

Project: Progress Energy Florida, Inc. Levy Baseload Transmission Program

Assessment Area: Levy-Crystal River Energy Complex Transmission Line Wetlands 1-24, Y, Z, AA, AB, AN-BH, ZA-ZH

**APPROVED JURISDICTIONAL DETERMINATION FORM**  
**U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

**SECTION I: BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER:**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: **Florida**

County/parish/borough: **Citrus**

City:

Center coordinates of site (lat/long in degree decimal format): Lat. **28.960383° N**, Long. **-82.651150° W**

Universal Transverse Mercator:

Name of nearest waterbody: **Crystal Bay**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Crystal Bay**

Name of watershed or Hydrologic Unit Code (HUC): **Direct Runoff to the Gulf/03100207**

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

**D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

☒ Office (Desk) Determination. Date: **January 7, 2010.**

☒ Field Determination. Date(s): **October 26-29, November 2-6, 2009.**

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

☐ Waters subject to the ebb and flow of the tide.

☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.  
Explain: .

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There **Are and are not** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

☐ TNWs, including territorial seas

☐ Wetlands adjacent to TNWs

☒ Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs (**Wetlands Y, Z, AA, AB, AO, AP, AQ, ZE**)

☐ Non-RPWs that flow directly or indirectly into TNWs

☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs (**Wetlands 3&24, Z, AB, AP, AT, AU**)

☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs (**Wetland AN**)

☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs

☐ Impoundments of jurisdictional waters

☐ Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: **133.92 acres**

**c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual**

Elevation of established OHWM (if known): .

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.

- ☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **Wetlands 1, 2, 4 through 23, AR, AS, AV through AZ, BA through BH, ZA through ZDA, and ZF through ZH are not jurisdictional because they are hydrologically isolated from TNWs and RPWs that flow directly or indirectly into TNWs.**

### SECTION III: CWA ANALYSIS

#### **A. TNWs AND WETLANDS ADJACENT TO TNWs**

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

**1. TNW**

Identify TNW:

Summarize rationale supporting determination:

**2. Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is "adjacent":

#### **B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):**

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody<sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

**1. Characteristics of non-TNWs that flow directly or indirectly into TNW (Wetlands Y, Z, AA, AB, AO, AP, AQ, ZE)**

**(i) General Area Conditions:**

Watershed size: **31,471.53 acres**

Drainage area: **31,471.53 acres**

Average annual rainfall: **52 inches**

Average annual snowfall: **0 inches**

**(ii) Physical Characteristics:**

**(a) Relationship with TNW:**

☒ Tributary flows directly into TNW. (**Wetlands Y, Z, AA, AB, AP**)

☒ Tributary flows through 2 tributaries before entering TNW. (**Wetlands AO, ZE**)

☒ Tributary flows through 4 tributaries before entering TNW. (**Wetland AQ**)

Project waters are 2-5 river miles from TNW.

Project waters are **1 or less** river miles from RPW.

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.



Project waters are 2-5 aerial (straight) miles from TNW.  
 Project waters are 1 (or less) aerial (straight) miles from RPW.  
 Project waters cross or serve as state boundaries. Explain: N/A.

Identify flow route to TNW<sup>5</sup>: Wetlands Y, Z, AA, AB, and AP compose portions of a ditch/canal located along the north side of Power Line Road that flows westward into the Crystal River Energy Complex discharge canal that outfalls into Crystal Bay, a TNW. Wetlands AO and ZE are ditches within the transmission line right-of-way that flow south into the ditch/canal on the north side of Power Line Road, which flows westward into the Crystal River Energy Complex discharge canal that outfalls into Crystal Bay, a TNW. Wetland AQ is a ditch located along the south side of Power Line Road. The eastern portion of this ditch, near North Tallahassee Road, joins a canal/ditch that flows west and southwest to a perennial stream and several intermittent, artificial paths that flow west and joins wetlands abutting Crystal Bay.  
 Tributary stream order, if known:

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☒ Natural Wetland AQ - Some portions south of Power Line Road outside of the project area appear natural.  
☒ Artificial (man-made). Explain: The RPWs are man-made, culverted ditches/canals.  
☐ Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):

Average width: 2.5 feet  
 Average depth: 2.5 feet  
 Average side slopes: Vertical (1:1 or less).

Primary tributary substrate composition (check all that apply):

☒ Silts ☒ Sands ☐ Concrete  
☐ Cobbles ☐ Gravel ☒ Muck  
☐ Bedrock ☒ Vegetation. Type/% cover: Herbaceous/50%  
☐ Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Stable - no erosion evident.

Presence of run/riffle/pool complexes. Explain: N/A.

Tributary geometry: Relatively straight

Tributary gradient (approximate average slope): 2 %

(c) Flow:

Tributary provides for: **perennial and intermittent/seasonal flows**

Estimate average number of flow events in review area/year: **continuous - perennial and 6-10 events**

Describe flow regime:

Other information on duration and volume:

Surface flow is: Confined. Characteristics:

Subsurface flow: Unknown. Explain findings:

☐ Dye (or other) test performed:

Tributary has (check all that apply):

☒ Bed and banks  
☒ OHWM<sup>6</sup> (check all indicators that apply):  
☒ clear, natural line impressed on the bank ☒ the presence of litter and debris  
☐ changes in the character of soil ☐ destruction of terrestrial vegetation  
☐ shelving ☐ the presence of wrack line  
☒ vegetation matted down, bent, or absent ☐ sediment sorting  
☐ leaf litter disturbed or washed away ☐ scour  
☒ sediment deposition ☐ multiple observed or predicted flow events  
☐ water staining ☐ abrupt change in plant community  
☐ other (list):  
☒ Discontinuous OHWM.<sup>7</sup> Explain: May be less evident where ditched.

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

<sup>6</sup> A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

<sup>7</sup> Ibid.

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> High Tide Line indicated by:   | <input checked="" type="checkbox"/> Mean High Water Mark indicated by: |
| <input type="checkbox"/> oil or scum line along shore objects      | <input type="checkbox"/> survey to available datum;                    |
| <input type="checkbox"/> fine shell or debris deposits (foreshore) | <input type="checkbox"/> physical markings;                            |
| <input type="checkbox"/> physical markings/characteristics         | <input type="checkbox"/> vegetation lines/changes in vegetation types. |
| <input type="checkbox"/> tidal gauges                              |  |
| <input type="checkbox"/> other (list):                             |  |

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: Unknown.

Identify specific pollutants, if known:

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- ☐ Riparian corridor. Characteristics (type, average width):
- ☒ Wetland fringe. Characteristics: **Portions have freshwater marsh/wet prairie fringing wetlands.**
- ☒ Habitat for:
  - ☒ Federally Listed species. Explain findings: **Foraging habitat for wood storks.**
  - ☐ Fish/spawn areas. Explain findings:
  - ☐ Other environmentally-sensitive species. Explain findings:
  - ☐ Aquatic/wildlife diversity. Explain findings:

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW (Wetlands 3&24, Z, AB, AN, AP, AT, AU)**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: **127.62 acres**

Wetland type. Explain: **Emergent/forested**

Wetland quality. Explain: **Fair based on their connection to larger overall forested wetland system.**

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent**. Explain:

Surface flow is: **Confined**

Characteristics: **Both confined (within ditch banks) and sheetflow (non-ditched areas).**

Subsurface flow: **Unknown**. Explain findings:

☐ Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

☒ Directly abutting **Wetlands 3&24, Z, AB, AP, AT, AU**

☒ Not directly abutting **Wetland AN**

☐ Discrete wetland hydrologic connection. Explain:

☐ Ecological connection. Explain:

☒ Separated by berm/barrier. Explain: **Wetland AN is separated from Wetland AO (a ditch that is an intermittent RPW) by a berm.**

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5 or less** river miles from TNW.

Project waters are **2-5 or less** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters**

Estimate approximate location of wetland as within the **100 - 500-year** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: **Water was moderately clear.**

Identify specific pollutants, if known:

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

☐ Riparian buffer. Characteristics (type, average width):

- ☒ Vegetation type/percent cover. Explain: **emergent and forested wetland/95%.**
- ☐ Habitat for:
- ☐ Federally Listed species. Explain findings:
- ☐ Fish/spawn areas. Explain findings:
- ☐ Other environmentally-sensitive species. Explain findings:
- ☐ Aquatic/wildlife diversity. Explain findings:

**3. Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis:

Approximately **127.62 acres** are being considered in the cumulative analysis.

For each wetland, specify the following:

	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
<b>3&amp;24</b>	<b>(Y)</b>	<b>3.67</b>		
<b>Z</b>	<b>(Y)</b>	<b>0.85</b>		
<b>AB</b>	<b>(Y)</b>	<b>11.39</b>		
<b>AP</b>	<b>(Y)</b>	<b>15.07</b>		
<b>AT</b>	<b>(Y)</b>	<b>52.77</b>		
<b>AU</b>	<b>(Y)</b>	<b>10.68</b>		
<b>AN</b>	<b>(N)</b>	<b>33.19</b>		

Summarize overall biological, chemical and physical functions being performed: **These wetlands provide hydrologic detention and attenuation while also filtering pollutants. These wetlands are also part of a larger network of wetlands and RPWs and non-RPWs that form a contiguous to semi-contiguous connection to TNWs in the region. As part of a larger system, these wetlands provide habitat, foraging, and refugia for wildlife utilization.**

**C. SIGNIFICANT NEXUS DETERMINATION**

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

**Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:**

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D.:

**Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: **Wetland AN is located adjacent to an intermittent RPW ditch that flows south into the ditch/canal located along the north side of Power Line Road that flows westward into the Crystal River Energy Complex discharge canal that outfalls into Crystal Bay, a TNW. This wetland provides hydrologic detention and attenuation while also filtering pollutants. This wetland is part of a larger network of wetlands and RPWs and non-RPWs that form a contiguous to semi-contiguous connection to TNWs in the region. As part of a larger system, this wetland provides habitat, foraging, and refugia for wildlife.**

**D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):**

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

☐ TNWs: linear feet width (ft), Or, acres.  
☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs. (Wetlands Y, Z, AA, AB, AO, AP, AQ, ZE)**

- ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: **Wetland Y has perennial flow, according to USGS NHD data.**  
☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: **Wetlands Z, AA, AB, AO, AP, AQ, and ZE appear to have intermittent/seasonal flows per 2009 aerial imagery and field observations.**

Provide estimates for jurisdictional waters in the review area (check all that apply):

☒ Tributary waters: linear feet width (ft). **13.37 acres**  
☐ Other non-wetland waters: acres.  
Identify type(s) of waters:

3. **Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

☐ Tributary waters: linear feet width (ft).  
☐ Other non-wetland waters: acres.  
Identify type(s) of waters:

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. (Wetlands 3&24, Z, AB, AP, AT, AU)**

- ☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.  
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:  
☒ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Based on review of aerial photography and field observations, Wetlands 3&24, Z, AB, AP, AT, AU directly abut intermittent/seasonal RPWs.**

Provide acreage estimates for jurisdictional wetlands in the review area: **87.36 acres**

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs. (Wetland AN)**

- ☒ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

<sup>8</sup>See Footnote # 3.

Provide acreage estimates for jurisdictional wetlands in the review area: **33.19 acres**

**6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- ☒ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

**7. Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- ☒ Demonstrate that impoundment was created from "waters of the U.S.," or
- ☒ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- ☒ Demonstrate that water is isolated with a nexus to commerce (see E below).

**E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

- ☒ which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☒ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- ☒ which are or could be used for industrial purposes by industries in interstate commerce.
- ☒ Interstate isolated waters. Explain:
- ☒ Other factors. Explain:

**Identify water body and summarize rationale supporting determination:**

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☒ Tributary waters: linear feet width (ft).
- ☒ Other non-wetland waters: acres.
- Identify type(s) of waters:
- ☒ Wetlands: acres.

**F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):**

- ☒ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☒ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
- ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).

- ☒ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:.
- ☒ Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☒ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- ☒ Lakes/ponds: acres.
- ☒ Other non-wetland waters: acres. List type of aquatic resource:
- ☒ Wetlands: acres

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☒ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).

<sup>9</sup> To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup> Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following *Rapanos*.

Project: **Progress Energy Florida, Inc. Levy Baseload Transmission Program**

Assessment Area: **Levy-Crystal River Energy Complex Transmission Line Wetlands 1-24, Y, Z, AA, AB, AN-BH, ZA-ZH**

- ☐ Lakes/ponds:            acres.
- ☐ Other non-wetland waters:            acres. List type of aquatic resource:            .
- ☒ Wetlands: 26.79 acres (Wetlands 1, 2, 4 through 23, AR, AS, AV through AZ, BA through BH, ZA through ZDA, and ZF through ZH)

#### **SECTION IV: DATA SOURCES.**

**A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):**

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:            .
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps:            .
- ☐ Corps navigable waters' study:            .
- ☒ U.S. Geological Survey Hydrologic Atlas: USGS 2006; [www.fgdl.org](http://www.fgdl.org).
  - ☒ USGS NHD data.
  - ☒ USGS 8 and 12 digit HUC maps.
- ☐ U.S. Geological Survey map(s). Cite scale & quad name:            .
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation:            .
- ☒ National wetlands inventory map(s). Cite name: USFWS, HRC 2008; [www.fgdl.org](http://www.fgdl.org).
- ☐ State/Local wetland inventory map(s):            .
- ☐ FEMA/FIRM maps:            .
- ☐ 100-year Floodplain Elevation is:            (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): AerialExpress 2008.
  - or ☐ Other (Name & Date):            .
- ☐ Previous determination(s). File no. and date of response letter:            .
- ☐ Applicable/supporting case law:            .
- ☐ Applicable/supporting scientific literature:            .
- ☒ Other information (please specify): Florida Atlas & Gazetteer, 2006; Southwest Florida Water Management District land use/land cover data, 2004.

**B. ADDITIONAL COMMENTS TO SUPPORT JD:**            .

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**U.S. Army Corps of Engineers**

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**SECTION I: BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER:**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: **Florida** County/parish/borough: **Citrus** City:  
Center coordinates of site (lat/long in degree decimal format): Lat. **28.961017° N**, Long. **-82.621583° W**.  
Universal Transverse Mercator:

Name of nearest waterbody: **Crystal Bay**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **None**

Name of watershed or Hydrologic Unit Code (HUC): **Crystal River/03100207**

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

**D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

☒ Office (Desk) Determination. Date: **January 7, 2010**.

☒ Field Determination. Date(s): **October 13 - 15, 2009**.

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

☐ Waters subject to the ebb and flow of the tide.

☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain:

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There **Are no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

- ☐ TNWs, including territorial seas
- ☐ Wetlands adjacent to TNWs
- ☐ Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs
- ☐ Non-RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- ☐ Impoundments of jurisdictional waters
- ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands:

**c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual**

Elevation of established OHWM (if known):

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain: **Wetlands X, CS K through CS M, and CS S through CS W are not jurisdictional because they are hydrologically isolated from TNWs and RPWs that flow directly or indirectly into TNWs.**

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.

### SECTION III: CWA ANALYSIS

#### A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": .

#### B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody<sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: acres

Drainage area: acres

Average annual rainfall: inches

Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

☐ Tributary flows through tributaries before entering TNW.

Project waters are river miles from TNW.

Project waters are river miles from RPW.

Project waters are aerial (straight) miles from TNW.

Project waters are aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:.

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.



Identify flow route to TNW<sup>5</sup>:

Tributary stream order, if known:

(b) **General Tributary Characteristics (check all that apply):**

**Tributary is:** ☐ Natural  
☐ Artificial (man-made). Explain:  
☐ Manipulated (man-altered). Explain:

**Tributary properties with respect to top of bank (estimate):**

Average width: feet

Average depth: feet

Average side slopes: **Pick List**

**Primary tributary substrate composition (check all that apply):**

☐ Silts ☐ Sands ☐ Concrete  
☐ Cobbles ☐ Gravel ☐ Muck  
☐ Bedrock ☐ Vegetation. Type/% cover:  
☐ Other. Explain:

**Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:**

**Presence of run/riffle/pool complexes. Explain:**

**Tributary geometry: **Pick List****

**Tributary gradient (approximate average slope):**

(c) **Flow:**

**Tributary provides for: **Pick List****

**Estimate average number of flow events in review area/year:**

**Describe flow regime:**

**Other information on duration and volume:**

**Surface flow is: **Pick List**. Characteristics:**

**Subsurface flow: **Pick List**. Explain findings:**

☐ Dye (or other) test performed:

**Tributary has (check all that apply):**

☐ Bed and banks  
☐ OHWM<sup>6</sup> (check all indicators that apply):  
☐ clear, natural line impressed on the bank ☐ the presence of litter and debris  
☐ changes in the character of soil ☐ destruction of terrestrial vegetation  
☐ shelving ☐ the presence of wrack line  
☐ vegetation matted down, bent, or absent ☐ sediment sorting  
☐ leaf litter disturbed or washed away ☐ scour  
☐ sediment deposition ☐ multiple observed or predicted flow events  
☐ water staining ☐ abrupt change in plant community  
☐ other (list):  
☐ Discontinuous OHWM.<sup>7</sup> Explain:

**If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):**

☒ High Tide Line indicated by: ☒ Mean High Water Mark indicated by:  
☐ oil or scum line along shore objects ☐ survey to available datum;  
☐ fine shell or debris deposits (foreshore) ☐ physical markings;  
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.  
☐ tidal gauges  
☐ other (list):

(iii) **Chemical Characteristics:**

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

<sup>6</sup> A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

<sup>7</sup> Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: Unknown.

Identify specific pollutants, if known:

**(iv) Biological Characteristics. Channel supports (check all that apply):**

- ☐ Riparian corridor. Characteristics (type, average width):
- ☐ Wetland fringe. Characteristics:
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings:
  - ☐ Other environmentally-sensitive species. Explain findings:
  - ☐ Aquatic/wildlife diversity. Explain findings:

**2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

**(i) Physical Characteristics:**

**(a) General Wetland Characteristics:**

Properties:

Wetland size:

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

**(b) General Flow Relationship with Non-TNW:**

Flow is: Explain:

Surface flow is: **Pick List**

Characteristics: Both confined (within ditch banks) and sheetflow (non-ditched areas).

Subsurface flow: **Pick List**. Explain findings:

☐ Dye (or other) test performed:

**(c) Wetland Adjacency Determination with Non-TNW:**

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☒ Discrete wetland hydrologic connection. Explain:
  - ☒ Ecological connection. Explain:
- ☐ Separated by berm/barrier. Explain:

**(d) Proximity (Relationship) to TNW**

Project wetlands are river miles from TNW.

Project waters are aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

**(ii) Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

**(iii) Biological Characteristics. Wetland supports (check all that apply):**

- ☐ Riparian buffer. Characteristics (type, average width):
- ☐ Vegetation type/percent cover. Explain:
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings:
  - ☐ Other environmentally-sensitive species. Explain findings:
  - ☐ Aquatic/wildlife diversity. Explain findings:

**3. Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis:

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

### C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

**Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:**

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

**Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:**

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

**Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

### D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

☐ TNWs: linear feet width (ft), Or, acres.

☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:

☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

☐ Tributary waters: linear feet width (ft).

☐ Other non-wetland waters: acres.

Identify type(s) of waters: .

**3. Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

☐ Tributary waters: linear feet width (ft).

☐ Other non-wetland waters: acres.

Identify type(s) of waters: .

**4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
- ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area:

**5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area:

**6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

**7. Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

☐ Demonstrate that impoundment was created from "waters of the U.S.," or

☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or

☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

**E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.

☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.

<sup>8</sup>See Footnote # 3.

<sup>9</sup>To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup>Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Project: **Progress Energy Florida, Inc. Levy Baseload Transmission Program**

Assessment Area: **Levy-Crystal River Energy Complex Transmission Line Wetlands X, CS K through CS M, CS S through CS W**

- ☐ which are or could be used for industrial purposes by industries in interstate commerce.
- ☐ Interstate isolated waters. Explain: .
- ☐ Other factors. Explain: .

**Identify water body and summarize rationale supporting determination:** .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.  
Identify type(s) of waters: .
- ☐ Wetlands: acres.

**F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):**

- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☒ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
- ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- ☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:.
- ☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands:

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☒ Wetlands: **8.62 acres (Wetlands X, CS K through CS M, CS S through CS W)**

**SECTION IV: DATA SOURCES.**

**A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):**

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps:
- ☐ Corps navigable waters' study:
- ☒ U.S. Geological Survey Hydrologic Atlas: USGS 2006; www.fgdl.org.
  - ☒ USGS NHD data.
  - ☒ USGS 8 and 12 digit HUC maps.
- ☐ U.S. Geological Survey map(s). Cite scale & quad name:.
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
- ☒ National wetlands inventory map(s). Cite name: USFWS, HRC 2008; www.fgdl.org.
- ☐ State/Local wetland inventory map(s): .
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): AerialExpress 2008.  
or ☐ Other (Name & Date): .
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .

Project: Progress Energy Florida, Inc. Levy Baseload Transmission Program

Assessment Area: Levy-Crystal River Energy Complex Transmission Line Wetlands X, CS K through CS M, CS S through CS W

☒ Other information (please specify): Florida Atlas & Gazetteer, 2006; Southwest Florida Water Management District land use/land cover data, 2004.

**B. ADDITIONAL COMMENTS TO SUPPORT JD:**

**PART I – Qualitative Description**  
(See Section 62-345.400, F.A.C.)

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line		Application Number		Assessment Area Name or Number FLUCFCS 511 - Wetlands 17, 20/21, AA, AB, AO, AQ, BA, BD, BH, CS T, ZE	
FLUCCs code  511 - Ditches		Further classification (optional)		Impact or Mitigation Site?  Impact	Assessment Area Size  14.68 acres (17=0.14, 20/21=2.35, AA=0.32, AB=4.39, AO=0.27, AQ=6.6, BA=0.03, BD=0.10, BH=0.22, CS T=0.19, ZE=0.07)
Basin/Watershed Name/Number Crystal River to St. Pete/03100207		Affected Waterbody (Class)		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)  None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Hydrologically connected to other wetlands/surface waters outside the transmission line ROW. Surrounded by upland and wetland forest, pasture, and cleared transmission line ROW					
Assessment area description  Ditches within existing transmission line ROW vegetated with a mixture of nuisance/exotic species such as cattail ( <i>Typha latifolia</i> ), primrose willow ( <i>Ludwigia peruviana</i> ), and torpedo grass ( <i>Panicum repens</i> ), as well as native species such as whitetop sedge ( <i>Dichromena</i> sp.), sedges ( <i>Carex</i> sp., <i>Cyperus</i> spp.), rushes ( <i>Juncus</i> sp.), sawgrass ( <i>Cladium jamaicense</i> ), wax myrtle ( <i>Myrica cerifera</i> ), sweetgum ( <i>Liquidambar styraciflua</i> ), coinwort ( <i>Centella asiatica</i> ), smartweed ( <i>Polygonum punctatum</i> ), musky bushmint ( <i>Hyptis alata</i> ), dogfennel ( <i>Eupatorium capillifolium</i> ), bushy broomsedge ( <i>Andropogon glomeratus</i> ), capeweed ( <i>Phyla nodiflora</i> ), goldenrod ( <i>Solidago canadensis</i> ), finger grass ( <i>Eustachys glauca</i> ), coastal plain willow ( <i>Salix caroliniana</i> ), beakrushes ( <i>Rhynchospora</i> spp.), dwarf umbrella sedge ( <i>Fuirena pumila</i> ), and sugarcane plumegrass ( <i>Eriarthus giganteus</i> ).					
Significant nearby features  Existing transmission line ROW, Crystal River Energy Center, roadways		Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique			
Functions  Wildlife habitat, water conveyance, flood attenuation, aquifer recharge		Mitigation for previous permit/other historic use  N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)  Wading birds, raccoon, fish, armadillo, various amphibians and herpetofauna		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Potential occasional use by wading birds such as white ibis (SSC), little blue heron (SSC), snowy egret (SSC), tricolored heron (SSC), sandhill crane (T), and wood stork (E).			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  wood stork					
Additional relevant factors:					
Assessment conducted by: M. Arrants, C. Cunningham, B. Meinecke, S. Rizzo, K. Bullock		Assessment date(s): 10/13/2009 through 11/06/2009			

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line	Application Number	Assessment Area Name or Number FLUCFCS 511 - Wetlands 17, 20/21, AA, AB, AO, AQ, BA, BD, BH, CS T, ZE
Impact or Mitigation Impact - Fill	Assessment conducted by: M. Arrants, C. Cunningham, B. Meinecke, S. Rizzo, K. Bullock	Assessment date: 10/13/09 through 11/06/09

<b>Scoring Guidance</b>
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support		Location and landscape support variable is reduced due to location of excavated ditches within surrounding cleared transmission line ROW. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 6, somewhat reduced due to location within cleared transmission line ROW; b) Invasive exotic species = 6, moderate coverage; c) Wildlife access to and from outside = 6, decreased due to limitations imposed by surrounding developed areas; d) functions that benefit fish & wildlife downstream-distance or barriers = 5, moderate benefit, artificial drainageways; e) Impacts to wildlife listed in Part 1 by outside land uses = 6, reduced due to surrounding development and clearing of native habitat; f) Hydrologically connected areas downstream of assessment area = 6, artificial drainage features connect to adjacent areas; g) Dependency of downstream areas on assessment area = 5, moderate benefit to downstream areas.
w/o pres or current	with	
6	0	
.500(6)(b)Water Environment (n/a for uplands)		The water environment score is reduced due to artifical hydroperiod resulting from excavation of drainage ditches within surrounding disturbed landscape. Individual parameter scores: a) water levels and flows = 5, artifical nature of excavated ditches; b) water level indicators = 5, altered hydroperiod due to excavated ditches; c) soil moisture = 6, consistent with expected; d) soil erosion or deposition = 4, erosion from ROW clearance, roadways, adjacent landuses; e) evidence of fire history = N/A; f) vegetation community zonation = 3, artifical system, significant upland species encroachment; g) hydrologic stress on vegetation = 6, upland and transitional species prevalent; h) use by animal species with specific hydrological requirements = 5, due to surrounding altered landscape/altered hydrology; i) vegetative species tolerant of and associated with water quality degradation = 4, some indication of high nutrients, cattails and algae; j) direct observation of water quality = 4, some elevated nutrients likely due to algal growth and nuisance/exotic vegetation; K) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.
w/o pres or current	with	
5	0	
.500(6)(c)Community structure		The community structure variable is reduced due to moderate coverage of exotic/nuisance species and excavated, artifical nature of drainage ditches. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 5, maintenance typically removes shrub/canopy stratum, non-desirable wetland species prevalent; b) invasive exotics or other invasive plant species = 6, moderate coverage of exotic/nuisance species; c) regeneration and recruitment = 4, artifical system, recruitment impacted by surrounding development and diminished hydroperiod; d) age & size distribution = 5, typical of artifical drainage ditch, some impact due to maintenance; e) density and quality of coarse woody debris, snag, den, and cavity = N/A; f) plant condition = 6, reduced due to maintenance and herbicide; g) land management practices = 5, due to alteration of community structure by routine maintenance; h) topographic features = 5, excavated system; i) siltation or algal growth in submerged aquatic plant communities = N/A
w/o pres or current	with	
5	0	

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
or w/o pres	
0.53	0

<b>If preservation as mitigation,</b>
Preservation adjustment factor =
Adjusted mitigation delta =

<b>For impact assessment areas</b>
FL = delta x acres = -0.53 x 0.08 = 0.04 (Wetland CS T)

Delta = [with-current]
<b>-0.53</b>

<b>If mitigation</b>
Time lag (t-factor) =
Risk factor =

<b>For mitigation assessment areas</b>
RFG = delta/(t-factor x risk) =



**PART I – Qualitative Description**  
(See Section 62-345.400, F.A.C.)

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line		Application Number		Assessment Area Name or Number FLUCFCS 511 - Wetlands Y, Z, AP, AU, CS M, ZDA	
FLUCCs code  511 - Ditches		Further classification (optional)		Impact or Mitigation Site?  Existing Condition	Assessment Area Size 3.1 acres (Y=0.22, Z=0.20, AP=1.3, AU=1.18, CS M=0.19, ZDA=0.01)
Basin/Watershed Name/Number Crystal River to St. Pete/03100207		Affected Waterbody (Class)		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)  None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Hydrologically connected to other wetlands/surface waters outside the transmission line ROW. Surrounded by upland and wetland forest, pasture, and cleared transmission line ROW					
Assessment area description  Ditches within existing transmission line ROW vegetated with a mixture of nuisance/exotic species such as cattail ( <i>Typha latifolia</i> ) and and torpedo grass ( <i>Panicum repens</i> ), as well as native species such as sugarcane plumegrass ( <i>Erianthus giganteus</i> ), whitetop sedge ( <i>Dichromena</i> sp.), sawgrass ( <i>Cladium jamaicense</i> ), musky bushmint ( <i>Hyptis alata</i> ), smartweed ( <i>Polygonum punctatum</i> ), dogfennel ( <i>Eupatorium capillifolium</i> ), bushy broomsedge ( <i>Andropogon glomeratus</i> ), arrowhead ( <i>Sagittaria lancifolia</i> ), muhly grass ( <i>Muhlenbergia capillaris</i> ), goldenrod ( <i>Solidago canadensis</i> ), and coastal plain willow ( <i>Salix caroliniana</i> ).					
Significant nearby features  Cleared transmission line ROW, US 19		Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique			
Functions  Wildlife habitat, water conveyance, flood attenuation, aquifer recharge		Mitigation for previous permit/other historic use  N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Wading birds, raccoon, white tailed deer, armadillo, various amphibians and herpetofauna		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Potential occasional use by wading birds such as white ibis (SSC), little blue heron (SSC), snowy egret (SSC), tricolored heron (SSC), sandhill crane (T), and wood stork (E).			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  mosquitofish, leopard frog, white-tailed deer, alligator, florida gar, mourning dove, blue jay					
Additional relevant factors:					
Assessment conducted by: M. Arrants, C. Cunningham, S. Rizzo, A. Davanzo, B. Meinecke, K. Bullock		Assessment date(s): 10/13/2009 through 11/06/2009			

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line	Application Number	Assessment Area Name or Number FLUCFCS 511 - Wetlands Y, Z, AP, AU, CS M, ZDA
Impact or Mitigation  Existing Condition	Assessment conducted by: M. Arrants, C. Cunningham, S. Rizzo, A. Davanzo, B. Meinecke, K. Bullock	Assessment date:  10/13/09 through 11/06/09

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support  w/o pres or current 6 with 0	Location and landscape support variable is somewhat reduced due to location within transmission line ROW. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 6, reduced due to disturbance from surrounding development; b) Invasive exotic species = 7, minimal coverage of wild taro and paragrass; c) Wildlife access to and from outside = 6, decreased due to limitations imposed by surrounding cleared landscape; d) functions that benefit fish & wildlife downstream-distance or barriers = 7, areas adjacent to other habitats; e) Impacts to wildlife listed in Part 1 by outside land uses = 7, somewhat reduced due to surrounding cleared transmission line ROW; f) Hydrologically connected areas downstream of assessment area = 7; g) Dependency of downstream areas on assessment area = 6, moderate benefit to adjacent areas.
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 5 with 0	The water environment score is reduced somewhat due to surrounding cleared transmission line ROW. Individual parameter scores: a) water levels and flows = 8, typical of assessment area, slightly reduced due to adjacent development; b) water level indicators = 7; c) soil moisture = 8, consistent with expected; d) soil erosion or deposition = 6, erosion noted; e) evidence of fire history = N/A; f) vegetation community zonation = 6, typical of assessment area; g) hydrologic stress on vegetation = 7, minimal; h) use by animal species with specific hydrological requirements = 6, foraging habitat; i) vegetative species tolerant of and associated with water quality degradation = 6, some indication of high nutrients, exotic species; j) direct observation of water quality = 7, somewhat elevated nutrients evident due to algal growth and nuisance/exotic vegetation; K) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 6 with 0	The community structure variable is slightly reduced due to presence of exotic/nuisance species. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 7, transmission line maintenance typically removes shrub/canopy stratum, non-desirable wetland species present; b) invasive exotics or other invasive plant species = 7, moderate coverage of paragrass, wild taro, rattlebox; c) regeneration and recruitment = 7, area within transmission line ROW is maintained; d) age & size distribution = 6, altered due to ROW maintenance; e) density and quality of coarse woody debris, snag, den, and cavity = N/A; f) plant condition = 7, typical of assessment area, somewhat reduced due to maintenance; g) land management practices = 7, due to alteration of community structure by routine maintenance; h) topographic features = 7, typical of system, altered due to ROW clearing; i) siltation or algal growth in submerged aquatic plant communities = N/A

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres 0.57 with 0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = -0.57 x 0 = 0

Delta = [with-current]
-0.57

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

**PART I – Qualitative Description**  
(See Section 62-345.400, F.A.C.)

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line		Application Number		Assessment Area Name or Number FLUCFCS 534 - Wetland AM	
FLUCCs code 534 - Reservoirs < 10 acres		Further classification (optional)		Impact or Mitigation Site? Existing Condition	Assessment Area Size 0.18 acres
Basin/Watershed Name/Number Direct Runoff to Gulf/03100207		Affected Waterbody (Class)		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Located within the Crystal River Energy Complex property, north and west of the existing substation. No hydrologic connection to other wetlands or surface waters.					
Assessment area description  Wetlands AI and AM are isolated retention areas that retain runoff water from the adjacent car wash and roadways. Vegetation consists of herbaceous species including Peruvian primrosewillow ( <i>Ludwigia peruviana</i> ), anglestem primrosewillow ( <i>Ludwigia leptocarpa</i> ), flatsedges ( <i>Cyperus</i> spp.), bristlegrass ( <i>Setaria</i> spp.), annual saltmarsh aster ( <i>Symphotrichum subulatum</i> ), Virginia buttonweed ( <i>Diodia virginiana</i> ), sawgrass ( <i>Cladium jamaicense</i> ), spotflower ( <i>Acmella</i> spp.), marsh mermaidweed ( <i>Proserpinaca palustris</i> ), and lizard's tail ( <i>Saururus cernuus</i> ).					
Significant nearby features  Crystal River Energy Complex, Gulf of Mexico		Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique			
Functions  Water storage, foraging habitat for wading birds		Mitigation for previous permit/other historic use  N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)  Wading birds, various amphibians and herpetofauna		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Potential foraging by wading birds such as white ibis (SSC), little blue heron (SSC), snowy egret (SSC), tricolored heron (SSC), sandhill crane (T), limpkin (SSC), wood stork (E).			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  none					
Additional relevant factors:					
Assessment conducted by: S. Rizzo, T. Davanzo		Assessment date(s): 10/29/2009			

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line	Application Number	Assessment Area Name or Number FLUCFCS 534 - Wetland AM
Impact or Mitigation Existing Condition	Assessment conducted by: S. Rizzo, T. Davanzo	Assessment date: 10/28/09, 10/29/09

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support  w/o pres or current 4 with 0	Location and landscape support variable is reduced due to location of wetlands within Crystal River Energy Complex. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 4, reduced due to location within plant; b) Invasive exotic species = 4, Peruvian primrosewillow dominant; c) Wildlife access to and from outside = 4, decreased due to limitations imposed by plant; d) functions that benefit fish & wildlife downstream-distance or barriers = 4, areas isolated; e) Impacts to wildlife listed in Part 1 by outside land uses = 4, reduced due to surrounding habitat loss; f) Hydrologically connected areas downstream of assessment area = 4, isolated; g) Dependency of downstream areas on assessment area = 4, areas isolated and provide no benefit.
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 4 with 0	The water environment score is reduced due to isolation from other wetlands, location within plant, and land clearing associated with the existing plant. Individual parameter scores: a) water levels and flows = 4, altered due to surrounding plant; b) water level indicators = 4, not consistent with expected; c) soil moisture = 4, drier than expected; d) soil erosion or deposition = 8, minimal erosion; e) evidence of fire history = N/A; f) vegetation community zonation = 8, mostly consistent with expected; g) hydrologic stress on vegetation = 4, apparent; h) use by animal species with specific hydrological requirements = 4, potential wading bird habitat, but no wading birds observed; i) vegetative species tolerant of and associated with water quality degradation = 4, community generally consists of typical species; j) direct observation of water quality = N/A, no water present; K) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 4 with 0	The vegetative community structure is dominated by herbaceous wetland species, and is reduced due to presence of invasive species. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 4, dominated by some undesirable wetland species; b) invasive exotics or other invasive plant species = 4, moderate coverage; c) regeneration and recruitment = 4, impacted by application of herbicides and mowing; d) age & size distribution = 4, impacted by application of herbicides and mowing; e) density and quality of coarse woody debris, snag, den, and cavity = N/A; f) plant condition = 4, impacted by application of herbicides and mowing; g) land management practices = 4, impacted by application of herbicides and mowing; h) topographic features = 4, man made except for Wetland AC; i) siltation or algal growth in submerged aquatic plant communities = N/A.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres 0.40 with 0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = -0.40 x 0 = 0

Delta = [with-current]
-0.40

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

**PART I – Qualitative Description**  
(See Section 62-345.400, F.A.C.)

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line		Application Number		Assessment Area Name or Number FLUCFCS 534 - Wetlands 1, AY, CS U	
FLUCCs code 534 - Reservoirs < 10 acres		Further classification (optional) Stormwater Ponds, Reservoirs		Impact or Mitigation Site? Existing Condition	
				Assessment Area Size 1.35 acres (1=0.12, AY=1.04, CS-U=0.19)	
Basin/Watershed Name/Number Crystal River to St. Pete/03100207		Affected Waterbody (Class)		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Isolated stormwater ponds/man-made reservoirs. Surrounded by existing transmission line ROW.					
Assessment area description  Stormwater ponds/reservoirs surrounded by transmission line ROW. Vegetative community dominated by a mixture of nuisance/exotic and native species, including coastal plain willow ( <i>Salix caroliniana</i> ), cattail ( <i>Typha latifolia</i> ), rushes ( <i>Juncus</i> sp.), bushy broomsedge ( <i>Andropogon glomeratus</i> ), broomsedge bluestem ( <i>Andropogon virginicus</i> ), coinwort ( <i>Centella asiatica</i> ), climbing aster ( <i>Aster carolinianum</i> ), buttonweed ( <i>Diodia virginiana</i> ), and water hyssop ( <i>Bacopa monnieri</i> ).					
Significant nearby features  Existing transmission line ROW			Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique		
Functions  Water storage, wildlife habitat			Mitigation for previous permit/other historic use  N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Wading birds, raccoon, various amphibians and herpetofauna			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Potential occasional use by wading birds such as white ibis (SSC), little blue heron (SSC), snowy egret (SSC), and tricolored heron (SSC).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  six-lined racerunner, apple snails					
Additional relevant factors:  					
Assessment conducted by: M. Arrants, C. Cunningham, S. Rizzo, A. Davanzo, K. Bullock			Assessment date(s): 10/15/2009 through 11/5/2009		

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line	Application Number	Assessment Area Name or Number FLUCFCS 534 - Wetlands 1, AY, CS U
Impact or Mitigation Existing Condition	Assessment conducted by: M. Arrants, C. Cunningham, S. Rizzo, A. Davanzo, K. Bullock	Assessment date: 10/15/09 through 11/5/09

<b>Scoring Guidance</b>
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support		Location and landscape support variable is reduced due to location of excavated ponds within surrounding cleared ROW and roadways. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 5, reduced due to disturbance from maintenance mowing/herbicide, surrounding development; b) Invasive exotic species = 5, moderate coverage of cattail; c) Wildlife access to and from outside = 6, decreased due to limitations imposed by surrounding developed areas and lack of hydrologic connection; d) functions that benefit fish & wildlife downstream-distance or barriers = 1, areas isolated from other habitats; e) Impacts to wildlife listed in Part 1 by outside land uses = 6, reduced due to surrounding development and clearing of native habitat; f) Hydrologically connected areas downstream of assessment area = 1, no hydrologic connection; g) Dependency of downstream areas on assessment area = 1, minimal benefit to downstream areas.
w/o pres or current	with	
5	0	
.500(6)(b)Water Environment (n/a for uplands)		The water environment score is reduced due to artifical hydroperiod resulting from excavation of ponds/reservoirs within surrounding cleared, impacted areas. Individual parameter scores: a) water levels and flows = 5, artifical nature of excavated ponds; b) water level indicators = 4, upland excavated ponds; c) soil moisture = 7, consistent with expected; d) soil erosion or deposition = 7, limited erosion noted; e) evidence of fire history = N/A; f) vegetation community zonation = 5, artifical system, reduced littoral zone; g) hydrologic stress on vegetation = 6, areas of deeper water reduce extent of expected emergent vegetation; h) use by animal species with specific hydrological requirements = 7, foraging noted, although lack of hydrologic connection reduces utilization; i) vegetative species tolerant of and associated with water quality degradation = 5, some indication of high nutrients, cattails and exotic species; j) direct observation of water quality = 5, elevated nutrients evident due to algal growth and nuisance/exotic vegetation; K) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.
w/o pres or current	with	
5	0	
.500(6)(c)Community structure		The community structure variable is reduced due to presence of exotic/nuisance species and excavated, artifical nature of ponds/reservoirs. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 5, maintenance typically removes shrub/canopy stratum, non-desirable wetland species prevalent; b) invasive exotics or other invasive plant species = 6, moderate coverage of cattail; c) regeneration and recruitment = 4, artifical system, recruitment impacted by surrounding development and diminished hydroperiod; d) age & size distribution = 4, typical of artifical stormwater pond system; e) density and quality of coarse woody debris, snag, den, and cavity = N/A; f) plant condition = 6, reduced due to maintenance and herbicide; g) land management practices = 5, due to alteration of community structure by routine maintenance; h) topographic features = 4, artifical excavated system; i) siltation or algal growth in submerged aquatic plant communities = N/A
1. Vegetation and/or 2. Benthic Community		
w/o pres or current	with	
5	0	

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
or w/o pres	
0.50	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = -0.50 x 0 = 0

Delta = [with-current]
-0.50

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

**PART I – Qualitative Description**  
(See Section 62-345.400, F.A.C.)

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line		Application Number		Assessment Area Name or Number FLUCFCS 617 - Wetlands 3&24, 8, 11, 12, 16, 18, 19, 22, AN, AQ, AW	
FLUCCs code  617 - Mixed Wetland Hardwoods		Further classification (optional)		Impact or Mitigation Site?  Impact	Assessment Area Size 29.97 acres (3&24=0.89, 8=0.3, 11=0.24, 12=0.14, 16=0.25, 18=0.26, 19=1.1, 22=5.84, AN=17.87, AQ=2.5, AW=0.58)
Basin/Watershed Name/Number Crystal River to St. Pete/03100207		Affected Waterbody (Class)		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)  None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Isolated forested wetlands adjacent to cleared transmission line ROW and upland forest.					
Assessment area description Forested wetlands vegetated with mixture of native wetland species including laurel oak ( <i>Quercus laurifolia</i> ), dahoon holly ( <i>Ilex cassine</i> ), cabbage palm ( <i>Sabal palmetto</i> ), red maple ( <i>Acer rubrum</i> ), blackgum ( <i>Nyssa sylvatica</i> ), pop ash ( <i>Fraxinus caroliniana</i> ), swamp bay ( <i>Persea palustris</i> ), red cedar ( <i>Juniperus virginianus</i> ), and sweet bay ( <i>Magnolia virginiana</i> ). Shrub species include wax myrtle ( <i>Myrica cerifera</i> ), coastal plain willow ( <i>Salix caroliniana</i> ), and walter's viburnum ( <i>Viburnum obovatum</i> ). Groundcover species include whitetop sedge ( <i>Dichromena</i> sp.), muhly grass ( <i>Muhlenbergia capillaris</i> ), marsh fleabane ( <i>Pluchea odorata</i> ), pickerelweed ( <i>Pontederia cordata</i> ), blackberry ( <i>Rubus</i> sp.), muscadine ( <i>Vitis rotundifolia</i> ), and dogfennel ( <i>Eupatorium capillifolium</i> ).					
Significant nearby features  Existing transmission line ROW, roadways		Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique			
Functions  Wildlife habitat, water storage, aquifer recharge		Mitigation for previous permit/other historic use  N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Wading birds, raccoon, various amphibians and herpetofauna		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Potential occasional use by wading birds such as white ibis (SSC), little blue heron (SSC), snowy egret (SSC), tricolored heron (SSC), sandhill crane (T), and wood stork (E).			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  mourning dove, blue jay					
Additional relevant factors:					
Assessment conducted by: B. Meinecke, S. Rizzo, A. Davanzo, K. Bullock		Assessment date(s): 11/2/09 through 11/5/09			

**PART II – Quantification of Assessment Area (impact or mitigation)**  
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line	Application Number	Assessment Area Name or Number FLUCFCS 617 - Wetlands 3&24, 8, 11, 12, 16, 18, 19, 22, AN, AQ, AW
Impact or Mitigation Impact - Fill	Assessment conducted by: B. Meinecke, S. Rizzo, A. Davanzo, K. Bullock	Assessment date: 11/2/09 - 11/5/09

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current	with	Location and landscape support variable is reduced somewhat due to location of wetland adjacent to transmission line and golf course. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 7, slightly reduced due to adjacent cleared landscape; b) Invasive exotic species = 9, minimal coverage; c) Wildlife access to and from outside = 7, decreased due to limitations imposed by surrounding agricultural areas and lack of hydrologic connection; d) functions that benefit fish & wildlife downstream-distance or barriers = 7, moderate barriers due to adjacent cleared landscape; e) Impacts to wildlife listed in Part 1 by outside land uses = 7, reduced due to surrounding habitat loss; f) Hydrologically connected areas downstream of assessment area = 5, no direct hydrologic connections; g) Dependency of downstream areas on assessment area = 5, no connection to downstream areas.
	7	0	
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current	with	The water environment score is slightly reduced due to impacts from historical landclearing and development. Individual parameter scores: a) water levels and flows = 8, slight alterations in water level due to surrounding clearing and development; b) water level indicators = 8, consistent with expected; c) soil moisture = 8, consistent with expected; d) soil erosion or deposition = 8, minimal erosion; e) evidence of fire history = N/A; f) vegetation community zonation = 8, typical of assessment area; g) hydrologic stress on vegetation = 8, minimal; h) use by animal species with specific hydrological requirements = 7, wading bird foraging habitat; i) vegetative species tolerant of and associated with water quality degradation = 8, community consists of typical species; j) direct observation of water quality = 8, none noted; K) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.
	8	0	
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community	w/o pres or current	with	The community structure variable reflects dominance by desirable native wetland canopy species. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 9, dominated by desirable native wetland species; b) invasive exotics or other invasive plant species = 9, minimal coverage; c) regeneration and recruitment = 8, minor impact due to adjacent transmission line maintenance; d) age & size distribution = 9, typical of system; e) density and quality of coarse woody debris, snag, den, and cavity = N/A; f) plant condition = 10; g) land management practices = 7, due to alteration of community structure by clearing of adjacent native uplands; h) topographic features = 9, typical for assessment area; i) siltation or algal growth in submerged aquatic plant communities = N/A
	9	0	

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
or w/o pres	
0.80	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = -0.80 x 0.76 = 0.61 (Wetland AN)

Delta = [with-current]
-0.80

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =



**PART II – Quantification of Assessment Area (impact or mitigation)**  
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line	Application Number	Assessment Area Name or Number FLUCFCS 617 - Wetlands 3&24, 8, 11, 12, 16, 18, 19, 22, AN, AQ, AW
Impact or Mitigation Impact - Clearing	Assessment conducted by: B. Meinecke, S. Rizzo, A. Davanzo, K. Bullock	Assessment date: 11/2/09 - 11/5/09

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
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.500(6)(a) Location and Landscape Support	w/o pres or current	7	with	5	Loss of canopy species associated with clearing the transmission line ROW would reduce the location and landscape support variable for wetland forests through loss of contiguous forested parcels and conversion to a freshwater marsh/wetland scrub community. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 4, reduced due to clearing impacts; b) Invasive exotic species = 6, potential encroachment of exotics associated with disturbance; c) Wildlife access to and from outside = 4, reduced due to clearing impacts; d) functions that benefit fish & wildlife downstream-distance or barriers = 4, limited benefit; e) Impacts to wildlife listed in Part 1 by outside land uses = 4, reduced due to habitat loss; f) Hydrologically connected areas downstream of assessment area = 4, reduced due to clearing impacts; g) Dependency of downstream areas on assessment area = 4, reduced benefit to downstream areas.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current	8	with	5	Clearing the canopy will impact the water environment variable, converting the forested system to a freshwater marsh/wetland scrub habitat; silt fencing will reduce temporary turbidity impacts to adjacent wetlands. Canopy clearing will impact the water environment score due to erosion, sedimentation, and soil compaction. Individual parameter scores: a) water levels and flows = 4, altered due to clearing impacts related to use of heavy machinery, erosion/sedimentation, and soil compaction; b) water level indicators = 4, altered from clearing impacts; c) soil moisture = 4, altered from soil compaction; d) soil erosion or deposition = 4, temporary erosion from clearing impacts; e) evidence of fire history = N/A; f) vegetation community zonation = 4, altered due to removal of canopy stratum; g) hydrologic stress on vegetation = 6, some stress from soil compaction; h) use by animal species with specific hydrological requirements = 6, decreased use due to clearing; i) vegetative species tolerant of and associated with water quality degradation = 6, may have potential encroachment of nuisance/exotic species; j) direct observation of water quality = N/A; K) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current	9	with	5	Clearing the canopy will convert the system to a freshwater marsh/wetland scrub community with significant loss of functional value compared to the existing forested system. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 4, canopy stratum removed; b) invasive exotics or other invasive plant species = 6, potential encroachment of exotics associated with disturbance; c) regeneration and recruitment = 6, the herbaceous and shrub stratum species will eventually regenerate and recruit; d) age & size distribution = 4, impacted from clearing; e) density and quality of coarse woody debris, snag, den, and cavity = 4, reduced due to clearing impacts; f) plant condition = 4, reduced due to clearing impacts; g) land management practices = 4, due to alteration of community structure by clearing; h) topographic features = 4, atypical for assessment area; i) siltation or algal growth in submerged aquatic plant communities = N/A.

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
0.80	0.50

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = -0.30 x 0.79 = 0.24 (Wetland 19); -0.30 x 2.89 = 0.87 (Wetland 22); -0.30 x 7.75 = 2.33 (Wetland AN); total of 11.43 acres and total FL of 3.44

Delta = [with-current]
-0.30

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

**PART I – Qualitative Description**  
(See Section 62-345.400, F.A.C.)

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line		Application Number		Assessment Area Name or Number FLUCFCS 630 - Wetlands AT, AZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH	
FLUCCs code  630 - Mixed Hardwood/Conifer Wetland		Further classification (optional)		Impact or Mitigation Site?  Impact	Assessment Area Size 25.5 acres (AT=22.94, AZ=0.28, ZA=1.29, ZB=0.01, ZC=0.10, ZD=0.45, ZE=0.15, ZF=0.09, ZG=0.11, ZH=0.08)
Basin/Watershed Name/Number Crystal River to St. Pete/03100207		Affected Waterbody (Class)		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)  None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Primarily isolated forested wetlands, some hydrologically connected to other wetlands within the transmission line ROW. Surrounded by cleared transmission line ROW and upland forest, adjacent to Crystal River Energy Center.					
Assessment area description  Forested wetlands vegetated with mixture of native wetland hardwood and conifer species including laurel oak ( <i>Quercus laurifolia</i> ), dahoon holly ( <i>Ilex cassine</i> ), cabbage palm ( <i>Sabal palmetto</i> ), red maple ( <i>Acer rubrum</i> ), ironwood ( <i>Carpinus caroliniana</i> ), sweetgum ( <i>Liquidambar styraciflua</i> ), American elm ( <i>Ulmus americana</i> ), slash pine ( <i>Pinus elliottii</i> ), blackgum ( <i>Nyssa sylvatica</i> ), pop ash ( <i>Fraxinus caroliniana</i> ), swamp bay ( <i>Persea palustris</i> ), red cedar ( <i>Juniperus virginianus</i> ), persimmon ( <i>Diospyros virginianus</i> ), and sweet bay ( <i>Magnolia virginiana</i> ). Shrub species include wax myrtle ( <i>Myrica cerifera</i> ), coastal plain willow ( <i>Salix caroliniana</i> ), and walter's viburnum ( <i>Viburnum obovatum</i> ). Groundcover species include maidenhair ( <i>Thelypteris</i> sp.) and saw palmetto ( <i>Serenoa repens</i> ).					
Significant nearby features  Cleared transmission line ROW, roadways		Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique			
Functions  Wildlife habitat, water storage, aquifer recharge		Mitigation for previous permit/other historic use  N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Wading birds, raccoon, various amphibians and herpetofauna		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Potential occasional use by wading birds such as white ibis (SSC), little blue heron (SSC), snowy egret (SSC), tricolored heron (SSC), sandhill crane (T), and wood stork (E).			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  blue jay					
Additional relevant factors:					
Assessment conducted by: S. Rizzo, A. Davanzo, K. Bullock		Assessment date(s): 10/13/2009 through 11/06/2009			

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line	Application Number	Assessment Area Name or Number FLUCFCS 630 - Wetlands AT, AZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH
Impact or Mitigation Impact - Fill	Assessment conducted by: S. Rizzo, A. Davanzo, K. Bullock	Assessment date: 10/29/09 - 11/6/09

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<b>.500(6)(a) Location and Landscape Support</b>  w/o pres or current <div>7</div> with <div>0</div>	Location and landscape support variable is reduced due to location adjacent to cleared transmission line. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 7, slightly reduced due to surrounding development; b) Invasive exotic species = 9, minimal coverage; c) Wildlife access to and from outside = 7, slightly decreased due to limitations imposed by surrounding agricultural areas and lack of hydrologic connection; d) functions that benefit fish & wildlife downstream-distance or barriers = 7, moderate barriers due to surrounding development; e) Impacts to wildlife listed in Part 1 by outside land uses = 7, reduced due to surrounding habitat loss; f) Hydrologically connected areas downstream of assessment area = 5, minimal hydrologic connections; g) Dependency of downstream areas on assessment area = 7, moderate benefit to downstream areas.
<b>.500(6)(b)Water Environment (n/a for uplands)</b>  w/o pres or current <div>8</div> with <div>0</div>	The water environment score is slightly reduced due to adjacent clearing and roadways. Individual parameter scores: a) water levels and flows = 8, slightly altered due to surrounding landclearing; b) water level indicators = 8, consistent with expected; c) soil moisture = 8, consistent with expected; d) soil erosion or deposition = 8, minimal erosion from surrounding clearing; e) evidence of fire history = N/A; f) vegetation community zonation = 9, typical for assessment area type; g) hydrologic stress on vegetation = 7, some edge effect, reduced hydroperiod, upland encroachment; h) use by animal species with specific hydrological requirements = 7, potential wading bird foraging habitat; i) vegetative species tolerant of and associated with water quality degradation = 8, community consists of typical species; j) direct observation of water quality = 8, none noted; K) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.
<b>.500(6)(c)Community structure</b>  1. Vegetation and/or 2. Benthic Community  w/o pres or current <div>9</div> with <div>0</div>	The community structure variable score reflects a high quality mixture of native wetland species. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 9, dominated by desirable native wetland species; b) invasive exotics or other invasive plant species = 9, minimal coverage; c) regeneration and recruitment = 8, typical for assessment area, slightly reduced due to transmission line maintenance; d) age & size distribution = 8, typical of system; e) density and quality of coarse woody debris, snag, den, and cavity = 9; f) plant condition = 9; g) land management practices = 7, due to alteration of community structure by clearing of adjacent native uplands; h) topographic features = 8, typical for assessment area; i) siltation or algal growth in submerged aquatic plant communities = N/A

Score = sum of above scores/30 (if uplands, divide by 20)
current
or w/o pres
with
0.80
0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = -0.80 x 0.23 = 0.18 (Wetland AZ); -0.80 x 0.13 = 0.10 (Wetland ZA); total of 0.36 acres and total FL of 0.28

Delta = [with-current]
-0.80

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

**PART II – Quantification of Assessment Area (impact or mitigation)**  
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line	Application Number	Assessment Area Name or Number FLUCFCS 630 - Wetlands AT, AZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH
Impact or Mitigation  Impact - Clearing	Assessment conducted by:  S. Rizzo, A. Davanzo, K. Bullock	Assessment date:  10/29/09 - 11/6/09

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
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.500(6)(a) Location and Landscape Support  w/o pres or current 7	with 5	Loss of canopy species associated with clearing the transmission line ROW would reduce the location and landscape support variable for wetland forests through loss of contiguous forested parcels and conversion to a freshwater marsh/wetland scrub community. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 4, reduced due to clearing impacts; b) Invasive exotic species = 6, potential encroachment of exotics associated with disturbance; c) Wildlife access to and from outside = 4, reduced due to clearing impacts; d) functions that benefit fish & wildlife downstream-distance or barriers = 4, limited benefit; e) Impacts to wildlife listed in Part 1 by outside land uses = 4, reduced due to habitat loss; f) Hydrologically connected areas downstream of assessment area = 4, reduced due to clearing impacts; g) Dependency of downstream areas on assessment area = 4, reduced benefit to downstream areas.
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 8	with 5	Clearing the canopy will impact the water environment variable, converting the forested system to a freshwater marsh/wetland scrub habitat; silt fencing will reduce temporary turbidity impacts to adjacent wetlands. Canopy clearing will impact the water environment score due to erosion, sedimentation, and soil compaction. Individual parameter scores: a) water levels and flows = 4, altered due to clearing impacts related to use of heavy machinery, erosion/sedimentation, and soil compaction; b) water level indicators = 4, altered from clearing impacts; c) soil moisture = 4, altered from soil compaction; d) soil erosion or deposition = 4, temporary erosion from clearing impacts; e) evidence of fire history = N/A; f) vegetation community zonation = 4, altered due to removal of canopy stratum; g) hydrologic stress on vegetation = 6, some stress from soil compaction; h) use by animal species with specific hydrological requirements = 6, decreased use due to clearing; i) vegetative species tolerant of and associated with water quality degradation = 6, may have potential encroachment of nuisance/exotic species; j) direct observation of water quality = N/A; K) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 9	with 5	Clearing the canopy will convert the system to a freshwater marsh/wetland scrub community with significant loss of functional value compared to the existing forested system. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 4, canopy stratum removed; b) invasive exotics or other invasive plant species = 6, potential encroachment of exotics associated with disturbance; c) regeneration and recruitment = 6, the herbaceous and shrub stratum species will eventually regenerate and recruit; d) age & size distribution = 4, impacted from clearing; e) density and quality of coarse woody debris, snag, den, and cavity = 4, reduced due to clearing impacts; f) plant condition = 4, reduced due to clearing impacts; g) land management practices = 4, due to alteration of community structure by clearing; h) topographic features = 4, atypical for assessment area; i) siltation or algal growth in submerged aquatic plant communities = N/A.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.80	0.50

If preservation as mitigation, Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = -0.30 x 8.52 = 2.56 (Wetland AT); -0.30 x 0.04 = 0.01 (Wetland AZ); -0.30 x 0.44 = 0.13 (Wetland ZA); -0.30 x 0.09 = 0.03 (Wetland ZC); -0.30 x 0.20 = 0.06 (Wetland ZD); -0.30 x 0.06 = 0.02 (Wetland ZE); -0.30 x 0.04 = 0.01 (Wetland ZG); total of 9.39 acres and total FL of 2.82

Delta = [with-current]
-0.30

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

**PART I – Qualitative Description**  
(See Section 62-345.400, F.A.C.)

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line		Application Number		Assessment Area Name or Number FLUCFCS 631 - Wetlands AK and AL	
FLUCCs code 631 - Wetland Scrub		Further classification (optional)		Impact or Mitigation Site? Impact	Assessment Area Size 1 acre (AK=0.47; AL=0.53)
Basin/Watershed Name/Number Direct Runoff to Gulf/03100207		Affected Waterbody (Class)		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Located within the Crystal River Energy Complex property, west of the existing substation. No hydrologic connection to other wetlands or surface waters.					
Assessment area description Wetlands AK and AL are shrub wetlands that appear to have been previously forested but are now logged, due to presence of logs, branches and similar debris within the wetlands. Vegetation consists of a mixture of shrub and herbaceous species including Carolina willow ( <i>Salix caroliniana</i> ), cabbage palm ( <i>Sabal palmetto</i> ), common buttonbush ( <i>Cephalanthus occidentalis</i> ), Carolina ash ( <i>Fraxinus caroliniana</i> ), cattail ( <i>Typha</i> spp.), arrowhead ( <i>Sagittaria</i> spp.), sweetscent ( <i>Pluchea odorata</i> ), flatsedges ( <i>Cyperus</i> spp.), Virginia buttonweed ( <i>Diodia virginiana</i> ), spotflower ( <i>Acmella</i> spp.), Peruvian primrosewillow ( <i>Ludwigia peruviana</i> ), lateflowering thoroughwort ( <i>Eupatorium serotinum</i> ), sawgrass ( <i>Cladium jamaicense</i> ), groundsel tree ( <i>Baccharis halimifolia</i> ), and plume grass ( <i>Erianthus</i> spp.).					
Significant nearby features Crystal River Energy Complex, Gulf of Mexico		Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique			
Functions Water storage, foraging habitat for wading birds		Mitigation for previous permit/other historic use N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Wading birds, various amphibians and herpetofauna		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Potential foraging by wading birds such as white ibis (SSC), little blue heron (SSC), snowy egret (SSC), tricolored heron (SSC), sandhill crane (T), limpkin (SSC), wood stork (E).			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): none					
Additional relevant factors:					
Assessment conducted by: S. Rizzo, T. Davanzo		Assessment date(s): 10/29/2009			

**PART II – Quantification of Assessment Area (impact or mitigation)**  
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line	Application Number	Assessment Area Name or Number FLUCFCS 631 - Wetlands AK and AL
Impact or Mitigation Impact - Fill	Assessment conducted by: S. Rizzo, T. Davanzo	Assessment date: 10/29/2009

<b>Scoring Guidance</b> The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed
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<b>Optimal (10)</b> Condition is optimal and fully supports wetland/surface water functions	<b>Moderate(7)</b> Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	<b>Minimal (4)</b> Minimal level of support of wetland/surface water functions	<b>Not Present (0)</b> Condition is insufficient to provide wetland/surface water functions
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<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current      with</p> <p>4      0</p>	<p>Location and landscape support variable is reduced due to location of wetlands within Crystal River Energy Complex. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 4, reduced due to location within plant; b) Invasive exotic species = 6, Peruvian primrosewillow present; c) Wildlife access to and from outside = 4, decreased due to limitations imposed by plant; d) functions that benefit fish &amp; wildlife downstream distance or barriers = 4, areas isolated; e) Impacts to wildlife listed in Part 1 by outside land uses = 4, reduced due to surrounding habitat loss; f) Hydrologically connected areas downstream of assessment area = 4, isolated; g) Dependency of downstream areas on assessment area = 4, areas isolated and provide no benefit.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current      with</p> <p>4      0</p>	<p>The water environment score is reduced due to isolation from other wetlands, location within plant, and land clearing/logging. Individual parameter scores: a) water levels and flows = 4, altered due to surrounding plant; b) water level indicators = 4, not consistent with expected; c) soil moisture = 4, drier than expected; d) soil erosion or deposition = 8, minimal erosion; e) evidence of fire history = N/A; f) vegetation community zonation = 4, altered due to previous logging; g) hydrologic stress on vegetation = 4, apparent; h) use by animal species with specific hydrological requirements = 4, potential wading bird habitat, but no wading birds observed; i) vegetative species tolerant of and associated with water quality degradation = 4, community generally consists of typical species; j) direct observation of water quality = N/A, no water present; K) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current      with</p> <p>4      0</p>	<p>The vegetative community structure is reduced due to presence of exotic species Peruvian primrosewillow and land clearing/logging. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 4, impacted by logging; b) invasive exotics or other invasive plant species = 6, moderate coverage; c) regeneration and recruitment = 4, impacted by logging; d) age &amp; size distribution = 4, impacted by logging; e) density and quality of coarse woody debris, snag, den, and cavity = N/A; f) plant condition = 4, impacted by logging; g) land management practices = 4, impacted by logging; h) topographic features = 6, mostly consistent with expected; i) siltation or algal growth in submerged aquatic plant communities = N/A.</p>

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
0.40	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = -0.40 x 0.03 = 0.01 (Wetland AK)

Delta = [with-current]
<b>-0.40</b>

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

**PART I – Qualitative Description**  
(See Section 62-345.400, F.A.C.)

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line		Application Number		Assessment Area Name or Number FLUCFCS 631 - Wetlands 3&24, AN, AP, AR, AS, AV	
FLUCCs code  631 - Wetland Scrub		Further classification (optional)		Impact or Mitigation Site?  Impact	
				Assessment Area Size 33.42 acres (3&24=2.78, AN=15.32, AP=13.77, AR=0.47, AS=0.98, AV=0.10)	
Basin/Watershed Name/Number Crystal River to St. Pete/03100207		Affected Waterbody (Class)		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)  None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Primarily isolated systems within existing cleared transmission line ROW; some connections to adjacent wetlands within the ROW.					
Assessment area description Scrub wetlands dominated by a mixture of desirable and nuisance wetland shrubs and small trees such as coastal plain willow ( <i>Salix caroliniana</i> ), groundsel tree ( <i>Baccharis halimifolia</i> ), wax myrtle ( <i>Myrica cerifera</i> ), dahoon holly ( <i>Ilex cassine</i> ), slash pine ( <i>Pinus elliottii</i> ), red cedar ( <i>Juniperus virginiana</i> ), laurel oak ( <i>Quercus laurifolia</i> ), cabbage palm ( <i>Sabal palmetto</i> ), swamp bay ( <i>Persea palustris</i> ), red maple ( <i>Acer rubrum</i> ), persimmon ( <i>Diospyros virginiana</i> ), pop ash ( <i>Fraxinus caroliniana</i> ), and buttonbush ( <i>Cephalanthus occidentalis</i> ). Groundcover species include nuisance/exotic species cattail ( <i>Typha latifolia</i> ), torpedo grass ( <i>Panicum repens</i> ), and cogon grass ( <i>Imperata cylindrica</i> ), as well as native species such as sawgrass ( <i>Cladium jamaicense</i> ), sugarcane plumegrass ( <i>Erianthus giganteus</i> ), bushy broomsedge ( <i>Andropogon glomeratus</i> ), goldenrod ( <i>Solidago</i> sp.), yellowtops ( <i>Flaveria</i> sp.), and lobelia ( <i>Lobelia</i> sp.).					
Significant nearby features  Cleared transmission line ROW, Crystal River Energy Center, roadways		Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique			
Functions  Wildlife habitat, water storage, aquifer recharge		Mitigation for previous permit/other historic use  N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Wading birds, raccoon, various amphibians and herpetofauna		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Potential occasional use by wading birds such as white ibis (SSC), little blue heron (SSC), snowy egret (SSC), tricolored heron (SSC), sandhill crane (T), and wood stork (E).			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  mourning dove, leopard frog					
Additional relevant factors:					
Assessment conducted by: B. Meinecke, S. Rizzo, A. Davanzo, K. Bullock		Assessment date(s): 10/29/09 - 11/5/09			

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line	Application Number	Assessment Area Name or Number FLUCFCS 631 - Wetlands 3&24, AN, AP, AR, AS, AV
Impact or Mitigation Impact - Fill	Assessment conducted by: B. Meinecke, S. Rizzo, A. Davanzo, K. Bullock	Assessment date: 10/29/09 - 11/5/09

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current	with	Location and landscape support variable is reduced due to location within cleared transmission line ROW. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 6, reduced due to surrounding clearing; b) Invasive exotic species = 4, significant coverage; c) Wildlife access to and from outside = 6, decreased due to limitations imposed by surrounding land clearing; d) functions that benefit fish & wildlife downstream-distance or barriers = 2, areas isolated from other habitats; e) Impacts to wildlife listed in Part 1 by outside land uses = 6, reduced due to surrounding habitat loss; f) Hydrologically connected areas downstream of assessment area = 2, no hydrologic connection; g) Dependency of downstream areas on assessment area = 2, little benefit to downstream areas.
	6	0	
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current	with	The water environment score is reduced due to impacts from landclearing, adjacent industrial landuses, and roadways. Individual parameter scores: a) water levels and flows = 6, altered due to clearing, ditching, roadways; b) water level indicators = 6, typical of assessment area; c) soil moisture = 6, typical of assessment area; d) soil erosion or deposition = 6, moderate erosion from adjacent landuses; e) evidence of fire history = N/A; f) vegetation community zonation = 6, moderate upland species encroachment; g) hydrologic stress on vegetation = 6; h) use by animal species with specific hydrological requirements = 5, poor wildlife habitat; i) vegetative species tolerant of and associated with water quality degradation = 6, some species indicative of high nutrients, eg. cattail; j) direct observation of water quality = N/A; K) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.
	6	0	
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community	w/o pres or current	with	The community structure variable is reduced due to periodic disturbance and nuisance species. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 6, prevalence of nuisance/exotic species, routine ROW maintenance; b) invasive exotics or other invasive plant species = 5, significant coverage; c) regeneration and recruitment = 6, impacted by mowing; d) age & size distribution = 5, altered due to ROW maintenance of ROW; e) density and quality of coarse woody debris, snag, den, and cavity = N/A; f) plant condition = 6, reduced due to ROW maintenance; g) land management practices = 6, due to alteration of community structure by clearing of adjacent native uplands; h) topographic features = 6, typical for assessment area; i) siltation or algal growth in submerged aquatic plant communities = N/A
	6	0	

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.60	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = -0.60 x 0.31 = 0.19 (Wetland AN)

Delta = [with-current]
-0.60

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =



**PART I – Qualitative Description**  
**(See Section 62-345.400, F.A.C.)**

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line		Application Number		Assessment Area Name or Number FLUCFCS 631 - Wetlands 15 and 23	
FLUCCs code 631 - Wetland Scrub		Further classification (optional)		Impact or Mitigation Site? Existing Condition	Assessment Area Size 1.41 acres (15=0.01, 23=1.40)
Basin/Watershed Name/Number Crystal River to St. Pete/03100207		Affected Waterbody (Class)		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Isolated systems within existing cleared transmission line ROW					
Assessment area description  Scrub wetlands dominated by a mixture of native wetland shrubs and small trees including coastal plain willow ( <i>Salix caroliniana</i> ), wax myrtle ( <i>Myrica cerifera</i> ), dahoon holly ( <i>Ilex cassine</i> ), laurel oak ( <i>Quercus laurifolia</i> ), cabbage palm ( <i>Sabal palmetto</i> ), pop ash ( <i>Fraxinus caroliniana</i> ), and buttonbush ( <i>Cephalanthus occidentalis</i> ). Groundcover species include creeping primrose willow ( <i>Ludwigia repens</i> ), sawgrass ( <i>Cladium jamaicense</i> ), dogfennel ( <i>Eupatorium capillifolium</i> ), whitetop sedge ( <i>Dichromena</i> sp.), and marsh fleabane ( <i>Pluchea odorata</i> ).					
Significant nearby features  Existing transmission line ROW, roadways		Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique			
Functions  Wildlife habitat, water storage, aquifer recharge		Mitigation for previous permit/other historic use  N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  raccoon, various amphibians and herpetofauna		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Potential but unlikely use by wading birds such as white ibis (SSC), little blue heron (SSC), snowy egret (SSC), tricolored heron (SSC), sandhill crane (T), and wood stork (E).			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  none observed					
Additional relevant factors:					
Assessment conducted by: B. Meinecke, K. Bullock		Assessment date(s): 11/4-5/2009			

**PART II – Quantification of Assessment Area (impact or mitigation)**  
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line	Application Number	Assessment Area Name or Number FLUCFCS 631 - Wetlands 15 and 23
Impact or Mitigation Existing Condition	Assessment conducted by: B. Meinecke, K. Bullock	Assessment date: 11/4-5/09

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current	with	Location and landscape support variable is reduced due to location adjacent to roads and cleared transmission line. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 7, reduced due to surrounding development; b) Invasive exotic species = 8, minimal coverage; c) Wildlife access to and from outside = 6, decreased due to limitations imposed by surrounding cleared landscape, industrial uses; d) functions that benefit fish & wildlife downstream-distance or barriers = 4, no connection to other habitats; e) Impacts to wildlife listed in Part 1 by outside land uses = 6, reduced due to surrounding habitat loss; f) Hydrologically connected areas downstream of assessment area = 3, no hydrologic connections; g) Dependency of downstream areas on assessment area = 3, little benefit to downstream areas.
	7	0	
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current	with	The water environment score is reduced due to impacts from landclearing, ditching, and ROW maintenance. Individual parameter scores: a) water levels and flows = 6, altered due to clearing, ditching; b) water level indicators = 7, typical of assessment area; c) soil moisture = 7, typical of assessment area; d) soil erosion or deposition = 7, erosion from adjacent landuses; e) evidence of fire history = N/A; f) vegetation community zonation = 6, moderate upland species encroachment; g) hydrologic stress on vegetation = 6; h) use by animal species with specific hydrological requirements = 5, poor wildlife habitat; i) vegetative species tolerant of and associated with water quality degradation = 6, willow; j) direct observation of water quality = N/A; K) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.
	6	0	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current	with	The community structure variable is slightly reduced due to limited species diversity, dominance by coastal plain willow, and routine ROW maintenance. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 7, dominance by native species, limited diversity; b) invasive exotics or other invasive plant species = 8, minimal coverage; c) regeneration and recruitment = 8, somewhat impacted by ROW maintenance, ditching; d) age & size distribution = 7, typical of system, reduced due to ROW maintenance; e) density and quality of coarse woody debris, snag, den, and cavity = 8; f) plant condition = 6, extent and health of native species impacted somewhat by ROW maintenance; g) land management practices = 6, clearing of adjacent native uplands; h) topographic features = 7, typical of assessment area; i) siltation or algal growth in submerged aquatic plant communities = N/A
	7	0	

Score = sum of above scores/30 (if uplands, divide by 20)		
current		with
w/o pres		
0.67		0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = -0.67 x 0 = 0

Delta = [with-current]
-0.67

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

**PART I – Qualitative Description**  
(See Section 62-345.400, F.A.C.)

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line		Application Number		Assessment Area Name or Number FLUCFCS 641 - Wetland AJ	
FLUCCs code 641 - Freshwater Marshes		Further classification (optional)		Impact or Mitigation Site? Existing Condition	
				Assessment Area Size 0.05 acres	
Basin/Watershed Name/Number Direct Runoff to Gulf/03100207		Affected Waterbody (Class)		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) None	
<p>Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands</p> <p>Located within the Crystal River Energy Complex property, north of the existing substation. No hydrologic connection to other wetlands or surface waters.</p> <p>Assessment area description</p> <p>Wetland AC is an isolated depressional freshwater marsh sprayed with herbicides, and Wetlands AH and AJ are isolated stormwater retention areas that retain water from surrounding parking lots. Vegetation consists of herbaceous species including torpedograss (<i>Panicum repens</i>), sawgrass (<i>Cladium jamaicense</i>), flatsedges (<i>Cyperus</i> spp.), creeping primrosewillow (<i>Ludwigia repens</i>), manyflower marshpennywort (<i>Hydrocotyle umbellata</i>), Virginia buttonweed (<i>Diodia virginiana</i>), ticktrefoil (<i>Desmodium</i> spp.), bedstraw (<i>Galium</i> spp.), and smartweed (<i>Polygonum</i> spp.).</p>					
Significant nearby features Crystal River Energy Complex, Gulf of Mexico			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique		
Functions Water storage, foraging habitat for wading birds			Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Wading birds, various amphibians and herpetofauna			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Potential foraging by wading birds such as white ibis (SSC), little blue heron (SSC), snowy egret (SSC), tricolored heron (SSC), sandhill crane (T), limpkin (SSC), wood stork (E).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): chipping sparrow					
Additional relevant factors:					
Assessment conducted by: S. Rizzo, T. Davanzo			Assessment date(s): 10/28/09, 10/29/09		

**PART II – Quantification of Assessment Area (impact or mitigation)**  
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line	Application Number	Assessment Area Name or Number FLUCFCS 641 - Wetland AJ
Impact or Mitigation Existing Condition	Assessment conducted by: S. Rizzo, T. Davanzo	Assessment date: 10/28/09, 10/29/09

<b>Scoring Guidance</b> The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed
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<b>Optimal (10)</b> Condition is optimal and fully supports wetland/surface water functions	<b>Moderate(7)</b> Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	<b>Minimal (4)</b> Minimal level of support of wetland/surface water functions	<b>Not Present (0)</b> Condition is insufficient to provide wetland/surface water functions
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<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current      with</p> <p>4      0</p>	<p>Location and landscape support variable is reduced due to location of wetlands within Crystal River Energy Complex. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 4, reduced due to location within plant; b) Invasive exotic species = 4, torpedograss dominant; c) Wildlife access to and from outside = 4, decreased due to limitations imposed by plant; d) functions that benefit fish &amp; wildlife downstream-distance or barriers = 4, areas isolated; e) Impacts to wildlife listed in Part 1 by outside land uses = 4, reduced due to surrounding habitat loss; f) Hydrologically connected areas downstream of assessment area = 4, isolated; g) Dependency of downstream areas on assessment area = 4, areas isolated and provide no benefit.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current      with</p> <p>4      0</p>	<p>The water environment score is reduced due to isolation from other wetlands, location within plant, and land clearing associated with the existing plant. Individual parameter scores: a) water levels and flows = 4, altered due to surrounding plant; b) water level indicators = 4, not consistent with expected; c) soil moisture = 4, drier than expected; d) soil erosion or deposition = 8, minimal erosion; e) evidence of fire history = N/A; f) vegetation community zonation = 4, altered due to application of herbicides and mowing; g) hydrologic stress on vegetation = 4, apparent; h) use by animal species with specific hydrological requirements = 4, potential wading bird habitat, but no wading birds observed; i) vegetative species tolerant of and associated with water quality degradation = 4, community generally consists of typical species; j) direct observation of water quality = N/A, no water present; K) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current      with</p> <p>4      0</p>	<p>The vegetative community structure is dominated by herbaceous wetland species, and is reduced due to presence of exotic species torpedograss. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 4, dominated by some undesirable wetland species; b) invasive exotics or other invasive plant species = 4, moderate coverage; c) regeneration and recruitment = 4, impacted by application of herbicides and mowing; d) age &amp; size distribution = 4, impacted by application of herbicides and mowing; e) density and quality of coarse woody debris, snag, den, and cavity = N/A; f) plant condition = 4, impacted by application of herbicides and mowing; g) land management practices = 4, impacted by application of herbicides and mowing; h) topographic features = 4, man made except for Wetland AC; i) siltation or algal growth in submerged aquatic plant communities = N/A.</p>

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
w/o pres	
0.40	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = -0.40 x 0 = 0

Delta = [with-current]
-0.40

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

**PART I – Qualitative Description**  
(See Section 62-345.400, F.A.C.)

Site/Project Name  Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line		Application Number		Assessment Area Name or Number  FLUCFCS 641 - Wetlands 2, 19, Z, AU, AX, AZ, BB, BC, BE, BF, BG, CS W	
FLUCCs code  641 - Freshwater Marshes		Further classification (optional)		Impact or Mitigation Site?  Impact	Assessment Area Size  17.52 acres (2=2.86, 19=1.97, Z=0.65, AU=9.5, AX=0.44, AZ=0.18, BB=0.21, BC=0.37, BE=0.37, BF=0.64, BG=0.05, CS W=0.28)
Basin/Watershed Name/Number Crystal River to St. Pete/03100207		Affected Waterbody (Class)		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)  None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Primarily isolated wetlands within cleared transmission line ROW. Wetland AU connects to ditch adjacent to Powerline Road.					
Assessment area description  Freshwater marsh wetlands within transmission line ROW, impacted by routing ROW maintenance/mowing. Vegetated with mixture of predominantly native wetland species including a sparse canopy/shrub layer comprised of a mixture of dahoon holly ( <i>Ilex cassine</i> ), laurel oak ( <i>Quercus laurifolia</i> ), sweetgum ( <i>Liquidambar styraciflua</i> ), cabbage palm ( <i>Sabal palmetto</i> ), groundsel tree ( <i>Baccharis halimifolia</i> ), persimmon ( <i>Diospyros virginiana</i> ), buttonbush ( <i>Cephalanthus occidentalis</i> ), and coastal plain willow ( <i>Salix caroliniana</i> ). Dominant groundcover species include sawgrass ( <i>Cladium jamaicense</i> ), cattail ( <i>Typha latifolia</i> ), muhly grass ( <i>Muhlenbergia capillaris</i> ), dogfennel ( <i>Eupatorium capillifolium</i> ), sugarcane plumegrass ( <i>Erianthus giganteus</i> ), whitetop sedge ( <i>Dichromena</i> sp.), spotflower ( <i>Spilanthes</i> sp.), sedges ( <i>Cyperus</i> sp.), bushy broomsedge ( <i>Andropogon glomeratus</i> ), finger grass ( <i>Eustachys glauca</i> ), marsh pennywort ( <i>Hydrocotyle umbellata</i> ), dwarf umbrella grass ( <i>Fuirena scirpoides</i> ), coinwort ( <i>Centella asiatica</i> ), redtop panicum ( <i>Panicum rigidulum</i> ), eryngo ( <i>Eryngium</i> sp.), goldenrod ( <i>Solidago</i> sp.), capeweed ( <i>Phyla nodiflora</i> ), signalgrass ( <i>Urochloa</i> sp.), and musky mint ( <i>Hyptis alata</i> ).					
Significant nearby features  Cleared transmission line ROW, roadways, Crystal River Energy Center		Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique			
Functions  Wildlife habitat, water storage, aquifer recharge		Mitigation for previous permit/other historic use  N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)  Wading birds, raccoon, various amphibians and herpetofauna		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Potential occasional use by wading birds such as white ibis (SSC), little blue heron (SSC), snowy egret (SSC), tricolored heron (SSC), sandhill crane (T), and wood stork (E).			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  mourning dove					
Additional relevant factors:					
Assessment conducted by: M. Arrants, B. Meinecke, S. Rizzo, K. Bullock		Assessment date(s): 10/15/2009 - 11/4/2009			

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line	Application Number	Assessment Area Name or Number FLUCFCS 641 - Wetlands 2, 19, Z, AU, AX, AZ, BB, BC, BE, BF, BG, CS W
Impact or Mitigation Impact - Fill	Assessment conducted by: M. Arrants, B. Meinecke, S. Rizzo, K. Bullock	Assessment date: 10/15/09 - 11/4/09

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current	with	Location and landscape support variable is reduced due to location of wetland within cleared transmission line ROW. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 6, reduced due to surrounding development; b) Invasive exotic species = 6, moderate coverage; c) Wildlife access to and from outside = 6, decreased due to limitations imposed by surrounding cleared ROW, industrial landuses; d) functions that benefit fish & wildlife downstream-distance or barriers = 5, limited connection to other habitats; e) Impacts to wildlife listed in Part 1 by outside land uses = 6, reduced due to surrounding habitat loss; f) Hydrologically connected areas downstream of assessment area = 4, limited hydrologic connections; g) Dependency of downstream areas on assessment area = 4, little benefit to downstream areas.
	6	0	
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current	with	The water environment score is reduced due to impacts from landclearing, ditching, adjacent industrial landuses, and roadways. Individual parameter scores: a) water levels and flows = 6, altered due to clearing, ditching; b) water level indicators = 7, typical of assessment area; c) soil moisture = 7, typical of assessment area; d) soil erosion or deposition = 6, erosion from clearing, adjacent landuses; e) evidence of fire history = N/A; f) vegetation community zonation = 6, moderate upland species encroachment; g) hydrologic stress on vegetation = 6; h) use by animal species with specific hydrological requirements = 6, marginal wildlife habitat; i) vegetative species tolerant of and associated with water quality degradation = 7, moderate coverage of willow; j) direct observation of water quality = N/A; K) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.
	6	0	
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community	w/o pres or current	with	The community structure variable is reduced due to routine ROW maintenance. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 6; b) invasive exotics or other invasive plant species = 8, minimal coverage; c) regeneration and recruitment = 6, impacted by ROW maintenance, ditching; d) age & size distribution = 6, typical of system, reduced due to ROW maintenance; e) density and quality of coarse woody debris, snag, den, and cavity = 6; f) plant condition = 6, extent and health of native species impacted by ROW maintenance; g) land management practices = 6, clearing of adjacent native uplands; h) topographic features = 6, reduced compared to typical assessment area; i) siltation or algal growth in submerged aquatic plant communities = N/A
	6	0	

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.60	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = -0.60 x 0.11 = 0.07 (Wetland AZ)

Delta = [with-current]
-0.60

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

**PART I – Qualitative Description**  
(See Section 62-345.400, F.A.C.)

Site/Project Name  Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line		Application Number		Assessment Area Name or Number  FLUCFCS 641 - Wetlands 4, 5, 6, 7, 9, 10, 13, 14, AT	
FLUCCs code  641 - Freshwater Marshes		Further classification (optional)		Impact or Mitigation Site?  Impact	
				Assessment Area Size 31.44 acres (4=0.01, 5=0.03, 6=0.42, 7=0.01, 9=0.22, 10=0.14, 13=0.64, 14=0.14, AT=29.83)	
Basin/Watershed Name/Number Crystal River to St. Pete/03100207		Affected Waterbody (Class)		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)  None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Hydrologically connected to other wetlands/surface waters outside the transmission line ROW. Surrounded by upland and wetland forest, roadways, and cleared transmission line ROW					
Assessment area description  Freshwater marsh wetlands within transmission line ROW, impacted by routing ROW maintenance/mowing. Dominant vegetative species include sawgrass ( <i>Cladium jamaicense</i> ), muhly grass ( <i>Muhlenbergia capillaris</i> ), sugarcane plumegrass ( <i>Erianthus giganteus</i> ), whitetop sedge ( <i>Dichromena</i> sp.), bushy broomsedge ( <i>Andropogon glomeratus</i> ), arrowhead ( <i>Sagittaria lancifolia</i> ), yellowtops ( <i>Flaveria</i> sp.), dwarf umbrella grass ( <i>Fuirena scirpoides</i> ), coinwort ( <i>Centella asiatica</i> ), redtop panicum ( <i>Panicum rigidulum</i> ), dogfennel ( <i>Eupatorium capillifolium</i> ), goldenrod ( <i>Solidago</i> sp.), blue maidencane ( <i>Amphicarpum muhlenbergianum</i> ), and sedges ( <i>Cyperus</i> sp., <i>Carex</i> sp.). Common shrub species include coastal plain willow ( <i>Salix caroliniana</i> ), wax myrtle ( <i>Myrica cerifera</i> ), and buttonbush ( <i>Cephalanthus occidentalis</i> ).					
Significant nearby features  Existing transmission line ROW, roadways, Crystal River Energy Center		Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique			
Functions  Wildlife habitat, water storage, aquifer recharge		Mitigation for previous permit/other historic use  N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)  Wading birds, raccoon, various amphibians and herpetofauna		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Potential occasional use by wading birds such as white ibis (SSC), little blue heron (SSC), snowy egret (SSC), tricolored heron (SSC), sandhill crane (T), and wood stork (E).			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  black vulture, red tailed hawk, blue jay					
Additional relevant factors:					
Assessment conducted by: B. Meinecke, S. Rizzo, A. Davanzo, K. Bullock		Assessment date(s): 11/2-4/09			

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line	Application Number	Assessment Area Name or Number FLUCFCS 641 - Wetlands 4, 5, 6, 7, 9, 10, 13, 14, AT
Impact or Mitigation  Impact - Fill	Assessment conducted by: B. Meinecke, S. Rizzo, A. Davanzo, K. Bullock	Assessment date:  11/2-4/09

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support  w/o pres or current 7 with 0	Location and landscape support variable is slightly reduced due to location of wetlands within transmission line ROW. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 7, reduced due to cleared ROW; b) Invasive exotic species = 7, minimal coverage; c) Wildlife access to and from outside = 7, decreased due to limitations imposed by clearing, roadways, development; d) functions that benefit fish & wildlife downstream-distance or barriers = 7; e) Impacts to wildlife listed in Part 1 by outside land uses = 7, slightly reduced due to clearing, roadways; f) Hydrologically connected areas downstream of assessment area = 3, typically isolated systems; g) Dependency of downstream areas on assessment area = 3, minimal benefit to downstream areas.
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 6 with 0	The water environment score is reduced due to impacts from landclearing, adjacent industrial landuses, and roadways. Individual parameter scores: a) water levels and flows = 6, altered due to clearing, ditching; b) water level indicators = 7, typical of assessment area; c) soil moisture = 7, typical of assessment area; d) soil erosion or deposition = 6, erosion from adjacent landuses; e) evidence of fire history = N/A; f) vegetation community zonation = 6, moderate upland species encroachment; g) hydrologic stress on vegetation = 6; h) use by animal species with specific hydrological requirements = 5, poor wildlife habitat; i) vegetative species tolerant of and associated with water quality degradation = 7, some species indicative of high nutrients, eg. willow; j) direct observation of water quality = N/A; K) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 7 with 0	These freshwater marshes support a diverse community of native wetland vegetation, although routine ROW maintenance reduces the community structure variable. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 7, dominated by desirable native wetland species, ROW maintenance reduces extent of canopy species; b) invasive exotics or other invasive plant species = 6, moderate coverage; c) regeneration and recruitment = 7, somewhat impacted by ROW maintenance; d) age & size distribution = 8, typical of system; e) density and quality of coarse woody debris, snag, den, and cavity = 7; f) plant condition = 8; g) land management practices = 7, due to alteration of community structure by clearing of adjacent native uplands; h) topographic features = 7; typical for assessment area; i) siltation or algal growth in submerged aquatic plant communities = N/A

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres 0.67 with 0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = -0.67 x 0.08 = 0.05 (Wetland 9); -0.67 x 0.23 = 0.16 (Wetland AT); total of 0.31 acres and total FL of 0.21

Delta = [with-current]
-0.67

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =



**PART I – Qualitative Description**  
(See Section 62-345.400, F.A.C.)

Site/Project Name  Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line		Application Number		Assessment Area Name or Number  FLUCFCS 643 - Wetlands X, AB, CS L, CS S, CS V	
FLUCCs code  643 - Wet Prairie		Further classification (optional)		Impact or Mitigation Site?  Existing Condition	
				Assessment Area Size 7.88 acres (X=0.43, AB=7.00, CS L=0.03, CS S=0.32, CS V=0.10)	
Basin/Watershed Name/Number Crystal River to St. Pete/03100207		Affected Waterbody (Class)		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)  None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Primarily isolated wet prairie wetlands within cleared transmission line ROW. Wetland AB connects to drainage ditch adjacent to Powerline Road.					
Assessment area description  Wet prairie wetlands, infrequently inundated, located within transmission line ROW, impacted by routine maintenance/mowing. Dominant groundcover species include sugarcane plume grass ( <i>Eriarthus giganteus</i> ), signalgrass ( <i>Urochloa</i> sp.), maidencane ( <i>Panicum hemitomon</i> ), muhly grass ( <i>Muhlenbergianum</i> sp.), musky mint ( <i>Hyptis alata</i> ), bushy broomsedge ( <i>Andropogon glomeratus</i> ), capeweed ( <i>Phyla nodiflora</i> ), and marsh fleabane ( <i>Pluchea odorata</i> ). Sparse shrub layer includes saw palmetto ( <i>Sereona repens</i> ) and wax myrtle ( <i>Myrica cerifera</i> ).					
Significant nearby features  Cleared transmission line ROW, roadways		Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique			
Functions  Wildlife habitat, water storage, aquifer recharge		Mitigation for previous permit/other historic use  N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Wading birds, raccoon, various amphibians and herpetofauna		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Potential occasional use by wading birds such as white ibis (SSC), little blue heron (SSC), snowy egret (SSC), tricolored heron (SSC), sandhill crane (T), and wood stork (E).			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  apple snails, catbird, gopher tortoise burrow within Wetland CS-S					
Additional relevant factors:  					
Assessment conducted by: M. Arrants, C. Cunningham, S. Rizzo, A. Davanzo, K. Bullock		Assessment date(s): 10/14-28/09			

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line	Application Number	Assessment Area Name or Number FLUCFCS 643 - Wetlands X, AB, CS L, CS S, CS V
Impact or Mitigation Existing Condition	Assessment conducted by: M. Arrants, C. Cunningham, S. Rizzo, A. Davanzo, K. Bullock	Assessment date: 10/14-28/09

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	Location and landscape support variable is reduced due to location within cleared transmission line and adjacent industrial landuses. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 6, reduced due to surrounding development; b) Invasive exotic species = 7, moderate coverage; c) Wildlife access to and from outside = 6, decreased due to limitations imposed by surrounding roadways and industrial areas; d) functions that benefit fish & wildlife downstream-distance or barriers = 5, limited connection to other habitats; e) Impacts to wildlife listed in Part 1 by outside land uses = 6, reduced due to surrounding habitat loss; f) Hydrologically connected areas downstream of assessment area = 2, limited hydrologic connections, typically isolated; g) Dependency of downstream areas on assessment area = 2, little benefit to downstream areas.	
	w/o pres or current 6	with 0
.500(6)(b)Water Environment (n/a for uplands)	The water environment score is reduced due to marginal hydroperiod and impacts from landclearing, ditching, adjacent industrial landuses, and roadways. Individual parameter scores: a) water levels and flows = 6, altered due to clearing, ditching; b) water level indicators = 5, less than typical of assessment area; c) soil moisture = 6, reduced due to ditching; d) soil erosion or deposition = 7, minimal erosion from surrounding landuse; e) evidence of fire history = N/A; f) vegetation community zonation = 6, moderate upland species encroachment; g) hydrologic stress on vegetation = 6; h) use by animal species with specific hydrological requirements = 5, poor wildlife habitat; i) vegetative species tolerant of and associated with water quality degradation = 8, none noted; j) direct observation of water quality = N/A; K) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.	
	w/o pres or current 6	with 0
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community	The community structure variable is reduced due to marginal hydroperiod, mowing, and ditching. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 6, limited diversity, significant coverage of facultative species; b) invasive exotics or other invasive plant species = 8, minimal coverage; c) regeneration and recruitment = 6, impacted by mowing; d) age & size distribution = 6, altered due to maintenance of ROW; e) density and quality of coarse woody debris, snag, den, and cavity = N/A; f) plant condition = 6, reduced due to ROW maintenance; g) land management practices = 6, due to alteration of community structure by clearing of adjacent native uplands; h) topographic features = 5, less than typical for assessment area; i) siltation or algal growth in submerged aquatic plant communities = N/A	
	w/o pres or current 6	with 0

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
or w/o pres	
0.60	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = -0.60 x 0 = 0

Delta = [with-current]
-0.60

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

**PART I – Qualitative Description**  
(See Section 62-345.400, F.A.C.)

Site/Project Name  Progress Energy Florida, Inc./Levy Baseload Transmission Program/LCR Transmission Line		Application Number		Assessment Area Name or Number  FLUCFCS 643 - Wetland CS K	
FLUCCs code  643 - Wet Prairie		Further classification (optional)		Impact or Mitigation Site?  Existing Condition	Assessment Area Size  6.89 acres
Basin/Watershed Name/Number Crystal River to St. Pete/03100207		Affected Waterbody (Class)		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)  None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Hydrologically isolated from other wetlands. Surrounded by upland forest, pasture, and cleared transmission line ROW					
Assessment area description  Isolated wet prairie vegetated with mixture of native wetland species including sugarcane plume grass ( <i>Erianthus giganteus</i> ), coastal plain willow ( <i>Salix caroliniana</i> ), wax myrtle ( <i>Myrica cerifera</i> ), and Walter's viburnum ( <i>Viburnum obovatum</i> ). Occasional cabbage palm ( <i>Sabal palmetto</i> ) and laurel oak ( <i>Quercus laurifolia</i> ) along wetland perimeter.					
Significant nearby features  Cleared transmission line ROW, US 19, improved pasture			Uniqueness (considering the relative rarity in relation to the regional landscape.)  Not unique		
Functions  Wildlife habitat, water storage, aquifer recharge			Mitigation for previous permit/other historic use  N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Wading birds, raccoon, white tailed deer, armadillo, various amphibians and herpetofauna			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Potential occasional use by wading birds such as white ibis (SSC), little blue heron (SSC), snowy egret (SSC), tricolored heron (SSC), sandhill crane (T), and wood stork (E).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  Catbird, apple snails					
Additional relevant factors:  					
Assessment conducted by: M. Arrants, C. Cunningham, K. Bullock			Assessment date(s): 10/13/2009		

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name Progress Energy Florida, Inc./Levy BaseLoad Transmission Program/LCR Transmission Line	Application Number	Assessment Area Name or Number FLUCFCS 643 - Wetland CS K
Impact or Mitigation Existing Condition	Assessment conducted by: M. Arrants, C. Cunningham, K. Bullock	Assessment date: 10/13/2009

<b>Scoring Guidance</b>
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	Location and landscape support variable is reduced somewhat due to location of wetland adjacent to transmission line. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 8, slightly reduced due to disturbance from cattle; b) Invasive exotic species = 9, minimal coverage; c) Wildlife access to and from outside = 8, slightly decreased due to limitations imposed by surrounding agricultural areas and lack of hydrologic connection; d) functions that benefit fish & wildlife downstream-distance or barriers = 0, area isolated from other habitats; e) Impacts to wildlife listed in Part 1 by outside land uses = 8, slightly reduced due to surrounding habitat loss; f) Hydrologically connected areas downstream of assessment area = 0, no hydrologic connection; g) Dependency of downstream areas on assessment area = 0, no benefit to downstream areas.	
	w/o pres or current 7	with 0
.500(6)(b)Water Environment (n/a for uplands)	The water environment score is slightly reduced due to impacts from historical landclearing and drought conditions. Individual parameter scores: a) water levels and flows = 8, slight alterations in water level due to artificial nature of the surrounding areas and drought conditions; b) water level indicators = 8, consistent with expected; c) soil moisture = 8, consistent with expected; d) soil erosion or deposition = 4, erosion from cattle; e) evidence of fire history = N/A; f) vegetation community zonation = 6, somewhat altered - upland species encroachment; g) hydrologic stress on vegetation = 7, not apparent; h) use by animal species with specific hydrological requirements = 7, ephemeral habitat; i) vegetative species tolerant of and associated with water quality degradation = 8, community consists of typical species; j) direct observation of water quality = 8, none noted; K) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.	
	w/o pres or current 7	with 0
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community	The community structure variable is slightly reduced due to encroachment of upland species. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 9, dominated by desirable native wetland species; b) invasive exotics or other invasive plant species = 9, minimal coverage; c) regeneration and recruitment = 7, somewhat impacted by diminished hydroperiod; d) age & size distribution = 8, typical of system; e) density and quality of coarse woody debris, snag, den, and cavity = N/A; f) plant condition = 8, slightly reduced due to drought; g) land management practices = 7, due to alteration of community structure by clearing of adjacent native uplands; h) topographic features = 8, typical for assessment area; i) siltation or algal growth in submerged aquatic plant communities = N/A	
	w/o pres or current 8	with 0

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.73	0

<b>If preservation as mitigation,</b>
Preservation adjustment factor =
Adjusted mitigation delta =

<b>For impact assessment areas</b>
FL = delta x acres = -0.73 x 0 = 0

Delta = [with-current]
-0.73

<b>If mitigation</b>
Time lag (t-factor) =
Risk factor =

<b>For mitigation assessment areas</b>
RFG = delta/(t-factor x risk) =



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November 30, 2009

Stacy Rizzo  
Golder Associates, Inc.  
6026 NW 1<sup>st</sup> Place  
Gainesville, FL 32607

Dear Ms. Rizzo,

Thank you for your request for information from the Florida Natural Areas Inventory (FNAI). We have compiled the following information for your project area.

**Project:** Proposed Citrus Substation – Crystal River Energy Complex  
**Date Received:** November 24, 2009  
**Location:** Citrus County

#### Element Occurrences

A search of our maps and database indicates that currently we have several Element Occurrences mapped within the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

*The Element Occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, Element Occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant.*

#### Likely and Potential Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity Matrix Report). These species should be taken into consideration in field surveys, land management, and impact avoidance and mitigation.

*FNAI habitat models indicate areas, which based on land cover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Habitat models have been developed for approximately 300 of the rarest species tracked by the Inventory, including all federally listed species.*

*FNAI species range models indicate areas that are within the known or predicted range of a species, based on climate variables, soils, vegetation, and/or slope. Species range models have been developed for approximately 340 species, including all federally listed species.*



Florida Resources  
and Environmental  
Analysis Center

Institute of Science  
and Public Affairs

The Florida State University

*Tracking Florida's Biodiversity*

*The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.*

**Florida Scrub-jay Survey – U.S. Fish and Wildlife Service**

This survey was conducted by staff and associates of the Archbold Biological Station from 1992 to 1996. An attempt was made to record all scrub-jay (*Aphelocoma coerulescens*) groups, although most federal lands were not officially surveyed. Each map point represents one or more groups.

This data layer indicates that there are potential scrub-jay populations on or very near your site. For additional information:

Fitzpatrick, J.W., B. Pranty, and B. Stith, 1994, Florida scrub jay statewide map, 1992-1993. U. S. Fish and Wildlife Service Report, Cooperative Agreement no. 14-16-004-91-950.

The Inventory always recommends that professionals familiar with Florida's flora and fauna should conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

Please visit [www.fnai.org/trackinglist.cfm](http://www.fnai.org/trackinglist.cfm) for county or statewide element occurrence distributions and links to more element information.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. FNAI data may not be resold for profit.

Thank you for your use of FNAI services. If I can be of further assistance, please give me a call at (850) 224-8207.

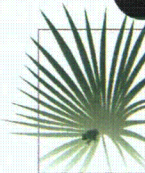
Sincerely,

**Alicia C. Newberry**

Alicia C. Newberry  
Data Services Coordinator

Encl





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## Florida Natural Areas Inventory

### Element Occurrences

- Animals
- Plants
- Communities
- Other
- Data Sensitive

Point Indicates General  
Vicinity of Element

U.S. Fish & Wildlife Service  
Scrub Jay Survey 1992-96

### Conservation Lands

- Federal
- State
- Local
- Private
- State Aquatic Preserves

### Land Acquisition Projects

- Florida Forever
- Board of Trustees Projects

- FNAI Rare Species  
Habitat
- FNAI Biodiversity Matrix  
Square Mile Units

- County Boundary
- Interstate
- Turnpike
- Major Highway
- Local Road
- Railroad [Inactive railroads  
shown in Gray]
- Water



### NOTE

Map should not be interpreted without  
accompanying documents.

## Proposed Citrus Substation - Crystal River Energy Complex

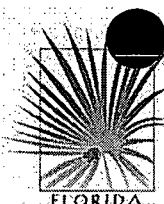
Site boundaries are approximate.

Citrus County



Map produced by ACN  
Map Date: 30 NOV 2009





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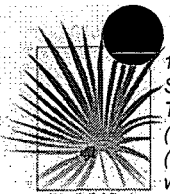
# Florida Natural Areas Inventory

## ELEMENT OCCURRENCES DOCUMENTED ON OR NEAR Proposed Citrus Substation - Crystal River Energy Complex



Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
APHECOER*42	Aphelocoma coerulescens	Florida Scrub-jay	G2	S2	LT	LT	1981-02-21	GRASSY PALMETTO SCRUB	1981-02-21: 11 SCRUB JAYS
MARIHAMM*204	Maritime hammock		G3	S2	N	N	2004	SMALL REMNANT SURROUNDED BY ESTUARINE TIDAL MARSH.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1991-10-10) (U05FNA02FLUS). REMNANT DOMINATED BY SABAL PALMETTO WITH PINUS ELLIOTTII, QUERCUS VIRGINIANA, JUNIPERUS SILICICOLA, DICHROMENA COLORATA, MYRIC
HYDRHAMM*17	Hydric hammock		G4	S4	N	N	2004	ISOLATED OCCURRENCE WITH LIMESTONE BOULDERS AT THE SURFACE; SOME DEEPER POOLS OF WATER.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1991-11-12) (U05FNA02FLUS). DOMINATED BY SABAL PALMETTO AND ACER RUBRUM.
SCRUB****42	Scrub		G2	S2	N	N	2004	GRASSY PALMETTO SCRUB	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1981-02-21) (U05FNA02FLUS). OCCURRENCE AT SITE
SCRUB****41	Scrub		G2	S2	N	N	1981-02-21	PALMETTO SCRUB, SCATTERED PALMS	OCCURRENCE AT SITE
ERETIMBR*7	Eretmochelys imbricata	Hawksbill	G3	S1	LE	LE	1997-04-02	Coastal hammock island.	1997-04-02: One adult turtle found dead, decomposing (U97MAI01FLUS).
HYDRHAMM*58	Hydric hammock		G4	S4	N	N	1997-04-07	This hammock is deep in the woods. Crystal River marshes and swamps are its south and west border. The north and east edges are flatwoods and sandhills, also within the preserve.	1997-04-07: Completely canopied by mature trees reaching over 100 feet; understory and ground layer fairly open from lack of light; succession dominated by light gaps; enormous, clearly old growth. Hammock is interspersed with shallow running streams and
MANASITE*2	Manatee Aggregation Site		GNR	SNR	N	N	1988	WARM-WATER EFFLUENT INTO GULF OF MEXICO (CRYSTAL BAY).	UP TO 5 MANATEES UTILIZE THIS AREA FOR SHORT PERIODS OF COOL WEATHER; MOST HEAVILY IN SPRING AS INDIVIDUALS DISPERSE NORTHWARD FROM CRYSTAL RIVER.
DRYMCOU*347	Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT	1973-10	No general description given	MUSEUM SPECIMEN: S. CHRISTMAN, OCT 1973, UF.
APHECOER*41	Aphelocoma coerulescens	Florida Scrub-jay	G2	S2	LT	LT	1981-02-21	PALMETTO SCRUB, SCATTERED PINES	1981-02-21: 2 SCRUB JAYS

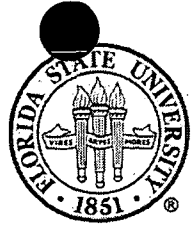




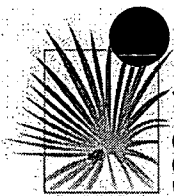
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# Florida Natural Areas Inventory

## ELEMENT OCCURRENCES DOCUMENTED ON OR NEAR Proposed Citrus Substation - Crystal River Energy Complex



Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
MUSTPENI*17	<i>Mustela frenata peninsulae</i>	Florida Long-tailed Weasel	G5T3	S3	N	N	1975-03-23	Coastal hammock.	1975-03-23: S.P. Christman, DEP, observation. Observed for several minutes as emerged from holes in hollow logs and ground in "peek-a-boo" fashion. See Fla. Game and Fresh Water Fish Comm., Cross Florida Barge Canal Restudy Rep. -Wildl. Study. Vol. IV, Ap
GOPHPOLY*1048	<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	LT	1997-04-08	Planted slash pine; includes some relic sandhill planted with slash pine and turkey oak (NW1/4 of section 2 T18SR16E).	1997-04-08: One individual sighted on dirt road in NW1/4 section 1 T18SR16E (S. Blitch et al.). 1995-1997: S. Blitch made several sightings of tortoises at three different locations within element occurrence boundaries (see attached map).
CROTADAM*270	<i>Crotalus adamanteus</i>	Eastern Diamondback Rattlesnake	G4	S3	N	N	1996	Planted pine.	1996: S. Blitch observed one individual once or twice near state buffer preserve's shop.
ELANFORF*10	<i>Elanoides forficatus</i>	Swallow-tailed Kite	G5	S2	N	N	1995-SPRING	No general description given	1995 Spring: One pair nested in planted slash pine (S. Blitch).
DRYMCOU*450	<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	LT	1996-XX-XX	Planted slash pine and pine flatwoods (T17SR16E sec. 35); oak hammock and pasture (T18SR16E Sec. 1) (S. Blitch); mature slash pine plantation (G. Maidhoff).	1995-1996: Individuals observed at four different locations by S. Blitch (no specific dates). 1995-02-21: One snake observed by Ms. Yulee Commander basking in fire trail (U95MAI02).
HALILEUC*904	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	PS	N	2003	No general description given	Nest status 1995-2003: Continuously active. (U03FWC01FLUS). Previous data (note different format) Nest; 1995: Produced 1 young; 1994: Produced 2 young; 1993: Produced 2 young; 1992: No data; 1991: Active, productivity unknown; 1990: Produced 1 young; 198
HALILEUC*22	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	PS	N	1991	No general description given	Nest status 1999-2003: Inactive - 2003; Unknown/not assessed - 2002, 2001, 2000, 1999; Status 1995-98: Inactive - 1998, 1997, 1996, 1995; (U03FWC01FLUS). Previous data (note different format) NEST: 1995: GONE; 1994: INACTIVE; 1993: INACTIVE; 1992: NO DAT



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Natural Areas  
INVENTORY

## Florida Natural Areas Inventory

### ELEMENT OCCURRENCES DOCUMENTED ON OR NEAR Proposed Citrus Substation - Crystal River Energy Complex



Map Label	Scientific Name	Common Name	Global State Federal State Observation				Date	Description	EO Comments
			Rank	Rank	Status	Listing			
HALILEUC*446	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	PS	N	2003	No general description given	Nest status 1995-2003: Continuously active. (U03FWC01FLUS). Previous data (note different format) NEST: 1995: PRODUCED 1 YOUNG; 1994: GONE; 1993: PRODUCED 2 YOUNG; 1992-87: NO DATA; 1982-1986 ACTIVE; FLEDGED YOUNG 1982-1983, 1985.
HALILEUC*905	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	PS	N	2003	No general description given	Nest status 1995-2003: Continuously active. (U03FWC01FLUS). Previous data (note different format) Nest: 1995: Produced 1 young; 1994: Produced 1 young; 1993: Produced 1 young; 1992: No data; 1991: Produced 1 young; 1990: No data; 1989: Produced 1 young;
HALILEUC*25	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	PS	N	1991	No general description given	Nest status 1999-2003: Inactive - 2003; Unknown/not assessed - 2002, 2001, 2000, 1999; Status 1995-98: Inactive - 1998, 1997, 1996, 1995; (U03FWC01FLUS). Previous data (note different format) NEST: 1995-93: GONE; 1992: NO DATA; 1991: ACTIVE, PRODUCTIVITY
PSEULUST*5	<i>Pseudobranchius striatus lustricolus</i>	Gulf Hammock Dwarf Siren	G5T1	S1	N	N	1951-03-15	1951: habitat not described by Neill (1951) (A51NEI02FLUS).	1951-03-15: W. T. Neill collected at least eight adults (paratypes, ERA-WTN 14218-14225) (A51NEI02FLUS, B92MOL01FLUS).

# Florida Natural Areas Inventory

## Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<b>Matrix Unit ID: 21805</b>					
<b>Likely</b>					
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	LT
<i>Manatee aggregation site</i>		GNR	SNR	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	LT*
<b>Potential</b>					
<i>Acipenser oxyrinchus desotoi</i>	Gulf Sturgeon	G3T2	S2	LT	LS
<i>Ammodramus maritimus peninsulae</i>	Scott's Seaside Sparrow	G4T3Q	S3	N	LS
<i>Asplenium heteroresiliens</i>	Wagner's Spleenwort	GNA	S1	N	N
<i>Caretta caretta</i>	Loggerhead	G3	S3	LT	LT
<i>Chelonia mydas</i>	Green Turtle	G3	S2	LE	LE
<i>Cistothorus palustris marianae</i>	Marian's Marsh Wren	G5T3	S3	N	LS
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S2	N	N
<i>Forestiera godfreyi</i>	Godfrey's Swampprivet	G2	S2	N	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	LT
<i>Justicia cooleyi</i>	Cooley's Water-willow	G2	S2	LE	LE
<i>Leitneria floridana</i>	Corkwood	G3	S3	N	LT
<i>Mustela frenata peninsulae</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Myotis austroriparius</i>	Southeastern Bat	G3G4	S3	N	N
<i>Neovison vison halilimnetes</i>	Gulf Salt Marsh Mink	G5T3	S3	N	N
<i>Nerodia clarkii clarkii</i>	Gulf Salt Marsh Snake	G4T4	S3?	N	N
<i>Phyllanthus leibmannianus ssp. platylepis</i>	Pinewood Dainties	G4T2	S2	N	LE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	LS
<i>Rallus longirostris scottii</i>	Florida Clapper Rail	G5T3?	S3?	N	N
<i>Spigelia loganioides</i>	Pinkroot	G2Q	S2	N	LE
<i>Trichechus manatus</i>	Manatee	G2	S2	LE	LE

### Matrix Unit ID: 22046

#### Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	LT
Mesic flatwoods		G4	S4	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	LT*

#### Potential

<i>Aimophila aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Asplenium heteroresiliens</i>	Wagner's Spleenwort	GNA	S1	N	N
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S2	N	N
<i>Forestiera godfreyi</i>	Godfrey's Swampprivet	G2	S2	N	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	LT
<i>Justicia cooleyi</i>	Cooley's Water-willow	G2	S2	LE	LE
<i>Leitneria floridana</i>	Corkwood	G3	S3	N	LT
<i>Mustela frenata peninsulae</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Myotis austroriparius</i>	Southeastern Bat	G3G4	S3	N	N
<i>Neovison vison halilimnetes</i>	Gulf Salt Marsh Mink	G5T3	S3	N	N
<i>Phyllanthus leibmannianus ssp. platylepis</i>	Pinewood Dainties	G4T2	S2	N	LE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	LS
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	LS

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# Florida Natural Areas Inventory

## Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Spigelia loganioides</i>	Pinkroot	G2Q	S2	N	LE
<b>Matrix Unit ID: 22288</b>					
<b>Documented</b>					
<i>Crotalus adamanteus</i>	Eastern Diamondback Rattlesnake	G4	S3	N	N
<b>Likely</b>					
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	LT
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	LT*
<b>Potential</b>					
<i>Aimophila aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Asplenium heteroresiliens</i>	Wagner's Spleenwort	GNA	S1	N	N
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S2	N	N
<i>Forestiera godfreyi</i>	Godfrey's Swampprivet	G2	S2	N	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	LT
<i>Justicia cooley</i>	Cooley's Water-willow	G2	S2	LE	LE
<i>Leitneria floridana</i>	Corkwood	G3	S3	N	LT
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Myotis austroriparius</i>	Southeastern Bat	G3G4	S3	N	N
<i>Neovison vison halilimnetes</i>	Gulf Salt Marsh Mink	G5T3	S3	N	N
<i>Phyllanthus leibmannianus ssp. platylepis</i>	Pinewood Dainties	G4T2	S2	N	LE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	LS
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	LS
<i>Spigelia loganioides</i>	Pinkroot	G2Q	S2	N	LE

**Matrix Unit ID: 22531**

### Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	LT
Mesic flatwoods		G4	S4	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	LT*

### Potential

<i>Aimophila aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Asplenium heteroresiliens</i>	Wagner's Spleenwort	GNA	S1	N	N
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S2	N	N
<i>Forestiera godfreyi</i>	Godfrey's Swampprivet	G2	S2	N	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	LT
<i>Justicia cooley</i>	Cooley's Water-willow	G2	S2	LE	LE
<i>Leitneria floridana</i>	Corkwood	G3	S3	N	LT
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Myotis austroriparius</i>	Southeastern Bat	G3G4	S3	N	N
<i>Neovison vison halilimnetes</i>	Gulf Salt Marsh Mink	G5T3	S3	N	N
<i>Phyllanthus leibmannianus ssp. platylepis</i>	Pinewood Dainties	G4T2	S2	N	LE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	LS
<i>Pseudobranchius striatus lustricolus</i>	Gulf Hammock Dwarf Siren	G5T1	S1	N	N
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	LS

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# Florida Natural Areas Inventory

## Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Spigelia loganioides</i>	Pinkroot	G2Q	S2	N	LE
<i>Stilosoma extenuatum</i>	Short-tailed Snake	G3	S3	N	LT

Matrix Unit ID: 22775

### Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	LT
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
Mesic flatwoods		G4	S4	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	LT*

### Potential

<i>Aimophila aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Asplenium heteroresiliens</i>	Wagner's Spleenwort	GNA	S1	N	N
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S2	N	N
<i>Forestiera godfreyi</i>	Godfrey's Swampprivet	G2	S2	N	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	LT
<i>Justicia cooleyi</i>	Cooley's Water-willow	G2	S2	LE	LE
<i>Leitneria floridana</i>	Corkwood	G3	S3	N	LT
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Myotis austroriparius</i>	Southeastern Bat	G3G4	S3	N	N
<i>Phyllanthus leibmannianus</i> ssp. <i>platylepis</i>	Pinewood Dainties	G4T2	S2	N	LE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	LS
<i>Pseudobranchius striatus lustricolus</i>	Gulf Hammock Dwarf Siren	G5T1	S1	N	N
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	LS
<i>Spigelia loganioides</i>	Pinkroot	G2Q	S2	N	LE
<i>Stilosoma extenuatum</i>	Short-tailed Snake	G3	S3	N	LT

Matrix Unit ID: 23022

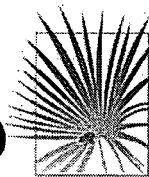
### Likely

<i>Aphelocoma coerulescens</i>	Florida Scrub-jay	G2	S2	LT	LT
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	LT
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
Mesic flatwoods		G4	S4	N	N

### Potential

<i>Agrimonia incisa</i>	Incised Groove-bur	G3	S2	N	LE
<i>Aimophila aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Asplenium heteroresiliens</i>	Wagner's Spleenwort	GNA	S1	N	N
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S2	N	N
<i>Forestiera godfreyi</i>	Godfrey's Swampprivet	G2	S2	N	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	LT
<i>Justicia cooleyi</i>	Cooley's Water-willow	G2	S2	LE	LE
<i>Leitneria floridana</i>	Corkwood	G3	S3	N	LT
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Myotis austroriparius</i>	Southeastern Bat	G3G4	S3	N	N
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2S3	N	N

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## Florida Natural Areas Inventory

### Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Phyllanthus leibmannianus</i> ssp. <i>platylepis</i>	Pinewood Dainties	G4T2	S2	N	LE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	LS
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	LS
<i>Spigelia loganioides</i>	Pinkroot	G2Q	S2	N	LE
<i>Stilosoma extenuatum</i>	Short-tailed Snake	G3	S3	N	LT

Matrix Unit ID: 23023

#### Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	LT
Mesic flatwoods		G4	S4	N	N

#### Potential

<i>Agrimonia incisa</i>	Incised Groove-bur	G3	S2	N	LE
<i>Aimophila aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Asplenium heteroresiliens</i>	Wagner's Spleenwort	GNA	S1	N	N
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	LS
<i>Forestiera godfreyi</i>	Godfrey's Swampprivet	G2	S2	N	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	LT
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Justicia cooleyi</i>	Cooley's Water-willow	G2	S2	LE	LE
<i>Leitneria floridana</i>	Corkwood	G3	S3	N	LT
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Myotis austroriparius</i>	Southeastern Bat	G3G4	S3	N	N
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2S3	N	N
<i>Phyllanthus leibmannianus</i> ssp. <i>platylepis</i>	Pinewood Dainties	G4T2	S2	N	LE
<i>Pituophis melanoleucus mugitus</i>	Florida Pine Snake	G4T3	S3	N	LS
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	LS
<i>Rana capito</i>	Gopher Frog	G3	S3	N	LS
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	LS
<i>Spigelia loganioides</i>	Pinkroot	G2Q	S2	N	LE
<i>Stilosoma extenuatum</i>	Short-tailed Snake	G3	S3	N	LT

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## GLOBAL AND STATE RANKS

Florida Natural Areas Inventory (FNAI) defines an **element** as any rare or exemplary component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature. FNAI assigns two ranks to each element found in Florida: the **global rank**, which is based on an element's worldwide status, and the **state rank**, which is based on the status of the element within Florida. Element ranks are based on many factors, including estimated number of occurrences, estimated abundance (for species and populations) or area (for natural communities), estimated number of adequately protected occurrences, range, threats, and ecological fragility.

## GLOBAL RANK DEFINITIONS

- G1** Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2** Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3** Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- G4** Apparently secure globally (may be rare in parts of range).
- G5** Demonstrably secure globally.
- G#?** Tentative rank (e.g., G2?)
- G#G#** Range of rank; insufficient data to assign specific global rank (e.g., G2G3)
- G#T#** Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1)
- G#Q** Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q)
- G#T#Q** Same as above, but validity as subspecies or variety is questioned.
- GH** Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
- GNA** Ranking is not applicable because element is not a suitable target for conservation (e.g. as for hybrid species)
- GNR** Not yet ranked (temporary)
- GNRTNR** Neither the full species nor the taxonomic subgroup has yet been ranked (temporary)
- GX** Believed to be extinct throughout range
- GXC** Extirpated from the wild but still known from captivity/cultivation
- GU** Unrankable. Due to lack of information, no rank or range can be assigned (e.g., GUT2).

## STATE RANK DEFINITIONS

Definition parallels global element rank: substitute "S" for "G" in above global ranks, and "in Florida" for "globally" in above global rank definitions.

**FEDERAL AND STATE LEGAL STATUSES (U.S. Fish and Wildlife Service – USFWS)  
PROVIDED BY FNAI FOR INFORMATION ONLY.**

For official definitions and lists of protected species, consult the relevant state or federal agency.

**FEDERAL LEGAL STATUS**

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

- LE** Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species which is in danger of extinction throughout all or a significant portion of its range.
- LE,XN** A non essential experimental population of a species otherwise Listed as an Endangered Species in the List of Endangered and Threatened Wildlife and Plants. LE,XN for *Grus americana* (Whooping crane), Federally listed as XN (Non essential experimental population) refers to the Florida experimental population only. Federal listing elsewhere for *Grus americana* is LE.
- PE** Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.
- LT** Listed as Threatened Species, defined as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
- LT,PDL** Species currently listed Threatened but has been proposed for delisting.
- PT** Proposed for listing as Threatened Species.
- C** Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants, Category 1. Federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.
- SAT** Threatened due to similarity of appearance to a threatened species.
- SC** Species of Concern, species is not currently listed but is of management concern to USFWS.
- N** Not currently listed, nor currently being considered for addition to the List of Endangered and Threatened Wildlife and Plants.

**FLORIDA LEGAL STATUSES (Florida Fish and Wildlife Conservation Commission – FFWCC/  
Florida Department of Agriculture and Consumer Services – FDACS)**

**Animals:** Definitions derived from “Florida’s Endangered Species and Species of Special Concern, Official Lists” published by Florida Fish and Wildlife Conservation Commission - FFWCC, 1 August 1997, and subsequent updates.

- LE** Listed as Endangered Species by the FFWCC. Defined as a species, subspecies, or isolated population which is so rare or depleted in number or so restricted in range of habitat due to any man-made or natural factors that it is in immediate danger of extinction or extirpation from the state, or which may attain such a status within the immediate future.
- LT** Listed as Threatened Species by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.
- LT\*** Indicates that a species has LT status only in selected portions of its range in Florida. LT\* for *Ursus americanus floridanus* (Florida black bear) indicates that LT status does not apply in Baker and Columbia counties and in the Apalachicola National Forest. LT\* for *Neovison vison* pop. 1 (Southern mink, South Florida population) state listed as Threatened refers to the Everglades population only (Note: species formerly listed as *Mustela vison* mink pop. 1. Also, priorly listed as *Mustela evergladensis*).
- LS** Listed as Species of Special Concern by the FFWCC, defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification,



environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species.

**LS\*** Indicates that a species has LS status only in selected portions of its range in Florida. LS\* for *Pandion haliaetus* (Osprey) state listed as LS (Species of Special Concern) in Monroe County only.

**PE** Proposed for listing as Endangered.

**PT** Proposed for listing as Threatened.

**PS** Proposed for listing as a Species of Special Concern.

**N** Not currently listed, nor currently being considered for listing.

**Plants:** Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or please visit: <http://DOACS.State.FL.US/PI/Images/Rule05b.pdf>

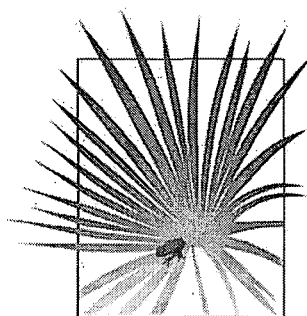
**LE** Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973, as amended.

**PE** Proposed by the FDACS for listing as Endangered Plants.

**LT** Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in such number as to cause them to be endangered. LT\* indicates that a species has LT status only in selected portions of its range in Florida.

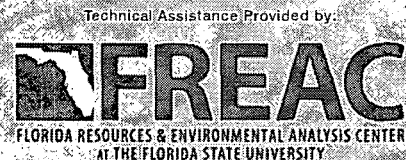
**PT** Proposed by the FDACS for listing as Threatened Plants.

**N** Not currently listed, nor currently being considered for listing.



FLORIDA  
*Natural Areas*  
INVENTORY

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Tallahassee, FL 32303  
(850) 224-8207  
(850) 681-9364 Fax  
[www.fnai.org](http://www.fnai.org)

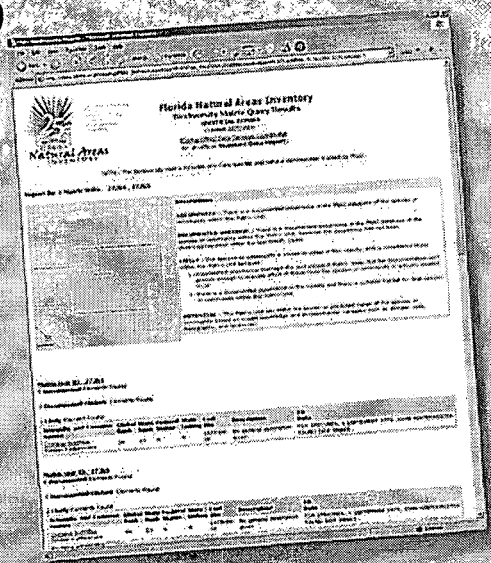


FOR IMMEDIATE RELEASE

## FNAI's Biodiversity Matrix Online



The Biodiversity Matrix Map Server is a new **screening tool** from FNAI that provides **immediate, free access** to rare species occurrence information statewide. This tool allows you to zoom to your site of interest and create a report listing documented, likely, and potential occurrences of rare species and natural communities.



The FNAI Biodiversity Matrix offers **built-in interpretation** of the likelihood of species occurrence for each 1-square-mile Matrix Unit across the state. The report includes a site map and list of species and natural communities by occurrence status: Documented, Documented-Historic, Likely, and Potential.

Try it today:

[www.fnai.org/biointro.cfm](http://www.fnai.org/biointro.cfm)

Please note: FNAI will continue to offer our Standard Data Report service as always. The Standard Data Report offers the most comprehensive information available on rare species, natural communities, conservation lands, and other natural resources.

[www.fnai.org](http://www.fnai.org)

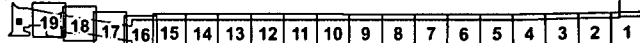
**LEVY – CRYSTAL RIVER ENERGY COMPLEX (LCR)  
TRANSMISSION LINE WETLAND IMPACT ANALYSIS  
FIGURES**

# LEVY COUNTY

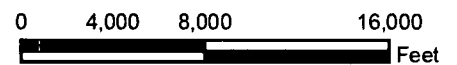


CRYSTAL RIVER  
ENERGY COMPLEX

PROPOSED  
CITRUS SUBSTATION



# CITRUS COUNTY



**Golder  
Associates**  
Gainesville, Florida

SCALE	AS SHOWN
DATE	2/19/2010
DESIGN	KAB
GIS	NRL
CHECK	SR
REVIEW	KAB

## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

FILE No.	09389547Z008
PROJECT No.	093-89547
REV.	1

PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT

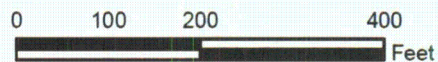
FIGURE  
**Cover Sheet**





## LEGEND

- |                                    |                                   |
|------------------------------------|-----------------------------------|
| LCR Right-of-Way                   | Forested Wetland Clearing Impacts |
| LCR Pad Locations                  | Surveyed Wetland Boundaries       |
| Structure Pad Wetland Fill Impacts |                                   |
| Substation Property                |                                   |



## REFERENCES

1. Wetland boundaries, MACTEC, 2010.
2. Wetland impacts, Golder Associates Inc., 2010.
3. Pad Locations, Access Roads, Patrick Engineering, 2010.

## NOTES

See wetland survey for acreage of wetlands.  
For impact acreages see attached tables.



SCALE	AS SHOWN
DATE	2/19/2010
DESIGN	KAB
GIS	NRL
CHECK	SR
REVIEW	KAB

## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

FILE No.	09389547Z004
PROJECT No.	093-89547
REV.	1

PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT



FIGURE  
1 of 19





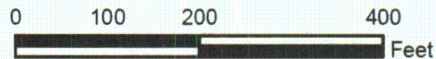
Map Document: 09389547Z004\_Rev1\_LCR.mxd / Modified 2/17/2010 4:36:40 PM / Plotted 2/19/2010 9:35:55 AM by ramar



## LEGEND

-  LCR Right-of-Way
-  LCR Pad Locations
-  Structure Pad Wetland Fill Impacts
-  Substation Property

-  Forested Wetland Clearing Impacts
-  Surveyed Wetland Boundaries



## REFERENCES

1. Wetland boundaries, MACTEC, 2010.
2. Wetland impacts, Golder Associates Inc., 2010.
3. Pad Locations, Access Roads, Patrick Engineering, 2010.

## NOTES

See wetland survey for acreage of wetlands.  
For impact acreages see attached tables.



SCALE	AS SHOWN
DATE	2/19/2010
DESIGN	KAB
GIS	NRL
CHECK	SR
REVIEW	KAB

## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

FILE No.	09389547Z004
PROJECT No.	093-89547

REV. 1

PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT

FIGURE

2 of 19

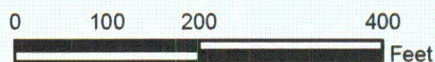




## LEGEND

-  LCR Right-of-Way
-  LCR Pad Locations
-  Structure Pad Wetland Fill Impacts
-  Substation Property

-  Forested Wetland Clearing Impacts
-  Surveyed Wetland Boundaries



## REFERENCES

1. Wetland boundaries, MACTEC, 2010.
2. Wetland impacts, Golder Associates Inc., 2010.
3. Pad Locations, Access Roads, Patrick Engineering, 2010.

## NOTES

See wetland survey for acreage of wetlands.  
For impact acreages see attached tables.



SCALE	AS SHOWN
DATE	2/19/2010
DESIGN	KAB
GIS	NRL
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## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

FILE No.	09389547Z004
PROJECT No.	093-89547
REV.	1

PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT

FIGURE  
**3 of 19**





## LEGEND

- LCR Right-of-Way
- LCR Pad Locations
- Structure Pad Wetland Fill Impacts
- Substation Property

- Forested Wetland Clearing Impacts
- Surveyed Wetland Boundaries

0 100 200 400  
Feet

## REFERENCES

1. Wetland boundaries, MACTEC, 2010.
2. Wetland impacts, Golder Associates Inc., 2010.
3. Pad Locations, Access Roads, Patrick Engineering, 2010.

## NOTES

See wetland survey for acreage of wetlands.  
For impact acreages see attached tables.



FILE No. 09389547Z004  
PROJECT No. 093-89547 REV. 1

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REVIEW KAB

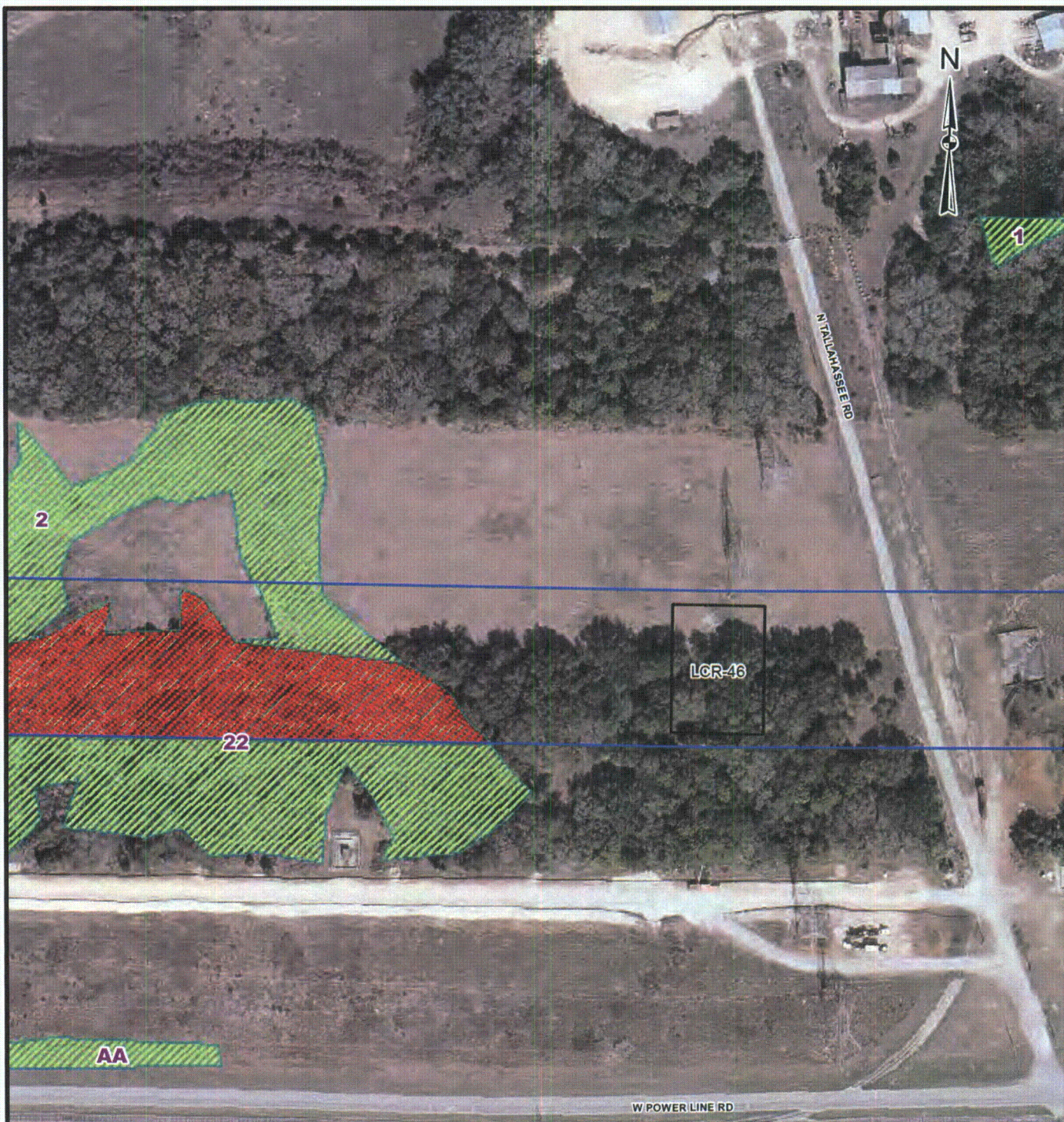
## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT

FIGURE 4 of 19



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## LEGEND

- |                                    |                                   |
|------------------------------------|-----------------------------------|
| LCR Right-of-Way                   | Forested Wetland Clearing Impacts |
| LCR Pad Locations                  | Surveyed Wetland Boundaries       |
| Structure Pad Wetland Fill Impacts |                                   |
| Substation Property                |                                   |

0 100 200 400  
Feet

## REFERENCES

1. Wetland boundaries, MACTEC, 2010.
2. Wetland impacts, Golder Associates Inc., 2010.
3. Pad Locations, Access Roads, Patrick Engineering, 2010.

## NOTES

See wetland survey for acreage of wetlands.  
For impact acreages see attached tables.



SCALE	AS SHOWN
DATE	2/19/2010
DESIGN	KAB
GIS	NRL
CHECK	SR
REVIEW	KAB

## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT

FIGURE







5 of 19



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## LEGEND

- |  |   |
|--|---|
|  LCR Right-of-Way                   |  Forested Wetland Clearing Impacts |
|  LCR Pad Locations                  |  Surveyed Wetland Boundaries       |
|  Structure Pad Wetland Fill Impacts |   |
|  Substation Property                |   |

## REFERENCES

1. Wetland boundaries, MACTEC, 2010.
2. Wetland impacts, Golder Associates Inc., 2010.
3. Pad Locations, Access Roads, Patrick Engineering, 2010.

## NOTES

See wetland survey for acreage of wetlands.  
For impact acreages see attached tables.



SCALE	AS SHOWN
DATE	2/19/2010
DESIGN	KAB
GIS	NRL

## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

FILE No.	09389547Z004
PROJECT No.	093-89547
REV.	1

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PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT

FIGURE  
**6 of 19**





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## LEGEND

-  LCR Right-of-Way
-  LCR Pad Locations
-  Structure Pad Wetland Fill Impacts
-  Substation Property

-  Forested Wetland Clearing Impacts
-  Surveyed Wetland Boundaries

0 100 200 400  
Feet

## REFERENCES

1. Wetland boundaries, MACTEC, 2010.
2. Wetland impacts, Golder Associates Inc., 2010.
3. Pad Locations, Access Roads, Patrick Engineering, 2010.

## NOTES

See wetland survey for acreage of wetlands.  
For impact acreages see attached tables.



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PROJECT No. 093-89547 REV. 1

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GIS NRL  
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## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT

FIGURE 7 of 19





## LEGEND

- LCR Right-of-Way
- LCR Pad Locations
- Structure Pad Wetland Fill Impacts
- Substation Property

- Forested Wetland Clearing Impacts
- Surveyed Wetland Boundaries

## REFERENCES

1. Wetland boundaries, MACTEC, 2010.
2. Wetland impacts, Golder Associates Inc., 2010.
3. Pad Locations, Access Roads, Patrick Engineering, 2010.

## NOTES

See wetland survey for acreage of wetlands.  
For impact acreages see attached tables.



**Golder  
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Gainesville, Florida

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GIS NRL

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## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

FILE No. 09389547Z004

PROJECT No. 093-89547 REV. 1

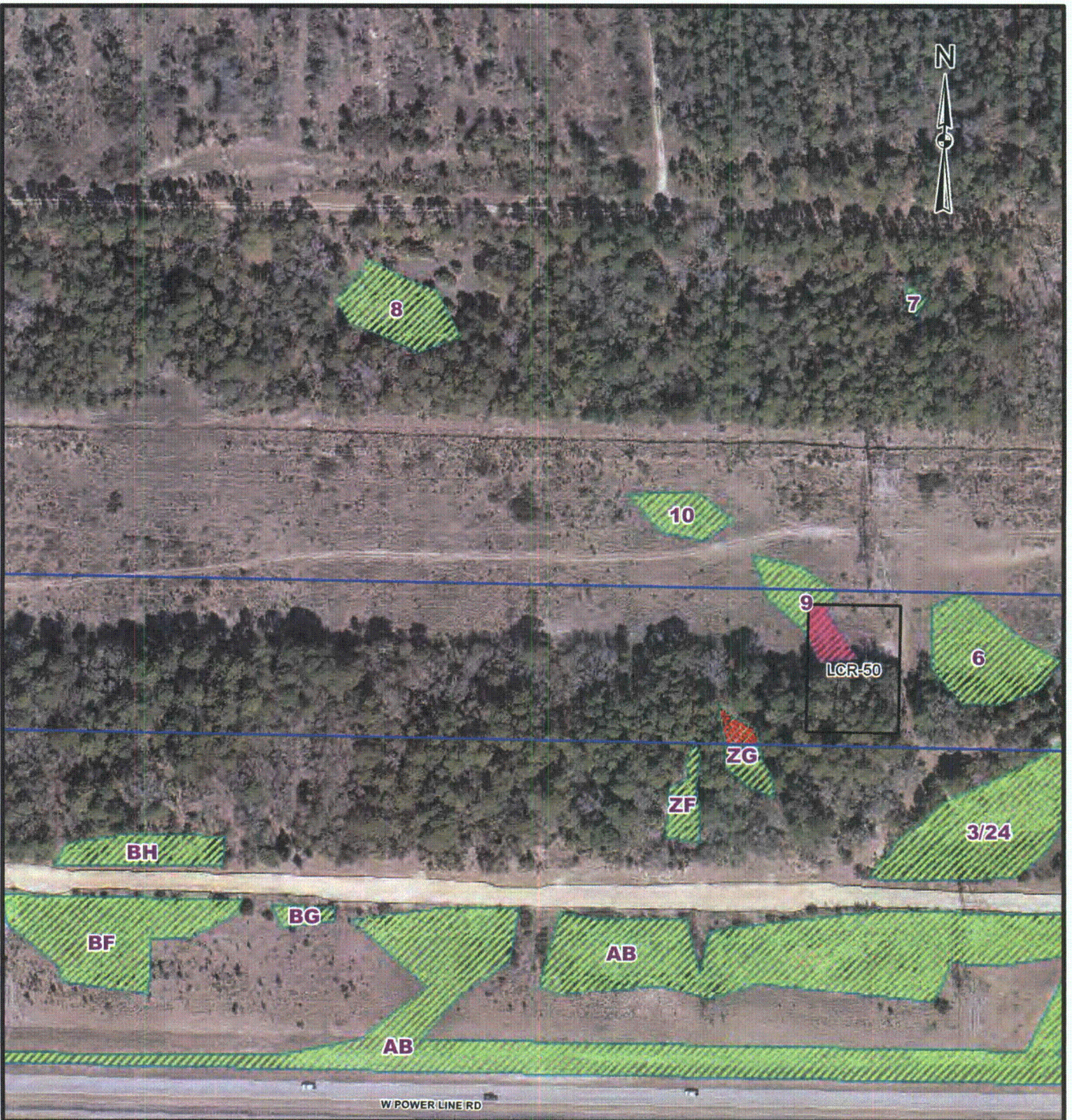
PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT

FIGURE

8 of 19



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### LEGEND

- |                                    |                                   |
|------------------------------------|-----------------------------------|
| LCR Right-of-Way                   | Forested Wetland Clearing Impacts |
| LCR Pad Locations                  | Surveyed Wetland Boundaries       |
| Structure Pad Wetland Fill Impacts |                                   |
| Substation Property                |                                   |

### REFERENCES

1. Wetland boundaries, MACTEC, 2010.
2. Wetland impacts, Golder Associates Inc., 2010.
3. Pad Locations, Access Roads, Patrick Engineering, 2010.

### NOTES

See wetland survey for acreage of wetlands.  
For impact acreages see attached tables.



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DESIGN	KAB
GIS	NRL
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## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

FILE No.	09389547Z004
PROJECT No.	093-89547
REV.	1

PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT





## LEGEND

	LCR Right-of-Way		Forested Wetland Clearing Impacts
	LCR Pad Locations		Surveyed Wetland Boundaries
	Structure Pad Wetland Fill Impacts		
	Substation Property		

## REFERENCES

1. Wetland boundaries, MACTEC, 2010.
2. Wetland impacts, Golder Associates Inc., 2010.
3. Pad Locations, Access Roads, Patrick Engineering, 2010.

## NOTES

See wetland survey for acreage of wetlands.  
For impact acreages see attached tables.



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## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

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PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT

FIGURE  
**10 of 19**





## LEGEND

	LCR Right-of-Way		Forested Wetland Clearing Impacts
	LCR Pad Locations		Surveyed Wetland Boundaries
	Structure Pad Wetland Fill Impacts		
	Substation Property		

0 100 200 400  
Feet

## REFERENCES

1. Wetland boundaries, MACTEC, 2010.
2. Wetland impacts, Golder Associates Inc., 2010.
3. Pad Locations, Access Roads, Patrick Engineering, 2010.

## NOTES

See wetland survey for acreage of wetlands.  
For impact acreages see attached tables.



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## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

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LEVY BASELOAD PROJECT

FIGURE  
11 of 19



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## LEGEND

- |                                    |                                   |
|------------------------------------|-----------------------------------|
| LCR Right-of-Way                   | Forested Wetland Clearing Impacts |
| LCR Pad Locations                  | Surveyed Wetland Boundaries       |
| Structure Pad Wetland Fill Impacts |                                   |
| Substation Property                |                                   |

0 100 200 400  
Feet

## REFERENCES

1. Wetland boundaries, MACTEC, 2010.
2. Wetland impacts, Golder Associates Inc., 2010.
3. Pad Locations, Access Roads, Patrick Engineering, 2010.

## NOTES

See wetland survey for acreage of wetlands.  
For impact acreages see attached tables.



SCALE	AS SHOWN
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DESIGN	KAB
GIS	NRL
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REVIEW	KAB

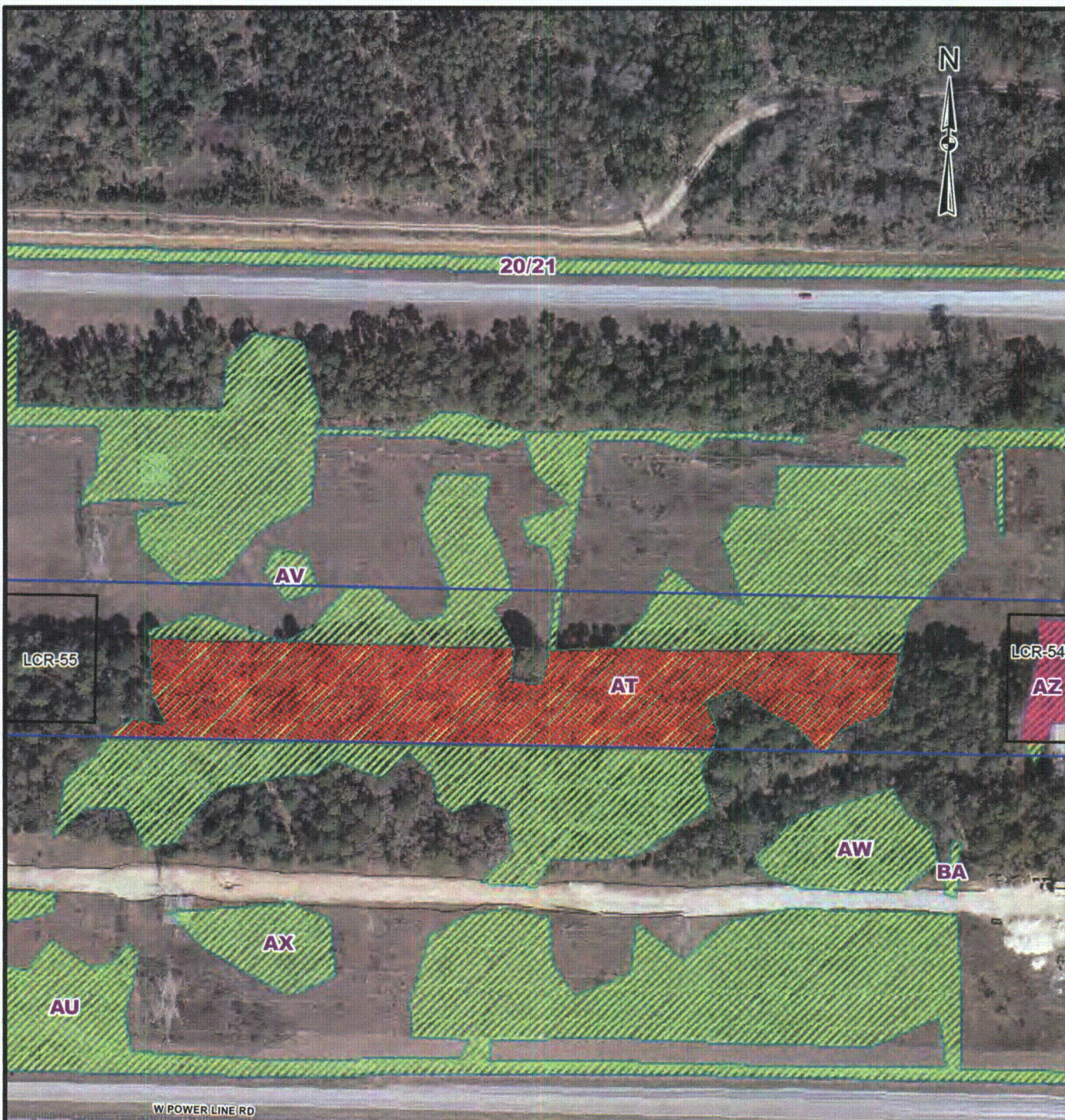
## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

FILE No.	09389547Z004
PROJECT No.	093-89547
REV.	1

PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT

FIGURE  
12 of 19





## LEGEND

- LCR Right-of-Way
- LCR Pad Locations
- Structure Pad Wetland Fill Impacts
- Substation Property

- Forested Wetland Clearing Impacts
- Surveyed Wetland Boundaries

0 100 200 400  
Feet

## REFERENCES

1. Wetland boundaries, MACTEC, 2010.
2. Wetland impacts, Golder Associates Inc., 2010.
3. Pad Locations, Access Roads, Patrick Engineering, 2010.

## NOTES

See wetland survey for acreage of wetlands.  
For impact acreages see attached tables.



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FILE No.	09389547Z004
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## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT

FIGURE  
13 of 19

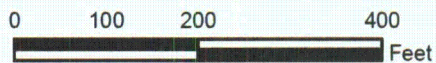




## LEGEND

- LCR Right-of-Way
- LCR Pad Locations
- Structure Pad Wetland Fill Impacts
- Substation Property

- Forested Wetland Clearing Impacts
- Surveyed Wetland Boundaries



## REFERENCES

1. Wetland boundaries, MACTEC, 2010.
2. Wetland impacts, Golder Associates Inc., 2010.
3. Pad Locations, Access Roads, Patrick Engineering, 2010.

## NOTES

See wetland survey for acreage of wetlands.  
For impact acreages see attached tables.



**Golder  
Associates**  
Gainesville, Florida

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GIS	NRL
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REVIEW	KAB

## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

FILE No.	09389547Z004
PROJECT No.	093-89547
REV.	1

PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT

FIGURE  
**14 of 19**

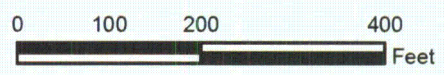


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**LEGEND**

- |                                    |                                   |
|------------------------------------|-----------------------------------|
| LCR Right-of-Way                   | Forested Wetland Clearing Impacts |
| LCR Pad Locations                  | Surveyed Wetland Boundaries       |
| Structure Pad Wetland Fill Impacts |                                   |
| Substation Property                |                                   |



**REFERENCES**

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2. Wetland impacts, Golder Associates Inc., 2010.
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**NOTES**

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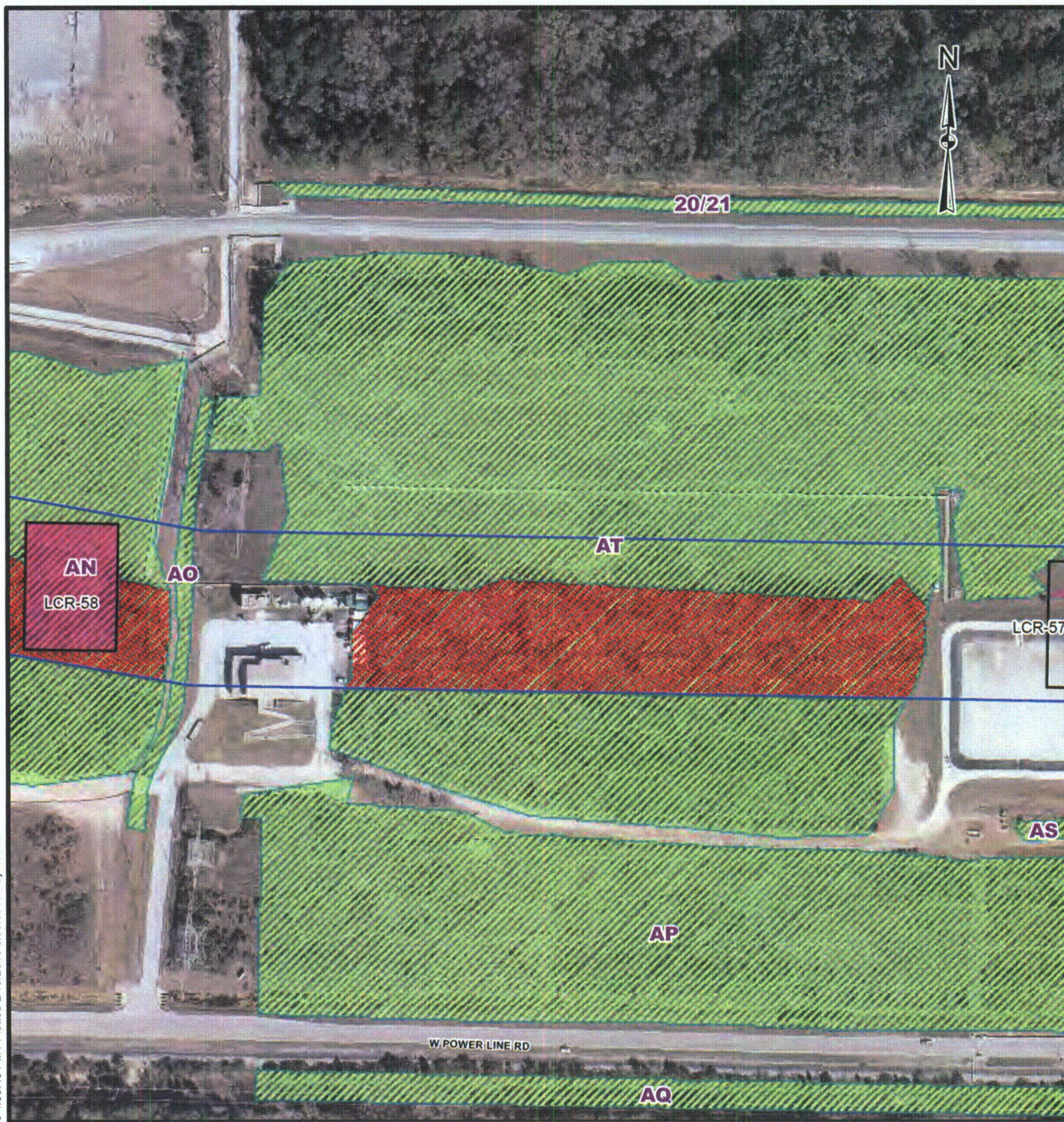
FILE No.	09389547Z004			CHECK	SR
PROJECT No.	093-89547	REV.	1	REVIEW	KAB

**LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR)  
TRANSMISSION LINE WETLAND IMPACT ANALYSIS**

PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT



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## LEGEND

- |                                    |                                   |
|------------------------------------|-----------------------------------|
| LCR Right-of-Way                   | Forested Wetland Clearing Impacts |
| LCR Pad Locations                  | Surveyed Wetland Boundaries       |
| Structure Pad Wetland Fill Impacts |                                   |
| Substation Property                |                                   |

## REFERENCES

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## NOTES

See wetland survey for acreage of wetlands.  
For impact acreages see attached tables.



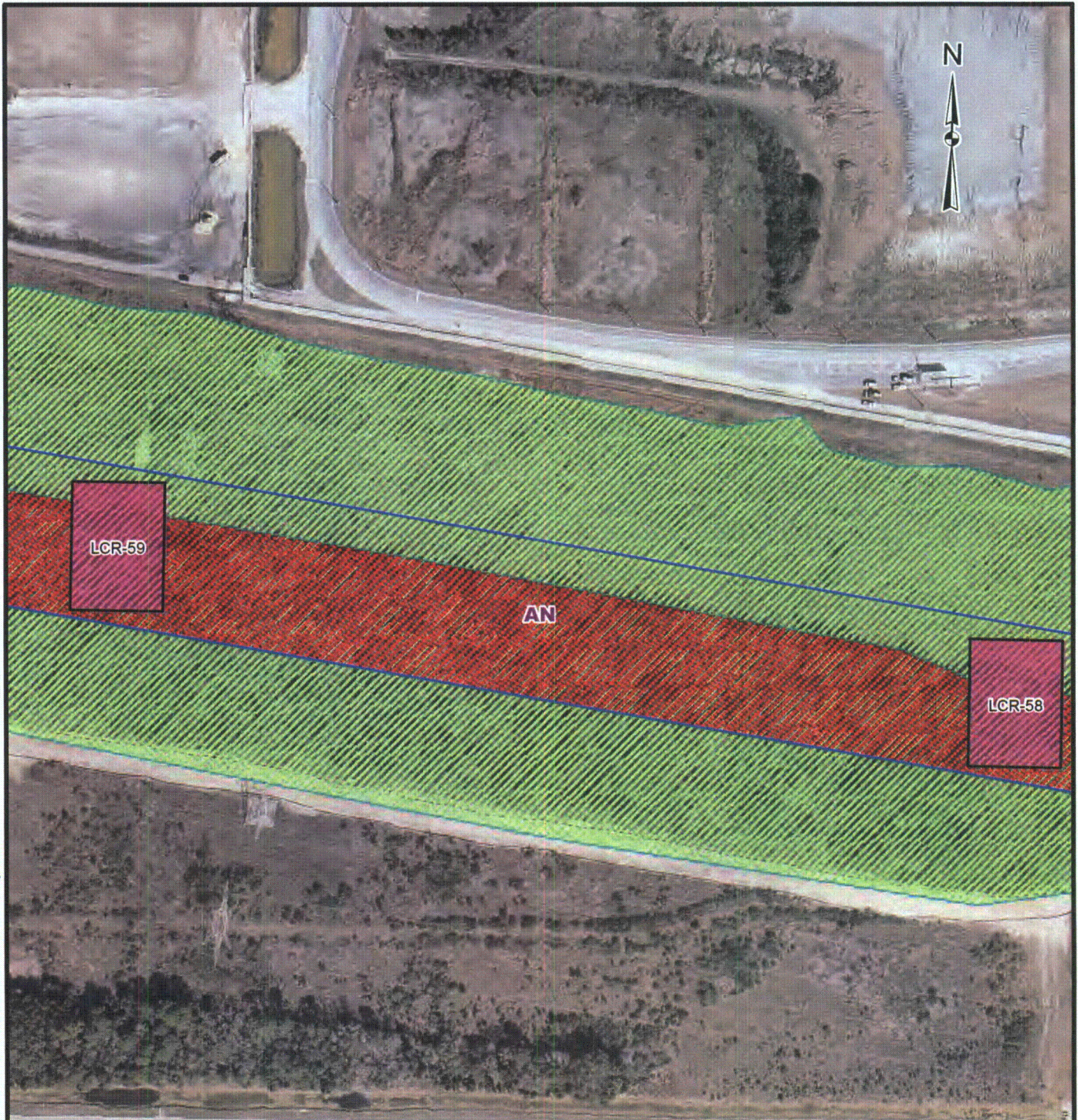
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DATE	2/19/2010
DESIGN	KAB
GIS	NRL
CHECK	SR
REVIEW	KAB

FILE No.	09389547Z004		
PROJECT No.	093-89547	REV.	1

## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT





## LEGEND

- |                                    |                                   |
|------------------------------------|-----------------------------------|
| LCR Right-of-Way                   | Forested Wetland Clearing Impacts |
| LCR Pad Locations                  | Surveyed Wetland Boundaries       |
| Structure Pad Wetland Fill Impacts |                                   |
| Substation Property                |                                   |

0 100 200 400  
Feet

## REFERENCES

1. Wetland boundaries, MACTEC, 2010.
2. Wetland impacts, Golder Associates Inc., 2010.
3. Pad Locations, Access Roads, Patrick Engineering, 2010.

## NOTES

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DATE	2/19/2010
DESIGN	KAB
GIS	NRL
CHECK	SR
REVIEW	KAB

## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

FILE No.	09389547Z004
PROJECT No.	093-89547

REV. 1

PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT

FIGURE 17 of 19





## LEGEND

- LCR Right-of-Way
- LCR Pad Locations
- Structure Pad Wetland Fill Impacts
- Substation Property

- Forested Wetland Clearing Impacts
- Surveyed Wetland Boundaries

0 100 200 400  
Feet

## REFERENCES

1. Wetland boundaries, MACTEC, 2010.
2. Wetland impacts, Golder Associates Inc., 2010.
3. Pad Locations, Access Roads, Patrick Engineering, 2010.

## NOTES

See wetland survey for acreage of wetlands.  
For impact acreages see attached tables.



SCALE	AS SHOWN
DATE	2/19/2010
DESIGN	KAB
GIS	NRL
CHECK	SR
REVIEW	KAB

## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

FILE No.	09389547Z004
PROJECT No.	093-89547
REV.	1

PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT

FIGURE  
**18 of 19**



Map Document: 09389547Z004\_Rev1\_LCR.mxd / Modified 2/17/2010 4:36:40 PM / Plotted 2/19/2010 9:35:55 AM by tamar



## LEGEND

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**Golder  
Associates**  
Gainesville, Florida

FILE No. 09389547Z004

PROJECT No. 093-89547 REV. 1

SCALE AS SHOWN

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DESIGN KAB

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## LEVY - CRYSTAL RIVER ENERGY COMPLEX (LCR) TRANSMISSION LINE WETLAND IMPACT ANALYSIS

PROGRESS ENERGY FLORIDA  
LEVY BASELOAD PROJECT

FIGURE

19 of 19



**LEVY – CRYSTAL RIVER ENERGY COMPLEX (LCR)  
TRANSMISSION LINE WETLAND IMPACT ANALYSIS  
TABLES**



**Progress Energy Florida  
Levy Baseload Project  
LCR Pads Wetland Impacts**

Structure ID	Wetland ID	FLUCFCS Code	FLUCFCS Definition	Impact Acreage	Total Impact Acreage	UMAM	Mitigation Credits	Total Mitigation Credits
LCR-43	CS-T	511	Ditches	0.08	0.08	0.53	0.04	0.04
LCR-47	22	617	Mixed Wetland Hardwoods	0.00*	0.00*	0.80	0.00*	0.00*
LCR-50	9	641	Freshwater Marshes	0.08	0.08	0.67	0.05	0.05
LCR-53	ZA	630	Wetland Forested Mixed	0.13	0.13	0.80	0.10	0.10
LCR-54	AZ	630	Wetland Forested Mixed	0.23	0.34	0.80	0.18	0.25
	AZ	641	Freshwater Marshes	0.11		0.60	0.07	
LCR-56	AT	641	Freshwater Marshes	0.16	0.16	0.67	0.11	0.11
LCR-57	AT	641	Freshwater Marshes	0.07	0.07	0.67	0.05	0.05
LCR-58	AN	617	Mixed Wetland Hardwoods	0.33	0.53	0.80	0.26	0.38
	AN	631	Wetland Shrub	0.20		0.60	0.12	
LCR-59	AN	617	Mixed Wetland Hardwoods	0.43	0.54	0.80	0.34	0.41
	AN	631	Wetland Shrub	0.11		0.60	0.07	
LCR-60	AK	631	Wetland Shrub	0.03	0.03	0.40	0.01	0.01
Totals					1.96			1.40

\* Impact Acreage or Mitigation Credits < 0.005

**Progress Energy Florida  
Levy Baseload Project  
LCR Forested Wetland Clearing Impacts**

Wetland ID	FLUCFCS Code	FLUCFCS Definition	Clearing Impact Acreage	Total Clearing Impact Acreage	UMAM	Functional Loss / Acre (UMAM)	Mitigation Credits	Total Mitigation Credits
19	617	Mixed Wetland Hardwoods	0.79	0.79	0.80	0.30	0.24	0.24
22	617	Mixed Wetland Hardwoods	2.89	2.89	0.80	0.30	0.87	0.87
AN	617	Mixed Wetland Hardwoods	7.75	7.75	0.80	0.30	2.33	2.33
AT	630	Wetland Forested Mixed	8.52	8.52	0.80	0.30	2.56	2.56
AZ	630	Wetland Forested Mixed	0.04	0.04	0.80	0.30	0.01	0.01
ZA	630	Wetland Forested Mixed	0.44	0.44	0.80	0.30	0.13	0.13
ZC	630	Wetland Forested Mixed	0.09	0.09	0.80	0.30	0.03	0.03
ZD	630	Wetland Forested Mixed	0.20	0.20	0.80	0.30	0.06	0.06
ZE	630	Wetland Forested Mixed	0.06	0.06	0.80	0.30	0.02	0.02
ZF	630	Wetland Forested Mixed	0.00*	0.00*	0.80	0.30	0.00*	0.00*
ZG	630	Wetland Forested Mixed	0.04	0.04	0.80	0.30	0.01	0.01
Totals				20.82				6.26

\* Impact Acreage or Mitigation Credits < 0.005

**Progress Energy Florida  
Levy Baseload Project  
LCR Wetland Impact Summary**

	<b>Acreage (Fill)</b>	<b>Acreage (Clearing)</b>	<b>Mitigation Credits</b>
<b>Pads</b>	1.96	-	1.40
<b>Roads</b>	-	-	-
<b>Right-of-Way Clearing</b>	-	20.82	6.26
<b>Total</b>	1.96	20.82	7.66