**Jay Chesser**
Station Manager
Hines Energy Complex

August 6, 2024

Mr. Nate Senn
Siting Coordination Office
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 5500
Tallahassee, FL 32399-2400
(Submitted via email to Nate.Senn@FloridaDEP.gov)

Subject: Duke Energy Florida, LLC
Hines Energy Complex
Conditions of Certification PA 92-33J
Petition for Modification-Cooling Pond Water Treatment Facility and Recharge Well Conversion
Response to Determination of Completeness Letter dated July 18, 2024

Dear Mr. Senn:

Duke Energy Florida, LLC. (DEF) received the Department's Determination of Completeness letter via email on July 18, 2024, in response to the petition for a Modification of the above-referenced Conditions of Certification for approval to construct a Cooling Water Treatment Reverse Osmosis Facility and conversion of the TWI-1 Recharge Well into a backup production well. The questions/comments included in the letter are provided in bold type, followed by the response from DEF.

**DEP Southwest District:**

1. **Please provide reasonable assurance that the existing stormwater system can accommodate for the proposed activity. Please use the geotechnical report, stormwater report, and other evidence to support your claims. Please make sure any information provided from the previous master planned permit is accurate to conditions today. [Chapter 62-330.060(1), F.A.C.]**

   DEF Response: The anticipated 1.83 acres of impervious area associated with the Cooling Pond Water Treatment Facility is entirely within the existing stormwater system's boundaries. The existing storm system was designed to be a closed, zero surface water discharge system, and will remain the same after the proposed activity.

2. **The submitted application did not include a plan for minimizing erosion and controlling sediment through implementation of Best Management Practices (BMPs) encompassing the entire project area. An application must provide reasonable assurance that the proposed activity will not adversely affect the quality of receiving waters such that the water quality standards set forth in Chapters 62-4, 62-302, 62-520, and 62-550, F.A.C., will be violated. To avoid off-site impacts, and prevent secondary impacts to water resources, please provide information on the types of BMPs that will be used during construction. [ERP Applicant's Handbook Volume I, Sections 4.2.3 and Chapter 62-330.350, F.A.C.]**

   DEF Response: Detailed design of the project has not been completed. Conceptual erosion and sediment control plan is shown on Drawing C-021 (Page 31 of 46 of the PDF submittal package). Preliminary evaluation indicates sheet flow from the site does not generally present an increased concern for erosion. Detailed engineering plans providing final erosion and sediment control plans will be submitted separately as a post-certification submittal following completion of the final design.

3. **The submitted application material does not provide a complete description of existing and proposed structures. Construction plans, drawings, calculations, and other supporting documents that depict and describe the proposed activities may be requested in order to process and evaluate whether the application meets the standards and criteria for issuance. Specifically, the submitted construction plans depicts two (2) evaporation ponds. Please provide clarification on the scope of the stormwater management system and all existing and proposed structures. [ERP Applicant's Handbook Volume I, Section 4.2.3, Chapter 62-330.301(1), F.A.C., and Parts III, IV, and IV of the SWFWMD ERP Applicant's Handbook, Volume II]**

   DEF Response: The existing site features are shown on the conceptual plans C-002 (page 28 of 46 the PDF submittal package). Detailed design of new structures has not yet been completed. Conceptual plans of the new structures are shown on Drawing C-101 (Page 32 of 46 of the PDF submittal package). Detailed construction plans and drawings will be submitted separately as a post-certification submittal following completion of the final design.

4. **The provided construction plans do not appear to label the additional impervious and semi-impervious surfaces. An application must provide sufficient construction plans, drawings, calculations, and other supporting documents that depict and describe all of the proposed activities. Therefore, please submit construction drawings with additional impervious and semi-impervious surfaces labeled, and any other relevant information. [ERP Applicant's Handbook Volume I, Section 5.5, and Section E Part 2, incorporated by reference in subsection 62-330.060(1), F.A.C.]**

   DEF Response: Detailed design of the new facility has not yet been completed. Detailed plans and drawings will be submitted separately as a post-certification submittal following completion of the final design. Conceptual plans of the new facility and for the

estimated 1.83 acres of impervious surface are shown on Drawing C-101 (Page 32 of 46 of the PDF submittal package). The conceptual plan has no semi-impervious surface.

5. **The application states, "A copy of "Section C" and an endangered species summary provided in this package." However, neither Section C nor an endangered species summary was included in the submittal. Please provide Section C of Form 62-330.060(1), F.A.C. (attached), including all requested supporting documentation therein. [ERP Applicant's Handbook Volume I, Section 4.2.3]**

   DEF Response: The referenced Section C form and Threatened and Endangered Species Inventory files are included with this response.

   Please be informed that the drawings submitted are for the final configuration of the proposed project. Prior to and during constructions approximately 130,000 sq feet will be covered with a low permeable surface – approximately 4" of lime rock. These areas are needed for temporary parking, housing office trailers, and for construction lay down. The 130,000 sq feet (or 3-acres) of temporary construction laydown area will result in an additional 100-year 24-hour storm runoff volume during the construction period of 2.36 acre-feet. Site erosion/sedimentation control measures for silt control during construction will be developed and submitted by the construction Contractor when available. At no time will the construction actives encroach within 25 feet of the designated wetlands. All rock surface will be removed during the final grading, which will conform to the approved stormwater permit.

**Southwest Florida Water Management District**

1. **Please confirm which water supply well is to be backed-up using the aquifer recharge well DID No. 21 (Permittee ID No. AR-1), referred to as TW-1 in the application documents submitted.**

   DEF Response: Aquifer recharge well DID No. 21, referred to as TW-1 in the application package, will serve as the backup to water supply well DID No. 2 (Permit ID No. P-2).

2. **Please confirm the construction status (i.e., existing and in use, existing and capped, or proposed) of the water supply wells DID Nos. 3, 4 and 5 (Permittee ID Nos. P-3, P4 and P-5). If existing and in use, confirm the installation of a meter as required by Section B. Specific Conditions, Condition II. Southwest Florida Water Management District, paragraph A. 16.**

   DEF Response: Water supply wells DID Nos. 3, 4 and 5 (Permittee ID Nos. P-3, P-4 and P-5) were never constructed. Due to the limitations on withdrawal amounts in the existing Conditions of Certification, additional limitations being implemented by the Central Florida Water Initiative, and the success of alternative water supply projects such as water cropping and use of reclaimed water, there are no plans to construct these additional water supply wells in the future.

3. **Please confirm the construction status of the aquifer recharge wells DID Nos. 22, 23, 24, 25 and 26, (Permittee ID Nos. AR-2, AR-3, AR-4, AR-5 and AR-6). If existing, confirm the installation of a meter as required by Section B. Specific Conditions, Condition II. Southwest Florida Water Management District, paragraph A. 23.**

   DEF Response: Aquifer recharge wells DID Nos. 22, 23, 24, 25 and 26 (Permittee ID Nos. AR-2, AR-3, AR-4, AR-5 and AR-6 were never constructed. Successful implementation of the aquifer recharge program at the Hines Energy Complex was not possible due to lack of availability of excess water that could be used to recharge the aquifer for future recovery under the program. Therefore, the program was discontinued after construction of the DID No. 21 (AR-1 or TW-1) aquifer recharge well.

4. **Please confirm the construction status of the aquifer recharge project monitor wells DID Nos. 151 and 152 (Permittee ID Nos. P1-SMW and P1-IMW).**

   DEF Response: Aquifer recharge project monitor wells DID Nos. 151 and 152 (Permittee ID Nos. P1-SMW and P1-IMW) were to be installed as monitoring wells for the aquifer recharge well DID No. 21 (AR-1). Since this aquifer recharge well was never put into service, the monitoring wells were never installed.

5. **It is noted that the existing Conditions have some specific requirements to address the development of the aquifer recharge project at the energy facility. It is unclear if the aquifer recharge project is being abandoned or if the project is being deferred for potential continued development should the current barriers to the project be resolved. Please describe the status of the aquifer recharge project. If the aquifer recharge project is to be abandoned, specific conditions addressing the project will be modified accordingly (e.g., removal of proposed aquifer recharge wells, metering of aquifer recharge wells, monitor wells, etc.).**

   DEF Response: DEF agrees with the Southwest Florida Water Management District that specific conditions addressing the aquifer recharge project should be removed from the Conditions of Certification, since the project was not implemented successfully at the site. As indicated previously, other alternative water supply projects such as water cropping, and use of reclaimed water have been successfully implemented.

Should you have any questions regarding this submittal, please contact Ms. Ilia Balcom at (813) 362-5123 or ilia.balcom@duke-energy.com. Please copy Ms. Balcom on all correspondence related to this submittal.

Sincerely,

Jay Chesser
Station Manager
Hines Energy Complex

Enclosures

# Section C: Supplemental Information for Works or Other Activities In, On, or Over Wetlands and/or Other Surface Waters

Instructions: **This section is for applications that do not involve activities associated with an individual single-family residence, duplex, triplex, or quadruplex. For those activities, please use Section B.** This form is to be completed if the proposed work or activity will occur in, on, over, or within 25 feet of a wetland or other surface water. The supplemental information required by this section is in addition to the information required by Section A of the application.

**Part 1: Wetland or Other Surface Water Impact Summary**

1. Describe the basic purpose of the project or activity: **Construction of an expanded water treatment facility including a stormwater treatment system.**

2. Total area of work (dredging, filling, construction, alteration, or removal) in, on, or over wetlands or other surface waters: sq. ft.; **0.0** ac.

3. Total volume of material to be dredged or filled in wetlands or other surface waters:
   a. to be dredged: **0.0**cubic yards,
   b. to be filled: **0.0** cubic yards.

4. Identify the seasonal high water level (SHWL) and wetland normal pool elevations for each wetland or surface water within the project site. For tidal wetlands and/or surface waters provide the elevation of mean high and mean low water. Include an aerial photograph showing the location of each sampling location, dates, datum, and methods used to determine these elevations. **There are no wetlands within the project area.**

5. Name of waterbody(ies) (if applicable & if known) in which work will occur? **There are no waterbodies within the project area**

6. Is the activity proposed in an Outstanding Florida Water or Aquatic Preserve?
☐ yes, name: ☒ no ☐ I don't know

7. Has there ever been a formal or informal wetland determination for the project site? If yes, provide the identifying number and/or a copy of the jurisdictional map. **Yes, a jurisdictional determination was performed as part of the siting act permit (PA 92-33J) that was issued by the FDEP and modified on July 6, 2022. Please see Attachment 1.**

8. Provide a map(s) of the project area and vicinity delineating USDA/NRCS soil types. **Please see the attached soils map**

9. Provide recent aerials legible for photointerpretation (no photocopies) with a scale of 1" = 400 ft, or more detailed, with project boundaries and wetland boundaries delineated on the aerial. **Please see the attached aerial map with the proposed project outlined.**

**10.** Provide maps accurately portraying the existing and proposed natural vegetative community types and land cover classifications using recognized classification schemes. Suggested sources include: the Florida Natural Areas Inventory Guide to the Natural Communities of Florida (2010) available at http://www.fnai.org/naturalcommguide.cfm, or the Florida Land Use and Cover Classification System (FLUCCS) (FDOT 1999, available at http://www.dot.state.fl.us/surveyingandmapping/documentsandpubs/fluccmanual1999.pdf). For vegetated areas dominated by exotic vegetation, use the descriptors representative of the native community type that was present prior to exotic infestation. **Please see the attached Land Use Land Cover Maps showing the FWC Land Use Classification System.**

11. Impact Summary Tables (located at the end of this section):
    a. For all projects, complete Table 1, 2 and 3 as applicable. **There are no wetland impacts**
    b. For shoreline stabilization projects, provide the information requested in Table 4. **N/A**

12. If the activity is located on state owned submerged lands and requires a lease or easement, provide a list of names and addresses from the latest county tax assessment roll of all property owners located within a 500 ft. radius of the proposed lease or easement boundary in mailing label format, or you may elect to send notice to those persons by certified mail, with the return-receipt card addressed to the DEP or water management district, as applicable, in accordance with subsection 18-21.005(3), F.A.C., and Section 253.115, F.S. Attach additional sheets if necessary.
    1. Name:
       Mailing Address:
       City, State, Zip Code:

    2. Name:
       Mailing Address:
       City, State, Zip Code:

    3. Name:
       Mailing Address:
       City, State, Zip Code:

    4. Name:
       Mailing Address:
       City, State, Zip Code:

    5. Name:
       Mailing Address:
       City, State, Zip Code:

    6. Name:
       Mailing Address:
       City, State, Zip Code:

**Part 2: Environmental Considerations**

Note: for many questions, a state statute/Applicant's Handbook Volume I (AH I)/State 404 Program Applicant's Handbook section is cited to assist the applicant in addressing these questions.

1. Elimination or Reduction of Impacts (Avoidance and Minimization). Describe measures taken to eliminate or reduce impacts to wetlands and other surface waters (*Refer to AH I Section 10.2.1*). **The**

**proposed pond site was designed to avoid wetlands. The pond is also designed to be at least 25 feet from the nearest wetland or water body.**

**2.** Fish, Wildlife, Listed Species, and their Habitats. Provide results of any wildlife assessments that have been conducted on the project site and provide any comments, biological opinions, formal or informal consultation decisions, or recommended actions you have received pertaining to the project from the Florida Fish and Wildlife Conservation Commission, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service. (*Refer to AH I Section 10.2.2*). **The proposed project is vacant land located within an existing water treatment facility operated by Duke Energy. It consists of frequently mowed cogon grass and provides minimal wildlife habitat value. A 100% survey for burrowing owls and gopher tortoises confirmed no burrows on the project site.**

3. Water quantity impacts to wetlands and other surface waters (*Refer to AH I Section 10.2.2.4 and AH II*).

   a. Does the activity include a proposed surface water management system with a control elevation different than the wetland normal pool elevation(s) of existing or proposed created wetlands or other surface waters? **No**

   b. If yes to (a), provide documentation (e.g. drawdown assessment or other methods) that shows the proposed surface water management system will not change the hydroperiod of the existing or created wetland or other surface water.

4. Public Interest Test. Please describe how the proposed activity will ***not be contrary*** to the public interest, OR if such an activity significantly degrades or is located within an Outstanding Florida Water (OFW), that the regulated activity will be ***clearly in*** the public interest (*Refer to AH I Section 10.2.3*).

   a. Please describe how the project will be designed to avoid adverse effects to public health, safety, or the welfare or the property of others. T**he proposed project is vacant land located within an existing water treatment facility operated by Duke Energy. The facility provided cooling water for the production of electricity for the public. The production of electricity provides benefits to the public health, safety and the welfare of residents, public facilities, and commercial operations in the central Florida area.**

   b. Please describe how the project will be designed to avoid adverse effects to the conservation of fish and wildlife, including endangered or threatened species, or their habitats. **The project area consists of frequently mowed cogon grass located on reclaimed phosphate mined lands and provides minimal wildlife habitat value. A 100% survey for burrowing owls and gopher tortoises confirmed no burrows on the project site. Duke Energy agrees to implement the Standard Protection Measures for the Eastern Indigo Snake (2021).**

   c. Please describe how the project will be designed to avoid adverse effects to navigation or the flow of water or cause harmful erosion or shoaling. **There are no waterbodies in the project area that provide navigation. Best Management Practices for erosion control will be implemented prior to beginning construction activities and will be maintained until the completion of construction,**

   d. Please describe how the project will be designed to avoid adverse effects to the fishing or recreational values or marine productivity in the vicinity of the activity. **The project site is located within an existing water treatment facility. There are no areas within the project site that are used for fishing or recreational purposes.**

e. Will the project be of a temporary or permanent nature? **Permanent**

f. Please describe how the project will be designed to avoid adverse impacts to significant historical and archaeological resources, under the provisions of section 267.061, F.S. **The project site is located on an area that has been historically mined for phosphate and reclaimed. There are no significant historical and archaeological resources on the project site.**

g. Please describe how the project will be designed to avoid adverse effects to the current condition and relative value of functions being performed by areas affected by the proposed regulated activity. **The proposed project is vacant land located within an existing water treatment facility operated by Duke Energy. The area has been previously mined for phosphate and has been reclaimed. The existing conditions consist of frequently mowed cogon grass with no trees or other woody vegetation. The proposed project does not adversely affect functions provided by the site since area currently provides no wetland values and minimal wildlife habitat value.**

5. Water Quality.
Provide a description of how water quality will be maintained in wetlands and other surface waters that will be preserved or will remain undisturbed, both on and offsite. Please address both short-term (such as during construction) and long-term water quality considerations (*Refer to AH I Section 10.2.4*).
**There are no wetlands on the project site. There are no waterbodies in the project area that provide navigation. Best Management Practices for erosion control will be implemented prior to beginning construction activities and will be maintained until the completion of construction,**

6. Class II Waters; Waters approved for shellfish harvesting *(Refer to AH I Section 10.2.5)*.

a. Will the project occur in Class II that are NOT approved for shellfish harvesting? If yes, please provide a plan or procedure detailing the measures to be taken to meet the requirements of *AH I Section 10.2.5(a)*. **No**

b. Is the project located adjacent to or in close proximity to Class II waters? If yes, please provide a plan or procedure detailing the measures to be taken to meet the requirements of *AH I Section 10.2.5(b)*. **No**

Is the project located in Class II or Class III waters that are classified as “approved”, “restricted”, “conditionally approved”, or “conditionally restricted”? If yes, demonstrate that the project meets the requirements of *AH I Section 10.2.5l*. **N**

c. **o**

7. Vertical seawalls. Are vertical seawalls proposed in an estuary or lagoon as part of the project? If yes, please describe how the project meets the requirements of *AH I Section 10.2.6*. **No**

Secondary Impacts (*AH I Section 10.2.7*

8. ).

   a. Will an upland buffer, with a minimum width of'15' and an average width of'25', be provided between the proposed activities and existing wetlands or wetlands to be preserved, enhanced, restored, or created? Provide the location and dimension of all buffers on the plans. **Yes** If not, demonstrate that secondary impacts will not occur or describe how they will be offset.

   **b.** If listed species are present or may be present, then coordination with wildlife agencies is needed. Have you coordinated with the FFWCC and/or USFWS? If so, please provide correspondence from the wildlife agencies indicating concurrence with the species management plan(s). **Coordination with the FWC and the USFWS has not occurred. Coordination with the FWC is anticipated through the ERP application process. Consultation with FWS is not warranted and is not expected.**

   c. What measures will be taken to avoid impacts to wetland-dependent wildlife and/or listed species that use uplands for nesting or denning? **There are no wetlands present within the project area. Based on the habitat present at the site, the only listed species that may utilize the project site is the Eastern Indigo Snake. Duke Energy agrees to implement the Standard Protection Measures for the Eastern Indigo Snake**

   d. Describe whether there are any other relevant activities that are very closely linked and causally related to any proposed dredging or filling in wetlands or other surface waters that have the potential to cause impacts to significant historical and archaeological resources. T**he project site is located on an area that has been historically mined for phosphate and reclaimed. There are no significant historical and archaeological resources on the project site.**

   e. Are there additional future phases or extensions of the proposed activities that are not shown? If yes, please describe. **No**

9. Cumulative Impacts. Is the proposed mitigation located within the same drainage basin (*Refer to AH I Figures 10.2.8.1 – 10.2.8.5)* as the proposed wetland impacts? **There are no wetlands on the project site and no mitigation is proposed** If not, please submit a Cumulative Impact Evaluation in accordance with *AH I Section 10.2.8*.

10. Mitigation Plan (*Refer to AH I Section 10.3*). **N/A**

    a. If a mitigation bank is proposed to offset wetland/other surface water impacts, provide:

       i. the name of the bank: . A letter of reservation from the banker will be required once the application has been evaluated.
       ii. If the mitigation bank was assessed using UMAM, provide UMAM worksheets for impact area(s). If the bank was assessed using a method other than UMAM, then prepare the impact assessment using the same method.

    b. If mitigation is proposed to offset wetland/other surface water impacts, please provide a mitigation plan that includes, at a minimum, the following:

       i. ☐ Proposed mitigation narrative:
          (1) ☐ Describe the current and proposed condition for each type of mitigation component (restoration, enhancement, creation, preservation), including:

(a) ☐ Describe current and proposed vegetation
(b) ☐ Describe current and proposed hydrologic conditions for the proposed mitigation.
(c) ☐ Describe the soil types from NRCS maps and confirm if actual soil conditions appear to match.

(2) ☐ Provide details of the proposed construction/mitigation activities including phasing and timing, as appropriate.
(3) ☐ Identify measures that will be implemented during and after construction to avoid adverse impacts related to the proposed activities.
(4) ☐ A mitigation implementation and monitoring schedule with dates.
(5) ☐ Identify the success criteria.
(6) ☐ Describe the anticipated site conditions in and around the mitigation area after the mitigation plan is successfully implemented.
(7) ☐ Provide a comparison of current fish and wildlife habitat to expected habitat after the mitigation plan is successfully implemented.

ii. ☐ Provide a Management Plan that includes, as appropriate, aspects of operation and maintenance, including water management practices, vegetation establishment, exotic and nuisance species control, fire management, and control of access.

iii. ☐ Maps:
(1) ☐ Soil map (include soil names/codes, hydrologic soil groups and hydric soil types).
(2) ☐ Topographic map of the mitigation area and adjacent contributing and receiving areas.
(3) ☐ Hydrologic features map of the mitigation area and adjacent contributing and receiving areas.
(4) ☐ Vegetative communities map (using FLUCCS or other appropriate classification system).
(5) ☐ For all maps, identify source.

iv. Provide the necessary supporting information for the application of sections 62-345.400 - .600 (Uniform Mitigation Assessment Method (UMAM)). To meet this requirement, submittal of UMAM worksheets is acceptable for impact and mitigation areas.

v. If onsite and/or offsite applicant-responsible mitigation is proposed, submit a draft Conservation Easement document or other form of restrictive covenant that provides for protection of the mitigation area in perpetuity. Standard forms, as described in subsection 62-330.301(6), F.A.C., are available from the Agency or on its website.

vi. If onsite and/or offsite applicant-responsible mitigation is proposed, submit a cost estimate for completing the mitigation, including monitoring and maintenance.

vii. If onsite and/or offsite applicant-responsible mitigation is proposed and the proposed mitigation exceeds $25,000, please provide a draft financial assurance document. Standard forms, as described in subsection 62-330.301(5), F.A.C., are available from the agency or on its website.

viii. Identify the entity responsible for monitoring, maintenance, and long-term stewardship of the mitigation area (i.e. the landowner or homeowner association, not the consultant or contractor that will do the work).

Note: If your project is in retained waters, it is highly recommended that you coordinate the design of any mitigation plan that also may be required for the Corps permit to meet the requirements of both permits. Pre-application meetings with both the applicable Agency and the Corps can help you to choose a mitigation option that is acceptable to both the applicable Agency and the Corps.

**Part 3: Plans**

Plans: The information listed in the checklist below represents the typical information required on the submitted project plans. The Plans checklists in each application section are cumulative unless otherwise noted. Separate plans for each application section are not required.

1. ☐ Include the following on the construction plans and cross sections:

    a. ☐ An Existing Conditions sheet showing the entire project and wetland/other surface water boundaries. Include the following: Acreage and type (herbaceous, forested or other surface water) of each wetland/other surface water.
    b. ☐ A Proposed Conditions sheet showing the entire project and wetland/other surface water boundaries with construction plan overlay.
    c. ☐ A Proposed Wetland Impact sheet that includes the following:
        i. ☐ Acreage and type (herbaceous, forested, or other surface water) of each wetland/other surface water to be impacted.
        ii. ☐ Proposed upland buffers with dimensions.
        iii. ☐ Identify the seasonal high water and wetland normal pool elevations on the plans.
    d. ☐ Include wetland boundaries on all construction plan sheets.

2. ☐ If onsite and/or offsite applicant-responsible mitigation is proposed, submit mitigation plans and cross sections including, at a minimum:

    a. ☐ existing conditions plan sheet identifying upland and wetland communities and acreage of each, topography, drainage patterns, and location of cross-section detail.
    b. ☐ proposed conditions plan sheet identifying proposed improvements by type (restoration, enhancement, creation, preservation), acreage of each, topography, drainage patterns, and location of cross-section detail.
    c. ☐ monitoring plan sheet including proposed improvements, monitoring transects, photostations, and mitigation signage (if applicable).
    d. ☐ cross-section and/or profile detail(s) sheet(s) including representative section of each type of mitigation component. Include existing and proposed conditions and representative elevations.
    e. ☐ planting schedule, plant species including common and scientific names divided into three sections (canopy, shrub, herbaceous) by mitigation component, quantity, spacing, size, and elevation range.

**Table 1 - Project Wetland (WI) And Other Surface Water (SW) And Impact Summary N/A**

| WL & SW ID | UMAM ASSESSMENT AREA NAME(S) | WL & SW TYPE | WL & SW SIZE (acres) | WL & SW NOT IMPACTED (acres) | TEMPORARY WL &SW IMPACT SIZE (acres) | TEMPORARY WL & SW IMPACT TYPE | PERMANENT WL &SW IMPACT SIZE (acres) | PERMANENT WL & SW IMPACT TYPE | MITIGATION ID |
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| **PROJECT TOTALS:** | | | | | | | | | |

Comments:

Codes (multiple entries per cell not allowed):

- Wetland & Surface Water ID: Include ID on submitted wetland and surface water impact maps
- Wetland Type: from an established wetland classification system
- Impact Type: D=dredge; F=fill; H=change hydrology; S=shading; C=clearing; O=other

**Table 2 - Project On-Site Mitigation Summary**

| MITIGATION ID | UMAM ASSESSMENT AREA NAME(S) | TARGET TYPE | CREATION AREA (acres) | RESTORATION AREA (acres) | ENHANCEMENT AREA (acres) | WETLANDS PRESERVE AREA (acres) | UPLAND PRESERVE AREA (acres) | OTHER AREA (acres) |
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| **PROJECT TOTALS:** | | | | | | | | |

COMMENTS:

Codes (multiple entries per cell not allowed):

- Target Type or Type=target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation

**Table 3 - Project Off-Site Mitigation Summary**

| MITIGATION ID | UMAM ASSESSMENT AREA NAME(S) | TARGET TYPE | CREATION AREA (acres) | RESTORATION AREA (acres) | ENHANCEMENT AREA (acres) | WETLANDS PRESERVE AREA (acres) | UPLAND PRESERVE AREA (acres) | OTHER AREA (acres) |
|---|---|---|---|---|---|---|---|---|
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| **PROJECT TOTALS:** | | | | | | | | |

COMMENTS:

Codes (multiple entries per cell not allowed):

- Target Type or Type=target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation

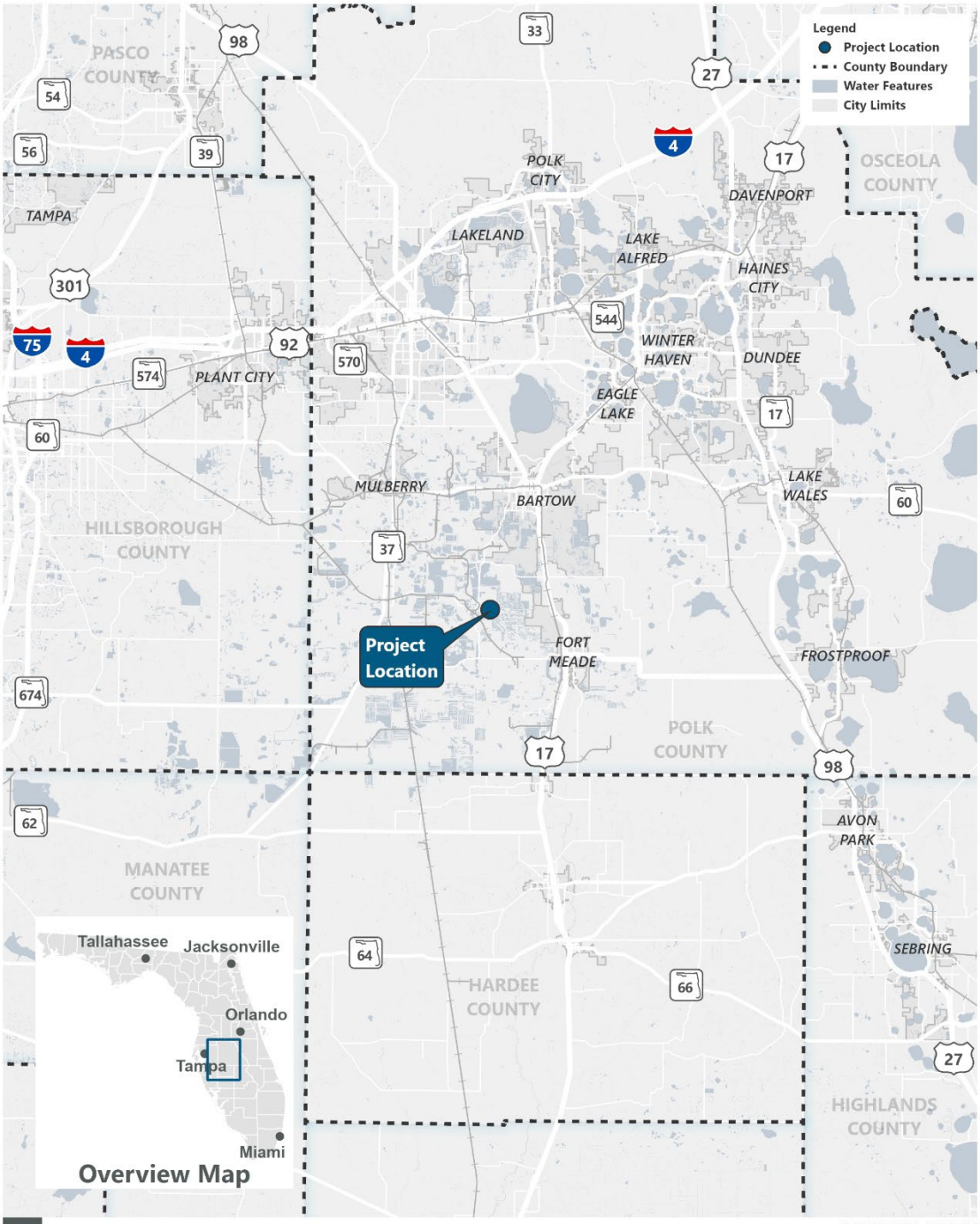
**Table 4 - Shoreline Stabilization**

| Stabilization | Linear Ft. New | Linear Ft. Replaced | Linear Ft. Repaired | Linear Ft. Removed | Slope H: V: | Toe Width (Ft.) |
|---|---|---|---|---|---|---|
| Natural Vegetation (living shoreline) | | | | | **N/A** | **N/A** |
| Rip Rap + Vegetation | | | | | | |
| Rip Rap | | | | | | |
| Seawall + Rip Rap | | | | | | |
| Vertical Seawall | | | | | | |
| Other Shoreline Stabilization Type | | | | | | |

Size of Rip Rap

Type of Rip Rap

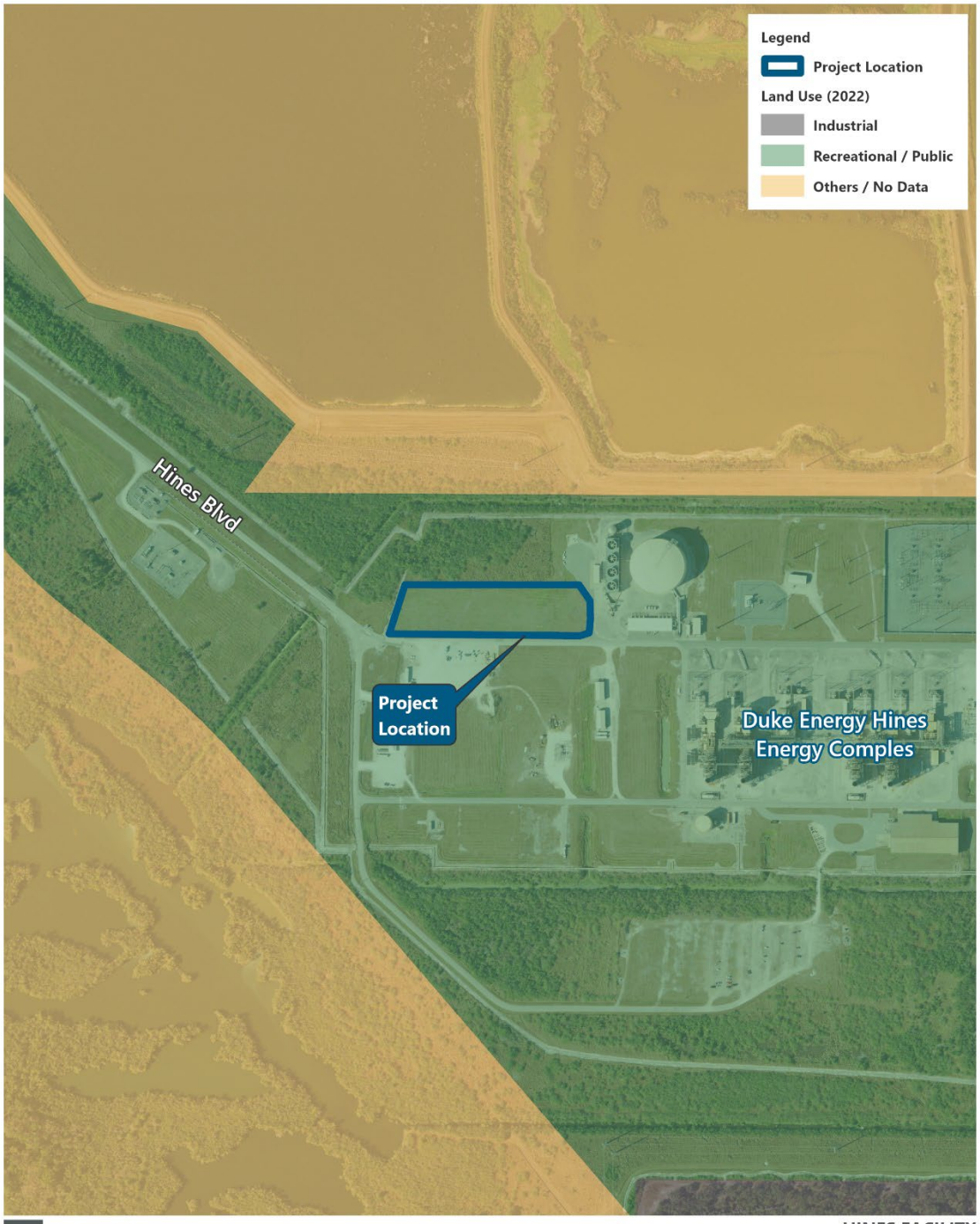
# ATTACHMENT 1
# LOCATION MAP




**HINES FACILITY**
Figure 1 - Location Map
DUKE ENERGY

DATE: 4/25/2024

# ATTACHMENT 2
# LAND USE MAP




DUKE ENERGY

1 inch equals 500 feet

0 250 500 Feet

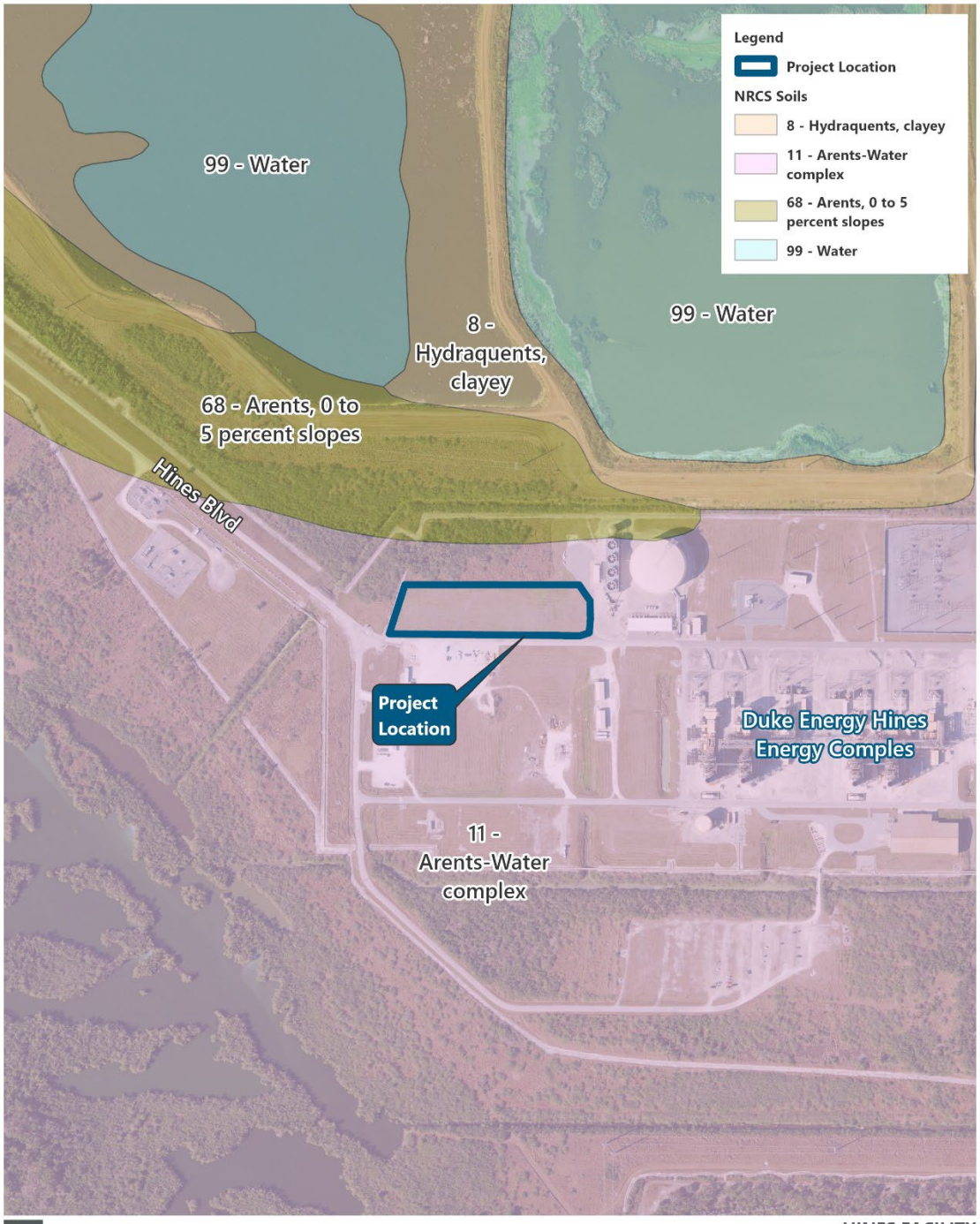
**HINES FACILITY**

Figure 2 - Land Use Map

DUKE ENERGY

*DATE: 4/25/2024*

# ATTACHMENT 3
# SOILS MAP




DUKE ENERGY

1 inch equals 500 feet

0 250 500 Feet

**HINES FACILITY**

Figure 3 - Soils Map

DUKE ENERGY

*DATE: 4/25/2024*

Attachment 2

# Threatened and Endangered Species Inventory

## Duke Energy Hines Facility

## Fort Meade, Polk County, Florida

Agency database searches, literature reviews, and desktop analysis using Geographic Information System-based (GIS) data searches were conducted in conjunction with a site visit on February 23, 2024. The desktop analysis used the most recent databases to identify state- and federal-protected species and/or critical habitats, occurring or potentially occurring within the project area as outlined in red below.


Information sources and databases used for the analyses included the following:

- Audubon Florida's EagleWatch Program Nest Locator
- Florida Land Use, Cover and Forms Classification System (FLUCFCS) Handbook (1999)
- Florida Natural Areas Inventory (FNAI) Biodiversity Matrix Query (May 2023)
- Soil Survey of DeSoto County, Florida, USDA, NRCS (1989)
- U.S. Fish and Wildlife Service Wood Stork Core Foraging Areas (2023)
- U.S. Fish and Wildlife Service, IPaC Information for Planning and Conservation (May 2023)

To assist in the assessment for potential impacts to federally listed species for the USFWS, an Information for Planning and Consultation Report (IPaC) was obtained from the U.S. Fish & Wildlife Service (USFWS)

website (**Attachment 1**). A summary of the federal protected species with the potential to occur, is provided in Table 1, below.

**Table 1: Federally Listed Species Potentially Occurring within the Project Area**

| Common Name | Scientific Name | Status | Effect Determination |
|---|---|---|---|
| **Mammals** | | | |
| Florida panther | *Puma concolor coryi* | Endangered | Not anticipated to adversely affect |
| **Birds** | | | |
| Crested caracara | *Caracara plancus* | Threatened | Not anticipated to adversely affect |
| Eastern black rail | *Laterallus jamaicensis jamaicensis* | Threatened | No affect |
| Everglades snail kite | *Rostrhamus sociabilis plumbeus* | Endangered | No affect |
| Whooping crane | *Grus americana* | Experimental Population | No affect |
| Wood stork | *Mycteria americana* | Threatened | No effect |
| **Reptiles** | | | |
| American alligator | *Alligator mississippiensus* | Similarity of appearance | No affect |
| Blue-tailed mole skink | *Eumeces egregius* | Threatened | Not anticipated to adversely affect |
| Eastern indigo snake | *Drymarchon corais couperi* | Threatened | May Affect Not Likely to Adversely Affect |
| Sand skink | *Neoseps reynoldsi* | Threatened | Not anticipated to adversely affect |
| **Insects** | | | |
| Monarch butterfly | *Danaus plexippus* | Candidate | Not anticipated to adversely affect |
| **Plants** | | | |
| Pygmy fringe-tree | *Chionanthus pygmaeus* | Endangered | No affect |

Discussions on the assessment of each federal listed species and their project effect determinations follow.

## Federal-Listed Wildlife

### Mammals

#### Florida Panther (*Puma concolor coryi*)

The Florida panther is federally endangered. The panther utilizes wetland and upland habitats, including forested wetlands, freshwater marsh, and pine flatwoods. The Duke Energy Hines Facility site is not located within the focus or a dispersal area for the Florida panther. Since the proposed project is located within an existing industrial facility, the water treatment facility expansion is not expected to significantly increase traffic , which could conflict with panthers. The project is not anticipated to adversely affect the Florida panther.

## Birds

### Crested Caracara (*Caracara cheriway*)

The crested caracara is a medium-sized falcon. They inhabit open country, including pastures, scrub, and savannas in southern and central Florida. They generally nest in solitary cabbage palm trees. The project involves impacts to a mowed upland field with no trees. Because the site does not provide suitable nesting habitat for this species, the project is not anticipated to adversely affect the caracara.

### Eastern black rail (*Laterallus jamaicensis jamaicensis*)

The Eastern black rail is a secretive bird that inhabits marshes particularly along the coast. The federal status for the Eastern black rail is threatened. It is a small, cryptic marsh bird that can reach 15 centimeters in length. Males and females are generally pale to blackish gray with bright red eyes. They require dense overhead cover and prefer herbaceous, emergent wetland vegetation. Nests are well hidden in these dense clumps of vegetation and are typically constructed over moist soil or shallow water. Since the project involves impacts to an upland mowed field within a developed industrial area that does not contain suitable marsh habitat, the project is not anticipated to impact the Eastern black rail.

### Everglade snail kite (*Rostrhamus sociabilis plumbeus*)

The federal status for the Everglade snail kite is endangered. The Everglade snail kite is a medium-sized raptor and adults are dark gray to black with a white patch at the base of the tail and red legs. It prefers large, open freshwater marshes less than 4 feet in depth where it feeds exclusively on apple snails. The proposed project is within the consultation area of the Everglades snail kite. The Everglades snail kite inhabits and forages in freshwater marshes and grassy shorelines of lakes. However critical habitat is not located in or adjacent to the project and the site does not provide suitable nesting or foraging habitat for this species. Therefore, the project is not anticipated to adversely affect the Everglades snail kite.

### Wood Stork (*Mycteria americana*)

The wood stork is federal- and state-listed as threatened. They are typically found in marshes, cypress swamps, and mangrove swamps, but they are common in artificial ponds, seasonally flooded roadside or agricultural ditches, and managed impoundments. Wood storks use freshwater and estuarine habitats for nesting, foraging, and roosting. They are typically colonial nesters and construct their nests in medium to tall trees located within wetlands or on islands. The same colony site may be used over many years, provided the site remains undisturbed and sufficient foraging habitat is available. Wood storks are known to nest with other wading bird species, including white ibis, tricolored herons, snowy egrets, and great blue herons.

The USFWS has defined an area in South Florida with a radius of 18.6 miles from nesting wood stork colonies as the Core Foraging Area (CFA) for those colonies. The project falls within the CFA of multiple active nesting wood stork colonies. As defined by the USFWS, suitable wood stork foraging habitat includes wetlands and surface waters with relatively calm water, uncluttered by dense thickets of aquatic vegetation, and have permanent or seasonal water depths between 2 and 15 inches. No suitable foraging areas were observed on the project site and no nesting habitat is present. Based on the use of the Effect

Determination Key for the Wood Stork in Central and North Peninsular Florida (September 2008), it is anticipated that the project will have **No Effect** on the wood stork (**See Attachment 2**). Further consultation is not required for this species.

## Reptiles

### American Alligator *(Alligator mississippiensis)*

The American alligator is listed as federally threatened due to similarity in appearance to the endangered American crocodile (*Crocodylus acutus*). The alligator is known to utilize ditches, wetlands, and creeks. Since the project involves impacts to a mowed upland field that provides stormwater treatment, the project is not expected to impact the American alligator.

### Blue-tailed Mole Skink (*Eumeces egregies lividus*)

The blue-tailed mole skink is federally threatened. It occurs in the high, sandy ridges associated with the ancient dunes of central Florida in xeric natural communities, including rosemary scrubs, scrubby flatwoods, sand pine and oak scrubs, turkey oak ridge, and sometimes the edges of citrus groves built on former habitat. This species does not leave sand tracks like the sand skink, but sand skink tracks can be used as an indicator of suitable blue-tailed mole skink habitat where the two species' ranges overlap.

The proposed project area is located within the consultation area of the blue-tailed mole skink in an open field dominated by cogon grass that is regularly mowed. The field is within the bounds of the Duke Energy Hines Energy complex, which has been historically phosphate-mined and reclaimed. The base material used for reclamation contains a high level of clay and dense cogongrass, which are not suitable to the sand skink. The blue-tailed mole skink requires loose sand and areas with sparse or no groundcover, therefore, the proposed project is not anticipated to adversely affect the blue-tailed mole skink.

### Eastern Indigo Snake (*Drymarchon corais couperi*)

The Eastern indigo snake is a large non-venomous snake native to the southeastern United States that occurs in a wide variety of terrestrial habitats throughout Florida and Georgia. The applicant has agreed to implement the USFWS *Standard Protection Measures for the Eastern Indigo Snake* (2021). Use of the Eastern Indigo Snake Programmatic Effect Determination Key for North Florida led to a determination of not likely to adversely affect (NLAA) (**See Attachment 3**).

### Sand Skink (*Neoseps reynoldsi*)

The sand skink is federally threatened. It occurs in the high, sandy ridges associated with the ancient dunes of central Florida in xeric natural communities including rosemary scrubs, scrubby flatwoods, sand pine and oak scrubs, turkey oak ridge, and sometimes the edges of citrus groves built on former habitat. The sand skink requires loose sand and areas with sparse or no groundcover. The species is fossorial and leaves distinctive "sine-wave" tracks in the sand as it "swims" just below the surface.

The proposed project is located within the consultation area of the sand skink, in an open field dominated by cogon grass that is regularly mowed and provides stormwater treatment. The field is within the bounds

of the Duke Energy Hines Energy complex, which has been historically phosphate-mined and reclaimed. The base material used for reclamation contains a high level of clay, which is not suitable to the sand skink. Therefore, the proposed project is not anticipated to adversely affect the sand skink.

**Pygmy fringe-tree (*Chionanthus pygmaeus*)**

The pygmy fringe tree is a federally listed endangered species endemic to Florida. It occurs in Florida scrub, sandhills, hammocks and flatwoods and prefers well-drained sandy soils. The species depends on fire to maintain the open sandy patches it requires. The project area has been completely mined, reclaimed, and industrialized and does not contain any xeric habitat. Since the preferred habitat types does not exist within or adjacent to the project corridor, the project is not anticipated to impact the pygmy fringe tree.

## State-Listed Wildlife

To assist in the assessment for potential impacts to state-listed species for the FWC, a Biodiversity Matrix Report was generated from the Florida Natural Areas Inventory (FNAI). A copy of the FNAI Report is included in **Attachment 4**. State-listed species that were identified as having the potential to occur within the vicinity of the project area are listed in Table 2, below.

**Table 2: State Listed Species Potentially Occurring within the Project Area**

| Common Name | Scientific Name | Status | Effect Determination |
|---|---|---|---|
| **Birds** | | | |
| Florida sandhill crane | *Antigone canadensis pratensis* | Threatened | No Effect Anticipated |
| **Reptiles** | | | |
| Gopher tortoise | *Gopherus polyphemus* | Threatened | No Effect Anticipated |
| **Plants** | | | |
| Sand butterfly pea | *Centrosema arenicola* | Endangered | No Effect Anticipated |
| Scrub buckwheat | *Eriogonum longifolium* | Endangered | No Effect Anticipated |
| Nodding pinweed | *Lechea cernua* | Threatened | No Effect Anticipated |
| Celestial lily | *Nemastylis floridana* | Endangered | No Effect Anticipated |
| Giant orchid | *Pteroglossaspis ecristata* | Threatened | No Effect Anticipated |
| Carter's warea | *Warea carteri* | Endangered | No Effect Anticipated |

Discussions on the assessment of each state listed species and their project effect determinations follow.

### Birds

#### Florida Sandhill Crane *(Antigone canadensis pratensis)*

The Florida sandhill crane is listed as threatened by the FWC. Sandhill cranes utilize wet prairies, pastures, and fields for foraging, and shallow vegetated marshes for nesting. The site does not provide suitable nesting habitat for this species. Therefore, the project is not anticipated to adversely affect the Florida sandhill crane.

### Reptiles

#### Gopher Tortoise

The gopher tortoise is state-listed as threatened due to habitat loss and degradation and a declining number of individuals. Gopher tortoises require well-drained, loose sandy soils for burrowing, and low-growing herbs and grasses for food. These conditions can be found in a variety of habitats including dry prairies, pine flatwoods, and disturbed or maintained sites, typically with a low groundwater table. Unsuitable habitat for the gopher tortoise is present within the project area; and this species and its burrows were not observed during the field reviews. A 100% gopher tortoise burrow survey was conducted during the site inspection on February 23, 2024, and no burrows were observed.

Current FWC regulations require a permit for any ground disturbance activity occurring within 25 feet of a potentially occupied gopher tortoise burrow. Based on these regulations, any gopher tortoises located within 25 feet of the project must be relocated to a permitted recipient site. The project area will be surveyed for gopher tortoise utilization prior to construction. If gopher tortoises or potentially occupied burrows are found within the project area, Duke Energy will coordinate with the FWC to secure all permits needed to relocate the tortoises and, if necessary, any additional listed species found to be utilizing the burrows. Therefore, there is **no effect anticipated** for the gopher tortoise.

## Plant Species

Five of the six state-listed plants listed in **Table 2**, including sand butterfly pea, scrub buckwheat, nodding pinweed, giant orchid, and Carter's Warea prefer sandy well-drained soils in scrub/sandhills**.** The sixth listed state plant, celestial lily, prefers fire maintained wet flatwoods. Since the project site consists of former phosphate mines that have been reclaimed with soil that has a high clay content (based on observations during our site visit on February 24, 2024), suitable habitat is not present for any of these plant species. Therefore, the project is not anticipated to impact any of the plant species listed in **Table 2.**

### Non-Listed Federal and State Protected Wildlife

#### Bald Eagle (*Haliaeetus leucocephalus*)

The bald eagle receives protections through the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA). Audubon Florida's EagleWatch Nest Locator records indicated that the nearest bald eagle nest (PO115) was located approximately 1.8 miles southwest of the project area. No unrecorded bald eagle nests were observed onsite. Because the distance from the nearest nest was

greater than the 660' protection buffer, coordination and development of a management plan with the USFWS or FWC is not expected.

**Osprey (*Pandion haliaetus*)**

The osprey is federally protected by the MBTA. Removal of active nests is restricted. Removal of inactive nests is authorized by FWC Migratory Bird Nest Removal Permits and based on the FWC's Osprey Nest Removal Guidelines. One osprey nest was observed on a light pole just west of the project area and another osprey landed on one of the water treatment buildings east of the project area. Based on these observations, the ospreys have become accustomed to normal activities associated with the water treatment plant. Temporary construction activities will not differ much from the normal operation. Therefore, there is **no effect anticipated** for the osprey.

**Summary or Conclusion**

The proposed water treatment expansion area is within the bounds of the Duke Energy Hines Energy complex, which has been historically mined for phosphate and reclaimed. Since the project involves impacts to an upland mowed field that is dominated by cogon grass within a developed industrial area, the anticipated impacts to protected species is anticipated to be negligible. The applicant has agreed to implement the USFWS *Standard Protection Measures for the Eastern Indigo Snake* (2021).

# ATTACHMENT 1

# USFWS IPAC REPORT

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.



## Location

Polk County, Florida

## Local office

Florida Ecological Services Field Office

(352) 448-9151
(772) 562-4288
fw4flesregs@fws.gov

777 37th St
Suite D-101
Vero Beach, FL 32960-3559

https://www.fws.gov/office/florida-ecological-services

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

# Mammals

| NAME | STATUS |
|---|---|
| **Florida Panther** Puma (=Felis) concolor coryi<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/1763 | Endangered |
| **Puma (=mountain Lion)** Puma (=Felis) concolor (all subsp. except coryi)<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/6049 | SAT |

# Birds

| NAME | STATUS |
|---|---|
| **Crested Caracara (audubon''''s) [fl Dps]** Caracara plancus audubonii<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/8250 | Threatened |
| **Eastern Black Rail** Laterallus jamaicensis ssp. jamaicensis<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/10477 | Threatened |
| **Everglade Snail Kite** Rostrhamus sociabilis plumbeus<br>Wherever found<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/7713 | Endangered |
| **Whooping Crane** Grus americana<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/758 | EXPN |

Wood Stork Mycteria americana — Threatened

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8477

# Reptiles

| NAME | STATUS |
|---|---|

American Alligator Alligator mississippiensis — SAT

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/776

Blue-tailed Mole Skink Eumeces egregius lividus — Threatened

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2203

Eastern Indigo Snake Drymarchon couperi — Threatened

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/646

Sand Skink Neoseps reynoldsi — Threatened

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4094

# Insects

| NAME | STATUS |
|---|---|

Monarch Butterfly Danaus plexippus — Candidate

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9743

# Flowering Plants

| NAME | STATUS |
|---|---|

Avon Park Harebells Crotalaria avonensis — Endangered

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7093

Britton's Beargrass Nolina brittoniana — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4460

Carter's Mustard Warea carteri — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5583

Florida Ziziphus Ziziphus celata — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2950

Highlands Scrub Hypericum Hypericum cumulicola — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2940

Lewton's Polygala Polygala lewtonii — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6688

Papery Whitlow-wort Paronychia chartacea — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/1465

Pigeon Wings Clitoria fragrans — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/991

Pygmy Fringe-tree Chionanthus pygmaeus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/1084

Sandlace Polygonella myriophylla — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5745

Scrub Blazingstar Liatris ohlingerae — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/864

| | |
|---|---|
| Scrub Mint Dicerandra frutescens<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/799 | Endangered |
| Short-leaved Rosemary Conradina brevifolia<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/2929 | Endangered |
| Wireweed Polygonella basiramia<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/1718 | Endangered |

## Lichens

| NAME | STATUS |
|---|---|
| Florida Perforate Cladonia Cladonia perforata<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/7516 | Endangered |

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

# Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

**There are bald and/or golden eagles in your project area.**

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|---|---|
| Bald Eagle *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1626 | Breeds Sep 1 to Jul 31 |



# Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence** (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

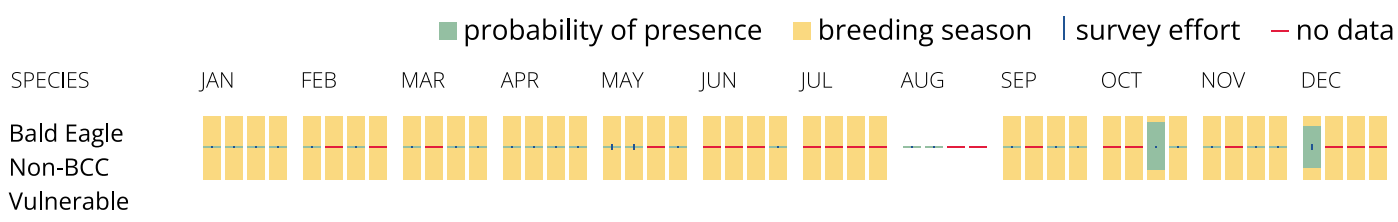
**Breeding Season** (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.




**What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?**

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

**What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?**

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

**What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.



# Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management

- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

**The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.



| NAME | BREEDING SEASON |
|---|---|
| American Kestrel *Falco sparverius paulus*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br>https://ecos.fws.gov/ecp/species/9587 | Breeds Apr 1 to Aug 31 |
| Bald Eagle *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1626 | Breeds Sep 1 to Jul 31 |
| Black Skimmer *Rynchops niger*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/5234 | Breeds May 20 to Sep 15 |

| | |
|---|---|
| **Great Blue Heron** *Ardea herodias occidentalis*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds Jan 1 to Dec 31 |
| **Gull-billed Tern** *Gelochelidon nilotica*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9501 | Breeds May 1 to Jul 31 |
| **Lesser Yellowlegs** *Tringa flavipes*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9679 | Breeds elsewhere |
| **Magnificent Frigatebird** *Fregata magnificens*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds Oct 1 to Apr 30 |
| **Prairie Warbler** *Dendroica discolor*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Jul 31 |
| **Red-headed Woodpecker** *Melanerpes erythrocephalus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Sep 10 |
| **Swallow-tailed Kite** *Elanoides forficatus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8938 | Breeds Mar 10 to Jun 30 |



# Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence** (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

**Breeding Season** (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.




**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

**What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

**Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

**What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

**Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.



# Facilities

## Wildlife refuges and fish hatcheries

## Refuge and fish hatchery information is not available at this time

# Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

PEM1Cx

FRESHWATER POND

PAB4Hx

PUBHx

LAKE

L1UBHx

A full description for each wetland code can be found at the National Wetlands Inventory website

**NOTE:** This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.



**Data limitations**

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

**Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

**Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

# ATTACHMENT 2

# WOOD STORK KEY SOUTH FLORIDA

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

May 18, 2010

Donnie Kinard
Chief, Regulatory Division
Jacksonville District Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32232-0019

Service Federal Activity Code: 41420-2007-FA-1494
Service Consultation Code: 41420-2007-I-0964
Subject: South Florida Programmatic Concurrence
Species: Wood Stork

Dear Mr. Kinard:

This letter addresses minor errors identified in our January 25, 2010, wood stork key and as such, supplants the previous key. The key criteria and wood stork biomass foraging assessment methodology have not been affected by these minor revisions.

The Fish and Wildlife Service's (Service) South Florida Ecological Services Office (SFESO) and the U.S. Army Corps of Engineers Jacksonville District (Corps) have been working together to streamline the consultation process for federally listed species associated with the Corps' wetland permitting program. The Service provided letters to the Corps dated March 23, 2007, and October 18, 2007, in response to a request for a multi-county programmatic concurrence with a criteria-based determination of "may affect, not likely to adversely affect" (NLAA) for the threatened eastern indigo snake (*Drymarchon corais couperi*) and the endangered wood stork (*Mycteria americana*) for projects involving freshwater wetland impacts within specified Florida counties. In our letters, we provided effect determination keys for these two federally listed species, with specific criteria for the Service to concur with a determination of NLAA.

The Service has revisited these keys recently and believes new information provides cause to revise these keys. Specifically, the new information relates to foraging efficiencies and prey base assessments for the wood stork and permitting requirements for the eastern indigo snake. This letter addresses the wood stork key and is submitted in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*). The eastern indigo snake key will be provided in a separate letter.

Wood stork

Habitat

The wood stork is primarily associated with freshwater and estuarine habitats that are used for nesting, roosting, and foraging. Wood storks typically construct their nests in medium to tall

trees that occur in stands located either in swamps or on islands surrounded by relatively broad expanses of open water (Ogden 1991, 1996; Rodgers et al. 1996). Successful colonies are those that have limited human disturbance and low exposure to land-based predators. Nesting colonies protected from land-based predators are characterized as those surrounded by large expanses of open water or where the nest trees are inundated at the onset of nesting and remain inundated throughout most of the breeding cycle. These colonies have water depths between 0.9 and 1.5 meters (3 and 5 feet) during the breeding season.

Successful nesting generally involves combinations of average or above-average rainfall during the summer rainy season and an absence of unusually rainy or cold weather during the winter-spring breeding season (Kahl 1964; Rodgers et al. 1987). This pattern produces widespread and prolonged flooding of summer marshes, which maximize production of freshwater fishes, followed by steady drying that concentrate fish during the season when storks nest (Kahl 1964). Successful nesting colonies are those that have a large number of foraging sites. To maintain a wide range of foraging sites, a variety of wetland types should be present, with both short and long hydroperiods. The Service (1999) describes a short hydroperiod as a 1 to 5-month wet/dry cycle, and a long hydroperiod as greater than 5 months. During the wet season, wood storks generally feed in the shallow water of the short-hydroperiod wetlands and in coastal habitats during low tide. During the dry season, foraging shifts to longer hydroperiod interior wetlands as they progressively dry-down (though usually retaining some surface water throughout the dry season).

Wood storks occur in a wide variety of wetland habitats. Typical foraging sites for the wood stork include freshwater marshes and stock ponds, shallow, seasonally flooded roadside and agricultural ditches, narrow tidal creeks and shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs. Because of their specialized feeding behavior, wood storks forage most effectively in shallow-water areas with highly concentrated prey. Through tactolocation, or grope feeding, wood storks in south Florida feed almost exclusively on fish between 2 and 25 centimeters [cm] (1 and 10 inches) in length (Ogden et al. 1976). Good foraging conditions are characterized by water that is relatively calm, uncluttered by dense thickets of aquatic vegetation, and having a water depth between 5 and 38 cm (5 and 15 inches) deep, although wood storks may forage in other wetlands. Ideally, preferred foraging wetlands would include a mosaic of emergent and shallow open-water areas. The emergent component provides nursery habitat for small fish, frogs, and other aquatic prey and the shallow, open-water areas provide sites for concentration of the prey during seasonal dry-down of the wetland.

Conservation Measures

The Service routinely concurs with the Corps' "may affect, not likely to adversely affect" determination for individual project effects to the wood stork when project effects are insignificant due to scope or location, or if assurances are given that wetland impacts have been avoided, minimized, and adequately compensated such that there is no net loss in foraging potential. We utilize our *Habitat Management Guidelines for the Wood Stork in the Southeast Region* (Service 1990) (Enclosure 1) (HMG) in project evaluation. The HMG is currently under review and once final will replace the enclosed HMG. There is no designated critical habitat for the wood stork.

The SFESO recognizes a 29.9 kilometer [km] (18.6-mile) core foraging area (CFA) around all known wood stork colonies in south Florida. Enclosure 2 (to be updated as necessary) provides locations of colonies and their CFAs in south Florida that have been documented as active within the last 10 years. The Service believes loss of suitable wetlands within these CFAs may reduce foraging opportunities for the wood stork. To minimize adverse effects to the wood stork, we recommend compensation be provided for impacts to foraging habitat. The compensation should consider wetland type, location, function, and value (hydrology, vegetation, prey utilization) to ensure that wetland functions lost due to the project are adequately offset. Wetlands offered as compensation should be of the same hydroperiod and located within the CFAs of the affected wood stork colonies. The Service may accept, under special circumstances, wetland compensation located outside the CFAs of the affected wood stork nesting colonies. On occasion, wetland credits purchased from a "Service Approved" mitigation bank located outside the CFAs could be acceptable to the Service, depending on location of impacted wetlands relative to the permitted service area of the bank, and whether or not the bank has wetlands having the same hydroperiod as the impacted wetland.

In an effort to reduce correspondence in effect determinations and responses, the Service is providing the Wood Stork Effect Determination Key below. If the use of this key results in a Corps determination of "no effect" for a particular project, the Service supports this determination. If the use of this Key results in a determination of NLAA, the Service concurs with this determination[1]. This Key is subject to revisitation as the Corps and Service deem necessary.

The Key is as follows:

A. Project within 0.76 km (0.47 mile)[2] of an active colony site[3] ..... "*may affect*[4]"

Project impacts Suitable Foraging Habitat (SFH)[5] at a location greater than 0.76 km (0.47 mile) from a colony site..... ..... "*go to* B"

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[1] With an outcome of "no effect" or "NLAA" as outlined in this key, and the project has less than 20.2 hectares (50 acres) of wetland impacts, the requirements of section 7 of the Act are fulfilled for the wood stork and no further action is required. For projects with greater than 20.2 hectares (50 acres) of wetland impacts, written concurrence of NLAA from the Service is necessary.

[2] Within the secondary zone (the average distance from the border of a colony to the limits of the secondary zone is 0.76 km (2,500 feet, or 0.47 mi).

[3] An active colony is defined as a colony that is currently being used for nesting by wood storks or has historically over the last 10 years been used for nesting by wood storks.

[4] Consultation may be concluded informally or formally depending on project impacts.

[5] Suitable foraging habitat (SFH) includes wetlands that typically have shallow-open water areas that are relatively calm and have a permanent or seasonal water depth between 5 to 38 cm (2 to 15 inches) deep. Other shallow non-wetland water bodies are also SFH. SFH supports and concentrates, or is capable of supporting and concentrating small fish, frogs, and other aquatic prey. Examples of SFH include, but are not limited to freshwater marshes, small ponds, shallow, seasonally flooded roadside or agricultural ditches, seasonally flooded pastures, narrow tidal creeks or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs.

Project does not affect SFH……..…..*"no effect[1]"*.

B. Project impact to SFH is less than 0.20 hectare (one-half acre)[6]……..……*NLAA[1]"*

Project impact to SFH is greater in scope than 0.20 hectare (one-half acre)....……*go to* C

C. Project impacts to SFH not within the CFA (29.9 km, 18.6 miles) of a colony site ……..…….…….…..……*go to* D

Project impacts to SFH within the CFA of a colony site …….…..…...…….*go to* E

D. Project impacts to SFH have been avoided and minimized to the extent practicable; compensation (Service approved mitigation bank or as provided in accordance with Mitigation Rule 33 CFR Part 332) for unavoidable impacts is proposed in accordance with the CWA section 404(b)(1) guidelines; and habitat compensation replaces the foraging value matching the hydroperiod[7] of the wetlands affected and provides foraging value similar to, or higher than, that of impacted wetlands. See Enclosure 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance[8]…….. *NLAA[1]"*

Project not as above.……... *"may affect[4]"*

E. Project provides SFH compensation in accordance with the CWA section 404(b)(1) guidelines and is not contrary to the HMG; habitat compensation is within the appropriate CFA or within the service area of a Service-approved mitigation bank; and habitat compensation replaces foraging value, consisting of wetland enhancement or restoration matching the hydroperiod[7] of the wetlands affected, and provides foraging value similar

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[6] On an individual basis, SFH impacts to wetlands less than 0.20 hectare (one-half acre) generally will not have a measurable effect on wood storks, although we request that the Corps require mitigation for these losses when appropriate. Wood storks are a wide ranging species, and individually, habitat change from impacts to SFH less than one-half acre are not likely to adversely affect wood storks. However, collectively they may have an effect and therefore regular monitoring and reporting of these effects are important.

[7] Several researchers (Flemming et al. 1994; Ceilley and Bortone 2000) believe that the short hydroperiod wetlands provide a more important pre-nesting foraging food source and a greater early nestling survivor value for wood storks than the foraging base (grams of fish per square meter) than long hydroperiod wetlands provide. Although the short hydroperiod wetlands may provide less fish, these prey bases historically were more extensive and met the foraging needs of the pre-nesting storks and the early-age nestlings. Nest productivity may suffer as a result of the loss of short hydroperiod wetlands. We believe that most wetland fill and excavation impacts permitted in south Florida are in short hydroperiod wetlands. Therefore, we believe that it is especially important that impacts to these short hydroperiod wetlands within CFAs are avoided, minimized, and compensated for by enhancement/restoration of short hydroperiod wetlands.

[8] For this Key, the Service requires an analysis of foraging prey base losses and enhancements from the proposed action as shown in the examples in Enclosure 3 for projects with greater than 2.02 hectares (5 acres) of wetland impacts. For projects with less than 2.02 hectares (5 acres) of wetland impacts, an individual foraging prey base analysis is not necessary although type for type wetland compensation is still a requirement of the Key.

to, or higher than, that of impacted wetlands. See Enclosure 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance[8]..... *"NLAA[1]"*

Project does not satisfy these elements ..... *"may affect[4]"*

This Key does not apply to Comprehensive Everglades Restoration Plan projects, as they will require project-specific consultations with the Service.

Monitoring and Reporting Effects

For the Service to monitor cumulative effects, it is important for the Corps to monitor the number of permits and provide information to the Service regarding the number of permits issued where the effect determination was: "may affect, not likely to adversely affect." We request that the Corps send us an annual summary consisting of: project dates, Corps identification numbers, project acreages, project wetland acreages, and project locations in latitude and longitude in decimal degrees.

Thank you for your cooperation and effort in protecting federally listed species. If you have any questions, please contact Allen Webb at extension 246.

Sincerely yours,

Paul Souza
Field Supervisor
South Florida Ecological Services Office

Enclosures

cc: w/enclosures (electronic only)
Corps, Jacksonville, Florida (Stu Santos)
EPA, West Palm Beach, Florida (Richard Harvey)
FWC, Vero Beach, Florida (Joe Walsh)
Service, Jacksonville, Florida (Billy Brooks)

## LITERATURE CITED

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# ATTACHMENT 3

# EASTERN INDIGO SNAKE PROGRAMMATIC EFFECT DETERMINATION KEY

United States Department of the Interior
U. S. FISH AND WILDLIFE SERVICE
7915 BAYMEADOWS WAY, SUITE 200
JACKSONVILLE, FLORIDA 32256-7517

IN REPLY REFER TO:
August 13, 2013

Colonel Alan M. Dodd, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
P.O Box 4970
Jacksonville, Florida 32232-0019
(Attn: Mr. David S. Hobbie)

RE: Update Addendum to USFWS Concurrence Letter to U.S. Army Corps of Engineers Regarding Use of the Attached Eastern Indigo Snake Programmatic Effect Determination Key

Dear Colonel Dodd:

This letter is to amend the January 25, 2010, letter to the U.S. Army Corps of Engineers regarding the use of the attached eastern indigo snake programmatic effect determination key (key). It supersedes the update addendum issued January 5, 2012.

We have evaluated the original programmatic concurrence and find it suitable and appropriate to extend its use to the remainder of Florida covered by the Panama City Ecological Services Office.

**On Page 2**

The following replaces the last paragraph above the signatures:

"Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. Any questions or comments should be directed to Annie Dziergowski (North Florida ESO) at 904-731-3089, Harold Mitchell (Panama City ESO) at 850-769-0552, or Victoria Foster (South Florida ESO) at 772-469-4269."

**On Page 3**

The following replaces both paragraphs under "Scope of the key":

"This key should be used only in the review of permit applications for effects determinations for the eastern indigo snake within the State of Florida, and not for other listed species or for aquatic resources such as Essential Fish Habitat (EFH)."

**On Page 4**

The following replaces the first paragraph under Conservation Measures:

"The Service routinely concurs with the Corps' "not likely to adversely affect" (NLAA) determination for individual project effects to the eastern indigo snake when assurances are given that

our *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013) located at: http://www.fws.gov/northflorida/IndigoSnakes/indigo-snakes.htm will be used during project site preparation and project construction. There is no designated critical habitat for the eastern indigo snake."

**On Page 4 and Page 5 (Couplet D)**

The following replaces D. under Conservation Measures:

D. The project will impact less than 25 acres of xeric habitat (scrub, sandhill, or scrubby flatwoods) or less than 25 active and inactive gopher tortoise burrows.....*go to* E

The project will impact more than 25 acres of xeric habitat (scrub, sandhill, or scrubby flatwoods) or more than 25 active and inactive gopher tortoise burrows and consultation with the Service is requested[2].....*"may affect"*

**On Page 5**

The following replaces footnote #3:

"[3]If excavating potentially occupied burrows, active or inactive, individuals must first obtain state authorization via a FWC Authorized Gopher Tortoise Agent permit. The excavation method selected should also minimize the potential for injury of an indigo snake. Applicants should follow the excavation guidance provided within the most current Gopher Tortoise Permitting Guidelines found at http://myfwc.com/gophertortoise ."

Thank you for making these amendments concerning the Eastern Indigo Snake Key. If you have any questions, please contact Jodie Smithem of my staff at the address on the letterhead, by email at jodie_smithem@fws.gov, or by calling (904)731-3134.

Sincerely,

Dawn Jennings
Acting Field Supervisor

cc:
Panama City Ecological Services Field Office, Panama City, FL
South Florida Ecological Services Field Office, Vero Beach, FL

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

January 25, 2010

David S. Hobbie
Chief, Regulatory Division
U.S. Army Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32232-0019

Service Federal Activity Code: 41420-2009-FA-0642
Service Consultation Code: 41420-2009-I-0467
41910-2010-I-0045
Subject: North and South Florida Ecological Services Field Offices Programmatic Concurrence for Use of Original Eastern Indigo Snake Key(s) Until Further Notice

Dear Mr. Hobbie:

The U.S. Fish and Wildlife Service's (Service) South and North Florida Ecological Services Field Offices (FO), through consultation with the U.S. Army Corps of Engineers Jacksonville District (Corps), propose revision to both Programmatic concurrence letters/keys for the federally threatened Eastern Indigo Snake (*Drymarchon corais couperi*), (indigo snake), and now provide one key for both FO's. The original programmatic key was issued by the South Florida FO on November 9, 2007. The North Florida FO issued a revised version of the original key on September 18, 2008. Both keys were similar in content, but reflected differences in geographic work areas between the two Field Offices. The enclosed key satisfies each office's responsibilities under the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C.1531 *et seq.*).

Footnote number 3 in the original keys indicated "A member of the excavation team should be authorized for Incidental Take during excavation through either a section 10(a)(1)(A) permit issued by the Service or an incidental take permit issued by the Florida Fish and Wildlife Conservation Commission (FWC)." We have removed this reference to a Service issued Section 10(a)(1)(A) permit, as one is not necessary for this activity. We also referenced the FWC's revised April 2009 Gopher Tortoise Permitting Guidelines with a link to their website for updated excavation guidance, and have provided a website link to our Standard Protection Measures. All other conditions and criteria apply.

We believe the implementation of the attached key achieves our mutual goal for all users to make consistent effect determinations regarding this species. The use of this key for review of projects

located in all referenced counties in our respective geographic work areas leads the Service to concur with the Corps' determination of "may affect, not likely to adversely affect" (MANLAA) for the Eastern indigo snake. The biological rationale for the determinations is contained within the referenced documents and is submitted in accordance with section 7 of the Act.

Should circumstances change or new information become available regarding the eastern indigo snake or implementation of the key, the determinations may be reconsidered as deemed necessary.

Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. Any questions or comments should be directed to either Allen Webb (Vero Beach) at 772-562-3909, extension 246, or Jay Herrington (Jacksonville) at 904-731-3326.

Sincerely,

Paul Souza
Field Supervisor
South Florida Ecological Services Office

David L. Hankla
Field Supervisor
North Florida Ecological Services Office

Enclosure

cc: electronic only
FWC, Tallahassee, Florida (Dr. Elsa Haubold)
Service, Jacksonville, Florida (Jay Herrington)
Service, Vero Beach, Florida (Sandra Sneckenberger)

**Eastern Indigo Snake Programmatic Effect Determination Key**

## Scope of the key

This key should be used only in the review of permit applications for effects determinations within the North and South Florida Ecological Services Field Offices Geographic Areas of Responsibility (GAR), and not for other listed species or for aquatic resources such as Essential Fish Habitat (EFH). Counties within the **North** Florida GAR include Alachua, Baker, Bradford, Brevard, Citrus, Clay, Columbia, Dixie, Duval, Flagler, Gilchrist, Hamilton, Hernando, Hillsborough, Lafayette, Lake, Levy, Madison, Manatee, Marion, Nassau, Orange, Pasco, Pinellas, Putnam, St. Johns, Seminole, Sumter, Suwannee, Taylor, Union, and Volusia.

Counties in the **South** Florida GAR include Broward, Charlotte, Collier, De Soto, Glades, Hardee, Hendry, Highlands, Lee, Indian River, Martin, Miami-Dade, Monroe, Okeechobee, Osceola, Palm Beach, Polk, Sarasota, St. Lucie.

## Habitat

Over most of its range, the eastern indigo snake frequents several habitat types, including pine flatwoods, scrubby flatwoods, high pine, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, and human-altered habitats (Service 1999). Eastern indigo snakes appear to need a mosaic of habitats to complete their life cycle. Wherever the eastern indigo snake occurs in xeric habitats, it is closely associated with the gopher tortoise *(Gopherus polyphemus),* the burrows of which provide shelter from winter cold and summer desiccation (Speake et al. 1978; Layne and Steiner 1996). Interspersion of tortoise-inhabited uplands and wetlands improves habitat quality for this species (Landers and Speake 1980; Auffenberg and Franz 1982).

In south Florida, agricultural sites, such as sugar cane fields, created in former wetland areas are occupied by eastern indigo snakes (Enge pers. comm. 2007). Formerly, indigo snakes would have only occupied higher elevation sites within the wetlands. The introduction of agriculture and its associated canal systems has resulted in an increase in rodents and other species of snakes that are prey for eastern indigo snakes. The result is that indigos occur at higher densities in these areas than they did historically.

Even though thermal stress may not be a limiting factor throughout the year in south Florida, indigo snakes still seek and use underground refugia. On the sandy central ridge of central Florida, eastern indigos use gopher tortoise burrows more (62 percent) than other underground refugia (Layne and Steiner 1996). Other underground refugia used include armadillo (*Dasypus novemcinctus*) burrows near citrus groves, cotton rat (*Sigmodon hispidus*) burrows, and land crab (*Cardisoma guanhumi*) burrows in coastal areas (Service 2006). Natural ground holes, hollows at the base of trees or shrubs, ground litter, trash piles, and crevices of rock-lined ditch walls are also used (Layne and Steiner 1996). These refugia are used most frequently where tortoise burrows are not available, principally in low-lying areas off the central and coastal ridges. In extreme south Florida (the Everglades and Florida Keys), indigo snakes are found in tropical

hardwood hammocks, pine rocklands, freshwater marshes, abandoned agricultural land, coastal prairie, mangrove swamps, and human-altered habitats (Steiner et al. 1983). It is suspected that they prefer hammocks and pine forests, because most observations occur in these habitats disproportionately to their presence in the landscape (Steiner et al. 1983). Hammocks may be important breeding areas as juveniles are typically found there. The eastern indigo snake is a snake-eater so the presence of other snake species may be a good indicator of habitat quality.

**Conservation Measures**

The Service routinely concurs with the Corps' "not likely to adversely affect" (NLAA) determination for individual project effects to the eastern indigo snake when assurances are given that our *Standard Protection Measures for the Eastern Indigo Snake* (Service 2004) located at: http://www.fws.gov/northflorida/IndigoSnakes/indigo-snakes will be used during project site preparation and project construction. There is no designated critical habitat for the eastern indigo snake.

In an effort to reduce correspondence in effect determinations and responses, the Service is providing an Eastern Indigo Snake Effect Determination Key, similar in utility to the West Indian Manatee Effect Determination Key and the Wood Stork Effect Determination Keys presently being utilized by the Corps. If the use of this key results in a Corps' determination of "no effect" for a particular project, the Service supports this determination. If the use of this Key results in a determination of NLAA, the Service concurs with this determination and no additional correspondence will be necessary[1]. This key is subject to revisitation as the Corps and Service deem necessary.

A. Project is not located in open water or salt marsh.....*go to* B

   Project is located solely in open water or salt marsh.....*"no effect"*

B. Permit will be conditioned for use of the Service's *Standard Protection Measures For The Eastern Indigo Snake* during site preparation and project construction.....*go to* C

   Permit will not be conditioned as above for the eastern indigo snake, or it is not known whether an applicant intends to use these measures and consultation with the Service is requested[2] .....*"may affect"*

C. There are gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities .....*go to* D

   There are no gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities .....*"NLAA"*

D. The project will impact less than 25 acres of xeric habitat supporting less than 25 active and inactive gopher tortoise burrows.....*go to* E

The project will impact more than 25 acres of xeric habitat or more than 25 active and inactive gopher tortoise burrows and consultation with the Service is requested[2]..... *"may affect"*

E. Any permit will be conditioned such that all gopher tortoise burrows, active or inactive, will be evacuated prior to site manipulation in the vicinity of the burrow[3]. If an indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of a particular area, and, if occupied by an indigo snake, no work will commence until the snake has vacated the vicinity of proposed work..... *"NLAA"*

Permit will not be conditioned as outlined above and consultation with the Service is requested[2] ..... *"may affect"*

---

[1]With an outcome of "no effect" or "NLAA" as outlined in this key, the requirements of section 7 of the Act are fulfilled for the eastern indigo snake and no further action is required.

[2]Consultation may be concluded informally or formally depending on project impacts.

[3] If burrow excavation is utilized, it should be performed by experienced personnel. The method used should minimize the potential for injury of an indigo snake. Applicants should follow the excavation guidance provided within the Florida Fish and Wildlife Conservation Commission's revised April 2009 Gopher Tortoise Permitting Guidelines located at **http://myfwc.com/License/Permits_ProtectedWildlife.htm#gophertortoise**. A member of the excavation team should be authorized for Incidental Take during excavation through an incidental take permit issued by the Florida Fish and Wildlife Conservation Commission.

# ATTACHMENT 4

# FNAI BIODIVERSITY MATRIX REPORT

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
850-681-9364 fax
www.fnai.org

# Florida Natural Areas Inventory

## Biodiversity Matrix Query Results

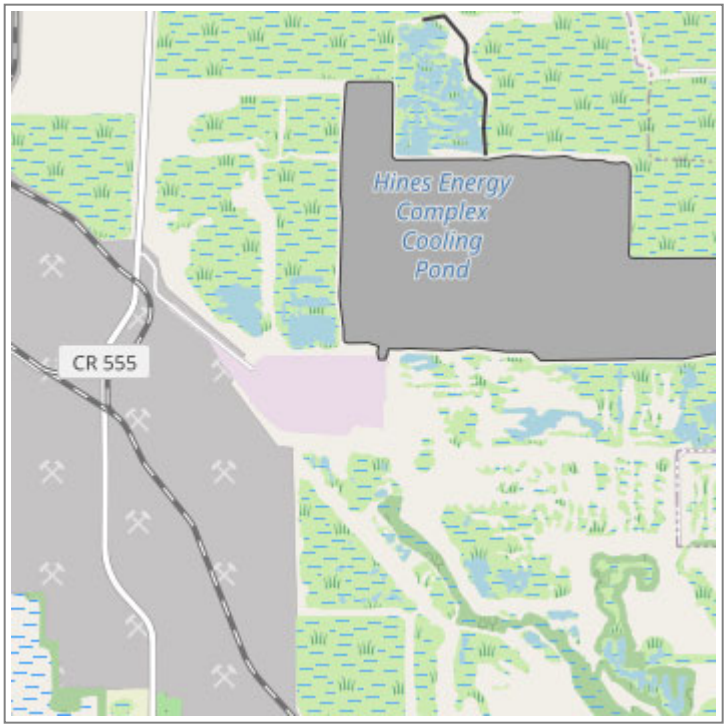
**UNOFFICIAL REPORT**

Created 2/19/2024

(Contact the FNAI Data Services Coordinator at 850.224.8207 or kbrinegar@fnai.fsu.edu for information on an official Standard Data Report)

NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

**Report for 2 Matrix Units: 36338 , 36678**




**Descriptions**

**DOCUMENTED** - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit.

**DOCUMENTED-HISTORIC** - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however the occurrence has not been observed/reported within the last twenty years.

**LIKELY** - The species or community is *known* to occur in this vicinity, and is considered likely within this Matrix Unit because:

1. documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; *or*
2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit.

**POTENTIAL** - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.

**Matrix Unit ID: 36338**

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

1 **Likely** Element Found

| Scientific and Common Names | Global Rank | State Rank | Federal Status | State Listing |
|---|---|---|---|---|
| *Mycteria americana*<br>Wood Stork | G4 | S2 | T | FT |

**Matrix Unit ID: 36678**

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

0 **Likely** Elements Found

**Matrix Unit IDs: 36338 , 36678**

17 **Potential** Elements Common to Any of the 2 Matrix Units

| Scientific and Common Names | Global Rank | State Rank | Federal Status | State Listing |
|---|---|---|---|---|
| *Antigone canadensis pratensis*<br>Florida Sandhill Crane | G5T2 | S2 | N | ST |
| *Calopogon multiflorus*<br>many-flowered grass-pink | G2G3 | S2S3 | N | T |
| *Centrosema arenicola*<br>sand butterfly pea | G2Q | S2 | N | E |
| *Drymarchon couperi*<br>Eastern Indigo Snake | G3 | S2? | T | FT |
| *Eriogonum longifolium var. gnaphalifolium*<br>scrub buckwheat | G4T3 | S3 | T | E |
| *Gopherus polyphemus*<br>Gopher Tortoise | G3 | S3 | C | ST |
| *Gymnopogon chapmanianus*<br>Chapman's skeletongrass | G3 | S3 | N | N |
| *Lechea cernua*<br>nodding pinweed | G3 | S3 | N | T |
| *Lithobates capito*<br>Gopher Frog | G2G3 | S3 | N | N |
| *Mustela frenata peninsulae*<br>Florida Long-tailed Weasel | G5T3? | S3? | N | N |
| *Nemastylis floridana*<br>celestial lily | G2 | S2 | N | E |
| *Neofiber alleni*<br>Round-tailed Muskrat | G2 | S2 | N | N |
| *Peucaea aestivalis*<br>Bachman's Sparrow | G3 | S3 | N | N |
| *Pteroglossaspis ecristata*<br>giant orchid | G2G3 | S2 | N | T |
| *Rostrhamus sociabilis*<br>Snail Kite | G4G5 | S2 | E | FE |
| *Ursus americanus floridanus*<br>Florida Black Bear | G5T4 | S4 | N | N |
| *Warea carteri*<br>Carter's warea | G1 | S1 | E | E |