

Appendix E
**CUMULATIVE EFFECTS
ANALYSIS**

for the
***J.W. Corbett Wildlife Management Area
Proposed Land Transfer***

Palm Beach and Martin Counties, Florida

JULY 2005

Prepared For:



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Section 1.0

PURPOSE AND NEED

1.1 INTRODUCTION

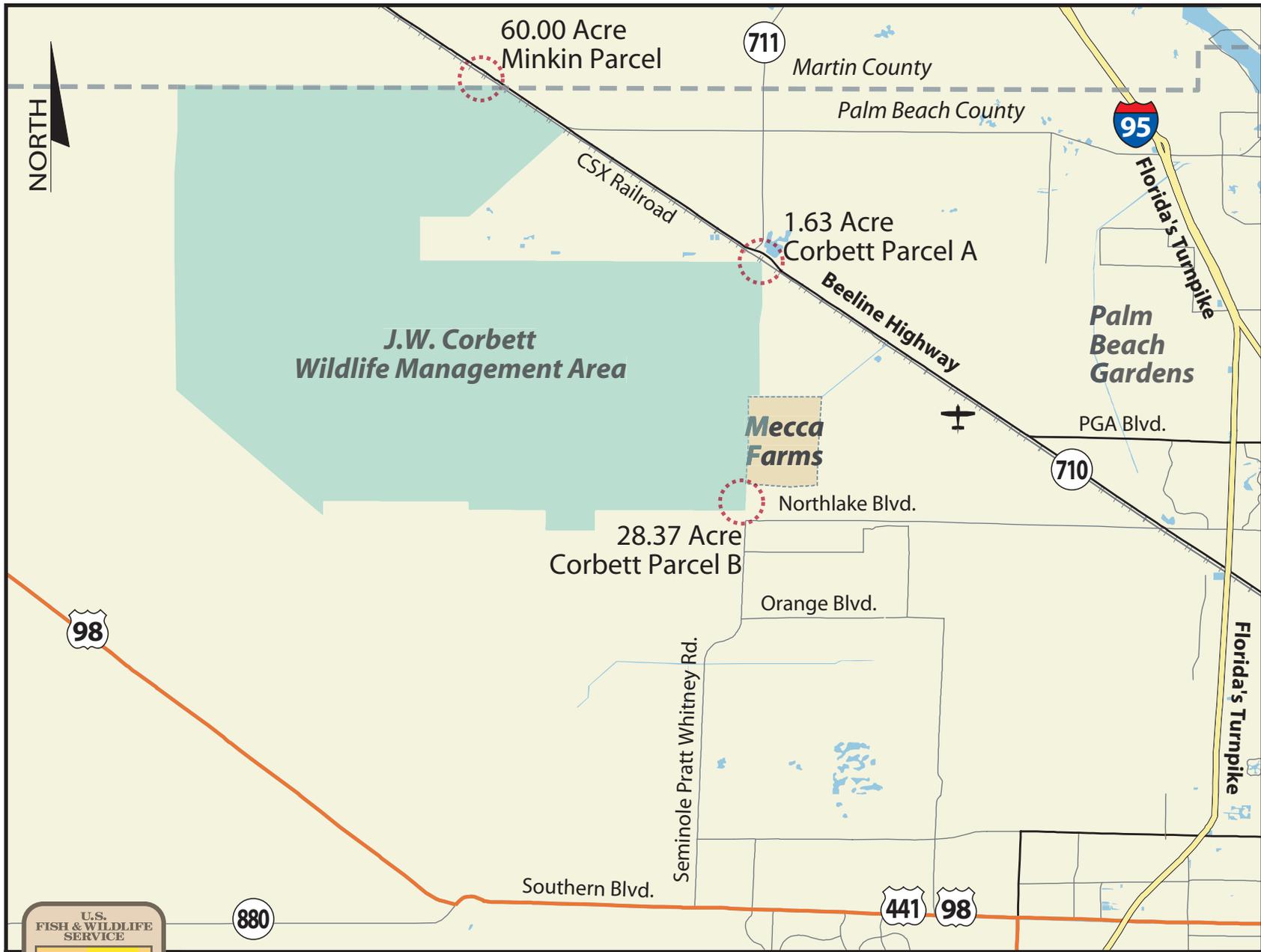
Palm Beach County, Florida (the County), in cooperation with the U.S. Fish and Wildlife Service (the Service, we, our), is preparing an Environmental Assessment (EA) to assess a proposed change in the use of lands within the J.W. Corbett Wildlife Management Area (JWCWMA) in Palm Beach County. Two tracts 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.



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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.

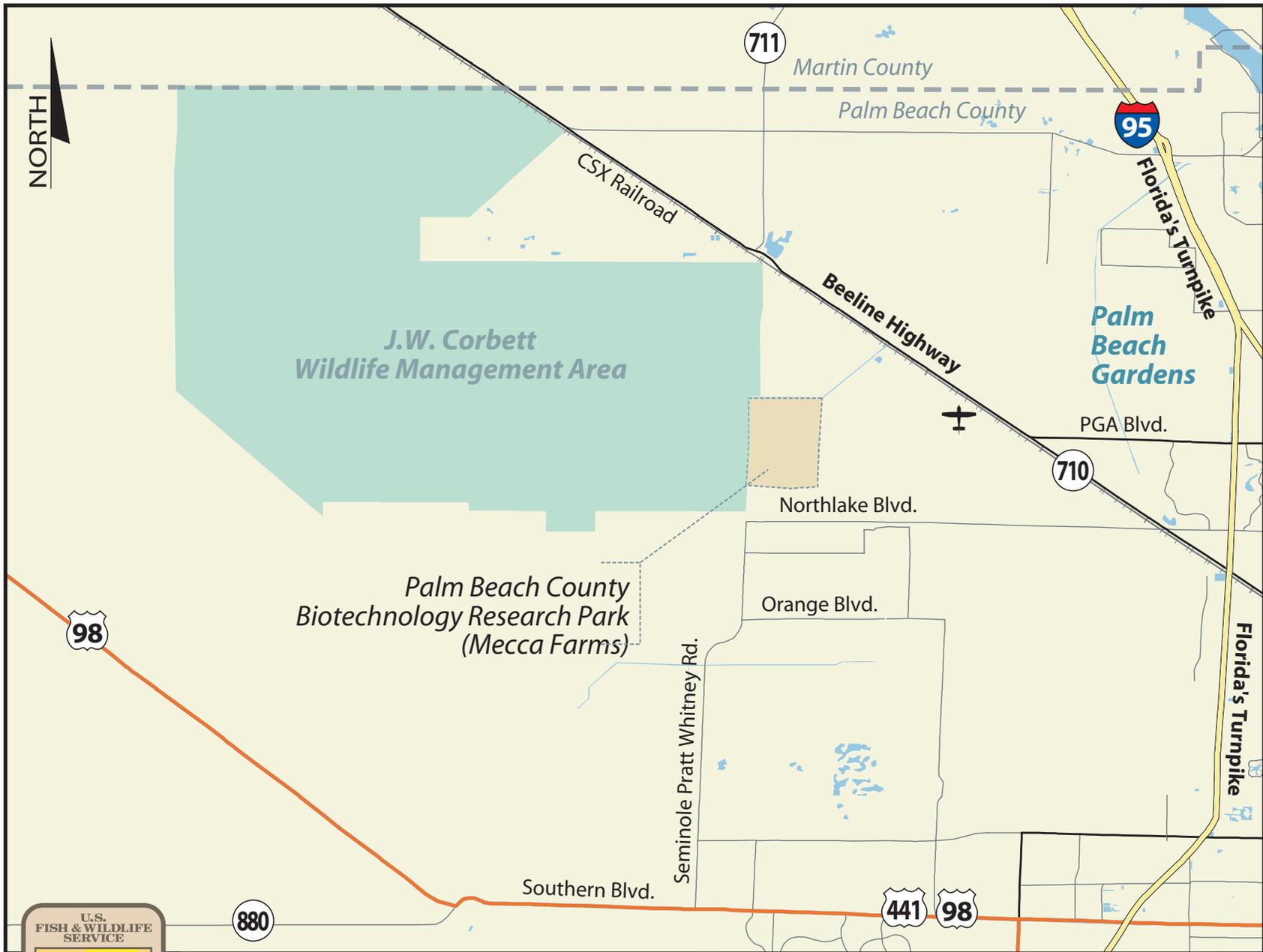
In May 2004, the County submitted a Development of Regional Impact (DRI) Application for Development Approval (ADA) for the PBCBRP project site (see **Figure 1-2**) to the State for subsequent approval. TSRI would occupy approximately 102.03 acres of the site.¹ Much of the remaining land would be made 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

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 of the EA 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

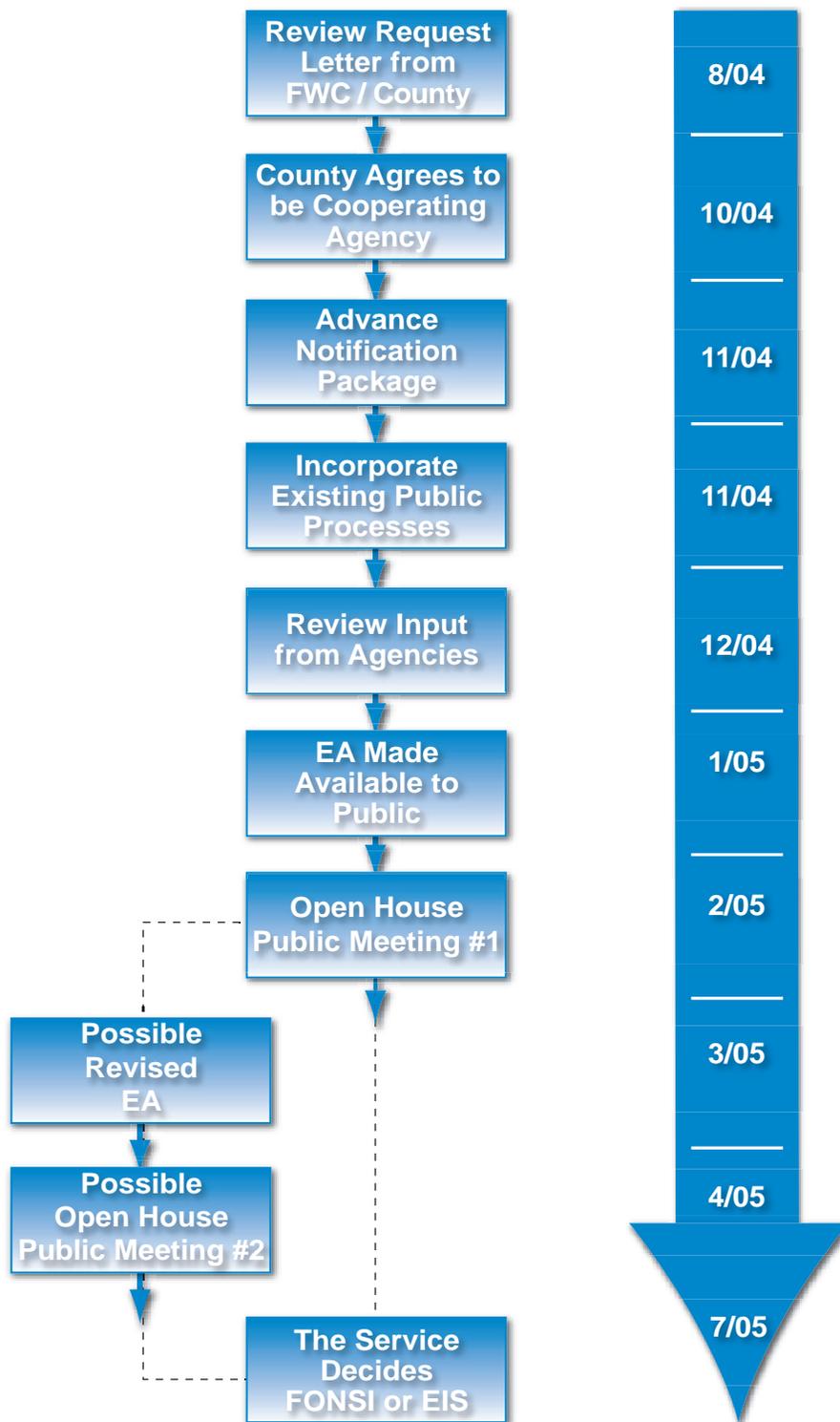
On February 2, 2005 (after 23 days of EA public availability), the Service conducted a Public Open House Meeting to allow the public to review and comment on the EA. The comment period for the EA remained open for 10 days after the Public Open House Meeting, with the comment period ending February 14, 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.



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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:

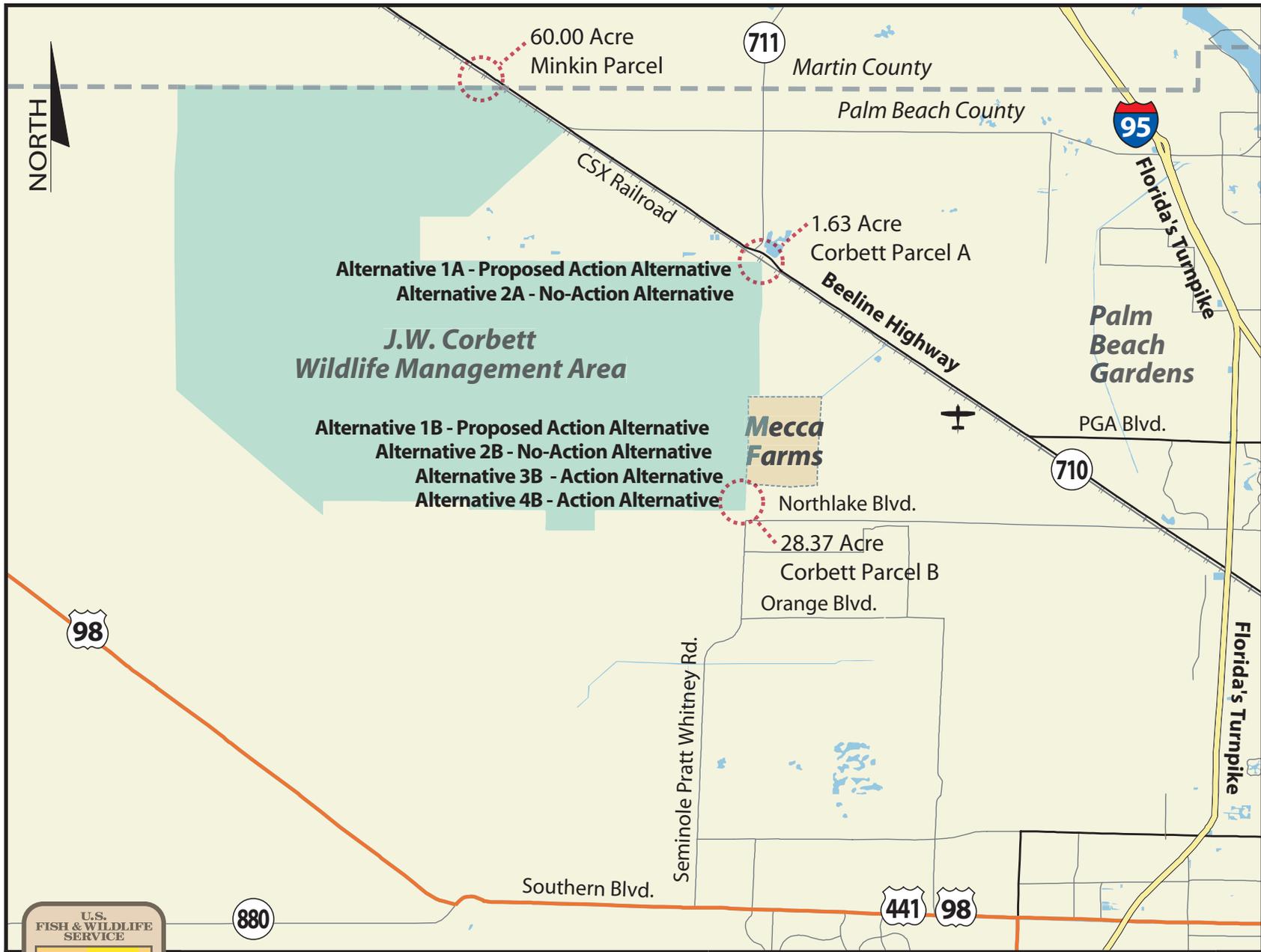
- **Engineering:** The design and location of the proposed improvement facilities;
- **Environmental:** Social, cultural, natural and physical factors; and
- **Public Involvement:** Needs and concerns of the local community.

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.

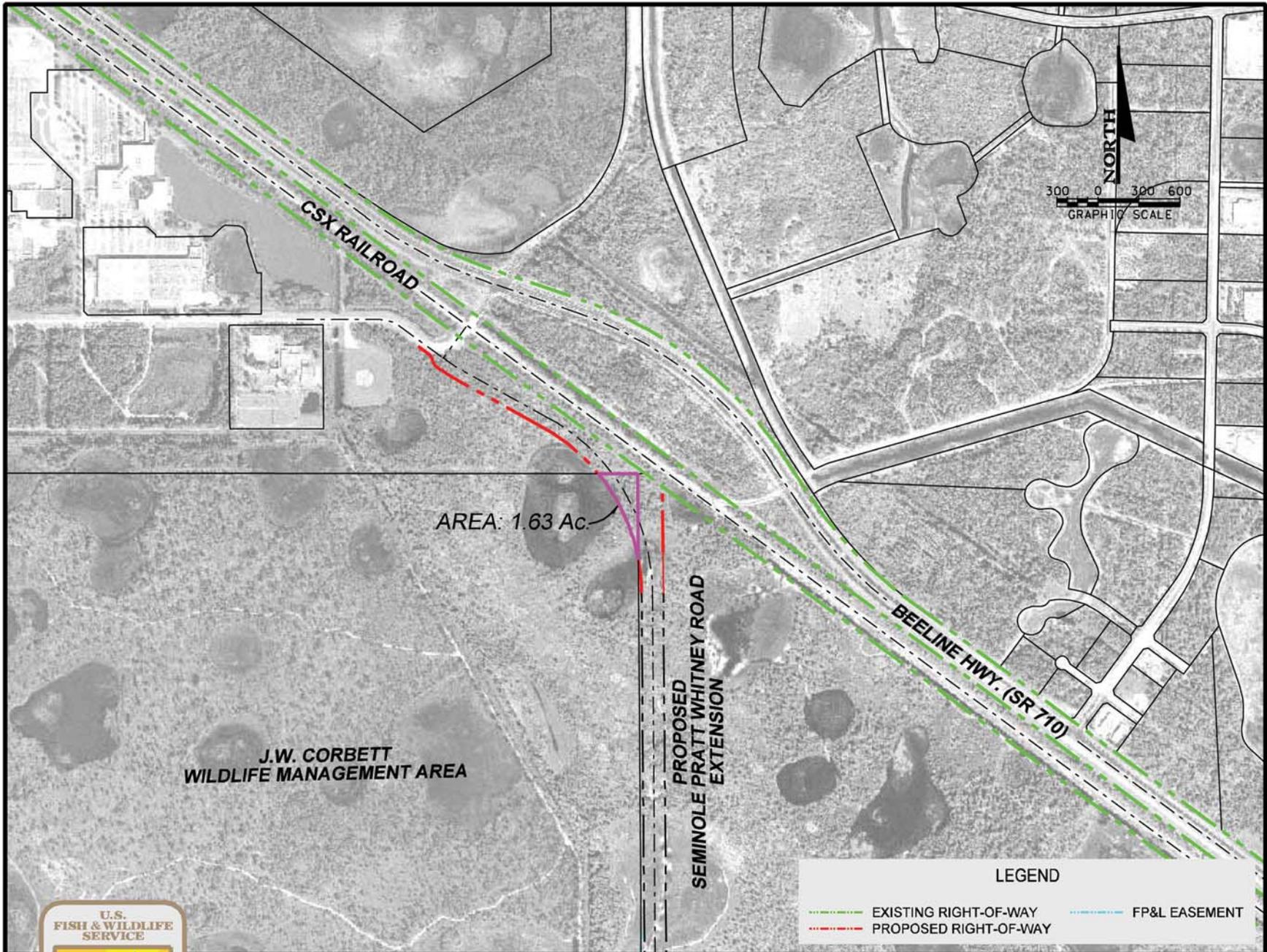
The direct, indirect (secondary), and cumulative impacts to the JWCWMA associated with the land transfer and easement actions are discussed in the Environmental Consequences section of this report.

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

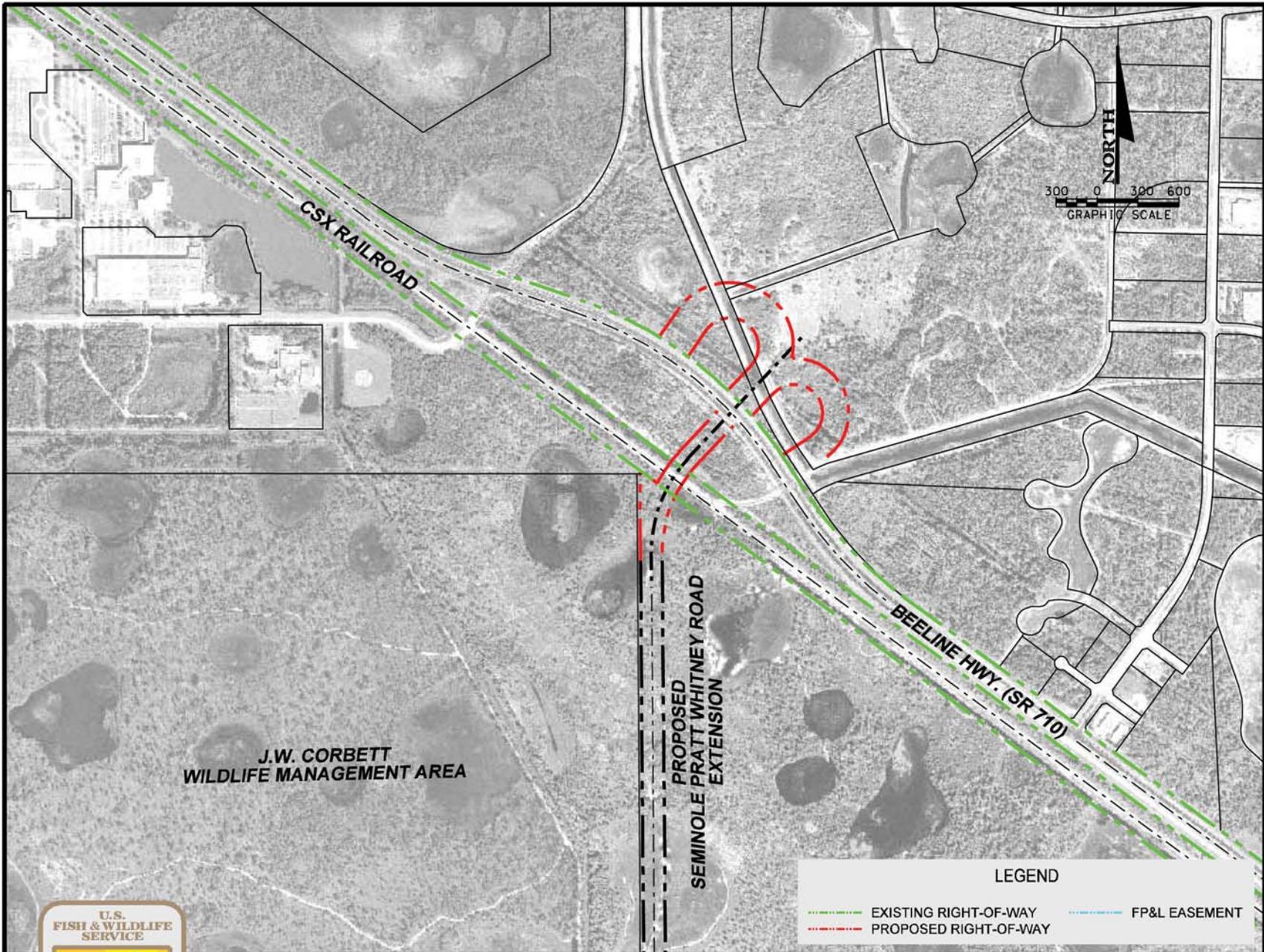
* Impacts associated with Alternatives 3B and 4B do not include the additional 138-acre parcel isolated within the JWCWMA.



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ALTERNATIVE 1-A

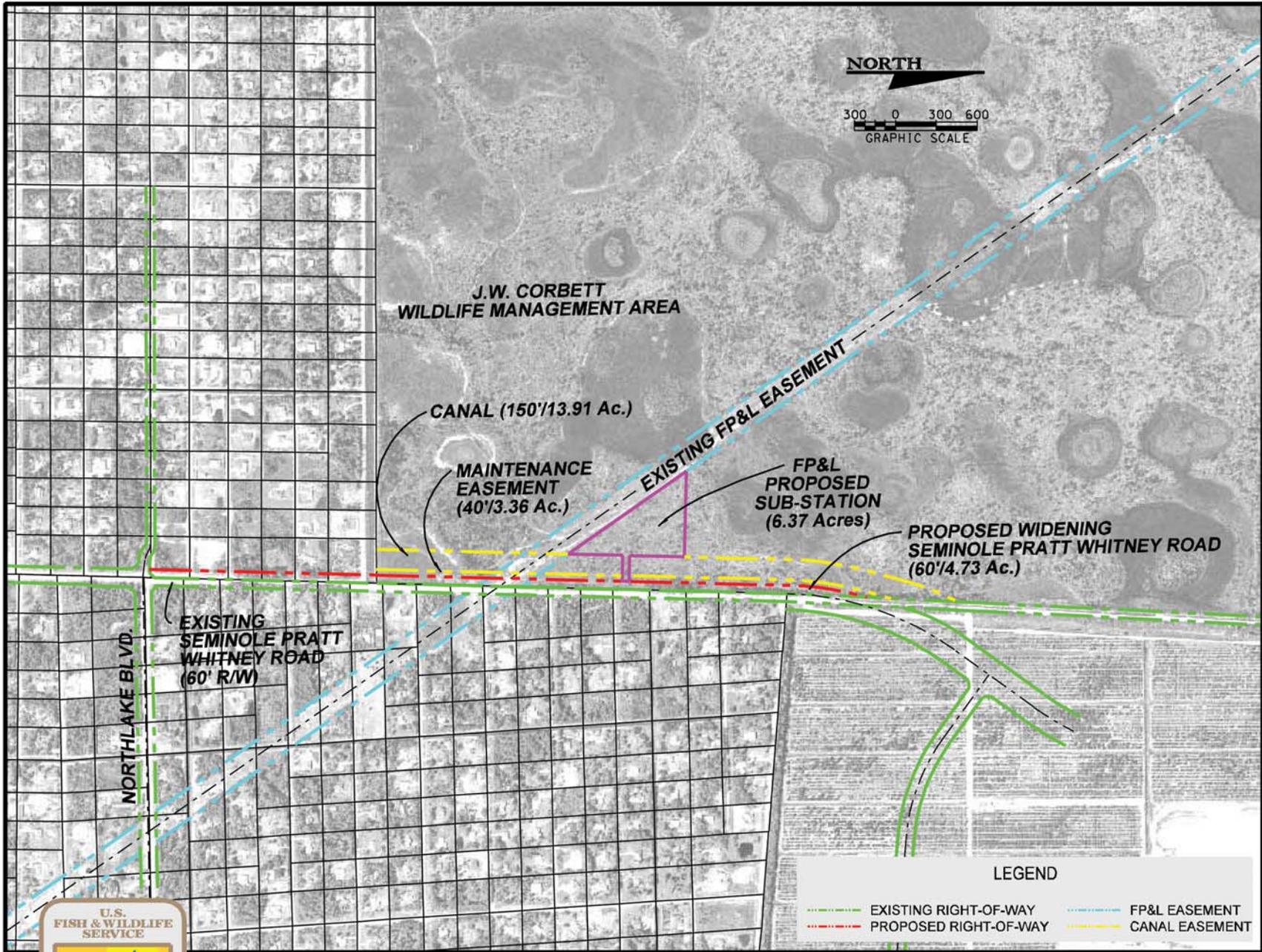
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**ALTERNATIVE 2-A
(NO ACTION)**

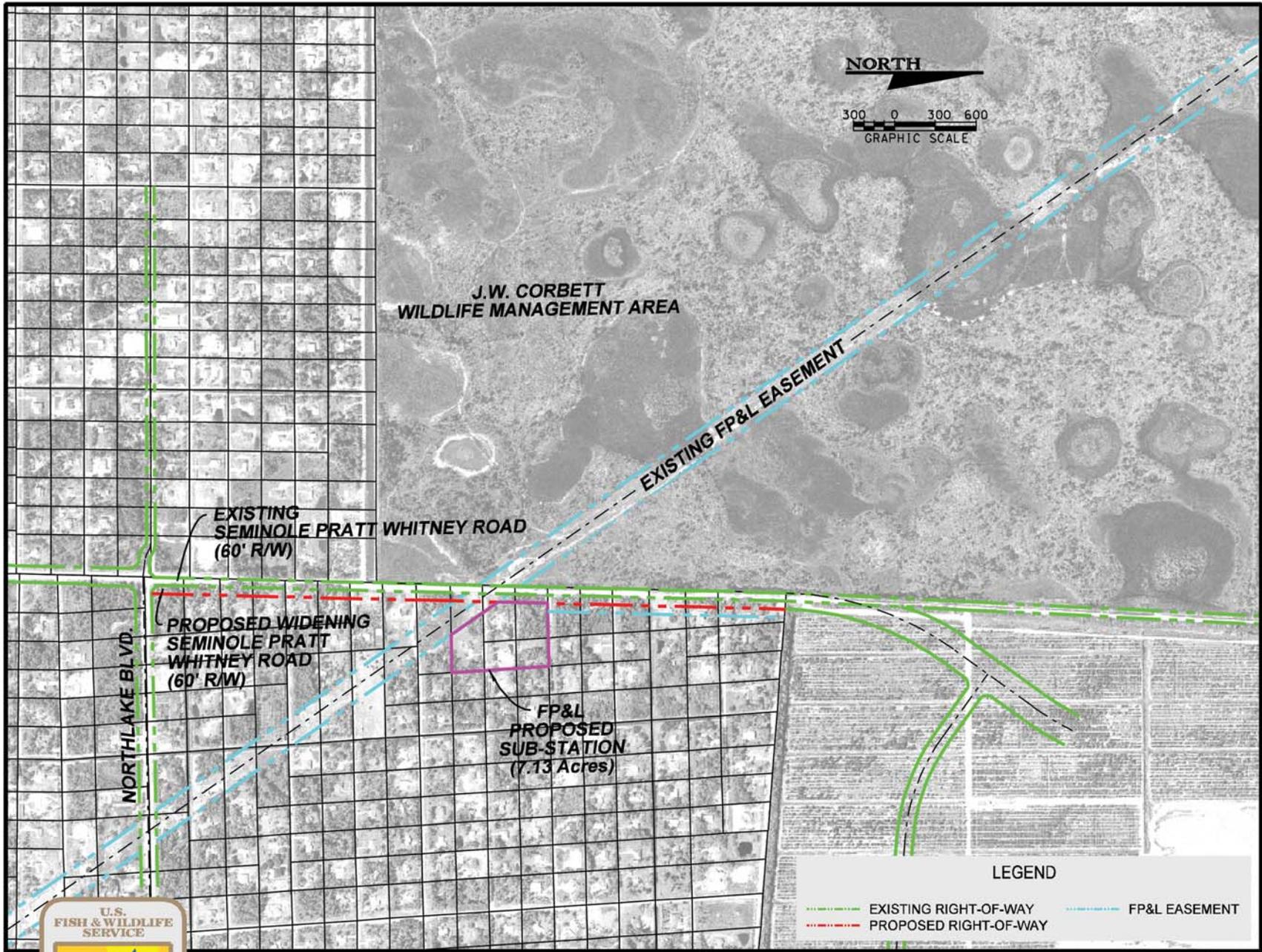
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ALTERNATIVE 1-B

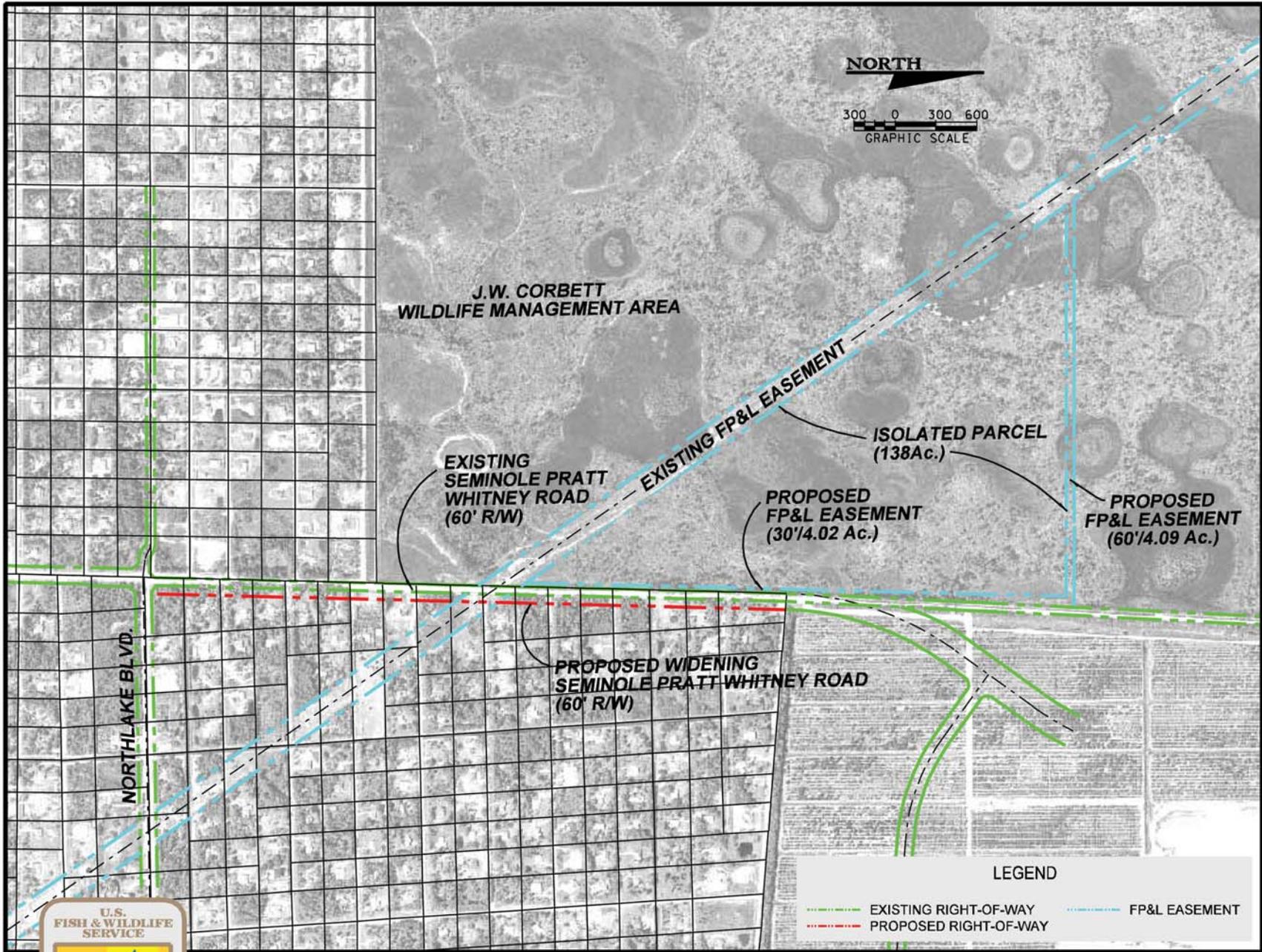
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**ALTERNATIVE 2-B
(NO ACTION)**

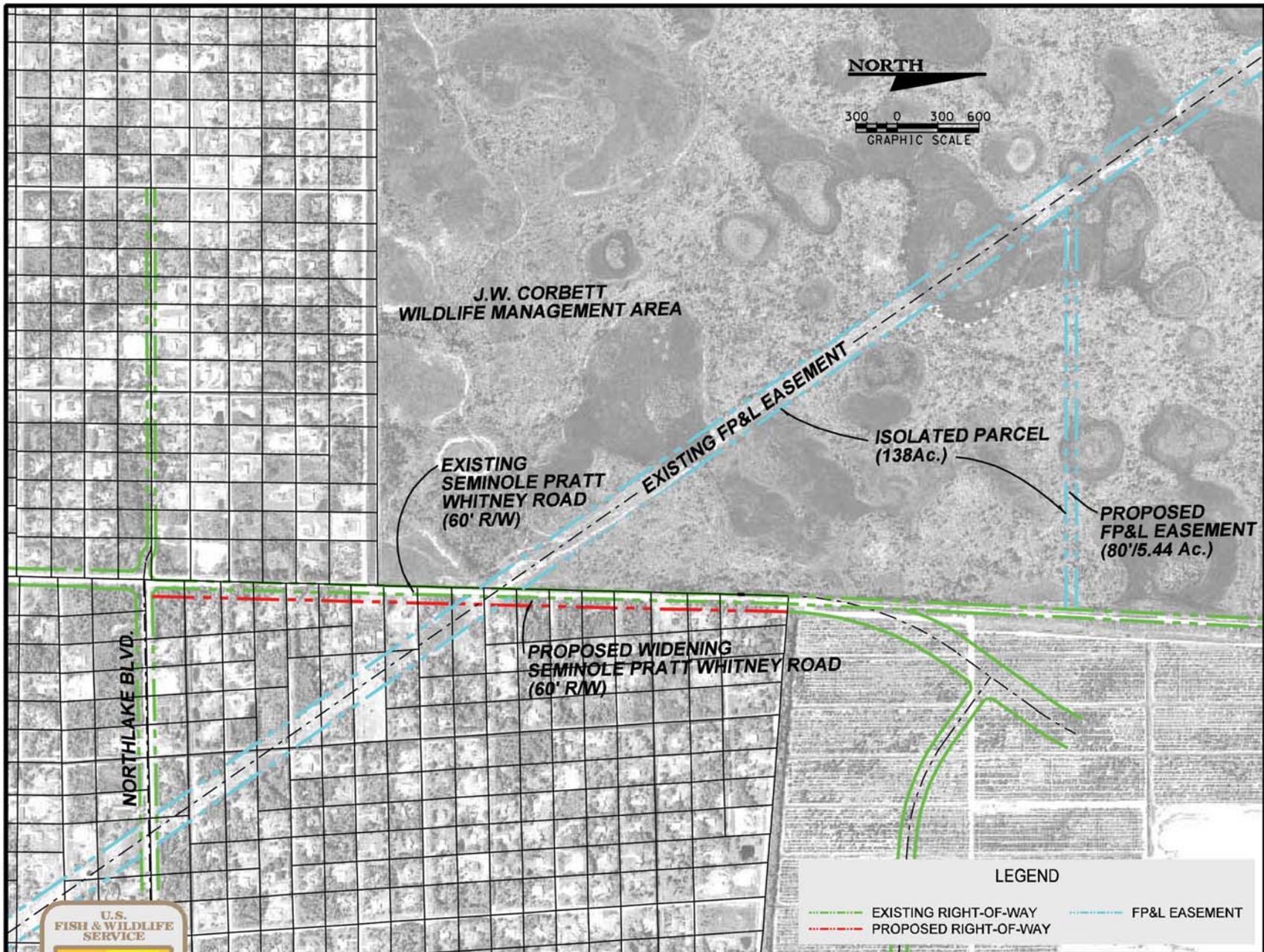
Figure 2-5



*J.W. Corbett Wildlife Management Area
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ALTERNATIVE 3-B

Figure 2-6



*J.W. Corbett Wildlife Management Area
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ALTERNATIVE 4-B

Figure 2-7

Section 3.0

METHODOLOGY

The Council on Environmental Quality's (CEQ) regulations (40 CFR Sections 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).”

For the purposes of these analyses, the CEQ definition has been applied to cumulative effects. Indirect and secondary effects are discussed in the Environmental Assessment (EA) related to the proposed action. The resources discussed below are those which can be reasonably identified as potentially affected by the cumulative effects of the proposed action.

This cumulative effects analysis identifies a number of environmental effects that are reasonably likely to occur as a result of 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.

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 mitigated by the addition of the Minkin Parcel to the JWCWMA.

3.1 STUDY AREA FOR CUMULATIVE EFFECTS

This section has been broken down into three sections: current use, trends, and impacts of land use on JWCWMA; overall trends within the study area; and an analysis of specific large scale projects and their effects within the study area. The study areas are in a similar geographic area of the County. The studied roadway links and intersections within each DRI were used to define the extent of the cumulative effects. The geographic area of influence for the study matrix was determined by the network of roads used in the various DRI traffic studies (**Figure 3-1**). The area used for the analysis of cumulative effects encompassed approximately 190,000 acres, of which the proposed action affects 30 acres (0.0001578 percent of the total area) converting land use from conservation to transportation/utility. However, the Minkin Parcel removes 60 acres (0.0003157 percent of the total area) from developable land use and converts it to conservation.

As discussed in Section 4.2.1 of the EA, changes in existing or approved future land uses are anticipated with any of the proposed alternatives.

3.2 LAND USE PATTERNS

3.2.1 CURRENT USE, TRENDS, AND IMPACTS OF LAND USE ON THE JWCWMA

At present, the areas of the land transfer includes the change in use of two tracts of land located within the JWCWMA and totaling 30 acres (i.e., Corbett Parcels A and B). Parcel A, located at the northeast corner of the JWCWMA, is 1.63 acres and consists of three separate habitat classifications; hydric pine flatwoods, freshwater marsh, and pine flatwood. Acreages of each and descriptions are found in Section 3.4.5.2, of the EA. Parcel B, located at the southeast corner of the JWCWMA, is 28.37 acres and consists of hydric pine flatwoods, freshwater marsh, and pine flatwoods. Acreages of each and descriptions are found in Section 3.4.5.2.

To compensate for the loss of lands described above, an existing 60-acre tract of undeveloped land located in Martin County adjacent to the JWCWMA's northern boundary would be added to the JWCWMA. This tract consists of hydric pine flatwoods, freshwater marsh, and cypress stands. Acreages of each and descriptions are found in Section 3.4.5.2.

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.

NORTH

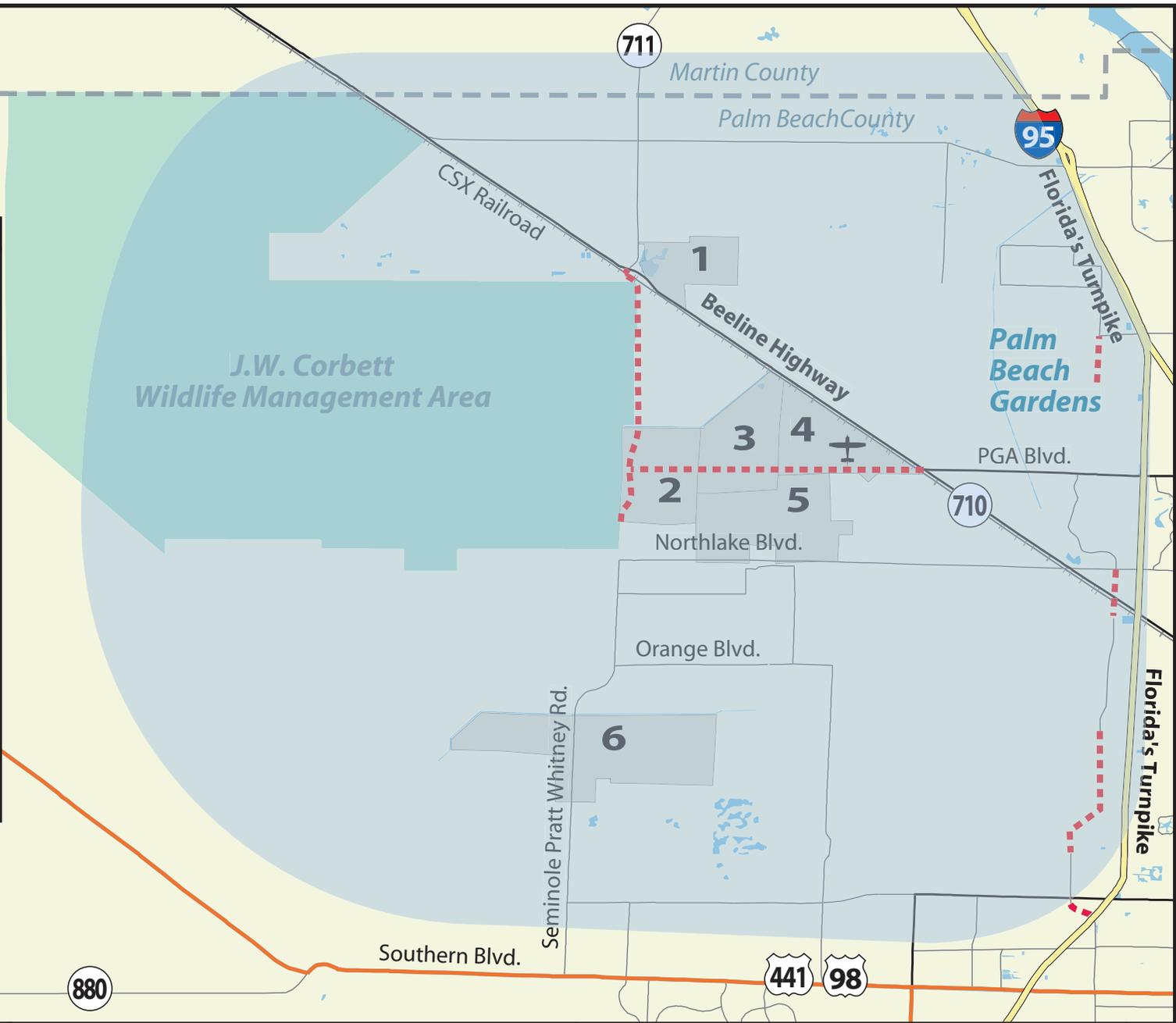
Legend

 Area Of Cumulative Effects

DRI Areas

- 1** Palm Beach Park of Commerce
- 2** Palm Beach County Biotechnology Research Park
- 3** Garden Science & Technology Community (Vavrus Ranch North)
- 4** North Palm Beach County General Aviation Airport
- 5** Vavrus Ranch South
- 6** Callery-Judge Grove

 Proposed New Roads



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

**AREA OF CUMULATIVE EFFECTS
ANALYSIS**

Figure 3-1

3.2.2 **CURRENT USE, TRENDS, AND IMPACTS OF LANDS IN THE STUDY AREA**

The region of north-central Palm Beach County is generally described as bounded on the south by Southern Boulevard (SR 80); extending north to the northern Palm Beach County line; Florida's Turnpike on the east; and extending west to 20 Mile Bend. It is an area in transition. Two decades ago, this region was primarily comprised of agricultural uses and limited residential development within the antiquated subdivisions of The Acreage and Loxahatchee Groves. The Village of Royal Palm Beach was the only incorporated area in the region, with a growing suburban population and limited community services. There were small pockets of industrial/employment along Beeline Highway, the only major transportation corridor running through the region.

Much of the area has developed in a single use sprawl pattern with low density single-family residential lots, interspersed with agricultural operations, and few non-residential services to support the residential population. The 1989 Comprehensive Plan permitted the development of the region at low rural residential densities with rural levels of service or limited services provided by special districts. It did not provide for commercial or industrial uses to provide services or create an employment base.

The north-central region is comprised of approximately 190,000 acres. A land area breakdown of this area follows:

- **Municipal**
 - +7,500 acres is incorporated as the Village of Royal Palm Beach;
 - +6,000 acres is incorporated in the City of Palm Beach Gardens (does not include the Loxahatchee Slough [conservation area], Gardens Scientific and Technology Community DRI, and Vavrus South DRI which are within the Palm Beach Gardens municipal, but are discussed separately); and
 - +8,000 acres is incorporated in the City of West Palm Beach (does not include water catchment area [conservation area] discussed separately).

Municipal total = 21,500 acres.

- **Conservation**
 - +12,800 acres is incorporated in the City of West Palm Beach as the Water Catchment Area;
 - +23,000 acres has been acquired by PBC for conservation purposes (includes the Loxahatchee Slough);
 - +23,625 acres in JWCWMA;
 - +1,963 acres is SFWMD; and
 - +2,117 acres is the Internal Trust Fund of the State of Florida.

Conservation total = 63,505 acres.

- **Developed or Have Development Approvals**
 - +21,302 acres is platted and developed for The Acreage;
 - +981 acres is platted for Stonewall Estates (Bay Hill);
 - +141 acres is platted for Carlton Oaks;
 - +306 acres is platted for Kramer's U/R;
 - +101 acres is platted for Osprey Isles;
 - +7,728 acres is platted for Loxahatchee Groves;
 - +642 acres is platted for Santa Rosa Groves;
 - +134 acres is platted for Tall Pine Acres;
 - +70 acres is platted for Waite Sub U/R;
 - +192 acres is platted Canal Pine Acres;
 - +487 acres is platted for Sunny Urban Meadows;
 - +296 acres is platted for Deer Run Plat 2;
 - +187 acres is platted for Las Flores Ranchos;
 - +331 acres is platted for Mandrell;
 - +139 acres is platted for Dellwood Estates;
 - +1,249 acres is platted for Deer Run;
 - +1,080 acres is platted for Fox Trail;
 - +186 acres is platted for Entrada Acres;
 - +123 acres is platted for Fox Property;
 - +7,792 acres is platted for Jupiter Farms;
 - +1,854 acres is platted for Caloosa;
 - +78 acres is platted for Trailwoods;
 - +2,012 acres is platted for Palm Beach County Estates;
 - +664 acres is platted for Eastpointe Country Club;
 - +451 acres is platted for Old Marsh Country Club;
 - +31 acres is platted for Okeechobee/441 (Heron Cove);
 - +681 acres is platted for Breakers West;
 - +31 acres is platted for Parkwood Estates;
 - +63 acres is platted for Thousand Pines (Phase I);
 - +418 acres is platted for Golden Lakes Village;
 - +28 acres is platted for Technology Park;
 - +46 acres is platted for Jasley PUD;
 - +16 acres is platted for Colony Park;
 - +25 acres is platted for Belvedere Isles II PUD;
 - +501 acres is platted for Vista Center;
 - +4,752 acres is PB Aggregates;
 - +660 acres is Lion County Safari;

- +796 acres is WCI/Parcel 19;
- +142 acres is Moroso Motorsports Park; and
- +5,700 acres is United Technologies/Pratt & Whitney.

Developed or have development approvals total = 61,704 acres.

- **Approved and Pending DRIs**

- +810 acres for Palm Beach Park of Commerce (approved);
- +1,832 acres for North Palm Beach County General Aviation Airport (approved);
- +1,920 acres for the PBCBRP;
- +3,872 acres for Callery Judge Grove;
- +2,000 acres for Gardens Scientific and Technology Community; and
- +2,763 acres for Vavrus South.

Approved and pending DRIs total = 13,197 acres

Approximately 21,500 acres are within municipal boundaries, 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.

Since adoption of the 1989 Comprehensive Plan, the development patterns and character of the region have changed significantly from what was envisioned. Properties have been annexed into the municipal boundaries of Palm Beach Gardens and West Palm Beach as these local governments have extended their boundaries west. Royal Palm Beach has annexed property in the southern part of the region. Site Specific Comprehensive Plan Land Use Amendments have been adopted allowing for additional intensity of development within the north-central area of Palm Beach County. Suburban-style development in the form of gated communities, increased construction of homes and services in The Acreage and Loxahatchee, an expanded transportation network, and retail opportunities and other community services have been planned for and constructed.

The area west of 20 Mile Bend in the Everglades Agricultural Area (EAA) is primarily in active agricultural use and has a land use designation of Agricultural Production. It is protected from development. The area east of Florida' Turnpike is developed. This places significant development pressure on the properties in north-central Palm Beach County. The northern lands

in the region are either held in conservation or platted as 1.25-acre lots, such as Jupiter Farms with a total of 5,048 lots, of which 81 percent are built out. The lands in the southern portion of the region, The Acreage, are also platted as 1.25-acre lots with a total of 15,786 lots, of which 76 percent are built out. Loxahatchee Groves at the southern end of the region is platted as five acre lots with a total of 1,555 lots of which 78 percent are built out. (Source: Palm Beach County Planning Department.)

The large agricultural operations in north-central Palm Beach County, primarily citrus production, have felt the most development pressure over the past two decades. The size of the parcels, combined with the decreased domestic demand for citrus, importing of citrus from other countries, and unpredictable weather patterns, have resulted in the property owners considering alternate uses for their property. In 1991, the owner of the 4,000-acre Vavrus property located just north of Northlake Boulevard, filed a DRI application seeking approval for over 11,000 dwelling units and 10 million square feet of retail/office/light industrial uses. The approval was never granted but the application was a clear indication that the agricultural properties were going to be phased out and replaced with more of a suburban style of development. In 2003, the owners of the Mecca property, now home of the PBCBRP, filed a Planned Unit Development application to rezone the property to permit 191 new home sites on the property. The owners of Callery Judge Groves, approximately 4,000 acres in the middle of The Acreage, have considered a new town development with a town center and home sites for the past decade. A DRI application for development of this property was submitted in November of 2004. Indian Trail Groves, along the western edge of The Acreage and with over 5 miles of common boundary along the JWCWMA, much like the Mecca site, is currently under contract with a major home builder, GL Homes of Florida, for development as a Planned Unit Development.

Since 1991, the Palm Beach County Board of County Commissioners (BOCC) has approved over 41,000 acres of Comprehensive Plan Site Specific Land Use Amendments within this area. Generally, these Comprehensive Plan Land Use Amendments have allowed for additional density and intensity to be developed or designated lands acquired by Palm Beach County for Conservation. As shown in **Table 3-1**, review of the land use changes adopted shows that over 280 acres of land has been converted from residential land use to commercial land use, allowing an additional 3.4 million square feet of development. Also, since 1999, over 4,300 acres of land has been annexed into the surrounding municipalities of the City of Palm Beach Gardens, the City of West Palm Beach, and the Village of Royal Palm Beach, a breakdown of which is shown in **Table 3-2**. (Source: Palm Beach County Planning Department.)

Palm Beach County's population has continued to grow at an average rate of almost 50 percent per decade over the past two decades. (Source: CBRE). This population growth has put enormous pressure on rural and agricultural lands to transition from low intensity development to moderate intensity development, and also to provide needed services including employment, retail, and community services.

**TABLE 3-1
PALM BEACH COUNTY COMPREHENSIVE PLAN SITE SPECIFIC LAND USE AMENDMENTS**

Amendment ID	Amendment Name	Original FLU	Proposed FLU	Ordinance Number	Acres	Original Intensity	Permitted Intensity	Change
6-COM 3		RR-10	CL/CL-O	1991-31	36.46	3 DU _s	555,869 sf	Increase 55,869 sf
57-COM 18		LR3	CH/8	1991-31	17.85	35 DU _s	272,141 sf	Increase 272,141 sf
62-COM 7		RR-10	CL/RR-10	1991-31	8.65	1 DU*	131,877 sf	Increase 131,877 sf
13 CR 1		RR-10	CR/RR-10	1992-31	15.00	1 DU	228,690 sf	Increase 228,690 sf
57 RES 1		IND, LR-3, C/IND	HR-8	1993-11	27.81			
94-48 CON 1		RR-20	CON	1994-32	322.84			
95-63 IND 1		U/T	IND	1995-61	20.00			
SCA 96-S-3		RR-10	CL/RR-10	1996-24	9.98	1 DU	152,155 sf	Increase 152,155 sf
96-D2		LR-1	INST	1996-49	55.00	55 DU _s	838,530 sf	Increase 838,530 sf
96-D2		LR-1	HR-12	1996-49	18.00	18 DU _s	144 DU _s (8 DU _s /ac)	Increase 126 Du
96-D2		LR-1	CH	1996-49	53.00	53 DU _s	808,038 sf	Increase 808,038 sf
96-D2		LR-1	CON	1996-49	1,567.00			
96-4 CON 1		RR-20	CON	1996-52	100.00			
96-7 CON 1		CON	RR-10	1996-52	26.27			
96-7 CON 2		RR-10	CON	1996-52	7.50			
96-7 CON 1 (Lox. River)		RR-10	CON	1996-52	315.89			
96-56 RES 1		MR-5	HR-8	1996-59	16.36	65 DU _s	130 DU _s	Increase 65 DU _s
SCA 55 COM 1		RR-10	CL	1997-19	5.00	1 DU	76,230 sf	Increase 76,230 sf
97-56 U/T 1 (Turnpike/Jog)		IND, LR-3, C/IND	U/T	1997-43	15.81			
97-34 COM 1		RR-10	CL/RR-10	1997-47	24.67	2 DU _s	376,118 sf	Increase 376,118 sf
98-29 RES1		IND	LR-1	1998-56	142.33			
99-56 INST 1		MR-5	INST/8	1999-56	7.09	28 DU _s	108,094 sf	Increase 108,094 sf
00-17 CON 1		RR-20	CON	2000-33	445.27			
00-87 CON 1		MR-5, LR-2	CON	2000-33	39.26			

TABLE 3-1 (CONTINUED)
PALM BEACH COUNTY COMPREHENSIVE PLAN SITE SPECIFIC LAND USE AMENDMENTS

Amendment ID	Amendment Name	Original FLU	Proposed FLU	Ordinance Number	Acres	Original Intensity	Permitted Intensity	Change
00-21 CON 1		MR-5	CON	2000-33	3.44			
00-03 CON 1		RR-20, IND	CON	2000-33	6,844.00			
00-56 CHX 1		CHX/IND	CH	2000-36	0.92			
00-14 RR 1	Change to Reflect Existing Density	RR-10	RR-2.5	2000-56	21,100.00			
00-14 RR 1	Change to Reflect Existing Density	RR-10	RR-2.5	2000-56	2,000.00			
00-35 RR 2	Change to Reflect Existing Density	RR-10	RR-5	2000-57	329.00			
00-56 COM1		CH/IND	CH	2000-59	7.47			
00-29 RES 1		RR-10	LR-1	2000-60	11.45	1 DU	11 DUs	Increase 10 DUs
00S-63 COM 2	Belvedere Commerce Center	IND .45	CH .50	2001-022	1.38	27,050 sf	30,056 sf	Increase 3,006 sf
01-63 COM 1	Southern/Turnpike	IND	CH	2001-036	6.69	131,137 sf	145,705 sf	Increase 14,571 sf
01-40 RR 1	Tall Pines: Change to Reflect Existing Density	RR-10	RR-5	2001-042	134.00			
01-40 RR 2	Waite's Subdivision: Change to Reflect Existing Density	RR-10	RR-5	2001-042	70.00			
01-39 RR 2	Canal Pine Acres: Change to Reflect Existing Density	RR-10	RR-5	2001-042	200.00			
01-46 RR 2	Mandell: Change to Reflect Existing Density	RR-10	RR-5	2001-042	331.00			
01-46, 47 RR 1	Deer Run Plat 2: Change to Reflect Existing Density	RR-10	RR-5	2001-042	286.00			
01-49 RR 1	Las Flores Ranchos: Change to Reflect Existing Density	RR-10	RR-5	2001-042	187.00			
01-49 RR 2	Delwood: Change to Reflect Existing Density	RR-10	RR-5	2001-042	139.00			
01-52, 53 RR 1	Deer Run: Change to Reflect Existing Density	RR-10	RR-5	2001-042	1,249.00			
01-60 RR 1	Entrada Acres: Change to Reflect Existing Density	RR-10	RR-5	2001-042	185.00			
01-53, 60 RR 1	Fox Trails: Change to Reflect Existing Density	RR-10	RR-5	2001-042	1,080.00			
01-11 EDC 1	United Technologies	IND .45	EDC .45	2001-053	275.60			No Change in Intensity
01-3 CON 1	Environmentally Sensitive Lands	IND	CON	2001-056	180.80			
01-4 CON 1	Environmentally Sensitive Lands	IND	CON	2001-056	58.85			
01-11 CON 1	Environmentally Sensitive Lands	IND	CON	2001-056	25.60			
01-11 CON 2	Environmentally Sensitive Lands	IND	CON	2001-056	133.80			
01-57 COM 1	Auto Nation MPUD	CH/IND	CH	2001-058	29.09			
01-57 COM 2	Palm Beach Plaza MPUD	CH/IND	CH	2001-058	27.25			
01-56 COM 4	Thousand Pines Plaza	C/3	CL	2001-088	9.78			
01-54, 55, 61, 62 RR	Rural FLU Revisions, Loxahatchee Groves: Change to Reflect Existing Density	RR-10	RR-5	2001-089	1,800.00			
01-56 COM 3	Okeechobee Boulevard Properties	CH/8	CH	2001-095	17.12			
01-56 COM 2	Okeechobee Boulevard Properties	C/8	CH	2001-095	18.93			

TABLE 3-1 (CONTINUED)
PALM BEACH COUNTY COMPREHENSIVE PLAN SITE SPECIFIC LAND USE AMENDMENTS

Amendment ID	Amendment Name	Original FLU	Proposed FLU	Ordinance Number	Acres	Original Intensity	Permitted Intensity	Change
01-56 COM 1	Okeechobee Boulevard Properties	HR-12 (8)	CH	2001-095	9.88	79 DU _s	215,186 sf	Increase 215,186 sf
01-23 U/T 1	North County Airport	RR-10	UT	2001-097	57.11			
02-063 IND 1	Royall Wall Systems	UT	IND	2002-038	13.99			
02-011 CON 1	Pal-Mal Outparcel	IND	CON	2002-057	5.30			
LGA 2002-0023	Commercial Categories	C/IND	CH/IND	2002-087	20.66			
LGA 2002-0008	Osprey Isles Residential (Non- Utilized Uses)	INST/1	LR-1	2002-089	98.81			
LGA 2002-0015	Palms West Hospital (Non-Utilized Uses)	INST/18	INST	2002-089	45.74			
N/A	Scrivner's Error	RR-10	RR-2.5	2003-032	97.92			
LGA 2003-0011	Murphy Property	UT	IND	2003-044	40.00			
LGA 2003-0007	Solid Waste Authority/Pike Road	UT	IND	2003-045	73.84			
LGA 2003-0015	Acree Pines Natural Area and Community Park	RR-10	CON	2003-045	169.75			
SCA 2003-0002	Belvedere Commerce Center 2	IND .45	CH .50	2003-047	7.39	144,858 sf	160,954 sf	Increase 16,096 sf
LGA 2003-0038	Commercial Categories 3	C/3	CL/3	2003-065	9.18			
LGA 2003-0031	Cypress Creek ESL	RR-10	CON	2003-066	598.76			
LGA 2004-00010	"F" Road	RR-10	CL-O/RR-10	2004-067	3.64	1 DU	31,711 sf	Increase 31,711 sf
LGA 2004-00035	"E" Road	RR-10	CL-O/RR-10	2004-068	9.13	1 DU	79,540 sf	Increase 79,540 sf
LGA 2004-00034	"D" Road	RR-10	CL/RR-10	2004-069	1.63	1 DU	14,200 sf	Increase 14,200 sf

* Assumes lot of record when RR-10, but less than 1 acre in size.

Intensities calculated on maximum density permitted by land use designation and maximum for permitted by land use and/or zoning designation.

Indicates an increase in intensity of land use designation.

Indicates a change to the conservation land use designation.

**TABLE 3-2
ANNEXATION ACTIVITY SINCE 1999**

Annexation ID	Annexation Name	Acres	Fiscal Year	City ID	Municipality
1999-72-001	Okeechobee Site	64.90	1999	72	Royal Palm Beach
1999-72-003	Walgreens/Albertsons/Church	24.08	1999	72	Royal Palm Beach
1999-74-001	Rolfs Property	3,171.14	1999	74	West Palm Beach
2000-72-001	Country West	72.55	2000	72	Royal Palm Beach
2000-74-001	Andros Isle Outparcel	9.90	2000	74	West Palm Beach
2001-30-004	WCI/Communities Finance	804.60	2001	30	Jupiter
2001-74-001	Fillmore Property, Ltd.	6.70	2001	74	West Palm Beach
2002-72-001	Fox-Heise/Village Shoppes	5.73	2002	72	Royal Palm Beach
2002-72-002	Palms West Hospital Part 1	28.60	2002	72	Royal Palm Beach
2003-72-001	Haas Property	0.69	2003	72	Royal Palm Beach
2003-72-002	Sunshine Properties	9.50	2003	72	Royal Palm Beach
2004-52-001	Northlake Boulevard Properties	61.91	2005	52	Palm Beach Gardens
2004-72-003	RPB ROW	38.09	2004	72	Royal Palm Beach
2004-72-004	Golden Corral	3.09	2004	72	Royal Palm Beach
2004-74-001	Sedona Commons	2.05	2004	74	West Palm Beach
2004-74-002	Sansbury Annexation	8.88	2004	74	West Palm Beach
Total		4,312.41			

Due to all of the development pressures and other factors discussed previously, it is anticipated that the Mecca, Vavrus, Indian Trail Groves, and Callery Judge Groves properties, along with other moderate sized properties in the north-central area, will transition to some form of non-agricultural development. The change is inevitable based on the past and current development trends and the need to provide housing and community services for a growing population. This trend is not inconsistent with the development trends experienced in the southern part of Palm Beach County adjacent to the Arthur R. Marshall Loxahatchee National Wildlife Refuge (LNWR). Two decades ago, the lands west of Jog Road were primarily very low density residential and agricultural in use. Development pressures from the south and the east resulted in the conversion of most of this land to higher density residential and commercial uses to serve a growing population. Palm Beach County instituted planning initiatives such as the Agricultural Reserve Study Area and the West Boynton Community Plan to plan for and manage the growth, and to protect the LNWR. These initiatives have resulted in well-planned developments in the area and are the templates for planning initiatives being undertaken in the north-central region of the county.

The Agricultural Reserve Study Area resulted in Comprehensive Plan and Land Development Code amendments to direct growth and established a development pattern that will allow for the construction of residential home sites and community services, yet also protect the environment, and preserve and protect existing agricultural activities. These standards included provisions for clustering of residential development parcels on 40 percent of a property with preserve areas established for either agricultural or environmental purposes on 60 percent of the property, and strategically locating commercial services in a traditional town center design in limited areas

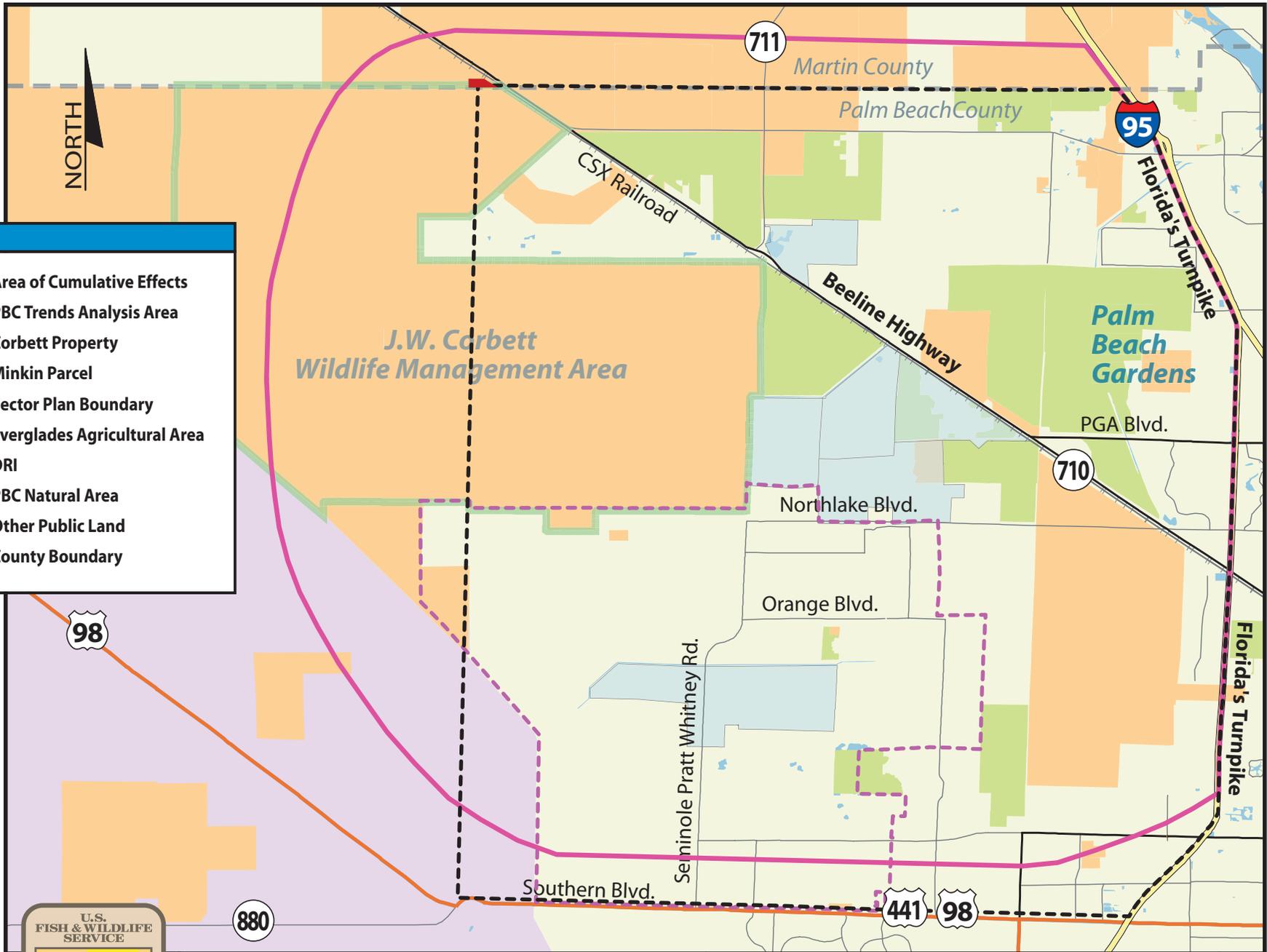
central to the study area. Palm Beach County and SFWMD also pursued acquisition of properties for environmental preservation and water management purposes. The Agricultural Reserve Study Area is approximately 75 percent planned and the majority of the proposed developments are under construction. The Comprehensive Plan and Land Development Code requirements have resulted in an efficient and organized development pattern that furthers Palm Beach County's goals of managing growth, protecting the LNWR, and preserving agricultural activities.

A similar approach to growth management and environmental protection is being pursued in the areas adjacent to the JWCWMA. Based on these past trends and planning models, regional planning initiatives have been implemented. The Comprehensive Plan and Land Development Code amendments adopted in conjunction with the PBCBRP and the Multi-Use Site direct not only the intensity of development but also the form and design. There are specific requirements incorporated into both the Comprehensive Plan and Land Development Code that require protection of the adjacent conservation areas.

Recognizing that population growth in the County has put enormous pressure on rural and agricultural lands to transition from low intensity uses to moderate intensity development, and also to provide needed services including employment, retail and community services and desiring to pro-actively plan for the anticipated future growth, Palm Beach County has undertaken several planning initiatives in the past two decades in the north-central region to direct this growth. These are:

- Environmentally Sensitive Lands Acquisition,
- Western Northlake Boulevard Corridor Planning Area,
- Growth Management Tier System, and
- Sector Planning Effort.

In 1991, Palm Beach County residents authorized a \$1 million bond referendum for the acquisition of environmentally sensitive lands, which resulted in the purchase of over 22,000 acres. On March 9, 1999, the residents of Palm Beach County authorized by referendum additional funds for land acquisition to further protect environmentally sensitive lands, water resources, green ways, agricultural lands, and open space. So far, 38 sites, containing over 12,000 acres of land, have been identified for future acquisitions. Through these programs, Palm Beach County has acquired over 23,000 acres of land in the north-central Palm Beach County area. These acquisitions are primarily located north of Northlake Boulevard on both the northeast and southwest sides of the Beeline Highway, as shown on **Figure 3-2**. (Source: Palm Beach County Department of Environmental Resources Management.)



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

TRENDS ANALYSIS MAP

Figure 3-2

On April 20, 1999, three jurisdictions entered into an Interlocal Agreement providing for heightened review regarding lands located within the Western Northlake Boulevard Corridor Planning Area. The three jurisdictions were Palm Beach County, Palm Beach Gardens, and the City of West Palm Beach. The agreement was based on a study that examined the existing land use patterns and future land use along Northlake Boulevard, generally west of the West Palm Beach Water Catchment Area, and south of the Beeline Highway. The area was primarily rural in character and experiencing an increased pressure for growth and urban development. Additionally, there is a substantial amount of publicly-owned environmentally sensitive land/conservation lands within the area, thus adding to the need to plan and coordinate the area's growth. The study contained recommendations for future land use designations and growth management techniques in order to ensure efficient growth and development, which were incorporated into the agreement.

The recommendations carry out the objective of the study focusing on: better delineation between the rural and urban/suburban uses; protecting the rural character of the area; discouraging premature conversion of rural lands to urban uses; and intergovernmental coordination. The Interlocal Agreement implements this initiation within the three municipal governments.

On August 19, 1999, the BOCC adopted an amendment to the Comprehensive Plan, known as the Managed Growth Tier System, which strengthens the County's growth management policies and provides a stronger relationship between the Land Use, Transportation, Economic Development, and Utilities Elements. As a result, the County's Comprehensive Plan addresses land use, design, facilities and services, water resource management, and natural features to determine the present and long range needs which will preserve the distinct geographic areas of the County while meeting future population demands.

In July of 2000, Palm Beach County initiated a regional comprehensive planning project in central-western Palm Beach County, known as the Central Western Communities Sector Plan. The Managed Growth Tier System serves as a basis for the Sector Plan. Based on the land development patterns, facilities and services, and natural features of the region, the Managed Growth Tier System identifies the Sector Plan region as being part of the Exurban and Rural Tiers.

The Sector Plan region comprises over 57,000 acres. The boundaries of this region are located within unincorporated Palm Beach County outside of the Urban Service Area and are generally described as: Southern Boulevard to the south; 20 Mile Bend, L-8 Canal, and the JWCWMA to the west; Beeline Highway to the north; and the County's Urban Service Area and the municipal boundaries of the City of Palm Beach Gardens, the City of West Palm Beach, and the Village of Royal Palm Beach to the east, excluding the Bay Hill (Stonewall) and Rustic Lakes (Kramer) subdivisions. The region is adjacent to four municipalities on the eastern, southern, and northern boundaries. These are: Palm Beach Gardens to the northeast, West Palm Beach and Royal Palm

Beach to the east, and Wellington to the south. Approximately 40 acres of commercial development have been approved to serve the needs of the current population, estimated in 1999 at 32,538 people. The region is primarily rural in character and is provided with rural levels of service by the County and several special districts. If development continues at its current pace, based on the number of grandfathered lots in the region, it is anticipated the region will be home to more than 55,000 residents by the year 2015. (Source: PZ&B Population Disaggregation Model.)

The Sector Plan legislation allows the establishment of a framework for managing growth to achieve the benefits of long-range planning for the build out of a region. It also provides for detailed planning for specific areas within the region. The sector planning process is continuing to the present day, with public meetings and workshops. The Palm Beach County BOCC considered the Sector Plan at their April 6, 2005 Transmittal Hearing for Round 2005-1. They approved and transmitted the Sector Plan to the State of Florida Department of Community Affairs (DCA).

The prevailing development trend in Palm Beach County in general, and the north-central region specifically, is for increased residential density and non-residential intensity. As described in **Table 3-3**, infrastructure and systems in this region can accommodate additional growth and development. There is limited land area left in the region for significant development opportunities. Most of the property is either platted antiquated subdivisions as low density residential or preserved either by the State of Florida or Palm Beach County for conservation purposes. Two of the large citrus groves, Mecca Farms and Callery Judge Groves, have already entered the development process as DRIs. The Mecca Farms site has gained approvals for the PBCBRP, a mixed use project with a significant employment center, town center with commercial services, and residential units at a medium density. The Callery Judge Groves property is seeking development approvals for a mixed use project as well. It is presumed that this transition from agricultural production to moderate density residential and mixed use developments will occur on the majority of the remaining available property in the region.

Recognizing that many of the vacant properties and large agricultural tracts in the north-central area would develop, the Palm Beach County BOCC has implemented several planning initiatives, as previously outlined, to direct this growth in a manner that promotes a stronger tie with other infrastructure improvements including transportation and utilities, and a diversification of the economy, including providing workforce opportunities in the western communities. The PBCBRP will further these goals by incorporating the “livable communities” directives of the Palm Beach County Comprehensive Plan, including providing for a well designed mixed use project that includes opportunities to live, work, learn, and play.

**TABLE 3-3
REGIONAL INFRASTRUCTURE/SYSTEMS**

Infrastructure/ Systems	North-Central Region Palm Beach County
Existing Land Use/Proposed Land Use	The southern section of the region is developed with the Village of Royal Palm Beach and the unincorporated areas of Palm Beach County, known as Loxahatchee Groves and The Acreage. The northern section of the region is in transition from agricultural uses to residential and non-residential development. Cropland and abandoned farmland, drainage ditches, and pine flatwoods are the predominant character. There have been large tracts of land acquired for conservation. Existing industrial uses include the Palm Beach Park of Commerce and Pratt Whitney Industries. Proposed land uses will include mixed-use commercial, light industrial, warehouse, and residential.
Transportation	There are several major transportation corridors in the region, including Southern Boulevard., Northlake Boulevard., PGA Boulevard, and Indiantown Road running east-west; and the Beeline Highway, Seminole Pratt Whitney Road, and Coconut Boulevard running north-south. There are improvements and expansions required for many of the roads in the network as part of the conditions of approval imposed on the PBCBRP, including the extension of PGA Boulevard west of the Beeline Highway. Other developments also have/will have conditions of approval for roadway improvements tied to their development orders.
Transit	Limited public transit service is available to this region, mostly in the southern section through Royal Palm Beach. Palm Beach County Palm Tran has plans to extend the service north and west to the PBCBRP via Northlake Boulevard and PGA Boulevard. There is an existing rail line that runs on the west side of the Beeline Highway.
Potable Water	The southern section of the region is served with public water via the Village of Royal Palm Beach. Most other areas are not on public utilities, except for community services such as retail centers and schools. Other utility service providers in the area include Palm Beach County Water Utilities Department., the City of West Palm Beach, Northern Palm Beach County Improvement District, the Town of Jupiter, and Seminole Improvement District.
Wastewater	The southern section of the region is served with public sewer via the Village of Royal Palm Beach. Most other areas are not on public utilities, except for community services such as retail centers and schools. Other utility service providers in the area include Palm Beach County Water Utilities Department, the City of West Palm Beach, Northern Palm Beach County Improvement District, the Town of Jupiter, and Seminole Improvement District.
Stormwater Runoff	Runoff volume and water quality in the region will be in accordance with the current rules of SFWMD, and the applicable drainage district. Drainage districts in the region include the Indian Trail Improvement District, Seminole Improvement District, Northern Palm Beach County Improvement District, and ENCON.

3.2.3 Application Process and Impacts from Proposed Small Scale Projects in the Study Area (Sub-DRI)

As stated in the previous section, many developments in Florida fall below the threshold of a DRI. However, each of these “sub-DRI” developments is required to obtain permits for activities, as shown in **Table 3-4**. Sub-DRI 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 3-5** addresses the DRI threshold level for different development types. While not all of the development types may occur in Palm Beach County, they were listed to illustrate the scope of development that is regulated through the DRI process.

**TABLE 3-4
PERMITTING REQUIREMENTS FOR SUB-DRI DEVELOPMENTS**

Category	Reviewing Agencies	Review/Permits	Mitigation Measures
Botanical	Palm Beach County DERM SFWMD FDA USFWS/NMFS	Protected Species - Biological Assessment/Biological Opinion/Incidental Take Permit Trees - Tree Removal Permit	Habitat Creation Habitat Enhancement Habitat Preservation Tree Replacement
Wildlife	Palm Beach County DERM FWC USFWS/NMFS	Protected Species - Biological Assessment/Biological Opinion/Incidental Take Permit	Habitat Creation Habitat Enhancement Habitat Preservation
Ecologic	Palm Beach County DERM SFWMD/FDEP (Wetlands) USACE (Wetlands)	404 Dredge and Fill Permit Environmental Resource Permit	Wetlands Creation Wetlands Enhancement Habitat Preservation
Stormwater	SFWMD FDEP	Environmental Resource Permit NPDES - SWPPP	Stormwater Treatment Stormwater Attenuation Floodplain Compensation
Cultural and Historic	SHPO	Cultural Resource Clearance	Documentation Recordation 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 3-5
DRI THRESHOLDS FOR PALM BEACH COUNTY, FLORIDA,
PER SECTION 380.0651, FLORIDA STATUTES**

Development Type	DRI Threshold¹
Residential	3,000 units.
Airports	<ul style="list-style-type: none"> • New airport; new commercial service at airport with paved runways. • New passenger terminal facility; lengthening an existing runway 25%. • Increasing the number of gates by 25% or three (whichever is greater).
Attraction	<ul style="list-style-type: none"> • Single performance: 2,500 parking spaces or 10,000 permanent seats; or • Serial performance: 1,000 parking spaces or 4,000 permanent seats.
Movie Theater	8 screens, 2,500 seats, 1,500 parking spaces.
Hospitals	<ul style="list-style-type: none"> • 600+ beds or will service citizens of more than one county. • All facilities less than 101 beds are exempt.
Industrial	320 acres or 2,500 parking spaces.
Mining	<ul style="list-style-type: none"> • Removes/disturbs more than 100 acres annually; or • Water consumption equals more than 3 million gallons per day.
Office	<ul style="list-style-type: none"> • 300,000 SF gross; or • 600,000 SF gross in an area suitable for an increase in threshold intensity.
Port and Marina Facilities	<ul style="list-style-type: none"> • Wet storage of more than 150 sport/pleasure watercraft and/or commercial fishing; or • Dry storage of more than 200 sport/pleasure watercraft and/or commercial fishing; or • 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 • Wet or dry storage of more than 50 sport/pleasure watercraft of 40 feet in length or less; or • 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	<ul style="list-style-type: none"> • Any facility with storage capacity of over 50,000 barrels within 1,000 feet of any navigable water; or • Any other facility with storage capacity of over 200,000 barrels; or • 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	<ul style="list-style-type: none"> • 350+ units; or • 750+ units in an area suitable for increased threshold intensity.
Recreation Vehicle Development	500+ spaces.
Multiuse Development	<ul style="list-style-type: none"> • Two or more land uses- sum of the thresholds is greater than 145%; or • 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	<ul style="list-style-type: none"> • 5,000+ full time students; or • Physical expansion that would increase the student population by 20%; but • Does not apply to campus master plan adopted by the University's board of trustees.
Single Owner Development	<p>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:</p> <ul style="list-style-type: none"> • 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 • The voluntary sharing of infrastructure; or • 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.

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.

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.

3.2.4 PROPOSED LARGE SCALE DEVELOPMENT OF LANDS IN THE STUDY AREA (DRIs)

DRIs 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 concept of the PBCBRP (see **Table 3-6** for a list and timeline). However, since 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 mix. Pursuant to Chapter 380, Florida Statutes, Regional Planning Councils (RPCs) are charged with the coordination of multi-jurisdictional agency review of large-scale development projects that may have more of a regional impact than smaller developments. These projects are known as DRIs.

If a project attains a threshold of development, either with the number of residential units, area of commercial or industrial space, or area impacted by natural resource extraction, it is reviewed by local, regional, and state agencies. The DRI process is a multi-level review that involves several regulatory agencies, spanning planning and growth management and including water resources, historical and cultural resources, public safety, disaster preparedness, wildlife and ecological resources, and transportation (see **Table 3-7**). The public has an opportunity to review and comment on the DRI document as well as participate in a public review through the public hearing process.

The DRI process commences with a pre-application meeting with the local RPC. The meeting facilitates the discussion of relevant issues of the project as well as determining what methodology will be used for transportation, housing, and wildlife studies.

**TABLE 3-6
TIMELINE OF DRI DEVELOPMENT**

DRI	Action	Date
Palm Beach Park of Commerce (#1 in Figure 3-1)	Effective Date	February 2, 1982
North Palm Beach County General Aviation Airport (#4 in Figure 3-1)	Effective Date	February 22, 1990
Palm Beach County Biotechnology Research Park	Expedited Pre-Application Meeting	March 10, 2004
Palm Beach County Biotechnology Research Park	Pre-Application Meeting	March 29, 2004
Callery Judge Grove	Pre-Application Meeting	April 22, 2004
Garden Science & Technology Community	Pre-Application Meeting	April 29, 2004
Palm Beach County Biotechnology Research Park	ADA Submittal	May 10, 2004
Garden Science & Technology Community (#3 in Figure 3-1)	ADA Submittal	May 28, 2004
Callery Judge Grove	ADA Submittal	July 12, 2004
Palm Beach County Biotechnology Research Park	Assessment Report	July 16, 2004
Palm Beach County Biotechnology Research Park	Transmitted to Palm Beach County	July 30, 2004
Callery Judge Grove	Insufficiency Letter	August 17, 2004
Vavrus Ranch South (#5 in Figure 3-1)	Pre-Application Meeting	August 25, 2004
Palm Beach County Biotechnology Research Park	Treasure Coast RRPC to Discuss	November 19, 2004
North Palm Beach County General Aviation Airport DRI	Buildout Date	2005
North Palm Beach County General Aviation Airport DRI	Expiration Date	2010
Palm Beach Park of Commerce DRI	Buildout Date	2014
Callery Judge Grove (#6 in Figure 3-1)	Buildout Date	2019
Palm Beach County Biotechnology Research Park	Buildout Date	2030

 = Actions related to the Palm Beach County Biotechnology Research Park (#2 in Figure 3-1).

**TABLE 3-7
DRI REVIEW AGENCIES, REVIEWS, IMPACTS, AND MITIGATION**

DRI Review Category	Mitigation Measures	Reviewing Agencies	Review and Permit(s) for Impacts
Air Quality	Provision for Transit Monitoring Program	FDOT FDEP Palm Beach County Treasure Coast RPC	Base Level Established Air Quality Monitoring
Airports	Noise Monitoring Air Quality Monitoring	FDOT FAA (if DRI is an airport)	
Botanical	Habitat Creation Habitat Enhancement	FWC Palm Beach County SFWMD Palm Beach County DERM	Botanical Assessment Aquatic Plant - SFWMD
Ecologic	Habitat Creation Habitat Enhancement	FWC USACE (Wetlands) SFWMD (Wetlands)	Ecologic Assessment Habitat Management Plan
Energy		Palm Beach County Treasure Coast RPC	Letter of Availability
Health Care	Funds for Additional Beds Donation of Land	Palm Beach County	Certificate of Need Review
Historical/ Archaeological	Cultural Resource Management Plan	FDHR	Cultural Resource Review

TABLE 3-7 (CONTINUED)
DRI REVIEW AGENCIES, REVIEWS, IMPACTS, AND MITIGATION

DRI Review Category	Mitigation Measures	Reviewing Agencies	Review and Permit(s) for Impacts
Housing	Housing Set-Asides Payment for Housing	Palm Beach County Treasure Coast RPC	East Central Florida RPC Housing Methodology
Hurricane	Evacuation Plan Mitigation Plan	Palm Beach County Emergency Operations	Palm Beach County Policy State of Florida Policy
Other - Planning	Comprehensive Plan Amendment Text Amendment Map Amendment	Palm Beach County Treasure Coast RPC	
Potable Water	Conservation Measures Alternate Water Resources Xeriscape Regulations	Palm Beach County Treasure Coast RPC FDEP Florida Department of Health SFWMD	Consumptive Use Permit Environmental Resource Permit
Schools	Land Donation Funds for Student Stations	Palm Beach County School Board	Letter of Capacity
Solid Waste	Recycling Policies Additional Capacity	Palm Beach County	Letter of Capacity Solid Waste Concurrency
Stormwater	Treatment/Attenuation Floodplain Compensation	Palm Beach County Treasure Coast RPC SFWMD	Surface Water Management
Transit	Transit Improvements Additional Capacity ROW Dedication	FDOT Palm Beach County Treasure Coast RPC Palm Beach MPO	
Transportation	Roadway Improvements Additional Capacity ROW Dedication	FDOT Palm Beach County Treasure Coast RPC	FDOT Permits Transportation Concurrency
Wastewater	Additional Capacity Extension of Central Lines	Palm Beach County Treasure Coast RPC FDEP	Letter of Capacity FDEP Permits Environmental Resource Permit
Wildlife	Habitat Creation Habitat Enhancement	FWC Palm Beach County	Wildlife Assessment Management Plan
Other Categories			
Industrial Plants		FDEP Local Government Agency	
Mining Operations	Mitigation: Create Habitat Enhance Habitat	FDEP Local Government Agency Local Water Management District	Consumptive Use Permit Environmental Resource Permit
Petroleum Storage		FDEP Local Government Agency Florida Department of Agriculture	Environmental Resource Permit
Port Facilities		FDOT FDEP	
Theme Parks		RPC Local Government 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

The submittal of the ADA document is the formal request for approval of the development. The document details the existing conditions of the subject site, the entitlements of the proposed development, impacts to the subject site and area, and mitigation/management measures for any impacts. The regulatory agencies generate comments and requests for additional information (RFI). The applicant responds to the RFI and the project proceeds to approval and adoption by the local government agency.

Once the ADA is deemed sufficient for review, the RPC staff notifies the local government that it may schedule a public hearing to consider a Development Order (DO) for the project. Following the sufficiency notice from the RPC, the local government shall set the public hearing at its next scheduled meeting. The local government shall publish a notice 60 days in advance of the public hearing, and the hearing shall be held no later than 90 days after issuance of the notice by the RPC unless the applicant requests an extension.

Within 50 days after receipt of the notice of public hearing from the local government, the RPC staff prepares a draft impact assessment report for consideration. After action by the RPC, the assessment report is transmitted to the local government for its consideration in preparing the final DO.

The local government adopts a DO at the public hearing taking into consideration the RPC's findings and recommendations and renders a copy of the DO to the RPC, the DCA, and the applicant/landowner. The DCA and the applicant/landowner have 45 days from the rendering date to appeal the DO to the Florida Land and Water Adjudicatory Commission.

During the 45-day appeal period, the RPC staff reviews the DO for consistency with their recommendations and with statutory requirements. The RPC staff reports its findings along with a recommendation to advise the DCA whether to appeal or not to appeal the adopted DO. If there is no appeal within the 45-day appeal period, the DO takes effect. If an appeal is filed, the DO takes effect following the resolution of the appeal.

During the DRI review process, effects created by the DRI are identified and a general plan for mitigation for each impact is submitted. The type and extent of the impact will determine if it will be mitigated on-site. The appropriate regulatory agencies will work with the DRI applicant in determining the appropriate mitigation. Mitigation may occur on-site, such as by the creation of new wetlands or enhancement of existing wildlife habitat. In some cases, the impacted resource is improved. An example is the improvement of hydrological links or habitat area for wildlife species. After the approval of the DRI, a formal mitigation plan is submitted to the appropriate regulatory agency as a part of the development review process. The regulatory agency reviews the mitigation plan and determines if the mitigation plan is appropriate in size, scope, and breadth and takes into account the effect the DRI would have on resources on and off the project site.

Generally, each DRI is responsible for the direct impacts it generates 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, 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 Statute to monitor its development and effects on the area and summarize their findings in an Annual Report submitted to the RPC and reviewing agencies. For example, the methodology for traffic, air quality, and water quality are established in the 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.

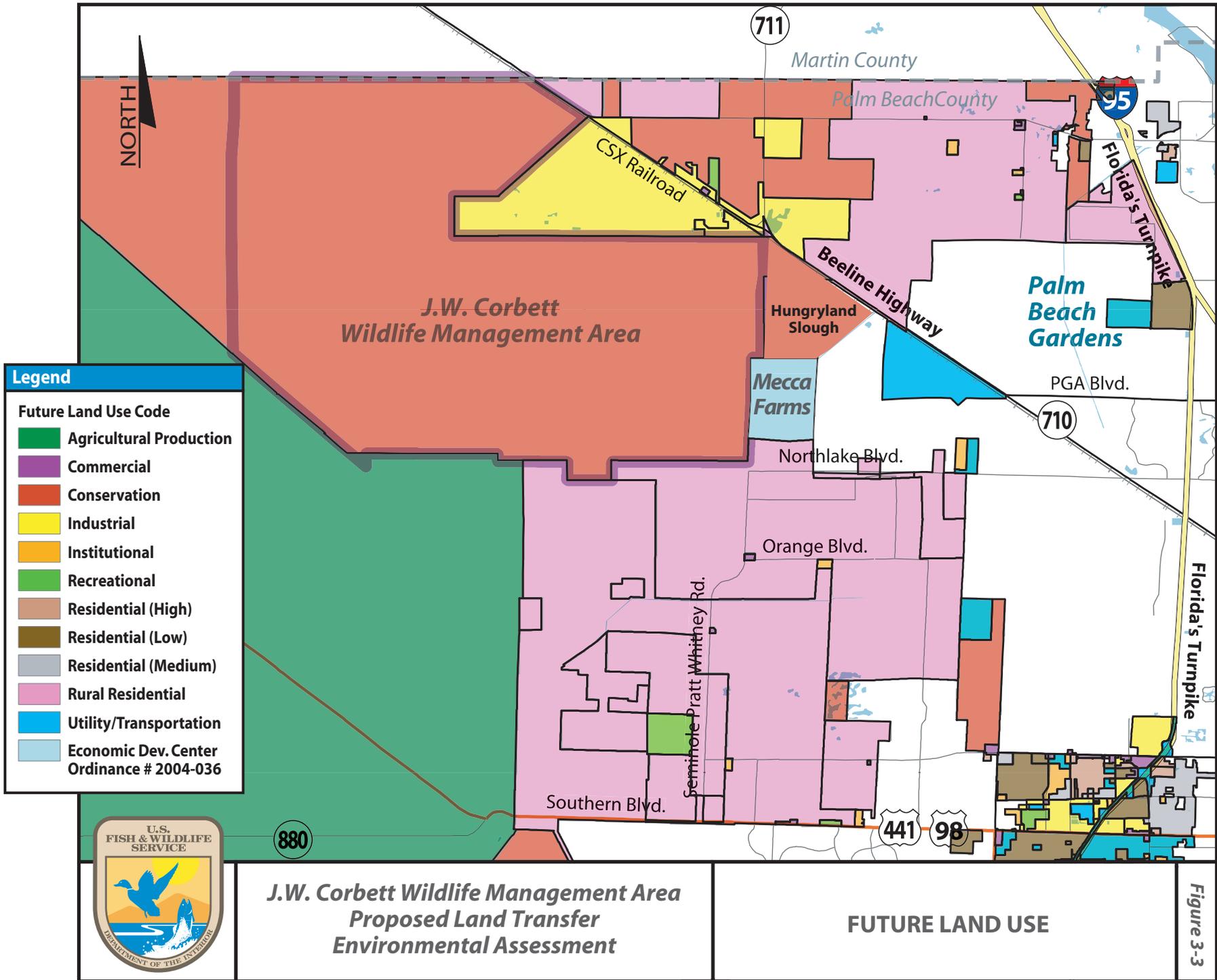
Any significant changes that may occur to the DRI over an established threshold would trigger a Notice of Proposed Change (NOPC). The NOPC process would allow regulatory agencies to review the proposed change(s) and their potential effects, permitting revisions to the DO.

An illustration of the proposed land transfer area in relation to the surrounding DRIs is illustrated on **Figure 3-3**.

3.2.4.1 Results of Search for Cumulative Effects

The result of our search and discussion in Section 3.2.2 indicate that 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 agriculture 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. Currently, the municipal boundaries 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.

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.



In addition to our examination of the actions discussed in Section 3.2.2, we examined six DRIs, identified in Figure 3-1 and noted in Table 3-6, to complete our cumulative analysis in projecting the reasonable and foreseeable future development with the study area. Table 3-6 illustrates the timeline of DRI development in the area of the land transfer. Two of the DRIs, the Palm Beach Park of Commerce and the North Palm Beach General Aviation Airport, were approved in the early 1980s. Phased development of the DRIs was complete prior to the submittal of the PBCBRP for DRI review. Therefore, the development of the two DRIs can be considered as background. Three DRIs are under consideration for development. Project applicants for two other large parcels in the area, the Indian Trail Groves and the Vavrus Ranch South, have had preliminary discussions with the TCRPC. However, the applicants have not indicated when they would submit their DRI applications for review.

Although cumulative impacts may carry forward for many decades, the actual time of influence attributable to a single project should generally diminish as the facility approaches its buildout. Therefore, it is recommended that buildout be used as the maximum period of time that a project can be expected to contribute to potential secondary and cumulative effects.

Our analysis of the effects and mitigation for each DRI are identified in **Table 3-8**. The DRIs are arranged in chronological order by approval date. Note that two DRIs were approved in the 1980s and subsequent DRIs have been submitted for review and approval in the past year, with the PBCBRP submitted in the spring of 2004. The traffic studies for each DRI took into consideration the approved development in the surrounding area as well as DRIs that had been submitted for review.

3.3 *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.

**TABLE 3-8
DRI RESOURCE MITIGATION MEASURES**

Impacts/ Mitigation Measures	DRI Area/Owner					
	Palm Beach Park of Commerce 1,248 Acres Donald C. Walker, Agent	North Palm Beach County General Aviation Airport 1,832 Acres Palm Beach Int'l Airport	Palm Beach County Biotechnology Research Park 1,920 Acres Palm Beach County	Callery Judge Grove 3,872 Acres Callery Judge Grove, LP	Gardens Scientific and Technology Community 2,000 Acres Vavrus Ranch	Vavrus South 2,763 Acres Vavrus Ranch
Existing Land Use	Cropland and abandoned farmland, drainage ditches, and pine flatwoods.	Pre-development: Pine flatwood, wet prairie, and canals.	Citrus grove and support facilities; dredge lake for agricultural uses.	Citrus grove and agricultural support facilities.	Undeveloped Vavrus Ranch: rangeland and agricultural crops.	Agricultural operations and support facilities.
Proposed Land Use	Proposed land use to include mixed-use commercial, light industrial, warehouse.	General aviation and landside support facilities.	Proposed land use includes mixed-use of biotechnology research facility, office, residential, retail, commercial, schools, parks, and open space.	Proposed land use includes mixed-use of office, research facility, residential, retail, commercial, schools, parks, and open space.	Proposed land use includes mixed-use of office, research facility, residential, retail, commercial, schools, parks, and open space.	Proposed land use includes mixed-use of office, residential, retail, commercial, schools, parks, and open space.
Approved Development Entitlements	Commercial - 114.5 acres Industrial - 695.8 acres	2 Runways at 4,300' 1 Runway at 3,700' Airplane Hangars - 248,900 SF T-Hangars - 253,800 SF Control Tower Crash/Fire Rescue Facility Admin Building - 10,300 SF	Industrial/Biotech 10,500,000 SF Retail 430,000 SF Residential 2,000 DUs 2,500 High School Students 2,000 College Students Hospital 300 Beds Open Space 990 Acres	Residential 10,000 DUs Hotel 150 rooms Retail 1,400,000 SF Industrial 3,000,000 SF Office 600,000 SF College 2,000 Students	Research/Ofc 2,000,000 SF Retail/Office 440,000 SF Movie Theatre 60,000 SF Hotel 300 Rooms Residential 7,500 DUs	Formal DRI submittal to TCRPC pending the sale of the property. Responses based on pre-application meeting with RPC.
Transportation	Several roadway improvements were required as a result of this project. It was determined that SR 710 would be improved to four lanes from Seminole Pratt Whitney Road south through its intersection with Lake Park Road.	Improvements to local roadway network: begin improvements with Phase 2; to include restriping, modifications to existing intersections, additional turn lanes, and additional lanes for capacity.	Several main roadway arteries will be extended to site and existing roadways widened to serve this project.	Roadway improvements to be phased: traffic study accounts for background growth and PBCBRP site. Added capacity to roadway network through 3- and 5-year physical improvements as well as operational improvements.	Analysis not included in ADA. However, several main roadway arteries will be extended to site and/or widened to serve this project.	Methodology meeting held: utilize procedures and assumptions as other DRIs; 'Park once' concept; minimize traffic impacts on The Acreage; integrate alternative transportation.
Transit	No public transit service to the project existed at the time of DRI approval and none was proposed.	Transit mitigation not required for this project.	Opportunity to connect to existing Palm Tran network. Adequate land to provide bus stations along major arteries. Discussions with SFRTA to have connection to an existing rail system in East Palm Beach County during buildout period.	Transit link to PBCBRP site; reduction of trips because project is a self-contained compact development. Provision for transit connections with Palm Tran and SFRTA; multi-modal choices for residents. Proposed passenger rail corridor to link to existing SFRTA.	Opportunity to connect to existing Palm Tran network; adequate land to provide bus stations along major arteries; discussions with SFRTA to have connection to an existing rail system in East Palm Beach County during buildout period.	RPC requests trail connections: Grassy Waters Preserve to Sweetbay area across the east end of Vavrus and from PBCBRP to Grassy Waters across the south end of Vavrus.

**TABLE 3-8 (CONTINUED)
DRI RESOURCE MITIGATION MEASURES**

Impacts/ Mitigation Measures	DRI Area/Owner					
	Palm Beach Park of Commerce 1,248 Acres Donald C. Walker, Agent	North Palm Beach County General Aviation Airport 1,832 Acres Palm Beach Int'l Airport	Palm Beach County Biotechnology Research Park 1,920 Acres Palm Beach County	Callery Judge Grove 3,872 Acres Callery Judge Grove, LP	Gardens Scientific and Technology Community 2,000 Acres Vavrus Ranch	Vavrus South 2,763 Acres Vavrus Ranch
Potable Water	There were no existing water supply wells on the site. It was anticipated that the water supply would be met from groundwater. The potable water supply system was to be operated by a public utility company established by the developers and the irrigation system was to be operated by the Property Owners Association and the individual occupants within the site.	Water supply plans to meet Palm Beach County and SFWMD regulations. Irrigation with non-potable water source.	Water supply to be provided by Palm Beach County Utilities Department. Reduce irrigation demand by utilizing 60% native plants, per Palm Beach County requirements.	Central water capacity is available and provided by Seminole Improvement District. Central water lines to be extended to site. Five shallow irrigation wells on-site.	The likely option is to construct an on-site water treatment facility and on-site water supply wells for potable water. The utility provider is SUA. Utilizing the water within the surface water management system will provide irrigation water.	Seacoast Utilities will provide central water services. Capacity to be assessed at time of formal DRI submission.
Wastewater	An on-site system was proposed with acreage set aside to accommodate the wastewater treatment needs of the project. The plant size would be adequate to meet the needs of all project phases and would be maintained and operated on a contract basis by the Property Owners Association.	Industrial effluent was to be treated and disposed of as approved and permitted by the Palm Beach County Environmental Control Board. This may include the use of filters, holding tanks, or other approved methods.	Project will be served by central wastewater service. No septic tanks. Off-site treatment provided by Palm Beach County Water Utilities Department.	Project will be served by central wastewater service. No septic tanks. Off-site treatment by Seminole Improvement District.	The proposed wastewater service will be provided within the service area boundary of SUA. On-site treatment and septic tanks are not proposed for the project.	Not directly addressed. Project to be integrated with CERP.
Stormwater Runoff	On-site detention in the canal and lake systems; runoff volume and quality is to be controlled by the provision of detention in the in accordance with the current rules of SFWMD and was to approximate the water quality that occurred in the existing canal system present on the site.	Does not receive any off-site drainage because of perimeter ditches. On-site detention created by a lake system with littoral zones. C-18 canal overland flow to the Loxahatchee Slough; discharge was determined to be within allowable flow rates.	No anticipated increase in off-site flooding due to the planned design of this project, utilizing on-site containment and treatment.	Contained/treated on-site through the provision of one basin, composed of 10 sub-basins. The discharge would be less than that of the citrus operation.	Stormwater conveyed to on-site system and water quality achieved through on-site lake system. Utilizing the water within the surface water management system will provide irrigation water.	Suggested that stormwater be retained on-site, treated, and rerouted back to the wetlands.
Solid Waste	Palm Beach County has a sanitary landfill with capacity to serve the project. The County is considering the use of recycling programs for the project and waste-to-energy producing facilities to reduce solid waste generated from the project.	Hazardous waste management/disposal through Broward County. Guidelines established for proper storage, use, and disposal of hazardous waste for each user/lessee.	Palm Beach County Solid Waste Authority has additional capacity available. Hazardous waste to be disposed in compliance with local, state, and Federal regulations.	Palm Beach County Solid Waste Authority has additional capacity available. Hazardous waste to be disposed in compliance with local, state, and Federal regulations.	Palm Beach County Solid Waste Authority provided certification that the Authority has disposal capacity available to accommodate the solid waste generation for the full buildout of the proposed project n 2020.	Hazardous waste management plan will be required.

**TABLE 3-8 (CONTINUED)
DRI RESOURCE MITIGATION MEASURES**

Impacts/ Mitigation Measures	DRI Area/Owner															
	Palm Beach Park of Commerce 1,248 Acres Donald C. Walker, Agent	North Palm Beach County General Aviation Airport 1,832 Acres Palm Beach Int'l Airport	Palm Beach County Biotechnology Research Park 1,920 Acres Palm Beach County	Callery Judge Grove 3,872 Acres Callery Judge Grove, LP	Gardens Scientific and Technology Community 2,000 Acres Vavrus Ranch	Vavrus South 2,763 Acres Vavrus Ranch										
Schools	<p>The project was found to be exempt from mitigating effects for this issue by the TCRPC.</p> <p>The exemption was granted due to no residential units built within the proposed project.</p>	<p>DRI does not generate school age children.</p> <p>Noise levels of aircraft are regulated through the establishment of restrictions based on plane type/weight.</p>	<p>High school for approximately 2,500 students and satellite university campus for 2,000 full-time students provided on-site.</p> <p>Elementary and middle schools provided with Gardens Science DRI to serve both projects.</p>	<p>New schools proposed on-site with student stations based upon development.</p> <p>3 new elementary schools, 1 new middle school, 1 new high school adjacent to site.</p> <p>Branch campus of an existing university (2,000 students) for higher education.</p>	<p>An elementary and middle school site will be provided on Gardens Science DRI site while a high school is being provided on the adjacent Palm Beach County Biotechnical Research Park site. The three schools will be large enough to serve students from both projects.</p>	<p>Address the number of students to be accommodated and required financing.</p> <p>Proposed 100-acre donation to the state for university purposes.</p>										
Health Care	<p>It was anticipated that medical and health care facilities would occur as the need warranted.</p> <p>In the interim, health needs for the project were to be supplied by Jupiter Hospital and the Palm Beach Gardens Hospital.</p>	<p>Project provides Crash/Fire Rescue (CFR) facilities with three minute response per FAA, Part 139 regulations.</p> <p>CFR service provided to associated development-on site.</p> <p>Impact on regional health care facilities was not required of DRI at time of submission/approval.</p>	<p>Clinic/hospital/teaching hospital; up to 300 beds to be provided.</p>	<p>No new hospital planned for site.</p> <p>Palms West Hospital in Loxahatchee (140 beds) has a Master Plan to expand to 275 beds.</p>	<p>Medical offices for routine medical needs to be provided on-site.</p> <p>Hospitals are provided off-site and have sufficient capacity for future populations.</p>	<p>At the time of formal DRI submission, review Certificate of Need for existing facilities in determining health care need for the DRI, as well as adjacent DRIs.</p>										
Air Quality	<p>Construction activities such as clearing may cause an impact on air quality through fugitive dust particles and emissions.</p> <p>Approx. avg. daily emissions from auto/trucks w/in 4.5 miles: Phase Hydrocarbons / NO_x / CO (lbs. / day)</p> <table border="1"> <tr> <td>1</td> <td>100.9 / 155.6 / 1030.1</td> </tr> <tr> <td>2</td> <td>198.2 / 305.6 / 2023.3</td> </tr> <tr> <td>3</td> <td>301.3 / 464.5 / 3076.0</td> </tr> <tr> <td>4</td> <td>366.0 / 564.2 / 3736.1</td> </tr> <tr> <td>5</td> <td>426.6 / 657.8 / 4355.3</td> </tr> </table> <p>Any point sources of air emissions requiring special treatment would be subjected to permit review prior to construction.</p>	1	100.9 / 155.6 / 1030.1	2	198.2 / 305.6 / 2023.3	3	301.3 / 464.5 / 3076.0	4	366.0 / 564.2 / 3736.1	5	426.6 / 657.8 / 4355.3	<p>Air quality tied to transportation study; Treasure Coast RPC to determine need.</p>	<p>Alternative transportation modes incorporated into Master Plan.</p> <p>If necessary, an air quality model and determination of impacts will be generated when the traffic analysis has determined to be sufficient, per DRI pre-application conference and transportation methodology meeting.</p>	<p>Construction activities such as clearing may cause an impact on air quality through fugitive dust particles and emissions, however, BMPs to be implemented at time of construction.</p> <p>Impact on air quality would be reduced due to reduction of number of vehicular trips resulting from the planning and design of the development, encouraging the use of bicycles, pedways, and transit.</p>	<p>All applicable requirements to contain fugitive dust particles during site preparation and construction will be taken as appropriate.</p> <p>The site is vacant, so no demolition activities are required.</p> <p>Air quality modeling will be implemented for intersections that exceed the Level of Service E/F, parking garages with 750+ spaces, or surface parking areas with 1,500+ vehicle trips per hour. Mitigation measures will be taken, as appropriate</p>	<p>Impacts to be evaluated based upon Level of Service, number of vehicle trips generated, and parking garages.</p> <p>The formal DRI application has not been submitted, therefore impacts have not been determined.</p>
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**TABLE 3-8 (CONTINUED)
DRI RESOURCE MITIGATION MEASURES**

Impacts/ Mitigation Measures	DRI Area/Owner					
	Palm Beach Park of Commerce 1,248 Acres Donald C. Walker, Agent	North Palm Beach County General Aviation Airport 1,832 Acres Palm Beach Int'l Airport	Palm Beach County Biotechnology Research Park 1,920 Acres Palm Beach County	Callery Judge Grove 3,872 Acres Callery Judge Grove, LP	Gardens Scientific and Technology Community 2,000 Acres Vavrus Ranch	Vavrus South 2,763 Acres Vavrus Ranch
Hurricanes	No mitigation required at the time of development approval of this project.	Hurricane preparedness not addressed due to early date of DRI (1981).	The property is not located within the coastal high hazard or hurricane vulnerability zone delineated in Palm Beach County's Coastal High Hazard Map, as a part of the adopted Comprehensive Plan.	Not located in a coastal high hazard zone or hurricane vulnerability zone. New high school on-site to be built to withstand hurricane-force winds and to act as a shelter; new 12.5-acre fire-rescue site can be used as an evacuation center.	The property is not within a hurricane evacuation area or vulnerability zone. All construction within the project will meet South Florida Building Code standards for hurricane resistance.	Not in a coastal high hazard zone or hurricane vulnerability zone. Suggestion to work with the Emergency Preparedness Director for needs and standards.
Botanical	Presently, most of the site remains undeveloped. According to the latest DRI approval document, +/- 134 acres of Wet prairie and Bayhead plant communities are to be preserved. Pine flatwood on perimeter of development to be preserved. Water bodies will encompass +/- 125 acres, and +/- 989 acres will be developed. Small area of wetland impact from construction of access road to be mitigated. No endangered or threatened plant species identified. The site was identified as nearly 60% pine flatwood pre-development. Exotic invasive plant species to be removed as a part of the development process.	Snowy orchid was observed in one of the wetland preservation areas. No other threatened, endangered, or rare plant species was observed on site. +/- 845 acres of wetlands are to be preserved, nearly 68% of wetlands on the parent parcel, +/- 141 acres of wetlands are to be restored, and +/- 408 acres to be developed. Exotic plant species removed. The site was identified as pine flatwood and wet prairie. Wetlands on site impacted by canals prior to DRI submission. Mitigation for impacts to wetlands identified in approval. Existing trees were trimmed or removed in clear zones as mandated by the FAA.	The majority of the site is a citrus grove and would be removed as a part of the development process. The creation of +/-247 acres of natural areas will increase the diversity of botanical species and variety of available habitat from the current citrus monoculture. Water management areas and lakes will consist of +/- 250 acres, open space will consist of +/- 386 acres, and +/- 1,036 acres will be developed. Emergent and submergent aquatic species native groundcover would be impacted during the construction of the project. Exotic plant species would be removed from the site. This area would be planted with a minimum of 90% native and/or drought-resistant vegetation.	The site is a monoculture of citrus, with cattail, willow, and pteris fern and limited herbaceous species in the shallow, lateral drainage ditches Impact to botanical resources is relatively minor, as a citrus grove is to be replaced by diverse native plant communities. No mitigation is planned because there are not any listed plant species present. The proposed DRI indicates +/- 549 acres of parks/greenways/buffers, +/- 600 acres of water management/CERP facilities, and +/- 2,723.1 acres of development.	At present, the site is undeveloped. Plant communities include Pine flatwood, unimproved pasture and row crops, as well as freshwater marshes and seasonally wet prairies. +/- 546 acres of high quality wetland, pine flatwood, sawgrass, and other communities to be preserved, with connectivity to off-site natural areas. Low quality wetlands will be mitigated. The proposed DRI indicates +/- 210 acres of lakes and +/- 1,244 acres of development. The natural cover types are comprised of natural and modified plant communities with varying levels of disturbance and habitat values. There have been various agricultural uses and site modifications, primarily related to drainage and clearing of natural vegetation as well as pine timber harvesting.	Coordination with USFWS and FWC on methodology for vegetation and wildlife. The formal DRI application has not been submitted, therefore, impacts have not been determined.

**TABLE 3-8 (CONTINUED)
DRI RESOURCE MITIGATION MEASURES**

Impacts/ Mitigation Measures	DRI Area/Owner					
	Palm Beach Park of Commerce 1,248 Acres Donald C. Walker, Agent	North Palm Beach County General Aviation Airport 1,832 Acres Palm Beach Int'l Airport	Palm Beach County Biotechnology Research Park 1,920 Acres Palm Beach County	Callery Judge Grove 3,872 Acres Callery Judge Grove, LP	Gardens Scientific and Technology Community 2,000 Acres Vavrus Ranch	Vavrus South 2,763 Acres Vavrus Ranch
Wildlife	<p>Variety of wildlife observed on site: Opossum, Armadillo, Marsh rabbit, Gray fox, Raccoon, Bobcat, and White-tailed deer.</p> <p>Listed species observed include: Little blue heron (SSC), Tri-color heron (SSC), White ibis (SSC), Southeastern American kestrel (t), Peregrine falcon (e), and Limpkin (SSC).</p> <p>Many of the species present on the property post-development were to benefit by the changes proposed, especially those animals associated with marshes, swamps, and lakes as these were to be preserved or expanded. Also sufficient preserved uplands were to be undisturbed to benefit other animals found on the site.</p> <p>Some species such as White-tailed deer, Bobcat, Cooper's hawk, Hairy woodpecker, and several species of snakes would be impacted by the proposed development due to loss of habitat, nesting, or foraging.</p> <p>Wet prairie and Bayhead communities to be preserved. Existing ditches to be widened. Pine flatwood and abandoned fields on perimeter to be preserved.</p>	<p>Listed species observed include: American alligator (SSC/T S/A), Everglades snail kite (e/E), Snowy egret (SSC), Tri-color heron (SSC), Little blue heron (SSC), Wood stork (e/E), Florida sandhill crane (t), and Limpkin (SSC).</p> <p>Noise and motion impacts to wildlife determined to be negligible, as demonstrated by the Pratt & Whitney site.</p> <p>On-site habitat does not attract flocking birds.</p> <p>Habitat preservation areas located away from primary flight paths per FAA regulations.</p>	<p>Listed species observed include: Snowy egret (SSC), American alligator (SSC/T S/A), Limpkin (SSC), Florida sandhill crane (t), Little Blue heron (SSC), and Tricolor heron (SSC).</p> <p>Project contains foraging habitat suitable by local wildlife, but does not provide suitable habitat for nesting or denning due to the continuous and high level of disturbance from agricultural/mining activities on the entire site.</p> <p>Impact to foraging habitat during construction activities.</p> <p>DRI proposes the creation of natural features suitable for wildlife, including water bodies and open space.</p>	<p>Tri-Color Heron, a Species of Special Concern listed with the FFWCC, is present on the site.</p> <p>No other species due to active agricultural operations.</p> <p>Impact to wildlife habitat is minimal, as new habitat will be created through the design of the development.</p>	<p>Listed species observed include: American alligator (SSC/T S/A), Bald eagle (t/T), Florida sandhill crane (t), Little blue heron (SSC), Snowy egret (SSC), Tri-colored heron (SSC), White ibis (SSC), and Wood stork (e/E).</p> <p>Wetland areas and marshes where wildlife was observed are planned to be preserved.</p> <p>Provision of connectivity to natural areas adjacent to the site, is planned to accommodate migratory wildlife.</p> <p>"Clustered" development provides increase in open space and reduced encroachment on wildlife areas, utilizing compact development.</p>	<p>Create connectivity between natural areas for wildlife.</p> <p>The formal DRI application has not been submitted, therefore impacts have not been determined.</p>

**TABLE 3-8 (CONTINUED)
DRI RESOURCE MITIGATION MEASURES**

Impacts/ Mitigation Measures	DRI Area/Owner					
	Palm Beach Park of Commerce 1,248 Acres Donald C. Walker, Agent	North Palm Beach County General Aviation Airport 1,832 Acres Palm Beach Int'l Airport	Palm Beach County Biotechnology Research Park 1,920 Acres Palm Beach County	Callery Judge Grove 3,872 Acres Callery Judge Grove, LP	Gardens Scientific and Technology Community 2,000 Acres Vavrus Ranch	Vavrus South 2,763 Acres Vavrus Ranch
Ecologic	<p>A total of +/- 134 acres were deemed environmentally sensitive and were to be preserved for a passive element as a natural open space amenity.</p> <p>Wet prairie and bayhead habitats will be preserved in their entirety. pine flatwood and abandoned agricultural fields on the perimeter will be preserved.</p> <p>Presently, most of the site remains undeveloped. Water management areas, totaling +/- 125 acres, will include expanded ditches new retention areas, which could become habitat for aquatic plants, wading birds, and water-borne reptiles and amphibians. The balance of the site will be developed in phases, as parcels are purchased.</p> <p>+/- 989 acres will be developed.</p>	<p>The layout of the runways and support facilities are laid out so high-quality wetlands are not impacted: approx. 86% of wetlands and 79% of uplands are to be preserved.</p> <p>Impacted wetlands on-site were offset by restoration and enhancement of existing wetlands, creation of littoral zones around lakes, wet prairie restoration, and restoration of hydroperiod.</p> <p>+/- 845.0 acres of wetlands are to be preserved, nearly 68% of wetlands on the parent parcel. +/- 141.49 acres of wetlands are to be restored, and 408.5 acres to be developed.</p> <p>Exotic plant species removed from upland habitat.</p>	<p>No wetlands on-site = no mitigation.</p> <p>Impact on ecologic resources would be very minimal, as the DRI proposes replacing the citrus grove with the creation of new natural areas and features.</p> <p>The existing monoculture of citrus would be replaced with a lake system larger (3x) than exists in the impoundment area.</p> <p>The DRI proposes the construction of a +/- 247-acre natural area and a large +/- 250-acre interconnected lake system providing new foraging habitat.</p> <p>Water management areas and lakes will consist of +/- 250 acres, open space will consist of +/- 386 acres, and +/- 1,036 acres will be developed.</p>	<p>No wetlands on-site = no mitigation.</p> <p>The proposed DRI indicates +/- 549 acres of parks/greenways/buffers, +/- 600 acres of water management/CERP facilities, and +/- 2,723 acres of development.</p> <p>Impact on ecologic resources would be minimal, as the DRI proposes the creation of new natural areas and features.</p> <p>There will be creation of new habitat from the former citrus grove and will interconnect to wetlands.</p> <p>Littoral species will be utilized in newly-created water bodies.</p>	<p>Communities to be preserved include +/- 522 acres of high quality wetland, pine flatwood, sawgrass, and other communities.</p> <p>Links to the Hungryland Slough Canal to northwest and Loxahatchee Slough to east are planned.</p> <p>Primary mitigation on-site.</p> <p>Off-site mitigation under consideration/evaluation.</p>	<p>Create a hydrological connection between the western wetlands of GSTC to the wetlands in the southwest quadrant of Vavrus. Hydrologic connection could be used to mitigate wetland impacts.</p> <p>The formal DRI application has not been submitted, therefore impacts have not been determined.</p>
Housing: Affordable & Workforce	<p>The project was found to be exempt from mitigation of this issue by the Treasure Coast RPC.</p> <p>The exemption was granted due to no residential units within the proposed project.</p>	<p>The project was not required to mitigate effects for this issue due to no residential units within the proposed project.</p>	<p>Accessory apartments for graduate students and other lower income workers will be included as a part of the housing mix in the Town Center area.</p> <p>Attached multi-family townhouse units provide alternative to apartment living for workforce families.</p>	<p>Percentage set aside for affordable housing based upon Palm Beach County statistics; creation of additional residence; multiple housing types.</p>	<p>Provided on-site with 160 units for 36 percent or less of median income in accessory apartments within the single-family unit.</p> <p>A mixture of residential housing types is proposed to meet demands of varying incomes of the workforce.</p>	<p>Use East Coast Florida RPC model. Take into account the absorption of existing affordable housing by the City, County, and other DRIs; DRI proposes to create additional residence; multiple housing types. DRI should address workforce housing.</p>

**TABLE 3-8 (CONTINUED)
DRI RESOURCE MITIGATION MEASURES**

Impacts/ Mitigation Measures	DRI Area/Owner					
	Palm Beach Park of Commerce 1,248 Acres Donald C. Walker, Agent	North Palm Beach County General Aviation Airport 1,832 Acres Palm Beach Int'l Airport	Palm Beach County Biotechnology Research Park 1,920 Acres Palm Beach County	Callery Judge Grove 3,872 Acres Callery Judge Grove, LP	Gardens Scientific and Technology Community 2,000 Acres Vavrus Ranch	Vavrus South 2,763 Acres Vavrus Ranch
Energy	Electrical power was anticipated to be the principal power source and provided by FP&L. No coal fueled facilities were anticipated and any natural bottled gas demand was to be furnished by local suppliers.	The major energy demand for the proposed land uses at the airport was electrical power. Due to the nature of the facilities, demand for natural gas and oil was expected to be negligible.	FP&L to provide electrical service to the project. Palm Beach County provides incentives for “green building” standards and other energy saving elements.	The project is to utilize electrical energy primarily and FP&L has documented capacity sufficient to serve the project’s needs. Natural gas demand is uncertain and the use of oil or coal for energy generation is not anticipated for this project.	FP&L, Florida Public Utilities, and Peoples Gas to provide energy services to site. Palm Beach County will consider providing incentives to those electing to build “green building” and other energy saving elements into their site developments.	Use Treasure Coast RPC’s <i>Energy Planning in the 21st Century</i> to identify energy conservation techniques.
Historical and Archaeological	A letter from Florida Department of State declared that the property contained no significant historical or archaeological sites.	No archaeological sites identified. FDHR requires survey if development activity disturbed hammocks larger than 0.25-acre. At the time of the ADA, no plans to disturb these areas were identified.	Report submitted, reviewed, and accepted by FDHR stating that site has no archaeological or historical resources identified.	There are no known historical or archaeological sites on the development site.	No resources known on-site. Survey required by FDHR. If resources found, plan will be devised and presented.	Letter required from the State Division of Historical Resources regarding historical or archaeological resources on the site.
Other	Not Applicable.	Not Applicable.	Not Applicable.	Not Applicable.	Not Applicable.	Use City’s LOS for recreation/open space. All types of active/passive parks, incl. neighborhood, urban, linear, and others. Airport: compatibility with N. County Airport and existing flight paths over the project site.

- SFRTA = South Florida Regional Transit Authority
- BMPs = Best Management Practices
- SUA = Seacoast Utility Authority
- FFWCC = Florida Fish and Wildlife Conservation Commission
- DRI = Development of Regional Impact
- SSC = Species of Special Concern, designation by the Florida Fish and Wildlife Conservation Commission
- e = Endangered, designation by the Florida Fish and Wildlife Conservation Commission
- t = Threatened, designation by the Florida Fish and Wildlife Conservation Commission
- E = Endangered, designation by the US Fish and Wildlife Service (US Department of the Interior)
- T = Threatened, designation by the US Fish and Wildlife Service (US Department of the Interior)
- S/A = Threatened due to similarity of appearance, designation by the US Fish and Wildlife Service (US Department of the Interior)

- 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 the 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 the JWCWMA 30 acres. Therefore, it will increase the total amount of conservation acres in Palm Beach County to roughly 63,530 acres 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, as well as maintenance and management of the area. In addition the canal would increase control of illegal motorized vehicles.