

**PRELIMINARY ECOLOGICAL  
ASSESSMENT REPORT**

**JALARMY ROAD AND LAKE MINNEOLA  
SHORES ROUNDABOUT  
LAKE COUNTY, FLORIDA**

**JANUARY 2023**



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## 1.0 INTRODUCTION

CPH, LLC (CPH), Environmental Services, conducted a preliminary ecological assessment on the Jalarmy Road and Lake Minneola Shores Roundabout Project (Project) in Lake County, Florida. The purpose of this preliminary assessment is to: 1) provide a general estimate of the type and extent of upland habitat types and confirm the extent and configuration of areas expected to fall within the wetland regulatory jurisdiction of the St. Johns River Water Management District (SJRWMD) and the Florida Department of Environmental Protection (FDEP); 2) conduct a public database search for known or probable geographic distribution of protected species within these habitat types; 3) perform a preliminary review for protected wildlife (and plant) species occurrence based on direct observation during the field investigations; 4) assess the quality of the on-site wetland habitats; and 5) identify special environmental designations on, or within close proximity to, the subject project.

The ±1.99-acre subject project is located in Sections 11 and 12, Township 22 South, Range 25 East, Lake County, Florida (**Figure 1, Appendix A**), along Jalarmy Road and Lake Minneola Shores. The surrounding land uses include residential neighborhoods, roads and open land. Vegetation associations and landscape descriptions were identified from aerial photography, the Soil Conservation Service (SCS) *Soil Survey of Lake County, Florida* and groundtruthing. There are two (2) vegetation and land use classifications and two (2) soil types mapped within the project boundaries. Vegetation and land uses are generally classified in accordance with the *Florida Land Use, Cover and Forms Classification System* (FLUCFCS) (FDOT 1999). CPH's field investigation was conducted on December 21, 2022.

## 2.0 METHODOLOGY

In December 2022, scientists performed pedestrian surveys of the subject project for the presence of protected flora and fauna and wetlands and surface waters. Prior to the reconnaissance level survey, a list of potentially occurring protected flora and fauna was compiled based upon on-site habitat types and known or probable geographic distribution of protected species within these habitat types.

### 3.0 EXISTING SITE CONDITIONS

The ±1.99-acre subject project is located in a residential area north of Lake Minneola and consists of open land and roads.

#### 3.1 Soils

The *Soil Survey of Lake County, Florida* identifies two (2) soil map units within the subject project (**Figure 2**). A summary of the characteristics of these soil types, as described by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), formerly Soil Conservation Service (SCS) Soil Survey Geographic (SSURGO) database is as follows:

##### **Candler sand, 0 to 5 percent slopes**

This soil is nearly level to gently sloping and is excessively drained. It is on ridges, knolls, and broad uplands. Typically, the surface layer is dark grayish brown sand about six (6) inches thick. The water table of this soil type is at a depth of more than eighty (80) inches. Available water capacity is very low and permeability is considered to be rapid to very rapid.

##### **Candler sand, 5 to 12 percent slopes**

This soil is sloping to strongly sloping and excessively drained. It is found on uplands. The water table of this soil type is at a depth of more than eighty (80) inches. Available water capacity is very low and permeability is considered to be rapid to very rapid.

#### 3.2 Vegetation and Land Use Types

There are two (2) vegetation and land use classifications mapped within the subject project. Vegetation and land use classifications are generally classified in accordance with the *Florida Land Use, Cover and Forms Classification System* (FLUCFCS) (FDOT 1999). The following descriptive titles and FLUCFCS numbers assess the subject project's vegetation and land uses and is presented on **Figure 3**.

### **Open Land (FLUCFCS No. 190)**

This land use classification includes undeveloped land within urban areas and inactive land with street patterns but without structures. This portion of the project is open and routinely maintained. Vegetation observed included bahia grass (*Paspalum notatum*), beggarticks (*Bidens alba*), crowfoot grass (*Dactyloctenium aegyptium*), lantana (*Lantana sp.*), live oak (*Quercus virginiana*), cabbage palm (*Sabal palmetto*) and various weeds and grasses.

### **Roads and Highways (FLUCFCS No. 814)**

This land use classification describes highways and roads including ingress and egress ramps, clear zones and associated infrastructure. This land use includes Jalarmy Road and Lake Minneola Shores and extends into Windsong Court and Elderberry Court. The land use extends into portions of residential yards and driveways. Vegetation observed in the right-of-way includes St. Augustine grass (*Stenotaphrum secundatum*), bahia grass and various weeds and grasses.

### **3.3 Photographs**

Select photographs taken during the field investigation documenting the project conditions are provided in **Appendix B**. A key map depicts the location and directional orientation of the photographs.

## **4.0 WETLANDS & SURFACE WATERS**

According to wetland delineation methodologies outlined in the *Corps of Engineers Wetland Delineation Manual* (1987), the *2008 Corps Interim Regional Supplement to the Corps Wetland Delineation Manual: Atlantic & Gulf Coastal Plain Region* and the State of Florida Unified Wetland Delineation Methodology (Section 62-340. F.A.C.), habitats classified as wetlands or surface waters were not observed within the subject project boundaries during the field investigation.

## **5.0 REGULATORY CONSIDERATIONS**

### **5.1 St. Johns River Water Management District**

The SJRWMD regulates wetlands that are isolated and those considered within or connected to “Waters of the State” pursuant to Chapter 403 of the Florida Statutes, Rules 62-302 and 62-330 of the Florida Administrative Code (F.A.C.). Development activities altering wetlands and/or drainage will require a Statewide Environmental Resource Permit (SWERP) from the SJRWMD. Different ERP Permits for various activities, General Permits and exemptions can be found in the *State of Florida Environmental Resource Permit Applicant’s Handbook, Volume I*. Specific design standards, basin specific criteria and procedures can be found in the *State of Florida Environmental Resource Permit Applicant’s Handbook, Volume II*.

Wetlands and surface waters that will fall under the regulatory jurisdiction of the SJRWMD were not observed within the subject project boundary during the field investigation.

### **5.2 Florida Department of Environmental Protection**

#### **5.2.1 Stormwater Pollution Prevention Plan**

The U.S. Environmental Protection Agency (EPA) requires coverage under the National Pollutant Discharge Elimination System (NPDES) generic permit for discharge from large and small construction activities for any project that results in the clearing of one or more acres, pursuant to 40 CFR parts 122 and 124 and the Florida Department of Environmental Protection (FDEP), pursuant to rule 62-621.300 (4), F.A.C. The EPA has delegated responsibility to the FDEP to administer the NPDES permits for the State of Florida. In association with this permit, a Stormwater Pollution Prevention Plan (SWPPP), which will be implemented during the construction of the project, will also be required. The primary functions of the NPDES requirements are to ensure that sediment and erosion are controlled during construction. The NPDES permit typically requires use of Best Management Practices to ensure compliance with water quality standards. In addition, coverage under the generic permit for discharge of produced ground water from a non-contaminated site

activity must be secured for any construction-related dewatering activity pursuant to Rule 62-621.302.

### **5.2.2 FDEP 404 Permit Program**

The EPA has delegated Federal authority to the Florida Department of Environmental Protection (FDEP) to administer dredge and fill applications within “Assumed Waters” that fall under the jurisdiction of Section 404 within the State of Florida pursuant to rule 62-331, F.A.C., “State 404 Program”. The State 404 Program rule was created to include federal requirements that were not addressed by the Florida SWERP program. The State 404 Program is a separate program from the existing SWERP program and projects within Assumed Waters will require both SWERP and State 404 authorizations. The State 404 Program became effective on December 22, 2020. Once an application is confirmed by FDEP to included Federal jurisdictional wetland areas, the application will be assessed to determine if those areas will require authorization for any proposed impacts per Section 404. **After a preliminary review of the subject project, areas meeting the jurisdictional definition of Assumed Waters (“Waters of the United States” and “Adjacent Waters”) pursuant to Section 404 of the Clean Water Act were not observed within the subject project boundary.**

## **6.0 PROTECTED FAUNA AND FLORA**

Preliminary ecological investigations included review of published and unpublished literature concerning the subject project and surrounding area, solicitation of databases on protected species, field investigations to generally delineate and characterize the habitats and a preliminary field survey for the occurrence of protected flora and fauna.

### **6.1 Records Search**

Prior to initiation of field work, a records review of documented wildlife observations (Wildlife Occurrence Database System) maintained by the Florida Fish and Wildlife Conservation Commission (FFWCC) was conducted. Other resources used as aids included the following: aerials,



*Soil Survey of Lake County, Florida*; Florida Natural Areas Inventory (FNAI); and Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida (FFWCC). **The public database did not indicate recorded observations of protected species located on, or in proximity to, the subject project. According to the public databases, the subject project is located within the USFWS Florida Scrub Jay Consultation Area and the USFWS Sand Skink Consultation Area.**

## **6.2 Field Investigation**

CPH biologists conducted a field investigation of the subject project on December 21, 2022. General reconnaissance of the site was conducted, looking for the occurrence of federal or state-listed flora and fauna as well as general wildlife utilization.

Regulatory oversight for protected fauna and flora is the responsibility of the U.S. Fish and Wildlife Service (USFWS), FFWCC and the Florida Department of Agriculture and Consumer Services (DACS). The USFWS is the federal agency responsible for protecting the nation's fish and wildlife resources through implementation of the Endangered Species Act of 1973, as amended. ("ESA," 16 U.S.C. 1513-1543). **Species (or their signs) protected under the ESA were not observed on, or adjacent to, the subject project during the field investigation.**

The Florida Fish and Wildlife Conservation Commission (FFWCC) regulate the taking of species listed as endangered, threatened or of special concern and their nests through Rules listed in 68A-27 Florida Administrative Code. The FFWCC also provides technical assistance to other agencies that have regulatory authority over activities, which may affect fish and wildlife and their habitat. **State listed protected species were not observed on, or adjacent to, the subject project during the field investigation.**

Section 581.185, Florida Statutes and Chapter 5B-40, F.A.C., delegates authority to the Florida Department of Agriculture and Consumer Services (DACS) to designate and regulate plants listed as "endangered," "commercially exploited" and "threatened." It is unlawful for an individual to harvest endangered or commercially exploited plants from the private land of another or any public land

without first obtaining written permission of the landowner and a permit from DACS. It is unlawful for an individual to harvest a threatened plant from private land or public land without first obtaining written permission of the landowner. **DACS protected plants, threatened and endangered, were not observed on the subject project during the field investigation.**

Wildlife utilization is a measure of direct observations or evidence of animals' presence (e.g. scat, tracks, dens, etc.). Potential wildlife utilization was evaluated on the basis of food sources, nesting areas, roosting areas, den areas and protective covering. During the field investigation, direct observations or signs of wildlife on the property included American crows (*Corvus brachyrhynchos*), gray squirrels (*Sciurus carolinensis*) and a red-tailed hawk (*Buteo jamaicensis*) flying overhead.

### **6.3 Protected Fauna and Flora Regulatory Considerations**

Below is a discussion of select species or groups of wildlife that frequently affect properties or projects even though these species are not physically located on the development site.

#### **6.3.1 Migratory Bird Treaty Act**

The USFWS also administers and enforces the Migratory Bird Treaty Act (MBTA) of 1918, as amended, (16 USC 703-712) which makes it unlawful to pursue, hunt, take, capture, kill or sell birds listed therein ("migratory birds"). The statute does not discriminate between live or dead birds and also grants full protection to any bird parts including feathers, eggs and nests. A migratory bird is any species or family of birds that live, reproduce or migrate within or across international borders at some point during their annual life cycle. The current list of birds protected under the MBTA was published in the *Federal Register* on April 16, 2020 which became effective on May 18, 2020. In total, 1,093 bird species are protected by the MBTA. **Species protected under the MBTA were observed within the subject project. Provided construction activities do not directly kill or harm birds, their nests or eggs, development of the subject project has a low probability of violating the MBTA.**

### 6.3.2 Bald Eagle

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d) and the regulations derived therefrom (50 CFR 22) state, in part, that no person shall take any bald eagle or any golden eagle, alive or dead, or any part, nest, or egg thereof with “take” meaning to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb. Both Federal and State laws and regulations make it unlawful to take any listed species with “take” meaning to harass, harm pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct.

Specific guidelines have been published for the protection of Bald eagle nests in “*Habitat Management Guidelines for the Bald Eagle in the Southeast Region*” (USFWS) when eagle nests and/or territories are located within the boundaries of a development project. **The records review indicated the closest bald eagle nests (LA199 and LA209) are approximately 2 miles south of the subject project. Due to the distance between the closest bald eagle nests and the subject project, there is a low probability that the eagle nests will adversely affect the development of the subject project. Bald eagle activity was not observed on, or within proximity to, the subject project during the field investigation.**

### 6.3.3 Wood Stork Core Foraging Area

The wood stork (*Mycteria americana*) is listed as Endangered by the USFWS and the FFWCC. The wood stork is protected under the Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 *et seq.* and Florida Chapter 68A, Florida Administrative Code. Inundated forested wetlands, cypress strands and domes, mixed hardwood swamps and sloughs provide nesting habitat. Nest sites are generally in woody vegetation over standing water, or on islands surrounded by broad expanses of open water. Shallow freshwater marshes, ponds, flooded pastures and ditches provide suitable foraging habitat. Wood storks nest in colonies and will return to the same colony site for many years so long as the site and the surrounding feeding habitat continue to supply the needs for the birds. The USFWS has determined the extent of the Core Foraging Area (CFA) as approximately 15 miles from the nesting colony for central Florida counties. **The subject project is not located within the USFWS designated Wood Stork Core Foraging Area (Figure 4).** Further, regulatory coordination regarding the wood stork should not be a consideration of this project as the projected limits do not include wetland habitats and therefore, wood stork habitat.

#### 6.3.4 Gopher Tortoise

The gopher tortoise (*Gopherus polyphemus*) is listed as a “Threatened” species by the FFWCC and is protected by state law under Chapter 68A-27, Florida Administrative Code. If the gopher tortoise is observed, or signs of the tortoise such as burrows are observed, their presence must be addressed prior to on-site construction activities. The FFWCC is the state agency responsible for overseeing the management of this species including permitting. According to the FFWCC there are several options to address sites slated for development with active gopher tortoise populations. These options include avoidance, on-site relocation and off-site relocation. All FFWCC permit scenarios will require local government approval of the development prior to permit issuance and tortoise relocation. **CPH scientists conducted a 100% survey for gopher tortoises and their signs on December 21, 2022. Gopher tortoises, or signs indicating their presence, were not observed on the subject project.** The results of the gopher tortoise survey are documented on **Figure 5**.

**According to FFWCC regulations, gopher tortoise surveys are valid for 90 days. CPH recommends conducting a tortoise survey to ascertain the full extent of the tortoise population at least 90 days prior to site construction in order to apply and process a permit with FFWCC, as appropriate.**

#### 6.3.5 USFWS Florida Scrub-Jay Consultation Area

The Florida Scrub-Jay (*Aphelocoma coerulescens coerulescens*) is listed as a Threatened species by the USFWS through the Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 *et seq.* The USFWS issues a Biological Opinion (BO) for projects and its effects on the threatened Florida scrub-jay in accordance with Section 7 or Section 10 of the Endangered Species Act of 1973, as amended (ESA) (87 stat. 884; 16 U.S.C. 1531 *et seq.*). The BO will spell out the negotiated mitigation measures taken by the property to ensure the listed species is not adversely affected.

If scrub habitat is located within ¼ mile of the site, regardless of the type of habitat on the subject project, the USFWS considers the on-site habitat Type III scrub jay habitat. According to the USFWS database the project is located within the USFWS Scrub Jay Consultation Area. However, there is no known mapped scrub jay territory on, or in proximity to the subject project (**Figure 4**). **During the December 2022 field investigation, Florida scrub jays, and their habitat, were not observed**

**within the subject project boundaries. There is a low probability that the Florida scrub jay will be adversely affected by the development of the subject project. If written confirmation is desired by the project owner regarding the “not likely to adversely affect” determination for the Florida scrub jay, the property owner or project owner, should conduct an informal consultation with the USFWS.**

### **6.3.6 USFWS Sand Skink Consultation Area**

The sand skink (*Neoseps reynoldsi*) and blue-tailed mole skink (*Eumeces egregious lividus*) were listed as threatened under the Endangered Species Act (ESA) in 1987. Individuals or entities intending to conduct activities that may affect listed species may lawfully incidentally take those species after consulting with the U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7 or 10 of the ESA. When a project is conducted, funded or authorized by a Federal agency, listed species consultation occurs pursuant to Section 7 of the ESA. If there is no Federal nexus (e.g., federal funding or authorization), a non-Federal entity who wishes to conduct an activity may legally “take” listed species after obtaining an Incidental Take Permit (ITP) from the USFWS in accordance with Section 10 of the ESA.

No critical habitat has been designated for the sand skink or blue-tailed mole skink. However, the USFWS has delineated a “Sand Skink and Blue-tailed Mole Skink Consultation Area” based on known locations of skinks, location of skink habitat as defined by appropriate soils and elevation, and natural and developed ecosystems that are known to support sand skinks or blue-tailed mole skinks. Proposed activities within the consultation area are more likely to affect sand skinks and blue-tailed mole skinks, while activities outside the consultation area are less likely to affect skinks. The consultation area provides an initial analysis tool; it should not be considered the only factor in determining if consultation with the USFWS is required.

Both sand skinks and blue-tailed mole skinks are endemic to the sandy ridges of central Florida. Sand skinks have been documented to occur in Highlands, Lake, Marion, Orange, Osceola, Polk and Putnam Counties. Blue-tailed mole skinks seem to be restricted to the Lake Wales Ridge in Highlands, Polk and Osceola Counties. They are generally found at, or above, elevations of 82 feet

above sea level and in excessively drained, well-drained and moderately well-drained sandy soils.

Research indicates that blue-tailed mole skinks typically occur with sand skinks. Only sand skinks leave visible signs, or tracks on sandy soil surfaces. Therefore, sand skink occurrence is used as an indicator of blue-tailed mole skink occurrence where the two species overlap in distribution. According to the USFWS Sand Skink & Blue-tailed Mole Skink Conservation Guidelines surveys must be conducted between March 1st and May 1st. Negative survey results (no skink tracts detected) obtained by surveys conducted outside of this time period will not be considered valid by the USFWS. Surveys should be conducted a minimum of four times in consecutive weeks within the survey time period to conclude that skinks are not present. Coverboards must be lifted and checked for tracks a minimum of once per week.

The subject project is located within the USFWS Sand Skink and Blue-tailed Mole Skink Consultation Area and contains a soil type preferred by skinks. Dense grass covers the non-paved portions of the project area which is typically not conducive to skink movement and survival.

**During the field investigation, sand skink tracks were not observed on the subject project. CPH recommends conducting an informal consultation with the USFWS to confirm if a sand skink survey is required and, if so, what areas of the project should be subject to a survey or to obtain written confirmation from the USFWS that the subject project is “not likely to adversely affect” the sand skink. If the USFWS requires a sand skink survey, time is of the essence, as the survey window is annually from March 1<sup>st</sup> to May 1<sup>st</sup>. The survey should begin mid-March 2023 to ensure construction is not delayed. The USFWS sand skink survey protocol requires a minimum of 4 weeks of data collection.**

## **7.0 SUMMARY AND RECOMMENDATIONS**

The 1.99-acre subject project is located in Sections 11 and 12, Township 22 South, Range 25 East, Lake County, Florida, along Jalarmy Road and Lake Minneola Shores. The surrounding land uses include residential homes, roads and open land.

According to wetland delineation methodologies outlined in the *Corps of Engineers Wetland Delineation Manual* (1987), the *2008 Corps Interim Regional Supplement to the Corps Wetland Delineation Manual: Atlantic & Gulf Coastal Plain Region* and the State of Florida Unified Wetland Delineation Methodology (Section 62-340, F.A.C.), jurisdictional areas that will fall under the regulatory jurisdiction of the SJRWMD and the FDEP 404 Program were not observed within the subject project boundary during the field investigation.

Different SWERP Permits for various activities, General Permits and exemptions can be found in the *State of Florida Environmental Resource Permit Applicant's Handbook, Volume I*. Specific design standards, basin specific criteria and procedures can be found in the *State of Florida Environmental Resource Permit Applicant's Handbook, Volume II*.

CPH scientists conducted a field investigation of the subject project in December 2022. General reconnaissance of the site was conducted, looking for the occurrence of federal or state-listed flora and fauna as well as general wildlife utilization. Public databases were reviewed for the documented occurrence of protected species on the subject project and in proximity to the subject project. Protected species, and their signs, were not observed on, or in proximity to, the subject project during the field investigation.

The gopher tortoise is listed as a "Threatened" species by the FFWCC and is protected by state law under Chapter 68A-27, Florida Administrative Code. Tortoises or their signs were not observed on the project area during the December 2022 field investigation. Tortoise surveys are valid for 90 days pursuant to FFWCC regulations. CPH recommends conducting another gopher tortoise survey at least 90 days prior to construction to confirm the presence or absence of the gopher tortoise. If permitting is required to address the presence of tortoises, 90 days should be sufficient time to conduct permitting and relocation prior to construction.

The subject project is located within the USFWS Consultation Area for the Florida scrub jay. However, during the December 2022 field investigation, scrub jays and their habitat were not observed within the subject project boundaries. CPH recommends conducting an informal consultation with the USFWS to solicit their review of the existing conditions of the subject project and field investigation observations confirming lack of foraging and nesting habitat to receive written confirmation of the "not likely to adversely affect" determination

regarding the scrub jay or determine if the USFWS will require a survey. The survey for the scrub jay is time sensitive and if a survey is required the timeframe is March, July, September and October.

The subject project is located within the USFWS Sand Skink and Blue-tailed Mole Skink Consultation Area, contains a soil type preferred by skinks, and is at an elevation above 82 feet above mean sea level. Which is preferred by skinks. The subject project does not contain optimal skink habitat due to dense grass cover which prevents skink movement and survival. During the field investigation, sand skink tracks were not observed on the subject project. CPH recommends conducting an informal consultation with the USFWS to confirm if a sand skink survey is required and, if so, what areas of the project should be subject to a survey or to obtain written confirmation from the USFWS that the subject project development is “not likely to adversely affect” the sand skink. CPH recommends conducting the USFWS informal consultation as soon as possible as the annual sand skink survey window, March 1<sup>st</sup> to May 1<sup>st</sup>, is approaching.

As a preliminary assessment, the findings of this report concerning native vegetation and land use may be subject to change upon more detailed analysis. Additionally, failure to detect a listed species does not necessarily infer species absence as wildlife are mobile, exhibit seasonality of occurrence and generally have low population levels. Further, nothing in this report regarding environmental laws, rules and regulations is intended to be a legal interpretation or opinion, thus readers of this report should contact an attorney concerning any matters of law.

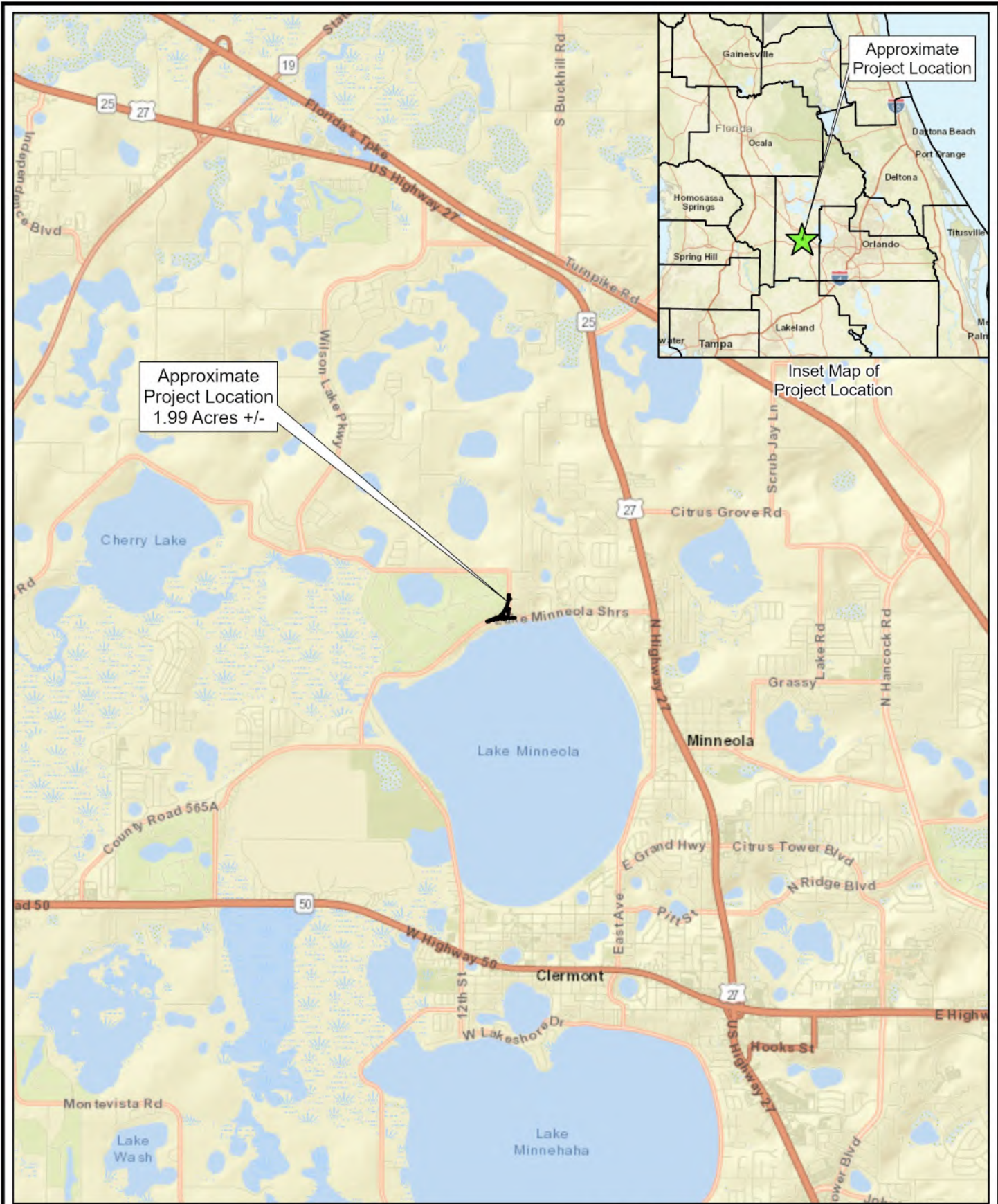




## **APPENDIX A**

### **Figures**

# **Jalarmy Road and Lake Minneola Shores Roundabout Preliminary Ecological Assessment Report Lake County, Florida**



Approximate Project Location  
1.99 Acres +/-

Approximate Project Location

Inset Map of Project Location



Scale: 1 inch = 1 mile  
 Date: 1/19/2023  
 Photo Date: N/A  
 Project No. L3609  
 Biologist: CM      GIS: ERR



**LOCATION MAP**

JALARMY ROAD AND LAKE MINNEOLA SHORES ROUNDABOUT  
 SECTIONS 11 & 12, TOWNSHIP 22 SOUTH, RANGE 25 EAST  
 LAKE COUNTY, FLORIDA

**FIGURE 1**

Soil No.	Description	Approximate Acres
8	Candler sand, 0 to 5 percent slopes	0.27
9	Candler sand, 5 to 12 percent slopes	1.72

USDA Natural Resource Conservation Service



	Scale: 1 inch = 250 feet		<p align="center"><b>SOILS MAP</b></p> <p align="center">JALARMY ROAD AND LAKE MINNEOLA SHORES ROUNDABOUT SECTIONS 11 &amp; 12, TOWNSHIP 22 SOUTH, RANGE 25 EAST LAKE COUNTY, FLORIDA</p>	<p align="center"><b>FIGURE 2</b></p>
	Date: 1/19/2023			
	Photo Date: 2020			
	Project No. L3609			
Biologist: CM	GIS: ERR			

FLUCFCS CODE	FLUCFCS CLASSIFICATION	APPROXIMATE ACREAGE	PERCENT OF SITE
190	Open Land	1.17	58.79%
814	Roads and Highways	0.82	41.21%

Florida Land Use, Cover and Forms Classification System (FDOT 1999)



Approximate Project Boundary

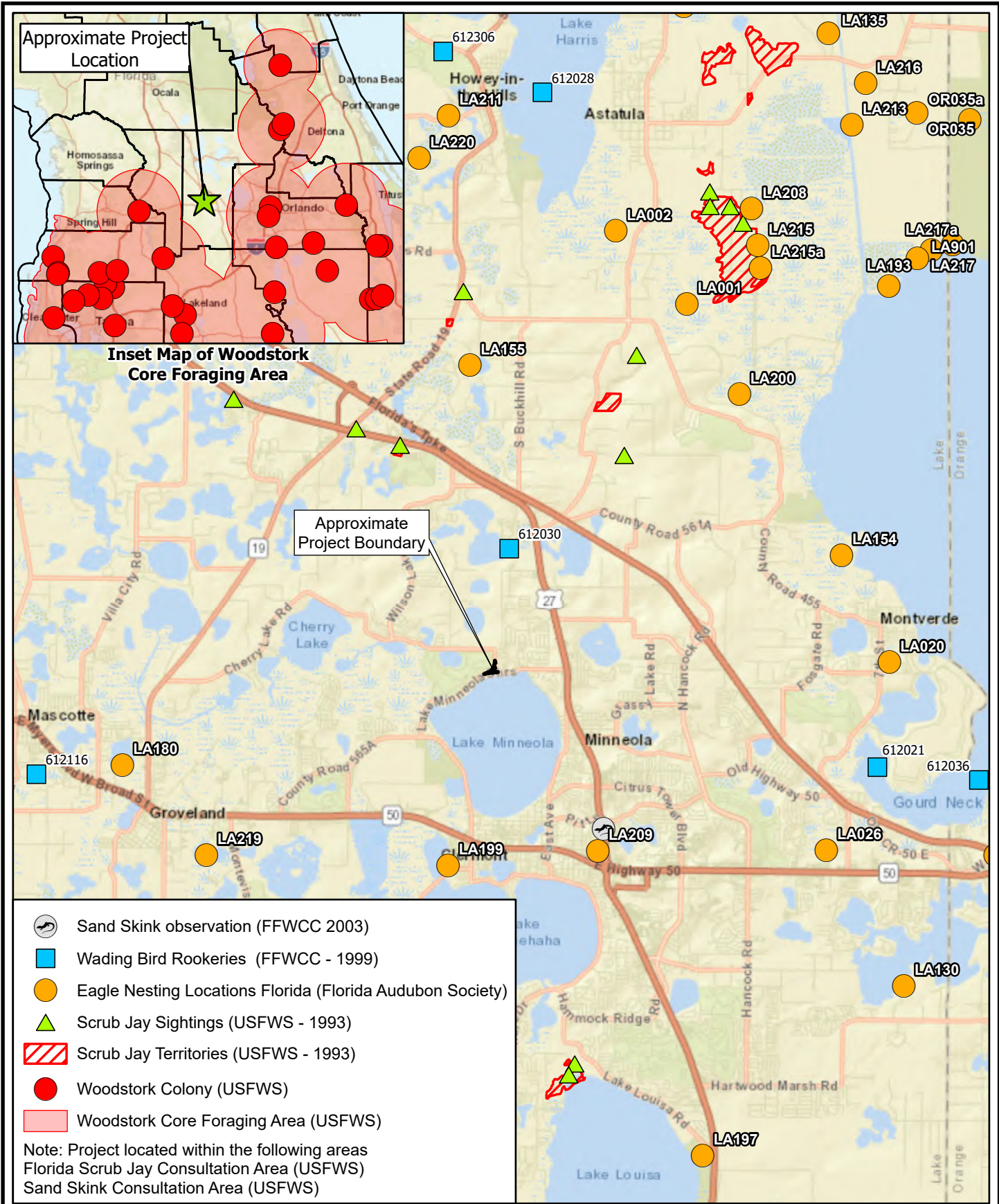


Scale: 1 inch = 175 feet  
 Date: 1/19/2023  
 Photo Date: 2020  
 Project No. L3609  
 Biologist: CM GIS: ERR



**PRELIMINARY VEGETATION AND LAND USE MAP**  
 JALARMY ROAD AND LAKE MINNEOLA SHORES ROUNDABOUT  
 SECTIONS 11 & 12, TOWNSHIP 22 SOUTH, RANGE 25 EAST  
 LAKE COUNTY, FLORIDA

**FIGURE 3**




Scale: 1 inch = 2 miles  
 Date: 1/19/2023  
 Photo Date: N/A  
 Project No. L3609  
 Biologist: CM GIS: ERR



**SPECIES MAP**  
 JALARMY ROAD AND LAKE MINNEOLA SHORES ROUNDABOUT  
 SECTIONS 11 & 12, TOWNSHIP 22 SOUTH, RANGE 25 EAST  
 LAKE COUNTY, FLORIDA

**FIGURE 4**



 Survey Transect Line  
 Note: Gopher tortoise burrows were not observed during the December 21, 2022 survey.



Scale: 1 inch = 175 feet  
 Date: 1/19/2023  
 Photo Date: 2020  
 Project No. L3609  
 Biologist: CM      GIS: ERR



**GOPHER TORTOISE SURVEY MAP**  
 JALARMY ROAD AND LAKE MINNEOLA SHORES ROUNDABOUT  
 SECTIONS 11 & 12, TOWNSHIP 22 SOUTH, RANGE 25 EAST  
 LAKE COUNTY, FLORIDA

**FIGURE**  
**5**




## **APPENDIX B**

### **Photographs**

# **Jalarmy Road and Lake Minneola Shores Roundabout Preliminary Ecological Assessment Report Lake County, Florida**




 Approximate Photograph Location and Direction  
 Refer to Exhibits B2-B3



Scale: 1 inch = 175 feet  
 Date: 1/19/2023  
 Photo Date: 2020  
 Project No. L3609  
 Biologist: CM      GIS: ERR



**PHOTOGRAPH LOCATION MAP**  
 JALARMY ROAD AND LAKE MINNEOLA SHORES ROUNDABOUT  
 SECTIONS 11 & 12, TOWNSHIP 22 SOUTH, RANGE 25 EAST  
 LAKE COUNTY, FLORIDA

**EXHIBIT  
B1**





Photograph #1



Photograph #2



Photograph #3



Photograph #4

Refer to Exhibit B1 for photograph location and direction.



Scale: 1 inch = feet  
 Date: 1/19/2023  
 Photo Date: 2020  
 Project No. L3609  
 Biologist: CM GIS: ERR



**PHOTOGRAPHS**

JALARMY ROAD AND LAKE MINNEOLA SHORES ROUNDABOUT  
 SECTIONS 11 & 12, TOWNSHIP 22 SOUTH, RANGE 25 EAST  
 LAKE COUNTY, FLORIDA

**EXHIBIT  
 B2**



Photograph #5



Photograph #6



Photograph #7



Photograph #8

Refer to Exhibit B1 for photograph location and direction.



Scale: 1 inch = feet  
 Date: 12/29/2022  
 Photo Date: 2020  
 Project No. L3609  
 Biologist: CM GIS: ERR



**PHOTOGRAPHS**

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 B3**