SABANA FARMS
MARION COUNTY, FLORIDA

ECOLOGICAL DUE DILIGENCE

MARCH 2024

ENVIRONMENTAL
PLANNING
DESIGN &
PERMITTING

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MODICA & ASSOCIATES

SABANA FARMS
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ECOLOGICAL DUE DILIGENCE

1.0 INTRODUCTION

Modica & Associates conducted an ecological Due Diligence of the 47± acre Sabana Farms property ("Project Site") on March 26, 2024. The Project Site is generally located north of NW 35th Street and west of NW 44th Avenue in Ocala, Marion County, Florida. The Project Site consists of a portion of one (1) parcel identified by Marion County Property Appraiser with parcel Identification Number 13709-001-00 (**Figures 1 & 2**).

The intent of the Ecological Due Diligence was to evaluate the existing conditions of the property, on-site habitats, delineate any onsite wetlands, vegetative communities, and to identify the presence, or potential for presence, of protected wildlife species. These findings reflect on-site conditions at the time of the investigation and do not preclude the possibility that conditions may change over time.

2.0 PROJECT SITE CONDITIONS

Prior to inspecting the Project Site, published literature and publicly available ArcView™ GIS data layers were reviewed to obtain an understanding of site topography, soils, vegetation, and anticipated / documented wildlife use in the vicinity of the property. The following resources were accessed as part of the subject Due Diligence:

- Aerial Photographic Imagery, ESRI Online Basemap Options;
- Google Earth Aerial Imagery, 1994-Present;
- U.S. Department of Agriculture (USDA) *Soil Survey of Marion County Florida*;
- Florida Natural Areas Inventory (FNAI) – Species Occurrence Tracking List, Marion County;
- *Florida's Endangered and Threatened Species*, December 2023, FWC;
- *Florida Land Use, Cover and Forms Classification System (FLUCFCS) Handbook*, U.S. Department of Transportation;
- Florida Association of Environmental Soil Scientists. 2000. Hydric Soils of Florida Handbook, Third Edition;
- Florida Fish and Wildlife Conservation Commission, Eagle Nest Locator (https://geodata.myfwc.com/datasets/eb20bf44aeea44a8ab4a47cd4329c6b6_5);
- Audubon Florida EagleWatch Nest Map (https://www.arcgis.com/apps/SimpleViewer/index.html?appid=75ea06f653f847658c908634ffc6f640).

Modica & Associates staff conducted a field inspection of the Project Site on March 26, 2024. The property was traversed via pedestrian and vehicular transects for the purpose of identifying any listed wildlife species and to map the onsite land uses and vegetative communities. The findings of the survey are discussed in greater detail below.

2.1 Soils

According to the *Soil Survey of Marion County, Florida*, prepared by the U.S. Department of Agriculture (USDA), Soil Conservation Service (SCS), two (2) soil types occur within the Project Site's boundaries (**Figure 3**). These following soil types and descriptions are excerpts from the SCS *Soil Survey of Marion County, Florida*.

> **Arredondo sand, 0 to 5 percent slopes (#9)** is a nearly level to gently sloping, well-drained soil that occurs as both small and large areas in the upland. This soil occurs as broad rolling areas of the uplands. The water table is at a depth of more than 72 inches. Permeability is rapid in the upper 65 inches, moderately rapid from 65 to 70 inches, and moderate below.
>
> **Gainesville loamy sand, 0 to 5 percent slopes (#35)** is a nearly level to gently sloping, well drained soil that occurs as small and large areas in the upland. The water table is at a depth of more than 72 inches. Permeability is rapid to a depth of more than 80 inches.

2.2 Land Use Types & Vegetative Communities

The Project Site currently supports one land use (**Figure 4**). The land use and vegetative community were identified using the Florida Land Use, Cover and Forms Classification System, Level III (FLUCFCS, FDOT, January 1999). The following provides a brief description of the land use and vegetative community identified on the site:

> 251- Horse Farms
> The Project Site consists of an active horse farm with various paddocks. Vegetation consists predominantly of bahia grass (*Paspalum notatum*) scattered trees such as live oak (*Quercus virginiana*) and chinaberry (*Melia azedarach*).

2.3 Wildlife

A qualitative review of the Project Site was conducted to determine if any wildlife species using the property are listed as protected by the U.S. Fish & Wildlife Service (USFWS) or the Florida Fish & Wildlife Conservation Commission (FWC). To assist in documenting the potential for protected species on the Project Site, the Florida Natural Areas Inventory Tracking List for Marion County was obtained and

reviewed (**Exhibit A**). In addition, the USFWS Information for Planning and Consultation (IPaC) website was reviewed to determine which species listed under the Endangered Species Act may be found within this portion of Florida (**Exhibit B**). Using this information, a survey of the site was conducted to determine the need and if a formal survey for any particular wildlife species should be conducted.

The review included direct observations, as well as evidence of a particular species' presence such as tracks, scat, and birdcalls. The following is a list of those wildlife species identified during the evaluation of the site. Species presented in bold type represent wildlife protected by the USFWS and/or the FWC.

BIRDS
Eastern bluebird (*Sialia sialis*)
American crow (*Crovus brachyrhrnchos*)

REPTILES
Brown Anole (*Anolis sagrei*)

MAMMALS
Eastern grey squirrel *(Sciurus carolinensis)*
Shermans fox squirrel (*Sciurus niger shermani*)

There were no listed species of wildlife documented on the Project Site during the March 26, 2024 site inspection. Information regarding the requirements for species of wildlife with potential for presence on the project site is provided in Section 4 below.

2.4 Listed Flora

A survey was conducted to document the presence of any protected plant species within the Project Site. This floral species survey was conducted in conjunction with the Due Diligence on March 26, 2024.

No plant species listed by either the Florida Department of Agriculture (FDA) or USFWS were observed on the site during the survey.

3.0 REGULATORY AGENCY PERMITTING

The Project Site lies within the jurisdiction of the Southwest Florida Water Management District (SWFWMD) and Marion County (County). Regulatory requirements for each agency are outlined below.

3.1 Southwest Florida Water Management District (SWFWMD)

The SWFWMD administers regulatory authority for proposed developments through the ERP program. Development of the Project Site will require an ERP application to be submitted for stormwater management and environmental regulatory review.

A review of Florida's Water Permitting Portal determined that there have been no SWFWMD permits issued for the Project Site.

Because the Project Site does not contain any jurisdictional wetlands or surface waters, this report should be sufficient to facilitate the environmental review component of the ERP process. The timeframe to receive an ERP permit is dependent upon the environmental, engineering and geotechnical information for a project. A typical project would generally take 4-9 months.

3.2 Marion County

The Marion County Comprehensive Plan and Land Development Code (LDC) sets forth protective regulations for certain areas and natural resources within the County. The Project Site does not contain jurisdictional wetlands or surface waters. The site also does not contain protected wildlife species.

Article 24, Division 5 of Marion County's LDC provides for the requirement of an Environmental Due Diligence for Listed Species (EALS) to support various applications. An EALS must be submitted to the Office of the County Engineer to be reviewed concurrently with a corresponding development review application. This report will likely be sufficient to support the development review application for Marion County.

4.0 PROTECTED SPECIES REGULATIONS AND PERMITTING

A qualitative review of the site was conducted to determine if any wildlife species using the property are listed as protected by the USFWS or the FWC. Surveys were performed by conducting pedestrian/vehicle transects across at least 20% of each community type.

It should be noted that these findings reflect the site conditions at the time of the investigation and do not preclude other listed species from inhabiting the project site in the future.

4.1 Gopher Tortoise

The gopher tortoise (*Gopherus polyphemus*) is listed by the FWC as "Threatened". Gopher tortoises are commonly found in areas occurring on well-drained sandy soils associated with xeric pine-oak hammock, scrub, pine flatwoods, pastures, and citrus groves.

FWC regulations prohibit development within a 25-foot radius of any potentially occupied gopher tortoise burrow. A permit will need to be obtained from the FWC authorizing the relocation of any gopher tortoises within 25-feet of the footprint of development prior to the initiation of any land clearing or construction activities.

Modica & Associates conducted a preliminary survey for gopher tortoises on February 29, 2024 and documented no "potentially occupied" gopher tortoise burrows; however, this was only a preliminary survey. FWC only considers a gopher tortoise survey to be valid for 90-days. A 100% survey will need to be completed within 90-days of anticipated start date of construction. The survey must comply with the April 2023 FWC Gopher Tortoise Permitting Guidelines ("permitting guidelines").

If any gopher tortoise burrows are documented on the Project Site during the comprehensive survey, a permit will need to be obtained from the FWC authorizing the relocation of any gopher tortoises within 25-feet of the footprint of development prior to the initiation of any land clearing or construction activities. This permitting process typically takes 45 to 60 days to complete.

4.2 American Bald Eagle

The American bald eagle (*Haliaeetus leucocephalus*) is no longer listed under the Endangered Species Act; however, it is still afforded protection by the USFWS under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

In addition to the on-site evaluation for wildlife, the Audubon's EagleWatch Nest Locator website was used to see if any documented eagle nests are located within or near the Project Site. The closest eagle nest (Nest ID # MR-186) is located 4.90 miles southeast of the Project Site (**Figure 5**). The associated management zones for nest MR-186 do not extend onto or near the Project Site. Therefore, project development should not have any adverse impact on eagle breeding or nesting activities. No coordination with USFWS is anticipated for this species.

4.3 Burrowing Owl

The burrowing owl is listed by the FWC as a Threatened species. Burrowing owls are commonly found in open areas that have short groundcover. No burrowing owls or burrows were documented during the site inspection conducted by Modica & Associates on March 26, 2024; however, the Project Site may contain suitable habitat. The comprehensive survey recommended for the gopher tortoise would also be comprehensive for the burrowing owl. This survey is recommended to verify that owls are not present on the Project Site at least 90 days prior to anticipated start of construction.

4.4 Southeastern American Kestrel

The Southeastern American kestrel (*Falco sparverius paulus*) is listed as Threatened by the FWC. This falcon species is a permanent and non-migratory resident of Florida. The population of southeastern American kestrels in Central Florida has decreased by 82% from 1940's to 1980's (Stys, 1993). The population decline is due to loss of habitat caused by clearing of woodlands for agriculture and residential development. Cleared areas have reduced suitable nesting and forging sites.

The Southeastern American Kestrel is the smallest of the falcon species and is approximately the size of a robin. It grows to a length of 9 to 12 inches (Stys, 1993). They are colorful birds and there is a color difference between the male and female. Both sexes have reddish and blue crowns. The males have blue wings and cinnamon backs and tails. They have dark spots on a white breast. The females have a cinnamon body color with dark streaks. They have a light tan breast with vertical brown streaks. They have long, pointed wings when seen in flight and will hover. It is common to see them sitting on electrical wires, poles, and fences.

Kestrels prefer open habitats so they can hunt small terrestrial animals. Southeastern American kestrels typically nest in cavities excavated by woodpeckers and in artificial objects such as power poles, nesting boxes and buildings. They have a clutch of 3 to 5 eggs (Stys, 1993). The eggs are pinkish to beige with reddish-brown speckles and dark brown spot. They usually have one brood a year. Egg incubation is 28 to 31 days, and the young fledge at 28 to 31 days of age.

If a nesting pair of southeastern American kestrels are documented within a project site, the FWC has recommended guidelines for preservation and protection of this species. The FWC requires that a 150-meter radius be established around the nest cavity. Additionally, the FWC recommends that 50 hectares of suitable foraging habitat remain on the site. This habitat can consist of golf courses, pastures and any other open grasslands on which the birds can forage.

No kestrels were documented on the Project Site, and it is unlikely that any will be found as suitable nesting habitat does not exist onsite. Coordination with FWC is not anticipated for this species.

4.5 Eastern Indigo Snake

The Eastern indigo snake (*Drymarchon couperi*) is listed as "Threatened" by the USFWS. Indigo snakes are thick-bodied, glossy black snakes with iridescent blue highlights. Adult indigo snakes may be between 60 and 74 inches long (USFWS, 2016c). The USFWS's *Standard Protection Measures for the Eastern Indigo Snake* ("Standard Protection Measures"; USFWS, 2004c) will be followed during project construction. The Standard Protection Measures require that an educational program

be developed by the Applicant to inform all construction personnel of the potential presence of indigo snakes on the project site. This requires placement of posters on the project site, distribution of educational pamphlets and informational signs and videos. These educational documents have been prepared by USFWS and are readily available for use by the landowner.

Recent discussions with USFWS staff from the South Florida Ecological Services Office indicate that if a snake's presence on a property is "reasonably certain to occur", consultation will be required. The USFWS is defining "reasonably certain to occur" as recorded or known primary evidence of a snake's presence on or near a property (i.e. documented observation of an indigo snake, snake shed). The Project Site is located in a highly urbanized area and is surrounded by high-density residential and commerical development. The potential presence for the indigo snake may be unlikely.

Because there are no wetlands or surface waters onsite, there is no regulatory pathway for USFWS consultation for the indigo snake. Consultation is voluntary under the Section 10 program. It is likely that the USFWS will concur that the project will not adversely affect the indigo snake. However, it is still recommended that the Standard Protection Measures be implemented during construction. The standard protection measure include either providing educational brochures about this species to the contractors or placing a placard on site which provides information about this species.

4.6 Florida Scrub-jay

The Project Site falls within the Consultation Area for the federally-threatened Florida scrub-jay *(Aphelocoma coerulescens)*. The species is native to Florida's xeric scrub communities, although it is known to use altered habitats including citrus groves and even residential areas. The USFWS considers the presence of scrub oaks to be the key indicator of suitable habitat. Based on available USFWS and FWC data, the closest family of scrub jays was historically (1992-1993 FWC Data) located over 8 miles southwest of the Project Site.

No scrub-jays were documented on the property during M&A's site visit, and it is unlikely that any will be documented as suitable habitat does not exist on the Project Site. No coordination with USFWS is anticipated for this species.

5.0 SUMMARY

Modica & Associates conducted an ecological Due Diligence of the 47± acre Sabana Farms property ("Project Site") on March 26, 2024. The Project Site is generally located north of NW 35th Street and west of NW 44th Avenue in Ocala, Marion County, Florida. The Project Site consists of a portion of one (1) parcel identified by Marion County Property Appraiser with parcel Identification Number 13709-001-00 (**Figures 1 & 2**).

The intent of the Ecological Due Diligence was to evaluate the existing conditions of the property, on-site habitats, delineate any onsite wetlands, vegetative communities, and to identify the presence, or potential for presence, of protected wildlife species. These findings reflect on-site conditions at the time of the investigation and do not preclude the possibility that conditions may change over time.

Development of the Project Site will require permitting through the SWFWMD and Marion County. It will be necessary to apply for an ERP through SWFWMD. Additionally, Marion County requires an EALS to support various building applications. This report should be sufficient to satisfy both an ERP application and a building permit application.

The Project Site occurs within the Consultation Area of several state and federally listed species. State-protected species for consideration include the southeast American kestrel, Florida scrub-jay, burrowing owl, and gopher tortoise. Federally protected species for consideration includes the eastern indigo snake. No listed species were observed during M&A's site inspection.

Modica & Associates conducted a preliminary survey for gopher tortoises on March 26, 2024 and did not document the presence of any tortoises or potentially occupied burrows on the Project Site. However, it is recommended that a comprehensive (100%) survey be conducted no more than 90 days prior to the commencement of development to verify whether gopher tortoises or burrowing owls have moved onto the property.

No kestrels were documented on the Project Site and it is unlikely that any will observed during subsequent surveys as suitable habitat does not exist onsite. Coordination with FWC is not anticipated for this species.

It is recommended that the Standard Protection Measures for the eastern indigo snake be implemented during construction activities. This requires placement of posters on the project site, distribution of educational pamphlets and informational signs and videos.

The closest eagle nest (Nest ID # MR-186) is located 4.90 miles southeast of the Project Site (**Figure 5**). The associated management zones for nest MR-186 do not extend onto or near the Project Site. Therefore, project development should not have any adverse impact on eagle breeding or nesting activities. No coordination with USFWS is anticipated for this species.
No Florida scrub-jays were documented on the property during M&A's site visit and it is unlikely that any will be documented as suitable habitat does not exist on the Project Site. No coordination with USFWS is anticipated for this species.

No other listed species of wildlife were identified on the property, nor does the Project Site appear to provide suitable habitat for other listed species at the time. However, it should be noted that these results reflect site conditions at the time of the investigation and do not preclude the possibility of any additional listed species using or inhabiting the site in the future, especially if vegetative habitat characteristics become more favorable for listed species in the future.

6.0 OTHER ENVIRONMENTAL CONCERNS

No other environmental concerns were identified or expected for the Project Site. This ecological assessment does not constitute a Phase 1 Environmental Audit and this report makes no representation as to the presence or absence of hazardous materials.

This report does not constitute a Cultural Resource Assessment Survey and provides no opinion on the presence of cultural or historical resources.

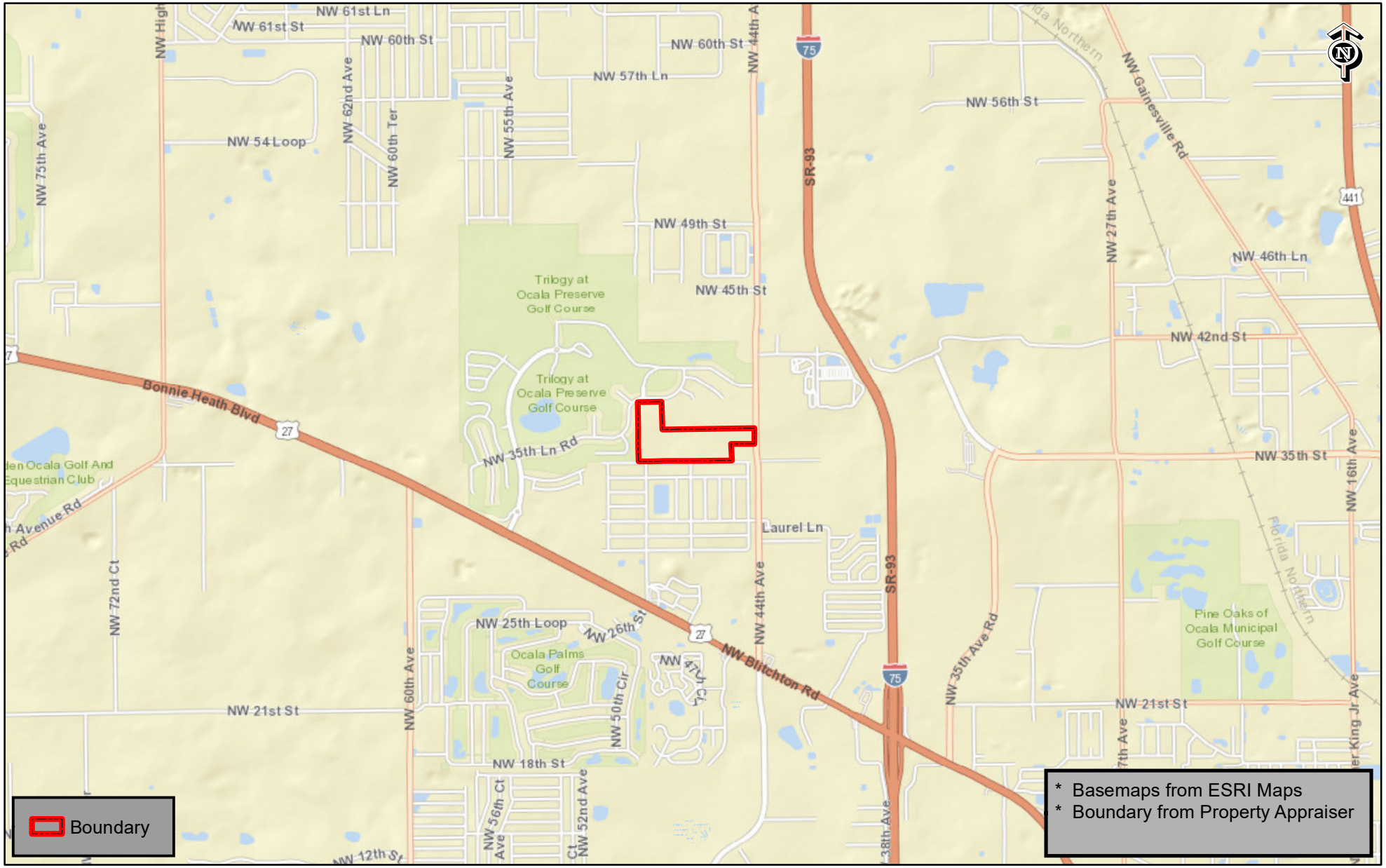
7.0 REFERENCES

Florida Fish and Wildlife Conservation Commission, Eagle Nest Locator (http://wildflorida.org/eagle/eaglenests)

Florida Fish and Wildlife Conservation Commission, Florida's Endangered Species, Threatened Species, and Species of Special Concern, January 2016.

United States Department of Agriculture: Soil Conservation Service. 1990. Soil Survey of Marion County, Florida.

FIGURES



Sabana Farm

Figure 1- Location Map
Section 34, T14S R21E
Marion County, Florida

3,000 1,500 0 3,000 Feet

MODICA & ASSOCIATES
302 Mohawk Road
Clermont, Florida 34715
P: (352) 394-2000
F: (352) 394-1159
Email: Environmental@Modica.cc
www.ModicaAndAssociates.com

Sabana Farm

Figure 2- Aerial Map
Section 34, T14S R21E
Marion County, Florida

300 150 0 300 Feet

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Sabana Farm

Figure 3- Soil Type Map
Section 34, T14S R21E
Marion County, Florida

300 150 0 300 Feet

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Sabana Farm

Figure 4- Land Use
Section 34, T14S R21E
Marion County, Florida

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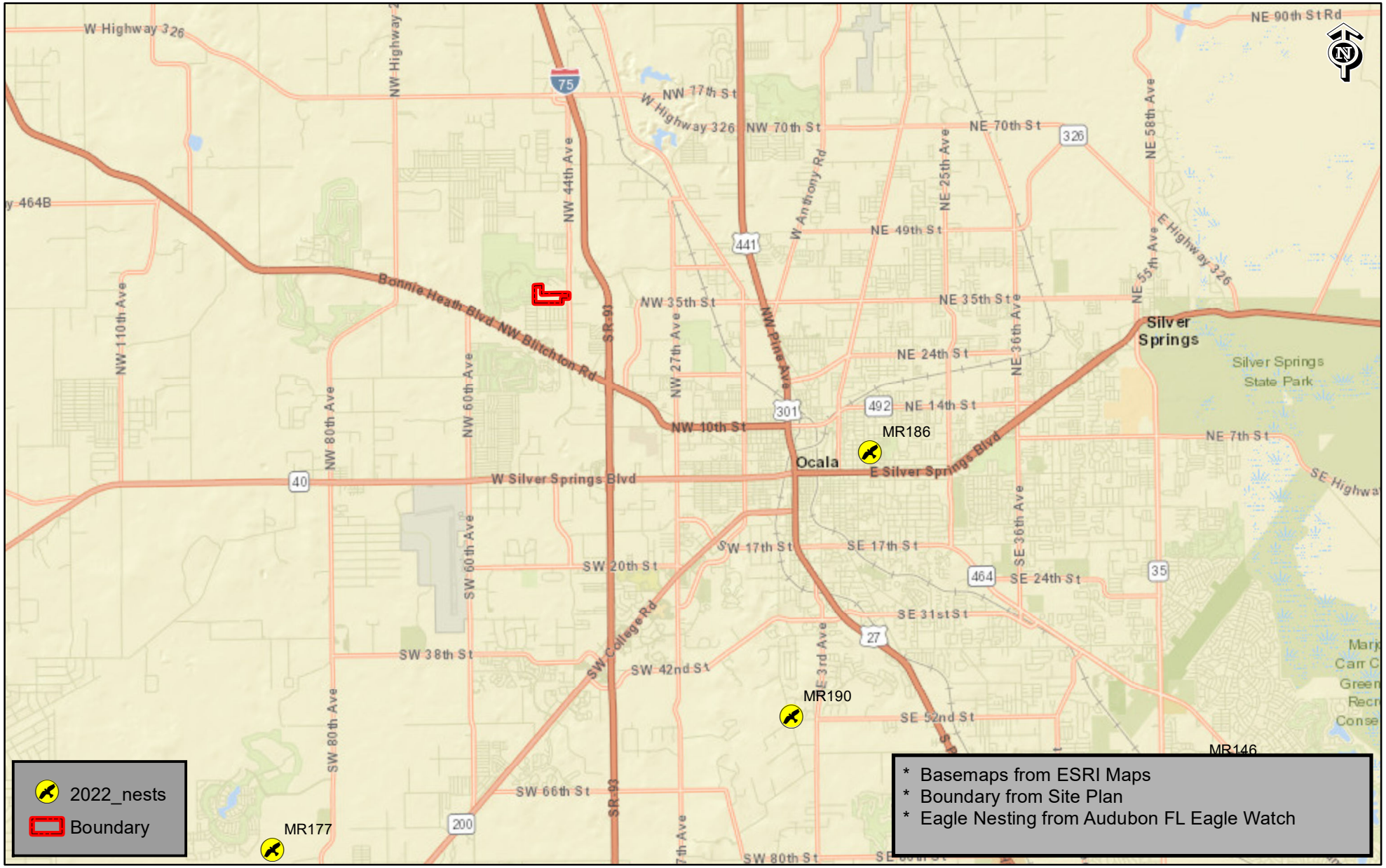

Sabana Farm

Figure 5- Eagle Nesting Map
Section 34, T14S R21E
Marion County, Florida

5,000 2,500 0 5,000 Feet

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EXHIBITS

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

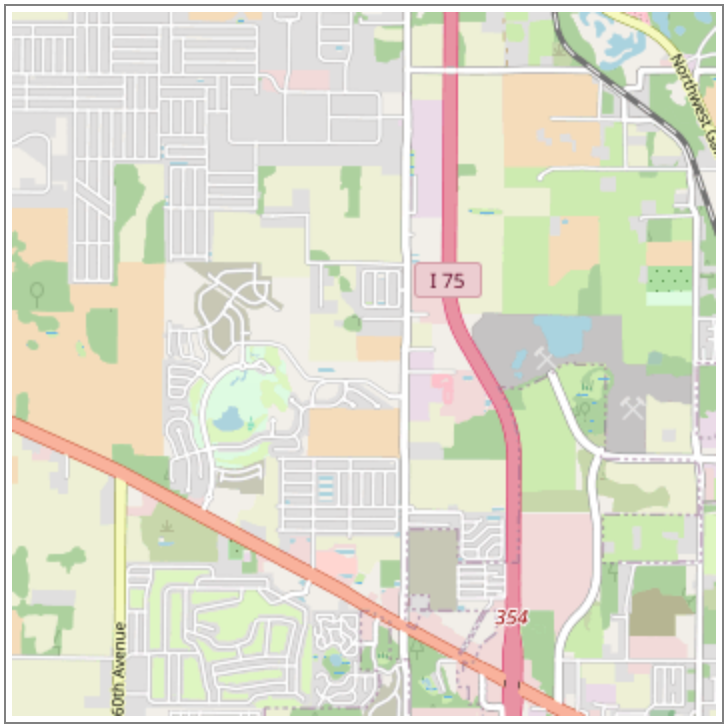
UNOFFICIAL REPORT

Created 3/20/2024

(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 1 Matrix Unit: 29841



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: 29841

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

0 **Likely** Elements Found

Matrix Unit ID: 29841

27 **Potential** Elements for Matrix Unit 29841

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Agrimonia incisa incised groove-bur	G3	S2	N	T
Antigone canadensis pratensis Florida Sandhill Crane	G5T2	S2	N	ST
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
Calopogon multiflorus many-flowered grass-pink	G2G3	S2S3	N	T
Digitaria floridana Florida fingergrass	G1	S1	N	N
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT
Eriogonum longifolium var. gnaphalifolium scrub buckwheat	G4T3	S3	T	E
Forestiera godfreyi Godfrey's swampprivet	G2	S2	N	E
Gopherus polyphemus Gopher Tortoise	G3	S3	C	ST
Lampropeltis extenuata Short-tailed Snake	G3	S3	N	ST
Lithobates capito Gopher Frog	G2G3	S3	N	N
Matelea floridana Florida spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae pygmy pipes	G2	S2	N	E
Mustela frenata peninsulae Florida Long-tailed Weasel	G5T3?	S3?	N	N
Myotis austroriparius Southeastern Myotis	G4	S3	N	N
Neofiber alleni Round-tailed Muskrat	G2	S2	N	N
Podomys floridanus Florida Mouse	G3	S3	N	N
Pteroglossaspis ecristata giant orchid	G2G3	S2	N	T
Pycnanthemum floridanum Florida mountain-mint	G3	S3	N	T
Salix floridana Florida willow	G2G3	S2S3	N	E
Sciurus niger niger Southeastern Fox Squirrel	G5T5	S3	N	N
Selonodon floridensis Florida Cebrionid Beetle	G2G4	S2S4	N	N
Sideroxylon alachuense silver buckthorn	G1	S1	N	E
Spigelia loganioides pinkroot	G2Q	S2	N	E

IPaC **U.S. Fish & Wildlife Service**

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

Marion 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.

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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 Laterallus jamaicensis ssp. jamaicensis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10477	Threatened
Whooping Crane Grus americana No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/758	EXPN

Reptiles

NAME	STATUS
Eastern Indigo Snake Drymarchon couperi Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/646	Threatened

Insects

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

Flowering Plants

NAME	STATUS
Lewton's Polygala Polygala lewtonii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6688	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 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 Haliaeetus leucocephalus 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 (■)

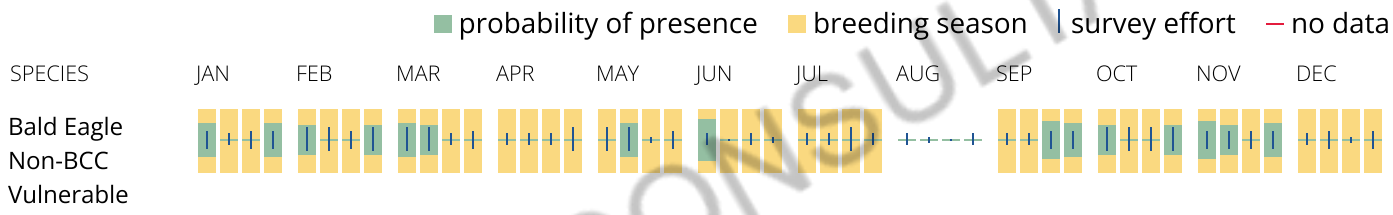
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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 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 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
Bald Eagle Haliaeetus leucocephalus 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
Chimney Swift Chaetura pelagica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Great Blue Heron Ardea herodias occidentalis 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
Lesser Yellowlegs Tringa flavipes This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Painted Bunting Passerina ciris This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 25 to Aug 15
Red-headed Woodpecker Melanerpes erythrocephalus 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* — Breeds Mar 10 to Jun 30

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8938

Worthington''s Marsh Wren *Cistothorus palustris griseus* — Breeds Apr 10 to Aug 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

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.

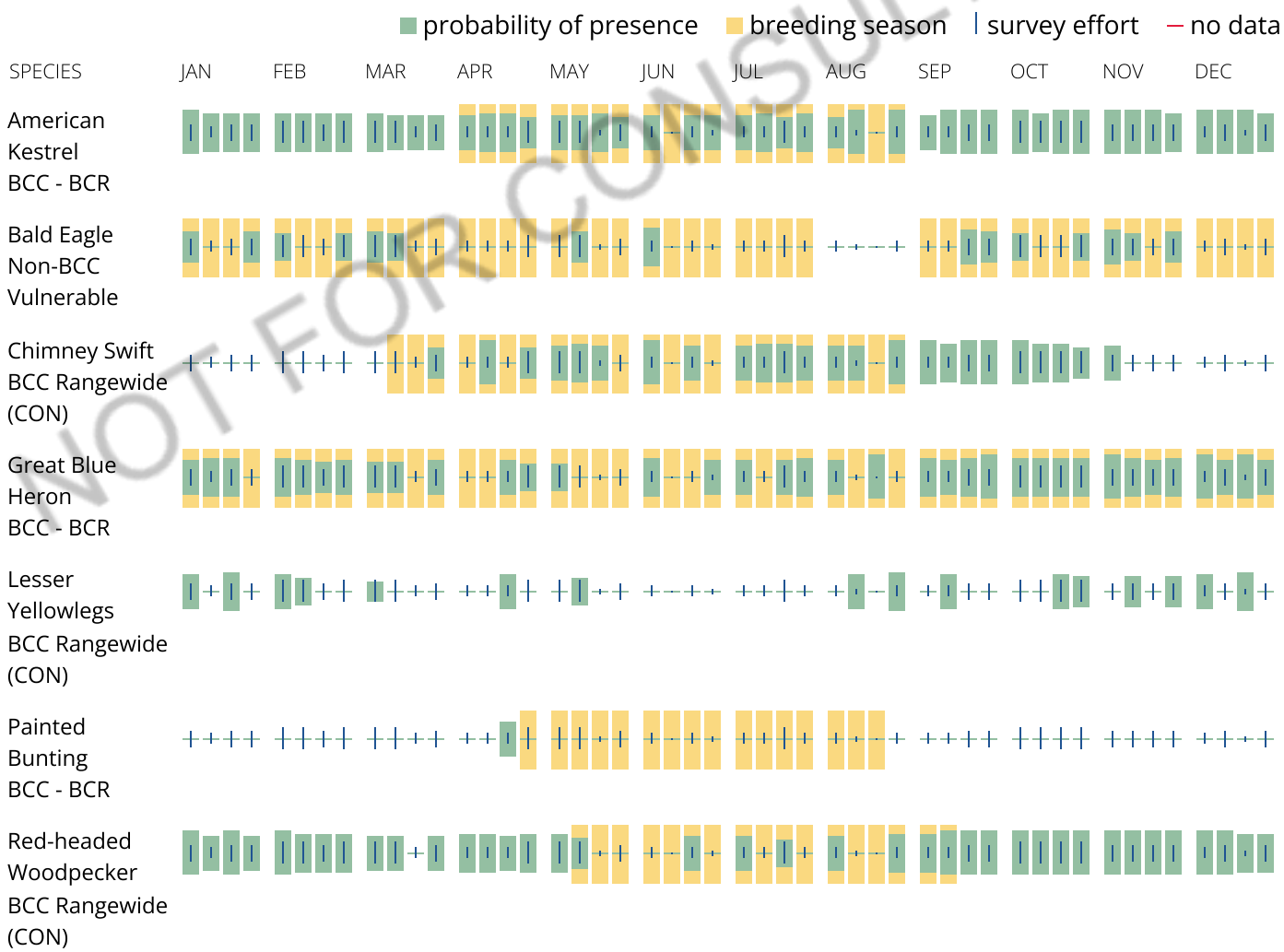
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

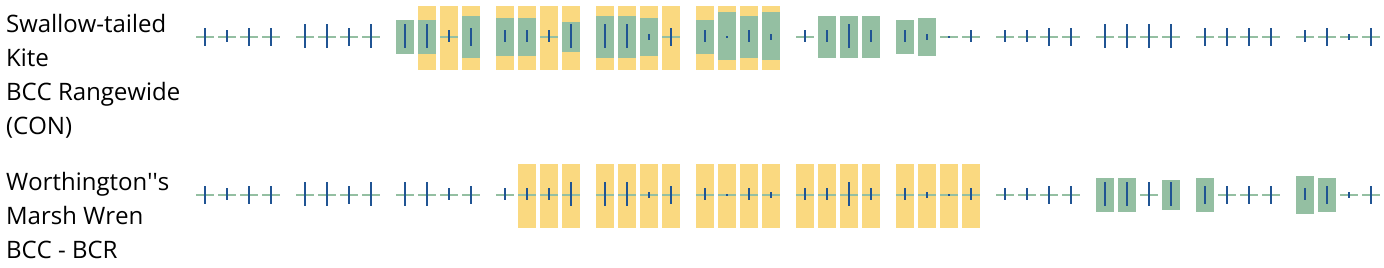
No Data (–)

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.

Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on Federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

CBRA information is not available at this time

This can happen when the CBRS map service is unavailable, or for very large projects that intersect many coastal areas. Try again, or visit the CBRS map to view coastal barriers at this location.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the official CBRS maps. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be

subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

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.

This location did not intersect any wetlands mapped by NWI.

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.