

**O'Leno State Park
Boardwalk Repairs**

Environmental Survey Report
Alachua and Columbia Counties, Florida



November 2024

Prepared by:



**Florida Environmental
and Land Services Inc.**

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**O'Leno State Park
Boardwalk Repairs
Environmental Survey Report
Alachua and Columbia Counties, Florida**

1.0 Introduction

Florida Environmental and Land Services, Inc. (FELSI) performed an environmental survey for a proposed project within O'Leno State Park in Alachua County and Columbia County, Florida. The proposed project involves repairs to six existing boardwalks located along the park's River Trail. The western section of the trail is within Columbia County tax parcel number 02-7S-17-09867-000; the eastern section is within Alachua County tax parcel number 00006-000-000. A location and vicinity map are included in Figure 1.

The study area included in this assessment comprises approximately 0.29 acres combined, associated with the six boardwalks. The environmental survey included a combination of database reviews and site-specific surveys, performed by qualified biologists from FELSI on October 3, 2024. Wetlands within the immediate vicinity (approximately 25') of each of the six boardwalks were delineated according to Rule 62-340, Florida Administrative Code (F.A.C.) and the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual methodology. Photos taken during the survey are included in Attachment A. An aerial map depicting each of the boardwalk locations is provided in Figure 2.

2.0 Soil Characteristics

The soil series and descriptions, as described by the USDA Natural Resources Conservation Service (NRCS), found within the study area are listed below in Table 1. *Oleno clay, occasionally flooded* (Map Unit Symbol 42) is the predominant soil type within the study area. This soil type is described as hydric and poorly drained, with depth to water table about 6 to 18 inches. Soils within the study area are depicted in Figures 2A through 2F.

Table 1. Soil Information for the Study Area

Symbol	Soil Type	Description	Hydric
Columbia County, Florida (FL023) NRCS Soils			
17	<i>Chiefland-Pedro variant complex, 0 to 5 percent slopes</i>	Well drained with depth to water table more than 80 inches. Landform: rises on karstic marine terraces.	No
29	<i>Lakeland fine sand, 0 to 5 percent slopes</i>	Excessively drained with depth to water table more than 8- inches.	No
Alachua County, Florida (FL001) NRCS Soils			
21	<i>Newnan sand</i>	Somewhat poorly drained with depth to water table about 18 to 60 inches.	No
42	<i>Pedro-Jonesville complex, 0 to 5 percent slopes</i>	Well drained with depth to water table more than 80 inches.	No
61	<i>Oleno clay, occasionally flooded</i>	Poorly drained with depth to water table about 6 to 18 inches.	Yes
99	<i>Water</i>	100% water.	Unranked

3.0 Vegetative Communities

The existing boardwalks are located along the River Trail, just south of the Santa Fe River. Vegetative communities within the study area were evaluated during the environmental survey performed on October 3, 2024. These habitats are described below as defined by the *Florida Land Use, Cover and Forms Classification System* (Florida Department of Transportation, 1999, FLUCCS).

3.1 Upland Habitat

3.1.1 Temperate Hardwoods – FLUCCS 425

The upland forested sections of the study area occur on slopes above the wetland communities and can be classified by FLUCCS as Temperate Hardwoods. The corresponding Florida Natural Areas Inventory (FNAI) community is Mesic Hammock. This community has a closed canopy dominated by laurel oak (*Quercus laurifolia*), water oak (*Q. nigra*), southern magnolia (*Magnolia virginiana*), pignut hickory (*Carya glabra*), and scattered live oak (*Q. virginiana*). Common understory species may include saw palmetto (*Serenoa repens*), coastalplain staggerbush (*Lyonia fruticosa*), sparkleberry (*Vaccinium arboreum*), deerberry (*V. stamineum*), highbush blueberry (*V. corymbosum*), red bay (*Persea borbonia*), American holly (*Ilex opaca*), and horse sugar (*Symplocos tinctoria*). Groundcover is sparse, with bracken fern (*Pteridium aquilinum*) and occasional low panic grasses (*Panicum* spp.). This community applies to the uplands adjacent to the boardwalks.

3.2 Wetlands and Other Surface Waters

Individual aerial maps depicting the delineated wetland line for each of the boardwalks are provided in Figures 2A through 2F. Please note, the wetland delineation has not been verified by state or federal agencies as of the date of this report. It is anticipated that environmental permit authorization for the proposed project will be needed through the Suwannee River Water Management District and the U.S. Army Corps of Engineers.

3.2.1 Stream and Lake Swamps (Bottomland) – FLUCCS 615

The forested wetlands within the study area can be classified as Stream and Lake Swamps. This community is often found on river floodplain or overflow areas. The corresponding Florida Natural Areas Inventory communities include Bottomland and Alluvial Forest. Common observed species include bald cypress (*Taxodium distichum*), swamp tupelo (*Nyssa biflora*), laurel oak, spruce pine (*Pinus glabra*), parsley hawthorn (*Crataegus marshallii*), dwarf palmetto (*Sabal minor*), American hornbeam (*Carpinus caroliniana*), and highbush blueberry. The evaluated boardwalks cross this wetland community.

4.0 Floodplain

According to FEMA's National Flood Hazard Layer (NFHL) database, the entire study area is mapped within 100-year Floodway Zone AE (FEMA FIRM Panel 12001C0015D effective 6/16/2006). The Base Flood Elevation for this area is reported at 53 feet. Floodplain is denoted in Figure 2.

Listed Species

FELSI performed an assessment of potential habitat utilization by listed species during the environmental survey on October 3, 2024. Prior to the site evaluation, an online records search was conducted through the United States Fish and Wildlife Service (USFWS) Information, Planning, and Conservation (IPaC) System and the FNAI Biodiversity Matrix for known and potential federal and state protected species occurrence within the study area vicinity. The O'Leno State Park and River Rise Preserve State Park Approved Unit Management Plan (State Park UMP, FDEP, October 23, 2017) was also reviewed for documented imperiled species occurrence within the park. No state or federally listed Threatened or Endangered species were observed or inferred to utilize the study area. Species-specific surveys were not performed. Potential habitat utilization by listed species is discussed below and summarized in Table 2.

5.1 Federally Listed Species

Federally listed Threatened and Endangered Species are afforded protection by the Endangered Species Act (16 U.S.C. 1531-1544, ESA). Federally listed Threatened and Endangered species are also protected by Florida's Endangered and Threatened Species Rule (Rule 68A-27.003.1, F.A.C.). IPaC indicated several ESA-listed Threatened or Endangered species as potentially affected by activities at the project location. The species are discussed below.

5.1.1 Birds

The eastern black rail (*Laterallus jamaicensis* ssp. *jamaicensis*) is a small wading bird afforded protection as an ESA-listed Threatened species. No critical habitat has been designated for this species. According to the USFWS, the species requires dense vegetative cover dominated by grasses with lower densities of shrubs. They are typically found in marsh wetland communities. The habitats around the six boardwalks are not suitable for this species. The species is not included in the Imperiled Species Inventory of the State Park UMP.

The Imperiled Species Inventory does include the wood stork (*Mycteria americana*), an ESA Threatened species, and the red-cockaded woodpecker (*Picoides borealis*), an ESA Endangered species. The red-cockaded woodpecker is indicated as extirpated within the State Park UMP, and the boardwalk project does not include any suitable habitat for the species. According to the USFWS, the study area does not overlap with a designated core foraging area for the species. The nearest nesting colony, recorded in 2019, is located approximately 20 miles southeast. The core foraging area for this colony ends approximately 7 miles southeast of the project area. No wood stork nests were observed during the environmental survey.

5.1.2 Freshwater Mussels

According to IPaC, the study area overlaps with USFWS designated critical habitat for two species of freshwater mussels: the oval pigtoe (*Pleurobema pyriforme*) and Suwannee moccasinshell (*Medionidus walkeri*). The oval pigtoe is listed Endangered; the Suwannee moccasinshell is listed Threatened. The critical habitat is shown in Figure 3. It is associated with the Santa Fe River and overlaps slightly with the wetland line delineated for Boardwalk 1. Coordination with the USFWS regarding these species may be needed during the environmental permitting phase of the project.

5.1.3 Reptiles

IPaC indicated two ESA-listed reptiles as potentially affected by activities at the project location: the eastern indigo snake (*Drymarchon couperi*) and the Suwannee alligator snapping turtle (*Macrochelys suwanniensis*). Both species are included in the Imperiled Species Inventory of the State Park UMP. According to the State Park UMP, the eastern indigo snake is associated with the sandhill and upland pine communities, which are not within the boardwalk project areas. The Suwannee alligator snapping turtle is known to occur within the adjacent river. The proposed project is not anticipated to negatively affect the species.

5.2 State Listed Species

State-only listed wildlife species are protected by Florida's Endangered and Threatened Species Rule (Rule 68A-27.003, F.A.C.). The Florida Fish and Wildlife Conservation Commission (FWC) maintains the list of animal species that have been awarded state listing and associated regulatory protections. The Florida Department of Agriculture and Consumer Services (FDACS) maintains the list of plant species that have been awarded state listing. The complete list of state regulated Endangered, Threatened and Commercially Exploited plants are found in the Regulated Plant Index, Chapter 5B-40.0055, F.A.C. Regulations regarding the harvesting of plants listed as endangered or threatened can be found in F.A.C. Rules 5B-40.003 and 5B-40.005, respectively.

No state listed species were observed or inferred to utilize the boardwalk project areas during the environmental survey. Potential occurrence of state listed species indicated by the FNAI Biodiversity Matrix and those included in the Imperiled Species Inventory of the State Park is noted in Table 2.

5.3 Potential Listed Species Occurrence

The State Park UMP confirms the utilization of the state park by numerous bird species which are federally protected by the U.S. Migratory Bird Treaty Act (16 U.S.C. 703-712, MBTA). The MBTA prohibits the take of protected migratory bird species without prior authorization through the USWFS. Birds afforded protection by the MBTA only are excluded from Table 2. It is always recommended that construction activity be timed to avoid migratory bird nesting season.

FELSI prepared a comprehensive list of protected plant and wildlife species indicated as potentially present within the immediate vicinity of the boardwalks. Table 2 includes FELSI's professional opinion of the possibility of a particular listed species using the habitat present within the study area as high, moderate, or low. The potential occurrence ranking was determined by habitat preferences, observed site conditions, and documented historical occurrence in the region. The list includes observations noted in the State Park UMP with occurrence determined by study area habitat suitability.

Table 2. Potential Occurrence of Protected Wildlife and Plant Species

Scientific Name ¹	Common Name	Protection Status ²	Potential Occurrence
Amphibians			
<i>Notophthalmus perstriatus</i>	Striped Newt	ST	Low
Birds			
<i>Egretta caerulea</i> *	Little Blue Heron	ST	Low
<i>Egretta tricolor</i> *	Tricolored Heron	ST	Low

Scientific Name ¹	Common Name	Protection Status ²	Potential Occurrence
<i>Dryobates borealis</i> *(extirpated)	Red-cockaded Woodpecker	FE	Low
<i>Grus americana</i>	Whooping Crane	EXPN	Low
<i>Mycteria americana</i> *	Wood Stork	FT	Moderate
<i>Laterallus jamaicensis</i> ssp. <i>jamaicensis</i>	Eastern Black Rail	FT	Low
<i>Platalea ajaja</i> *	Roseate Spoonbill	ST	Low
Freshwater Mussels			
<i>Pleurobema pyriforme</i>	Oval Pigtoe	FE	Low
<i>Medionidus walkeri</i>	Suwannee Moccasinshell	FT	Low
Mammals			
<i>Ursus americanus floridanus</i> *	Florida Black Bear	SP	High
Reptiles			
<i>Alligator mississippiensis</i> *	American Alligator	FT(S/A)	High
<i>Drymarchon couperi</i> *	Eastern Indigo Snake	FT	Low
<i>Gopherus polyphemus</i> *	Gopher Tortoise	ST	Low
<i>Lampropeltis extenuate</i>	Short-tailed Snake	ST	Low
<i>Macrochelys suwanniensis</i> *	Suwannee Alligator Snapping Turtle	FT	Low
<i>Pituophis melanoleucus mugitus</i> *	Florida Pine Snake	ST	Low
Plants			
<i>Agrimonia incisa</i> *	Incised Agrimony	ST	Low
<i>Asplenium verecundum</i> *	Modest Spleenwort	SE	Low
<i>Athyrium filix-femina</i> *	Southern Lady Fern	ST	Low
<i>Brickellia cordifolia</i>	Flyr's Brickell-bush	SE	Low
<i>Callirhoe papaver</i> *	Woodland Poppymallow	SE	Low
<i>Centrosema arenicola</i> *	Sand Butterfly Pea	SE	Low
<i>Corallorhiza odontorhiza</i> *	Autumn Coralroot	SE	Low
<i>Ctenium floridanum</i>	Florida Toothache Grass	SE	Low
<i>Forestiera godfreyi</i>	Godfrey's Swampprivet	SE	Low
<i>Gonolobus suberosus</i> *	Anglepod	ST	Low
<i>Hartwrightia floridana</i>	Hartwrightia	ST	Low
<i>Hexalectris spicata</i> *	Spiked Crested Coralroot	SE	Low
<i>Lilium catesbaei</i> *	Pine Lily	ST	Low
<i>Matelea floridana</i> *	Florida Spinypod	SE	Low
<i>Matelea floridana</i>	Plume Polypody	SE	Low
<i>Cleistesiosis divaricate</i> *	Rosebud Orchid	SE	Low
<i>Pteroglossaspis ecristata</i> *	Giant Orchid	ST	Low
<i>Pycnanthemum floridanum</i> *	Florida Mountain-mint	ST	Low
<i>Salix floridana</i>	Florida Willow	SE	Low
<i>Spiranthes longilabris</i> *	Longlip Ladiestresses	ST	Low
<i>Spiranthes ovalis</i> var. <i>erostellata</i> *	October Ladiestresses	SE	Low
<i>Spiranthes tuberosa</i> *	Little Ladiestresses	ST	Low
<i>Triphora trianthophoros</i> *	Threebirds Orchid	ST	Low

Protection Status Key

Federal Protections: FE: Federally Listed Endangered; FT: Federally Listed Threatened; FT(S/A): Federally Listed Threatened Due to Similarity of Appearance (16 U.S.C. 1531-1544); PFE: Proposed Endangered Federally; EXPN: Experimental Population, Non-essential; BGEPA: Federally Protected by the Bald and Golden Eagle Act (16 U.S.C. 668-668d)

State Protections: SE: State of Florida Listed Endangered; ST: State of Florida Listed Threatened; SP: State Protected by the Florida Black Bear Conservation Rule (Rule 68A-4.009, F.A.C.)

¹Species denoted with an asterisk (*) are included on the Imperiled Species Inventory of the O'Leno State Park and River Rise Preserve State Park Approved Unit Management Plan (State Park UMP, FDEP, October 23, 2017). The potential occurrence of each species was determined based on the suitability of the habitat within the evaluated study area.

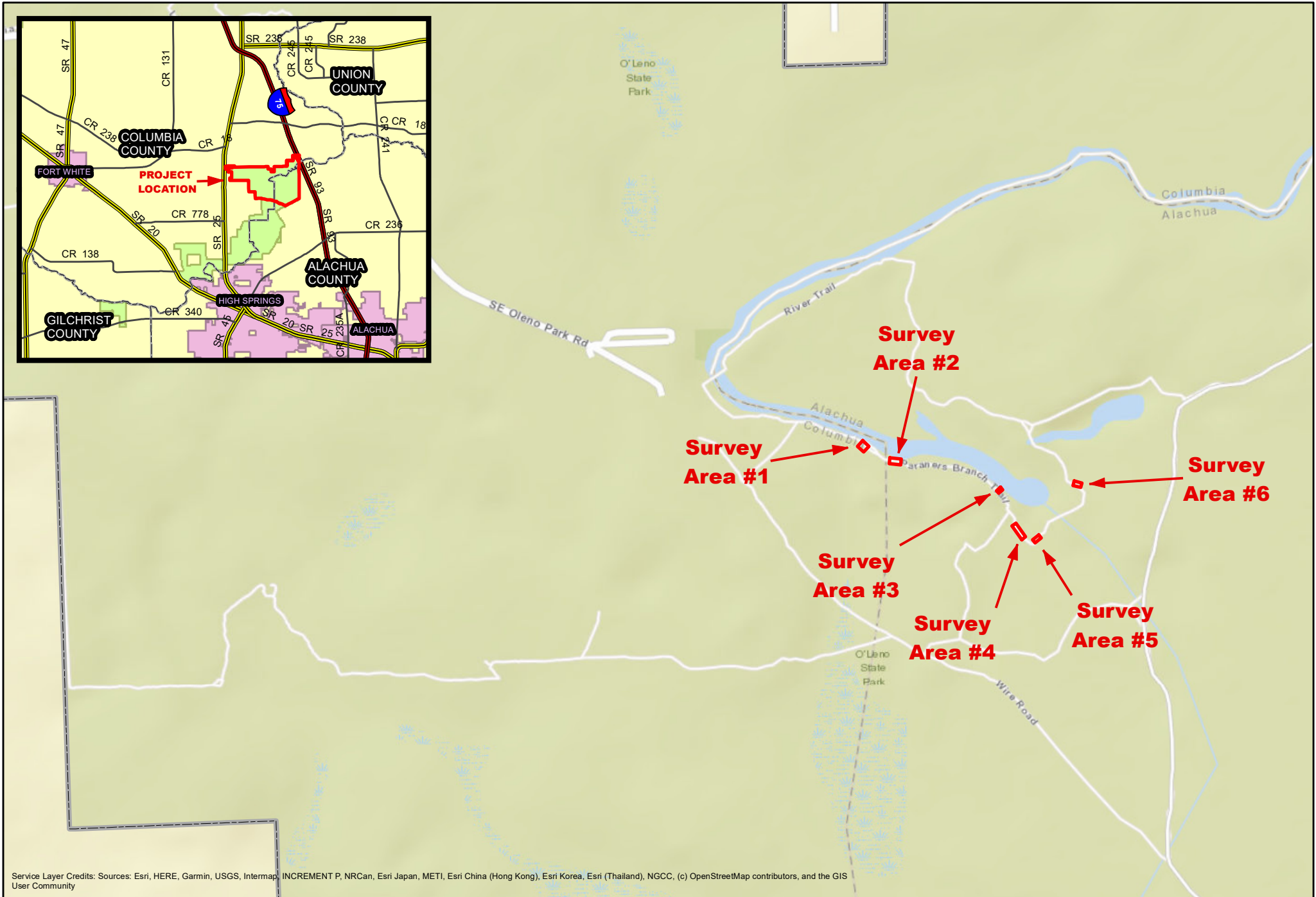
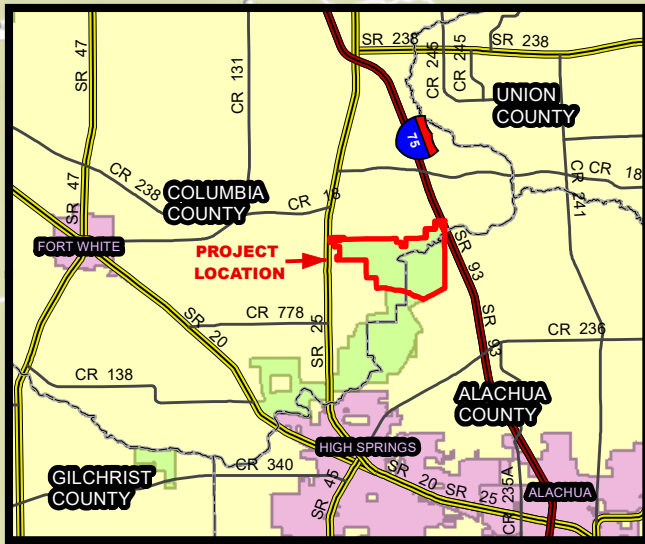
²Federally listed Threatened and Endangered species are also protected by Florida's Endangered and Threatened Species Rule (Rule 68A-27.003.1, F.A.C.). MBTA protections also apply to state and federally listed threatened and endangered birds included in this list.

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Environmental Survey Report**

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FIGURES

- Figure 1 – Location Map
- Figure 2 – Aerial Overview
 - Figure 2A – Boardwalk 1
 - Figure 2B – Boardwalk 2
 - Figure 2C – Boardwalk 3
 - Figure 2D – Boardwalk 4
 - Figure 2E – Boardwalk 5
 - Figure 2F – Boardwalk 6
- Figure 3 – USFWS Critical Habitat



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

 Florida Environmental & Land Services Inc. 221-4 DELTA COURT · TALLAHASSEE, FL 32303 (850) 385-6255	PROJECT: O'Leno State Park Boardwalk Project Alachua/Columbia County, Florida		TITLE: Figure 1- Location Map		 0 300 600 1,200 1,800 Feet PIN #00006-000-000 (Alachua), 02-7S-17-09867-000 (Columbia)
	DATE:	BY:	CHECK:	FELSI PROJECT #	
	11/7/2024	NC	EP	24-2559	



Soils		
Symbol	Description	Hydric Rating
8	Millhopper Sand, 0-5% Slopes	No
17	Chiefland-Pedo Variant Complex, 0-5% Slopes	No
21	Newnan Sand	No
29	Lakeland Fine Sand, 0-5% Slopes	No
42	Pedro-Jonesville Complex, 0-5% Slopes	No
55	Lake Sand, 0-5% Slopes	No
61	Oleno Clay, Occasionally Flooded	Yes
99	Water	Unranked



FLUCCS (Florida Land Use, Cover and Forms Classification System)	
Code	Description
425	Temperate Hardwoods
615	Stream and Lake Swamps

Soils		
Symbol	Description	Hydric Rating
8	Millhopper Sand, 0-5% Slopes	No
17	Chiefland-Pedo Variant Complex, 0-5% Slopes	No
99	Water	Unranked



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PROJECT:

O'Leno State Park
Boardwalk Project

Alachua/Columbia County, Florida

TITLE:

Figure 2A - Boardwalk 1

DATE:

11/7/2024

BY:

NC

CHECK:

EP

PROJECT #:

24-2559

 Wetland Delineation Survey Area (0.06 Acres)

 Approximate Location of Trail

 Wetland (0.02 Acres)

 Soils (SSURGO)

 1' Contours (USGS)

 Wetland Line

 Wetland Points



0 5 10 20 30
Feet

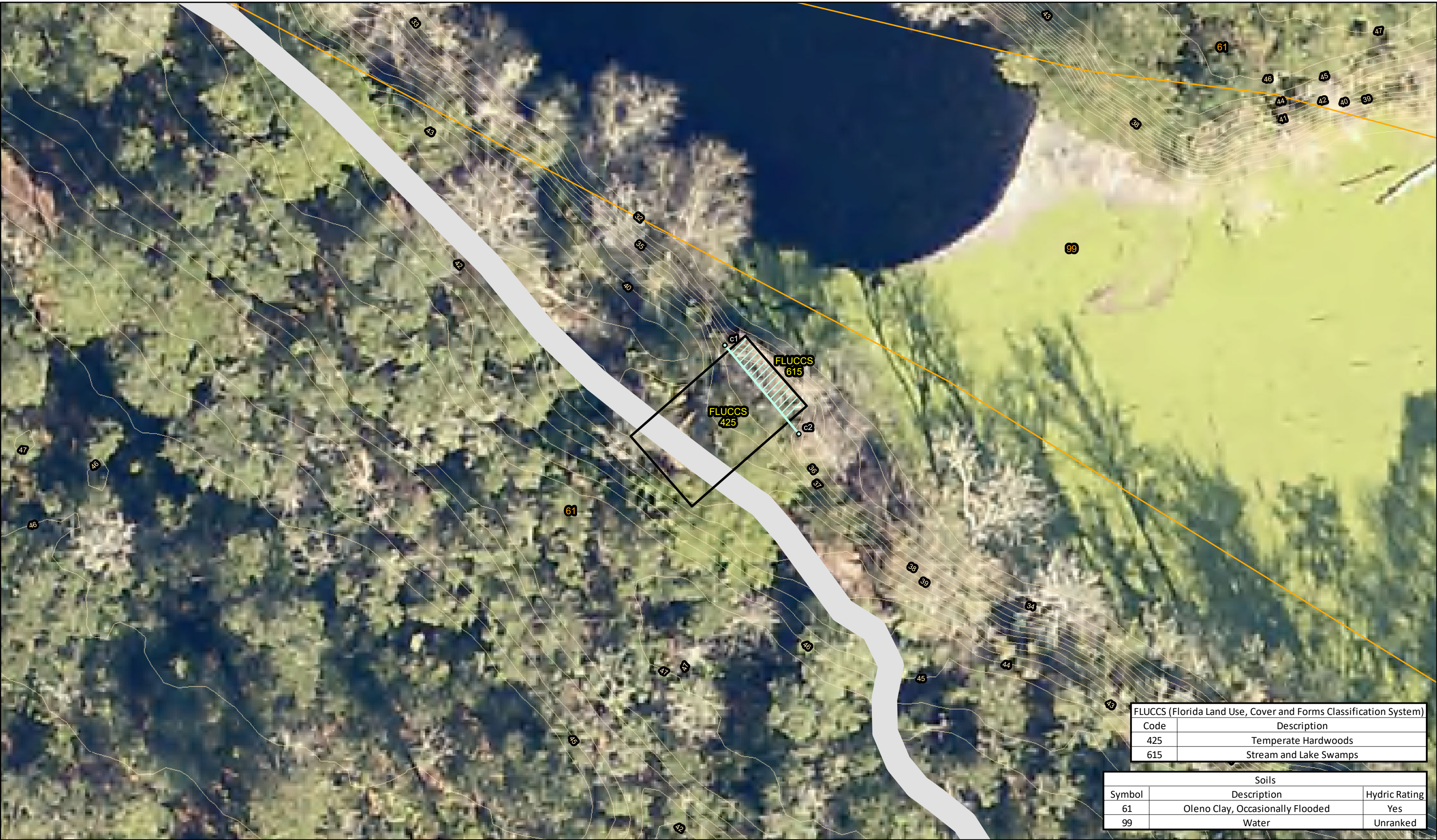
PIN #00006-000-000 (Alachua), 02-7S-17-09867-000 (Columbia)

FDOT Aerial 2023



FLUCCS (Florida Land Use, Cover and Forms Classification System)	
Code	Description
425	Temperate Hardwoods
615	Stream and Lake Swamps

Soils		
Symbol	Description	Hydric Rating
17	Chiefland-Pedo Variant Complex, 0-5% Slopes	No
42	Pedro-Jonesville Complex, 0-5% Slopes	No
99	Water	Unranked



FLUCCS (Florida Land Use, Cover and Forms Classification System)	
Code	Description
425	Temperate Hardwoods
615	Stream and Lake Swamps

Soils		
Symbol	Description	Hydric Rating
61	Oleno Clay, Occasionally Flooded	Yes
99	Water	Unranked



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PROJECT:

O'Leno State Park
Boardwalk Project

Alachua/Columbia County, Florida

TITLE:

Figure 2C - Boardwalk 3

DATE:

11/7/2024

BY:

NC

CHECK:

EP

PROJECT #:

24-2559

Wetland Delineation Survey Area (0.02 Acres)

Approximate Location of Trail

Wetland (0.01 Acres)

Soils (SSURGO)

1' Contours (USGS)

Wetland Line

Wetland Points

N



05102030

Feet

PIN #00006-000-000 (Alachua), 02-7S-17-09867-000 (Columbia)

FDOT Aerial 2023



FLUCCS (Florida Land Use, Cover and Forms Classification System)	
Code	Description
425	Temperate Hardwoods
615	Stream and Lake Swamps

Soils		
Symbol	Description	Hydric Rating
61	Oleno Clay, Occasionally Flooded	Yes



FLUCCS (Florida Land Use, Cover and Forms Classification System)	
Code	Description
425	Temperate Hardwoods
615	Stream and Lake Swamps

Soils		
Symbol	Description	Hydric Rating
61	Oleno Clay, Occasionally Flooded	Yes



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PROJECT:

O'Leno State Park
Boardwalk Project

Alachua/Columbia County, Florida

TITLE:
Figure 2E - Boardwalk 5

DATE:	BY:	CHECK:	PROJECT #:
11/7/2024	NC	EP	24-2559

Wetland Delineation Survey Area (0.03 Acres)	1' Contours (USGS)
Approximate Location of Trail	Wetland Line
Wetland (0.02 Acres)	Wetland Points
Soils (SSURGO)	



0 5 10 20 30
Feet

PIN #00006-000-000 (Alachua), 02-7S-17-09867-000 (Columbia)
FDOT Aerial 2023



FLUCCS (Florida Land Use, Cover and Forms Classification System)	
Code	Description
425	Temperate Hardwoods
615	Stream and Lake Swamps

Soils		
Symbol	Description	Hydric Rating
61	Oleno Clay, Occasionally Flooded	Yes
99	Water	Unranked



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PROJECT:

O'Leno State Park
Boardwalk Project

Alachua/Columbia County, Florida

TITLE: Figure 2F - Boardwalk 6			
DATE:	BY:	CHECK:	PROJECT #:
11/7/2024	NC	EP	24-2559

Wetland Delineation Survey Area (0.04 Acres)

Approximate Location of Trail

Wetland (0.02 Acres)

Soils (SSURGO)

1' Contours (USGS)

Wetland Line

Wetland Points

N

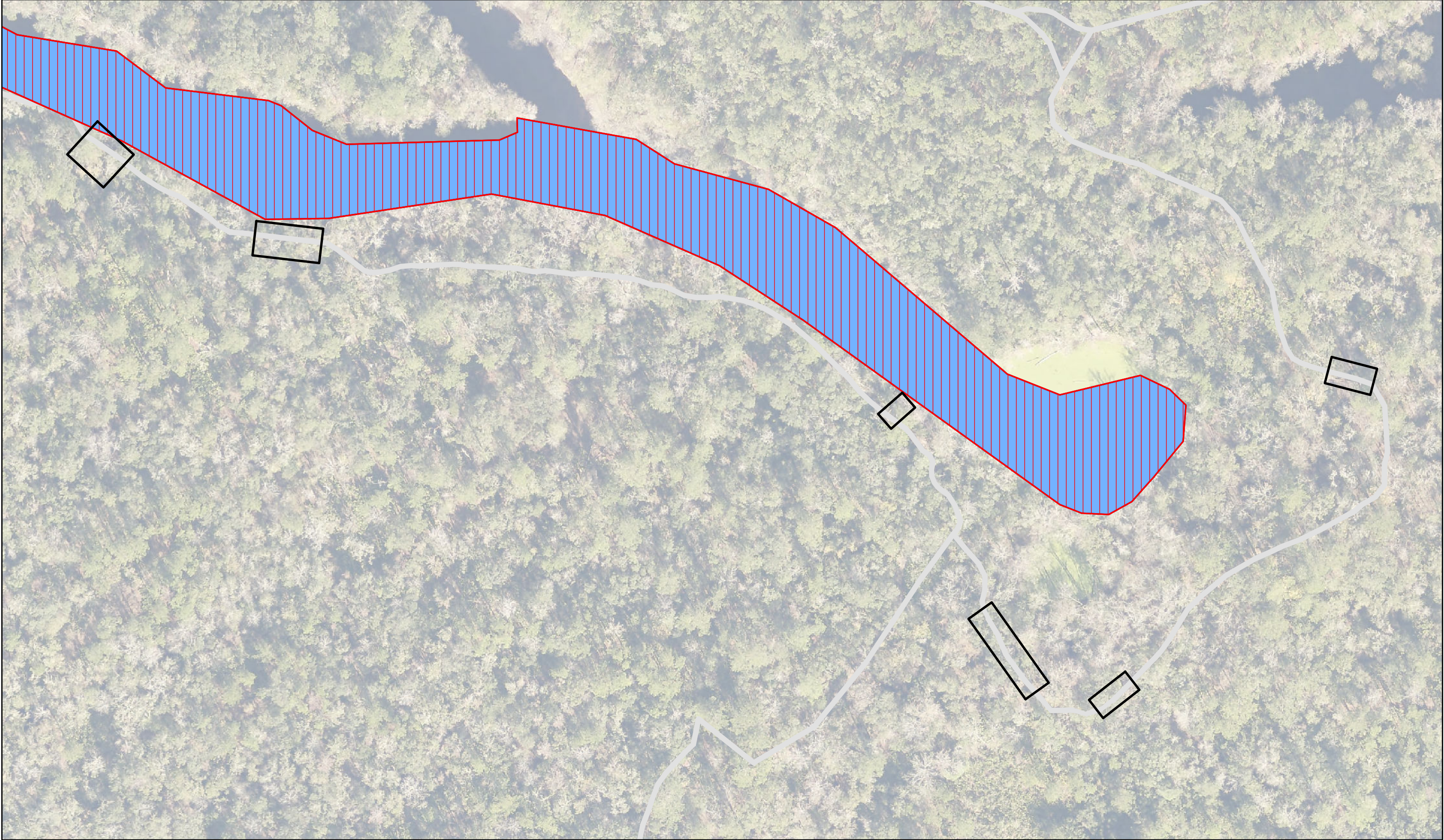


0 5 10 20 30

Feet

PIN #00006-000-000 (Alachua), 02-7S-17-09867-000 (Columbia)

FDOT Aerial 2023



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ATTACHMENT A

Environmental Survey Photo Documentation

Environmental Survey Site Visit Photos: O'Leno State Park Boardwalk Project (10/3/2024)



East side of Boardwalk 1.



Vegetation south of Boardwalk 1.



Boardwalk 1 viewed from north.



Wetlands south of Boardwalk 1.

Environmental Survey Site Visit Photos: O'Leno State Park Boardwalk Project (10/3/2024)



East side of Boardwalk 2.



West side of Boardwalk 2.



Wetlands and river north of Boardwalk 2.



Wetlands south of Boardwalk 2.

Environmental Survey Site Visit Photos: O'Leno State Park Boardwalk Project (10/3/2024)



West side of Boardwalk 3.



Boardwalk 3 observation deck.



Boardwalk 3 facing Santa Fe River observation deck.



East side of Boardwalk 4.

Environmental Survey Site Visit Photos: O'Leno State Park Boardwalk Project (10/3/2024)



West side of Boardwalk 4.



River side of Boardwalk 4 from east end.



Wetland side of Boardwalk 4 from west end.



Wetland side of Boardwalk 4 from east end.

Environmental Survey Site Visit Photos: O'Leno State Park Boardwalk Project (10/3/2024)



Boardwalk 5.



Boardwalk 5 existing structure.



Boardwalk 5 wetlands.



Boardwalk 5 river side.

Environmental Survey Site Visit Photos: O'Leno State Park Boardwalk Project (10/3/2024)



East side of Boardwalk 6.



Boardwalk 6 viewed from southwest.



Boardwalk 6 adjacent community, facing northwest.



Boardwalk 6 adjacent community, facing southwest.

Environmental Survey Site Visit Photos: O'Leno State Park Boardwalk Project (10/3/2024)



Representative photo of uplands adjacent to boardwalks.



Representative photo of uplands adjacent to boardwalks.

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ATTACHMENT B

**USFWS Information, Planning, and Conservation (IPaC)
Resource List**

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

Alachua and Columbia counties, 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

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 species¹ 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 Fisheries²).

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:

Birds

NAME	STATUS
Eastern Black Rail <i>Laterallus jamaicensis</i> ssp. <i>jamaicensis</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10477	Threatened
Whooping Crane <i>Grus americana</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/758	EXPN

Reptiles

NAME	STATUS
Eastern Indigo Snake <i>Drymarchon couperi</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/646	Threatened
Suwannee Alligator Snapping Turtle <i>Macrochelys suwanniensis</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10891	Threatened

Clams

NAME	STATUS
Oval Pigtoe <i>Pleurobema pyriforme</i> Wherever found There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/4132	Endangered
Suwannee Moccasinshell <i>Medionidus walkeri</i> Wherever found There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/533	Threatened

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

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

This location overlaps the critical habitat for the following species:

NAME	TYPE
Oval Pigtoe <i>Pleurobema pyriforme</i> https://ecos.fws.gov/ecp/species/4132#crithab	Final
Suwannee Moccasinshell <i>Medionidus walkeri</i> https://ecos.fws.gov/ecp/species/533#crithab	Final

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, 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 likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

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 <i>Haliaeetus leucocephalus</i> 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. 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 Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ 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 <i>Falco sparverius paulus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9587	Breeds Apr 1 to Aug 31
Bachman's Sparrow <i>Peucaea aestivalis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6177	Breeds May 1 to Sep 30
Bald Eagle <i>Haliaeetus leucocephalus</i> 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. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

Brown-headed Nuthatch <i>Sitta pusilla</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 1 to Jul 15
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Chuck-will's-widow <i>Antrostomus carolinensis</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 10 to Jul 10
Coastal (wayne's) Black-throated Green Warbler <i>Setophaga virens waynei</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 1 to Aug 15
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Prairie Warbler <i>Setophaga discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> 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 <i>Elanoides forficatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 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.

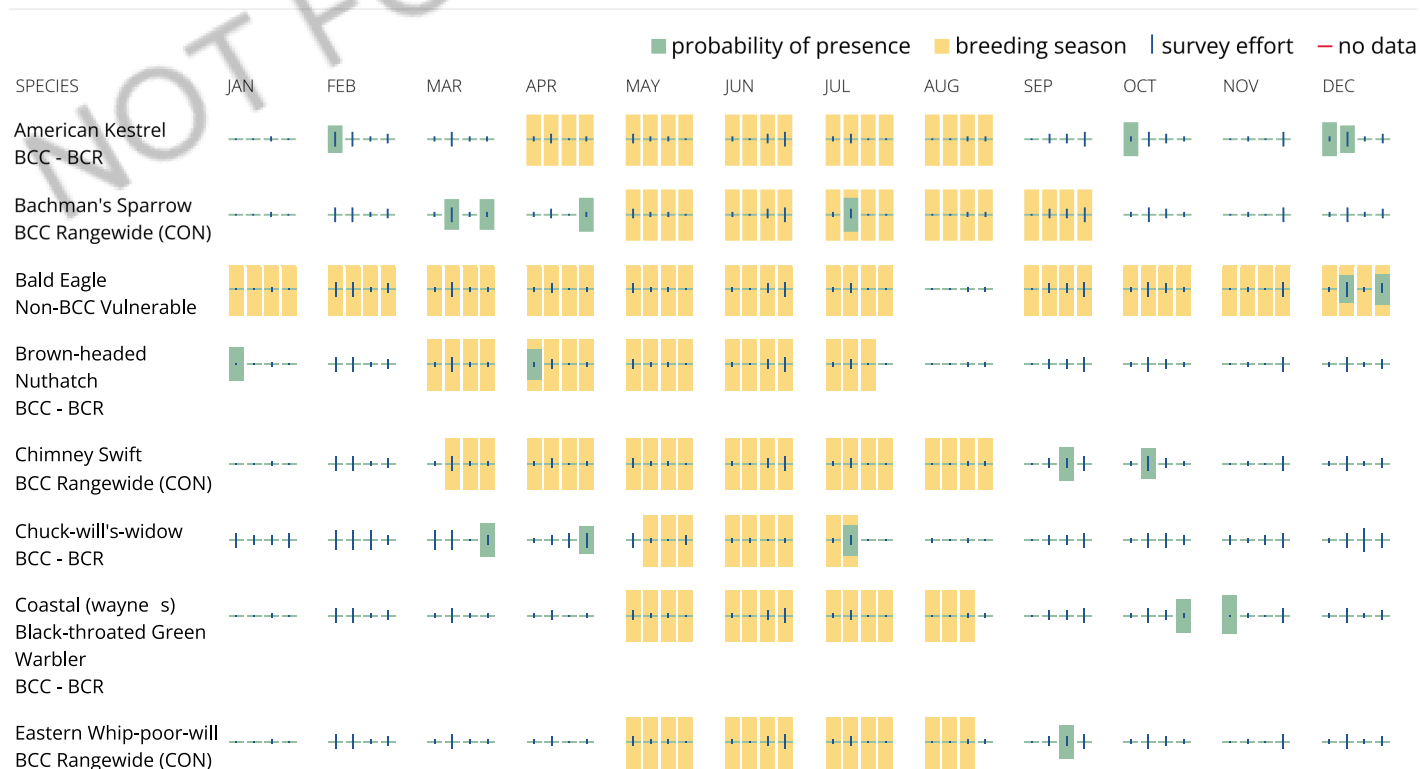
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

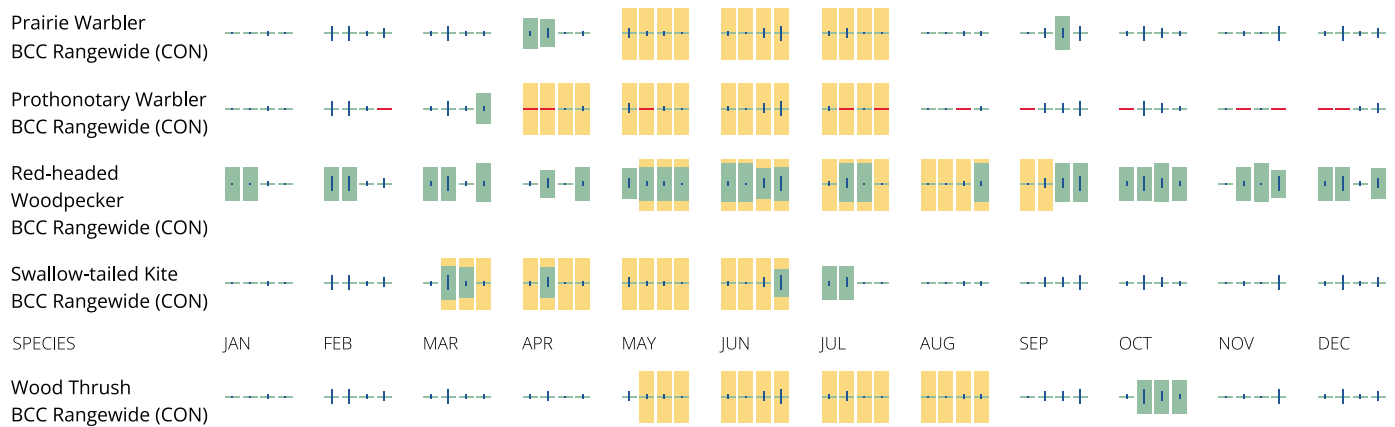
No Data (—)

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.





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

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

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](#).

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

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 tubercid 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.

**O'Leno State Park
Boardwalk Repairs
Environmental Survey Report**

November 2024

ATTACHMENT C

**Florida Natural Areas Inventory (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

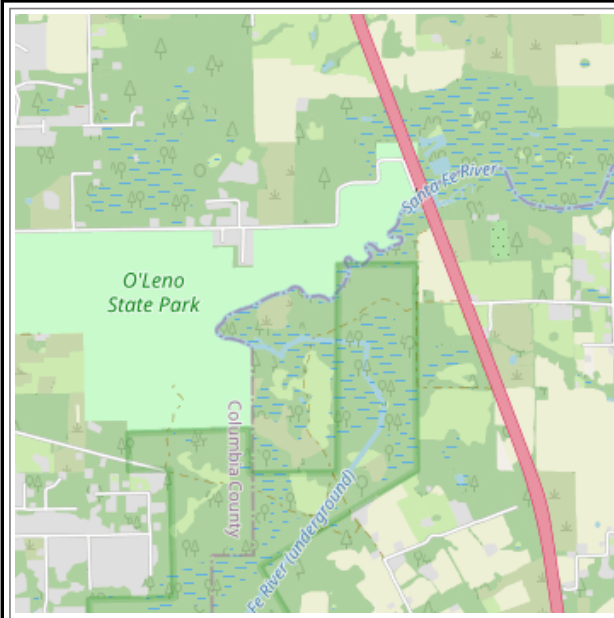
Created 9/9/2024

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

for

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

Report for 1 Matrix Unit: 23584



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: 23584

6 Documented Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Blackwater stream	G4	S3	N	N
Gopherus polyphemus Gopher Tortoise	G3	S3	C	ST
<i>Peucaea aestivalis</i> Bachman's Sparrow	G3	S3	N	N
Pseudemys concinna suwanniensis Suwannee Cooter	G5T3	S3	N	N
Scrubby flatwoods	G2	S2?	N	N
Upland hardwood forest	G5	S3	N	N

0 Documented-Historic Elements Found

10 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Crotalus adamanteus Eastern Diamondback Rattlesnake	G3	S3	N	N
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT
Medionidus walkeri Suwannee Moccasinshell	G1	S1	T	FT
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	T	FT

Pleurobema pyrifforme Oval Pigtoe	G2	S1S2	E	FE
Quadrula kleiniana Florida Mapleleaf	G2G3	S2	N	N
Sandhill	G3	S2	N	N
Scrub	G2	S2	N	N
Upland pine	G3	S2	N	N

Matrix Unit ID: 23584

23 Potential Elements for Matrix Unit 23584

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Agrimonia incisa incised groove-bur	G3	S2	N	T
Alligator mississippiensis American Alligator	G5	S4	SAT	FT(S/A)
Asplenium x curtissii Curtiss' spleenwort	GNA	S1	N	N
Asplenium x heteroresiliens Morzenti's spleenwort	G2	S1	N	N
Asplenium x plenum ruffled spleenwort	G1Q	S1	N	N
Athene cunicularia floridana Florida Burrowing Owl	G4T3	S3	N	ST
Brickellia cordifolia Flyr's brickell-bush	G3	S2	N	E
Corynorhinus rafinesquii Rafinesque's Big-eared Bat	G3G4	S1	N	N
Ctenium floridanum Florida toothache grass	G2	S2	N	E
Forestiera godfreyi Godfrey's swampprivet	G2	S2	N	E
Hartwrightia floridana hartwrightia	G2	S2	N	T
Lampropeltis extenuata Short-tailed Snake	G3	S3	N	ST
Lithobates capito Gopher Frog	G2G3	S3	N	N
Macrochelys suwanniensis Suwannee Alligator Snapping Turtle	G2	S2	PT	ST
Matelea floridana Florida spiny-pod	G2	S2	N	E
Micropterus notius Suwannee Bass	G3	S3	N	N
Myotis austroriparius Southeastern Myotis	G4	S3	N	N
Neofiber alleni Round-tailed Muskrat	G2	S2	N	N
Notophthalmus perstriatus Striped Newt	G2G3	S2	N	C
Pteroglossaspis ecristata giant orchid	G2G3	S2	N	T
Salix floridana Florida willow	G2G3	S2S3	N	E
Sciurus niger niger Southeastern Fox Squirrel	G5T5	S3	N	N
Ursus americanus floridanus Florida Black Bear	G5T4	S4	N	N

Disclaimer

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

Unofficial Report

These results are considered unofficial. FNAI offers a [Standard Data Request](#) option for those needing certifiable data.