

COUNTY BARN VILLAS

Section 8, Township 50 South, Range 26 East
Collier County, Florida

Protected Species Assessment

December 2016

Prepared for:

**Neal Communities
5800 Lakewood Ranch Blvd.
Sarasota, FL 34240**

Prepared by:

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INTRODUCTION

This 38.22± acre project is located within a portion of Section 8, Township 50 South, Range 26 East, Collier County, Florida. The surrounding lands have been developed to varying degrees and consist of the Seacrest School to the north, the Unity of Naples Church to the east, a borrow pit owned by Collier County to the south, and County Barn Road to the west. A major canal is present between County Barn Road and the property's west property line.

SITE CONDITIONS

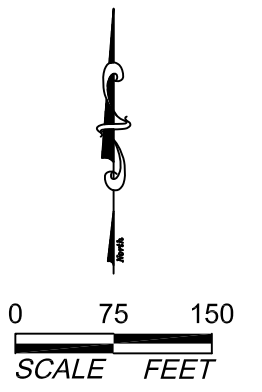
Based on a review of historical aerial photography the center of the property had been cleared prior to 1975 and a house with scattered trees were present at that time. By 1985 additional homes had been constructed and land cleared in the northern and western portions of the site. There are currently three single family homes with associated structures on the property. Many of the previously cleared areas have become re-vegetated over time by both exotic and native species.

VEGETATIVE CLASSIFICATIONS

The predominant vegetation associations were mapped in the field on 2016 digital 1" = 150' scale aerial photography. The approximate property boundary was obtained from Rhodes and Rhodes Land Surveying, Inc. and inserted into the digital aerial. Eight vegetation associations were identified using the Florida Land Use, Cover and Forms Classification System (FLUCCS). Figure 1 depicts the approximate location and configuration of these vegetation associations and Table 1 summarizes the acreages by FLUCCS Code. A brief description of each FLUCCS Code is provided below.

Table 1. Acreage Summary by FLUCCS Code

| FLUCCS CODE | DESCRIPTION | ACREAGE |
|--------------------|---|----------------|
| 411E4 | Pine Flatwoods Invaded by Exotics (76 – 90%) | 1.88 |
| 419E4 | Other Pines Invaded by Exotics (76 – 90%) | 3.97 |
| 450 | Mixed Exotic Upland Forest | 11.84 |
| 619 | Exotic Wetland Hardwoods | 1.61 |
| 624E4 | Cypress – Pine Invaded by Exotics (76 – 90%) | 0.83 |
| 625DE4 | Drained Hydric Pine Flatwoods Invaded by Exotics (76 – 90%) | 2.29 |
| 740 | Disturbed Land | 15.61 |
| 742 | Borrow Areas | 0.19 |
| | Total | 38.22 |



SECTION: 8
TOWNSHIP: 50 S
RANGE: 26 E

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| Total | | 38.22 ac. |

- Remnant Perimeter Swale
- ◆ Air Plant (5)
- ⊕ Butterfly Orchid (1)

Notes:
 1. Property boundary provided by GradyMinor
 2. Mapping based on photointerpretation of 2015 aerial photography and ground truthing in February 2016, June 2016, and August 2016.
 3. Delineation of jurisdictional wetlands is preliminary and subject to field review/approval by applicable regulatory agencies.
 4. Widely scattered additional airplants present onsite. Only those within proposed preserve shown.

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Figure 1. Protected Species Assessment Map

County Barn Villas

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FLUCCS Code 411E4, Pine Flatwoods Invaded by Exotics (76 – 90%)

This upland community is located in the southeastern portion of the property and contains a canopy of slash pine (*Pinus elliotii*), Australian pine (*Casuarina equisetifolia*), earleaf acacia (*Acacia auriculiformis*), and java plum (*Syzygium cumini*). The midstory is dominated by Brazilian pepper (*Schinus terebinthifolius*) and cocoplum (*Chrysobalanus icaco*). Saw palmetto (*Serenoa repens*) and a thick layer of leaf duff forms the ground cover.

FLUCCS Code 419E4, Other Pines Invaded by Exotics (76 – 90%)

This upland community is located in the west central portion of the site and contains a canopy of slash pine, Australian pine, earleaf acacia, and java plum. The midstory is dominated by Brazilian pepper and cocoplum. A thick layer of leaf duff forms the ground cover. The primary difference between this community and FLUCCS Code 411E4 described above is the lack of saw palmetto in the ground cover strata.

FLUCCS Code 450, Mixed Exotic Upland Forest

Significant portions of the property are disturbed uplands dominated by non-native trees. These include Australian pine, earleaf acacia, java plum, and Brazilian pepper. A thick layer of leaf duff forms the ground cover.

FLUCCS Code 619, Exotic Wetland Hardwoods

One forested wetland is located in the east central portion of the property. The canopy and midstory of the wetland are dominated by Brazilian pepper and air potato (*Dioscorea bulbifera*). Ground cover is sparse.

FLUCCS Code 624E4, Cypress – Pine Invaded by Exotics (76 – 90%)

Forested wetlands are located in the northwest and southeast corners of the site. The canopy and midstory are vegetated by slash pine, bald cypress (*Taxodium distichum*), earleaf acacia, and java plum. Brazilian pepper and cocoplum are common in the midstory. Ground cover consists of scattered swamp fern (*Blechnum serrulatum*) and a thick layer of leaf duff.

FLUCCS Code 625DE4, Drained Hydric Pine Flatwoods Invaded by Exotics (76 – 90%)

This habitat type, located in the northwestern portion of the property, is similar to FLUCCS Code 624E4 described above with the exception that the bald cypress in the canopy and swamp fern in the ground cover are generally lacking. Widely scattered clumps of saw palmetto are also present.

FLUCCS Code 740, Disturbed Land

The areas on the property that have been cleared of the majority of the native trees and that are being maintained as yards was mapped using this FLUCCS Code. This includes the residential structures and driveway as well as periodically mowed areas. The vegetation consists of scattered slash pine, cabbage palm (*Sabal palmetto*), queen palm (*Syagrus romanzoffiana*), planted sweet gum (*Liquidambar styraciflua*), laurel oak (*Quercus laurifolia*), java plum, Brazilian pepper, earleaf acacia, and banyan (*Ficus* sp.). Ground cover consists of species such as St. Augustine grass (*Stenotaphrum*

secundatum), Bermuda grass (*Cynodon dactylon*), whitehead broom (*Spermacoce verticillata*), dayflower (*Commelina diffusa*), pusley (*Richardia grandiflora*), fingergrass (*Eustachys petraea*), beggar tick (*Bidens* sp.), ragweed (*Ambrosia artemisiifolia*), and wedelia (*Wedelia trilobata*).

FLUCCS Code 742, Borrow Areas

A small excavated area is located in the northern portion of the site. The area is vegetated by cattail (*Typha* sp.), red ludwigia (*Ludwigia repens*), and water spangles (*Salvinia minima*).

A remnant perimeter swale has been excavated along the perimeter of the central portion of the property. The ditch is overgrown by Australian pine and Brazilian pepper. There are several breaks in the swale and only a small segment appears to connect to the County Barn Road canal in the northwestern portion of the site. No evidence of flow within this swale was observed.

SURVEY METHOD

Based on the general habitat types (FLUCCS Codes) identified on-site there is a very low potential for a limited number of species listed as endangered, threatened, or species of special concern by the Florida Fish and Wildlife Conservation Commission (FWC) or the United States Fish and Wildlife Service (FWS) to potentially occur on the subject parcel. These species include gopher tortoise (*Gopherus polyphemus*), eastern indigo snake (*Drymarchon corais couperi*), red-cockaded woodpecker (*Picoides borealis*), a variety of wading birds, Big Cypress fox squirrel (*Sciurus niger avicennia*), and Florida bonneted-bat (*Eumops floridanus*). The bald eagle (*Haliaeetus leucocephalus*), which has been delisted by the FWC and FWS, is still protected by other regulations and was therefore included in the survey. The Florida black bear (*Ursus americanus floridanus*), delisted in 2012, is still protected by the Florida Black Bear Management Plan and was therefore included in the survey. Please see Table 2 for additional listed species included in the survey. In addition, per Collier County regulations three species of orchids (*Cyrtopodium punctatum*, *Encyclia cochleata*, and *E. tampensis*) and four species of wild-pine (*Tillandsia fasciculata*, *T. utriculata*, *T. balbisiana*, and *T. flexuosa*) which could potentially occur on-site were included in the survey.

In order to comply with FWC/FWS survey methodology guidelines, each habitat type was surveyed for the occurrence of the species listed above using meandering pedestrian belt transects. Observations for listed species were made during specific protected species survey events. The meandering pedestrian belt transects were spaced approximately 50 to 75 feet apart. Observations were also made at selected points along the perimeter of the borrow area and the wetland dominated by Brazilian pepper and air potato. The approximate location of direct sighting or sign (such as tracks, nests, and droppings) of a listed species, when observed, was denoted on the aerial photography.

Table 2. Listed Species That Could Potentially Occur On-site

| FLUCCS CODE | Percent Survey Coverage | Species Name | Present | Absent |
|----------------|-------------------------|--|---------|---|
| 411E4 419E4 | 80 | Gopher Frog (<i>Rana areolata</i>) Eastern Indigo Snake (<i>Drymarchon corais couperi</i>) Gopher Tortoise (<i>Gopherus polyphemus</i>) Red-cockaded Woodpecker (<i>Picoides borealis</i>) Southeastern American Kestrel (<i>Falco sparverius paulus</i>) Big Cypress Fox Squirrel (<i>Sciurus niger avicennia</i>) Florida Black Bear (<i>Ursus americanus floridanus</i>) Florida Panther (<i>Felis concolor coryi</i>) | | √ √ √ √ √ √ √ √ |
| 450 | 80 | None | | |
| 619 | 80 | None | | |
| 624E4 | 80 | Gopher Frog (<i>Rana areolata</i>) Arctic Peregrine Falcon (<i>Falco peregrinus tundrius</i>) Little Blue Heron (<i>Egretta caerulea</i>) Snowy Egret (<i>Egretta thula</i>) Tricolored Heron (<i>Egretta tricolor</i>) Big Cypress Fox Squirrel (<i>Sciurus niger avicennia</i>) Everglades Mink (<i>Mustela vison evergladensis</i>) Florida Black Bear (<i>Ursus americanus floridanus</i>) Florida Panther (<i>Felis concolor coryi</i>) | | √ √ √ √ √ √ √ √ √ |

| FLUCCS CODE | Percent Survey Coverage | Species Name | Present | Absent |
|---|-------------------------|--|---------|--------|
| 625DE4 | 80 | Gopher Frog (<i>Rana areolata</i>) | | √ |
| | | Eastern Indigo Snake (<i>Drymarchon corais couperi</i>) | | √ |
| | | Arctic Peregrine Falcon (<i>Falco peregrinus tundrius</i>) | | √ |
| | | Little Blue Heron (<i>Egretta caerulea</i>) | | √ |
| | | Red-cockaded Woodpecker (<i>Picoides borealis</i>) | | √ |
| | | Snowy Egret (<i>Egretta thula</i>) | | √ |
| | | Tricolored Heron (<i>Egretta tricolor</i>) | | √ |
| | | Big Cypress Fox Squirrel (<i>Sciurus niger avicennia</i>) | | √ |
| | | Everglades Mink (<i>Mustela vison evergladensis</i>) | | √ |
| | | Florida Black Bear (<i>Ursus americanus floridanus</i>) | | √ |
| Florida Panther (<i>Felis concolor coryi</i>) | | | √ | |
| 740 | 80 | None | | |
| 742 | 80 | None | | |

The 1" = 150' scale aerial Protected Species Assessment Map (Figure 1) depicts the approximate location of the survey transects and the results of the survey. The listed species survey was conducted during the mid-day hours of July 8, 2016. The weather at the time of the survey was hot and sunny with a light breeze. Additional observations were made while mapping vegetation and flagging jurisdictional wetlands in February, June, July, and August 2016.

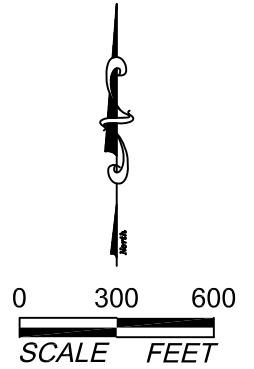
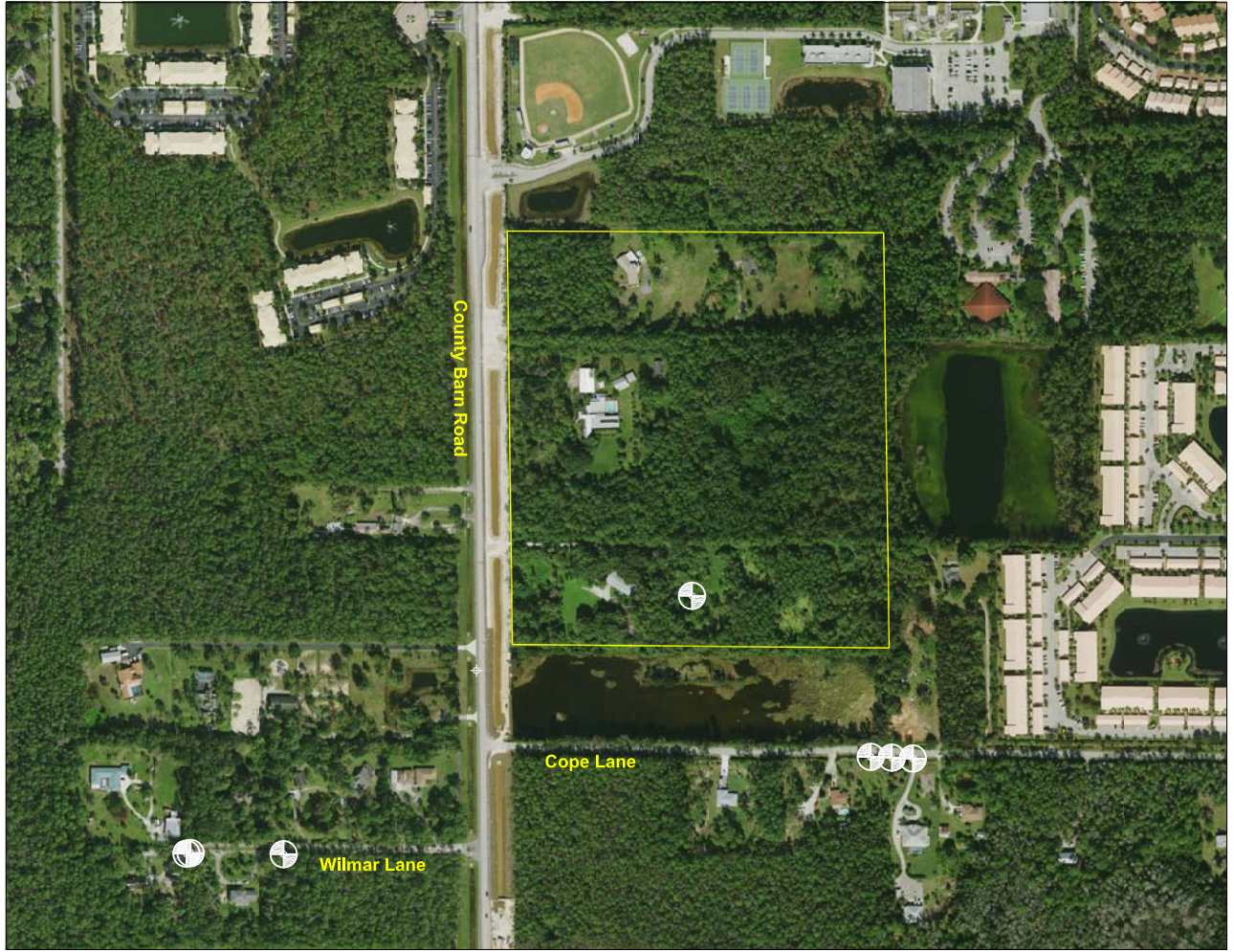
Prior to conducting the protected species survey, a search of the FWC listed species database (updated June 2016) was conducted to determine the known occurrence of listed species in the project area. This search revealed no known protected species occurring on or immediately adjacent to the site. The database indicated that Florida black bear have been recorded adjacent to the property (Figure 2). The Florida black bear is listed as threatened by the FWC but is not listed by the FWS. The property is within a wood stork core foraging area but is not within Panther Priority 1 or 2 zones.

SURVEY RESULTS

No species listed by either the FWS or the FWC were observed on the site during the protected species survey. In addition to the site inspection, a search of the FWC species

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 Nuisance Bear Calls

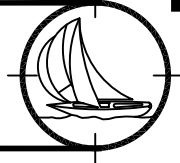
- Notes:**
1. Property boundary provided by GradyMinor Surveying, Inc.
 2. Nuisance bear call locations obtained from the Florida Fish and Wildlife Conservation Commission (June 2016).

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December 01, 2016 1:38:55 p.m.
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Figure 2. Nuisance Bear Calls

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database (updated June 2016) revealed no known protected species within or immediately adjacent to the project limits.

Collier County Plants

The protected species survey was initiated within the proposed forested wetland preserve located within the southeastern corner of the property. Both butterfly and wild-pines were observed within the future preserve area. Additional wild-pines were observed elsewhere on-site but are not shown on Figure 1. Because both species occur within the preserve, there is no requirement to relocate butterfly orchids or stiff-leaved wild-pines from the development area pursuant to Collier County LDC Section 3.04.03.