on a specific resource such as transportation, open space, or schools. The level of service (LOS) for each resource is determined based upon the resource versus capacity, compared to present and future capacity. If a proposed project's impacts exceed the LOS for the given resource, then improvements are required in order to create additional capacity to maintain the LOS. Typically, the applicant is required to pay for their fair share of the improvements or expansion of capacity. Above all, and in conjunction with concurrency, a project must also maintain consistency with the State Comprehensive Plan, the Strategic Regional Policy Plan, and the County Comprehensive Plan and Unified Land Development Code. The concurrency test is conducted pre-development and an assessment is made prior to the issuance of development approval and building permits.

The subject JWCWMA land transfer parcels are located in an area where potential growth and development of large land parcels may occur. The large development parcels are changing from the land use of conservation and related support facilities to mixed-use developments. The development of the parcels is consistent with the growing population and demand for housing and support facilities in south Florida and Palm Beach County.

As detailed previously in Section 4.2.1, Land Use Changes, there are no changes anticipated in future land uses in the area surrounding the proposed action and alternatives, with the exception of the land transfer itself. Changes in land use require Public Notice Public Hearing(s), and approval by the Palm Beach County Board of County Commissioners. Future land use patterns are anticipated to remain consistent with the currently approved Palm Beach County Future Land Use Map.

Recreational use in terms of acres per person at the JWCWMA is not anticipated to change. However, the regional growth and encroachment of suburban neighborhoods is likely to cause an increase in uses such as hiking, biking, horseback riding, and walking. Currently, the JWCWMA is providing for 0.05 acres per person based on the 2000 Census and 0.03 acres per person based on 2030 population projections. To counter this pressure, the County has established a $150 million Environmental Lands Acquisition and Protection Program (ELAPP) (see **Figure 4-6**, Public Lands).

While the land transfer would provide a location for an electrical substation, roadway right-of-way, canal/flow way, equestrian trail, and other benefits to the public, it would increase the gross area of the JWCWMA by approximately 30 acres. The proposed parcel (Minkin Parcel) to be transferred to the JWCWMA is twice the size of the parcels that would be granted easements.

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**PUBLIC LANDS MAP**

*Figure 4-6*

### *4.6.1 J.W. CORBETT WILDLIFE MANAGEMENT AREA*

For residents of Palm Beach County and the State of Florida, the JWCWMA provides various hunting, fishing, birding, wildlife viewing, and recreational activities. However, as discussed in Section 3.4.5.3, Wildlife, the JWCWMA is one of many publicly owned open spaces in southeast Florida providing these opportunities.

#### *4.6.1.1 Wildlife and Habitat Management*

The proposed action directly impacts the JWCWMA by conversion of use, from conservation to transportation and utility, in Parcels A and B, as detailed in Section 2.0 of this report. This conversion, however, would not affect the long-term management of wildlife and/or habitat in the JWCWMA in the near or long-term. The extension of Seminole Pratt Whitney Road to the north bisects two natural areas that may affect wildlife movement.

The *Conceptual Management Plan for J.W. Corbett Wildlife Management Area 2003-2013* identifies a large tract of land to the northwest of the JWCWMA as a future acquisition for wildlife and habitat conservation. This parcel would create a large contiguous parcel combining the JWCWMA and the Dupuis Reserve, spanning Martin and Palm Beach counties.

#### *4.6.1.2 Recreational Uses*

Recreational uses specific to the JWCWMA are neither unique nor critical to the satisfaction of the Recreation/Open Space Element of the Palm Beach County Comprehensive Plan, the JWCWMA Management Plan, and/or the FWC Strategic Plan. Palm Beach County contains over 400,000 acres of conservation lands with active and passive recreational uses, and 99 parks on 8,403 acres (Palm Beach County Parks and Recreation Department, Statistics on Palm Beach County Parks, 2004). The JWCWMA contains 60,288 acres and provides many passive and active recreational opportunities, of which none are affected by the proposed action. The FWC in their Strategic Plan (Objective 12) indicates a desire to increase the FY 95/96 amount of publicly owned lands managed for outdoor recreation (approximately 3,511,000 acres) by 5 percent. These actions at the local, state, and Federal levels would offset any adverse impacts to recreational uses in the JWCWMA or any other proximate publicly owned lands as a result of the proposed action or any of its cumulative effects.

With the additional residences associated with the various developments in the immediate vicinity of the JWCWMA, the FWC expects a larger number of people to utilize the management area in the future. The current buffer for center fire rifles within one-quarter mile of Mecca Farms may be extended north along the extension of Seminole Pratt Whitney Road. This increase in use is noted in the *Conceptual Management Plan for the J.W. Corbett Wildlife Management Area 2003-2013* and will likely result in increased maintenance costs for infrastructure and staffing.

#### *4.6.1.3 Fire Management*

The FWC developed the J.W. Corbett Wildlife Management Area Controlled Burning Plan in January 2001 to:

- Reduce fuel,
- Promote regrowth,
- Maintain sub-climax communities, and
- Restore native communities.

This plan identifies smoke sensitive areas (Figure 2 of the Burn Plan) surrounding the JWCWMA including rural and urban residential developments and a publicity and communications plan.

Additionally, the JWCWMA Management Plan calls for the maintenance of native communities, control of exotic species, and support of listed species (Red-cockaded woodpeckers) and their habitat through controlled burns. In instances where prescribed burning is not feasible, mechanical means of vegetation control may need to be utilized in the flatwoods areas.

### *4.6.2 IMPACTS WITH AND WITHOUT THE LAND TRANSFER*

Below are the cumulative impacts within the study area without the proposed land transfer to the public and natural resources alike:

- Without the proposed project (Alternative 1B), the following are the reasonably foreseeable future land uses: municipal boundaries currently encompass 21,500 acres, with most of the properties either developed or designated for suburban development and roughly 63,500 acres are held for conservation purposes. Approximately 62,000 acres are developed or have development approvals pending for a variety of uses, including residential, industrial, commercial, and civic purposes. An additional 2,600 acres are approved DRIs. This leaves approximately 40,000 acres, or approximately 21 percent of the region, for future development opportunities. Of this total, approximately 10,500 acres are for pending DRIs, which if approved would leave approximately 30,000 acres, or approximately 16 percent of the region for future development opportunities.

- Lands in the cumulative impacts study area were originally developed in a single use sprawl pattern with low density residential. Since the adoption of the 1989 Comprehensive Plan, development patterns have changed to Suburban-style development, e.g., gated communities of increased residential densities such as The Acreage and Loxahatchee, expanded transportation network, retail, and other community services.

- The large agricultural operations in north-central Palm Beach County have been primarily converted from citrus production to residential development over the past two decades. This trend is anticipated to continue as the Palm Beach County population continues to grow at an average rate of almost 50 percent over the last two decades. Due to development pressures, it is estimated that Mecca, Vavrus, Indian Trail Groves, and Callery Judge Grove properties, along with other moderate sized properties in the north-central area, will transition to some form of non-agricultural developments.

- Without the proposed project Alternative 1B, 20 residential properties would likely be subjected to condemnation or eminent domain processes to allow for the FP&L substation and roadway easement that would have to be routed through the residential area of The Acreage.

- Without the proposed project Alternative 1B, which provides improved connectivity of Seminole Pratt Whitney Road, there may be an increase in response time for public safety vehicles responding to emergency calls.

- Without the proposed project Alternative 1B, the proposed canal would not prevent access of off-road vehicles and could reduce control of illegal motorized vehicles.

Below are the cumulative impacts within the study area with the proposed land transfer:

- Although 30 acres of JWCWMA will provide a location for an electrical substation and roadway right-of-way, approximately 60 acres of land proposed as mitigation, the Minkin Parcel, would be converted from private ownership to public ownership. This change in ownership would allow for this parcel to be managed for conservation purposes and will overall expand JWCWMA 30 acres. Therefore it will increase the total amount of conservation acres in PBC to roughly 63,530 acres are held for conservation purposes.

- The land transfer would provide connectivity of Seminole Pratt Whitney Road. The new access will benefit public safety vehicles in responding and accessing areas in less time. Improvements to the intersection of SR 710 and Seminole Pratt Whitney Road would include alignment and drainage, as well as signalization (if necessary).

- Twenty residential properties would be saved from condemnation or eminent domain process because the FP&L substation and roadway easement would not have to be routed through the residential area of The Acreage.

- A proposed canal/flow way would be a part of the proposed land transfer area. The land transfer would provide a maintenance berm/activities trail for trail users and wildlife viewing, as well as for maintenance and management of the area. In addition, the canal would increase control of illegal motorized vehicles.

# *Section 5.0*
# *LIST OF PREPARERS*

As required by the Service and in accordance with Sections 1500 - 1508 of the CEQ regulations, the names and qualifications of the principal persons contributing information to this EA are identified. It should be noted that in accordance with Section 1502.6 of the CEQ regulations, the efforts of an interdisciplinary team consisting of technicians and experts in various fields, were required to accomplish this study. Specialists involved in this EA included those in such fields as ecology, biological sciences, engineering, transportation planning, land use planning, archaeological resources, geology, noise assessment, and other disciplines. It should be noted that while an interdisciplinary approach has been used, all decisions made with regard to the content and scope of this EA are those of the Service.

## U.S. FISH AND WILDLIFE SERVICE - LEAD AGENCY

**Jeff Fleming** - Assistant Regional Director of External Affairs. Provided document review.

**Mike Piccirilli** - Chief of Federal Assistance. Quality Assurance and Quality Control review of the EA and supporting technical documentation.

**Kevin Moody** - Regional Environmental Coordinator. Quality Assurance and Quality Control review of the EA and supporting technical documentation.

**Richard Warner** - Archaeologist. Quality Assurance and Quality Control review of the EA and supporting technical documentation.

**Thomas McCoy** - Wildlife Biologist. Quality Assurance and Quality Control review of the EA and supporting technical documentation.

**Christine Willis** - Supervisory Biologist. Quality Assurance and Quality Control review of the EA and supporting technical documentation.

**Shari Brewer** - Federal Assistance Specialist. Quality Assurance and Quality Control review of the EA and supporting technical documentation.

## PALM BEACH COUNTY - COOPERATING AGENCY

**John Tierney** - Senior Environmental Analyst, Palm Beach County Facilities Development and Operations. BS Biology, 15 years experience. Quality Assurance and Quality Control review of the EA and supporting technical documentation.

**Audrey Wolf** - Director, Palm Beach County Facilities Development and Operations. BS Environmental Engineering and MA Public Administration/Environmental Growth Management, 20 years experience. Quality Assurance and Quality Control review of the EA and supporting technical documentation.

**Omelio Fernandez, P.E.** - Division Director, Palm Beach County Engineering Department Roadway Production Division. BS Civil Engineering, 30 years experience. Quality Assurance and Quality Control review of the EA and supporting technical documentation.

## URS CORPORATION - PRIME CONSULTANT

**Ron Gregory, AICP** - Task Manager. BA and MA Geography, 31 years experience. Consultant Task Manager responsible for overall supervision of the Consultant Team.

**Vickie Scott, AICP** - EA Coordinator. BA Geography, 20 years experience. Responsible for production and coordination of EA documentation and support sciences. Provided public involvement, noise, and air quality assessment.

**Mark Easley** - Senior Environmentalist. BS Biology, 21 years experience. Responsible for supervision of biological assessment, habitat surveys, and Biological Assessment Technical Appendix.

**Marty Peate, AICP** - Senior Planner. BS Political Science and MS Environmental Planning and Resource Management, 11 years experience. Responsible for land use analysis, Corbett analysis, and Cumulative Effects Assessment Technical Appendix.

**Jeff Jenkins, AICP** - Senior Planner. BA Geography, MS Public Administration, 17 years experience. Preparation of ADA/DRI and Comprehensive Plans evaluations.

**Erin Degutis, AICP** - Planner. BS Landscape Architecture, MS Landscape Architecture, 12 years experience. Preparation of cumulative effects analysis and overview of Comprehensive Plans and ADA/DRI impacts. Quality Assurance and Quality Control review of EA and supporting technical documentation.

**Ed Leding, PG** - Senior Geologist. 15 years experience. Preparation of Contamination Screening Report Technical Appendix.

**Mike Dinardo** - Biologist. BS Environmental Management, 5 years experience. Biological and environmental data collection and analysis.

**Crystal Clark** - Biologist. BS Environmental Sciences, 8 years experience. Biological and environmental data collection and analysis.

**Robert Johnson, P.E.** - Water Resources Engineer. BSCE Environmental Engineering, 20 years experience. Surface drainage and water resources analysis.

**Jim Wise** - GIS Specialist. BS Finance, MA Geography, 16 years experience. Preparation of Geographic Information Systems mapping and analysis.

**Lisa Heimburg, P.E.** - Senior Engineer. BSCE Civil Engineering, 17 years experience. Development of roadway concepts and analysis of CSX rail crossing and SR 710 interchange.

**Mark Jennings** - Senior Planner. BA Geography, 18 years experience. Provided introduction and background analyses, Quality Assurance and Quality Control for EA documentation, and editorial support for EA.

**Maria Cipriano** - Technical Editor. 5 years experience. Responsible for coordination and production of hard-copy and electronic versions of document.

**Debbie Wheeler** - Graphic Designer. 15 years experience. Development of original graphics for EA and Technical Appendices. Quality Assurance and Quality Control review of graphics.

**Roger Carvey** - Graphics Designer. BA Fine Arts, 20 years experience. Development of original graphics for EA and Technical Appendices.

**Paul Floyd** - Engineering Technician. 25 years experience. Development of original alternatives mapping and graphics for EA and Technical Appendices.

## ARCHAEOLOGICAL AND HISTORICAL CONSERVANCY, INC. - CULTURAL RESOURCES SUBCONSULTANT

**Robert S. Carr** - Archaeologist. MS Anthropology, 30 years experience. Responsible for archaeological and historic cultural resource investigations and analysis and Cultural Resource Assessment Survey Technical Appendix.