



February 19, 2024

Mr. John Goolsby  
Clearview Land Design, P.L.  
3010 W. Azeele St., Suite 150  
Tampa, FL 33609

**RE: 2023 Listed Species Survey Report  
King Ranch Property  
Pasco County, Florida**

Mr. Goolsby,

In December 2023 Applied Bionomics, LLC (Applied Bionomics) completed a preliminary listed species survey for the King Ranch Property (Parcel IDs: 34-26-19-0000-00100-0000, 34-26-19-0000-00100-0050, 34-26-19-0000-00100-0060, 34-26-19-0000-00100-0070, 34-26-19-0000-00400-0000, and 34-26-19-0000-00600-0000; Property), located within Section 34, Township 26 South, Range 19 East, in Pasco County, Florida (Figure 1). More specifically, the Property encompasses  $\pm 323.99$  acres situated just north of County Line Road, between Interstate 75 and Cypress Creek Road, and 0.30 miles south of State Road 54 (Figure 2). This listed species survey was designed to assess the potential presence of listed species known to occur Pasco County and utilize habitats similar to those observed on the Property (Table 1). These species include, but are not limited to, gopher tortoise (*Gopherus polyphemus*), southeastern American kestrel (*Falco sparverius paulus*), Florida sandhill crane (*Antigone canadensis*), bald eagle (*Haliaeetus leucocephalus*), wood stork (*Mycteria americana*), and other wadingbird species.

**Current Site Conditions** – According to the U.S. Natural Resource Conservation Service (NRCS) Web Soil Survey (WSS), there are 14 soil types, including open water, occurring on the Property (Figure 3). Tavares Sand, 0 to 5 Percent Slopes (Soil ID 6,  $\pm 73.57$  acres, 23% of the Property), Anclote Fine Sand, 0 to 2 Percent Slopes, Ponded (Soil ID 27,  $\pm 55.17$  acres, 17% of the Property), Candler Fine Sand, 0 to 5 Percent Slopes (Soil ID 13,  $\pm 41.10$  acres, 13% of the Property), Delray Mucky Fine Sand (Soil ID 63,  $\pm 41.01$  acres, 13% of the Property), and Sparr Fine Sand, 0 to 5 Percent Slopes (Soil ID 7,  $\pm 34.67$  acres, 11% of the Property) are the dominate soils identified onsite (Figure 3). In their undisturbed state, these soils range from moderately well drained soils to very poorly drained soils, typically associated with sandhill and wetland habitats.

The habitats on the Property have been classified using the Florida Cooperative Land Cover System [CLC; FWC and Florida Natural Areas Inventory (FNAI), Nov. 2021]. There are eleven habitat types identified on the Property (Figure 4). The primary habitat types identified on the Property are Improved Pasture (CLC 183313,  $\pm 172.71$  acres, 53% of the Property), Cypress (CLC 2211,  $\pm 47.16$  acres, 15% of the Property), and Mixed Hardwood-Coniferous (CLC 1400,  $\pm 49.12$  acres, 15% of the Property) (Figure 4).

The two main types of upland habitats occurring onsite are Open Pasture and Mixed Hardwood-Coniferous forested habitat (Table 2, Figure 4). The Open Pasture habitat is dominated by bahiagrass (*Paspalum notatum*), and the forested habitat is mostly comprised of a mix of longleaf pine (*Pinus palustris*), slash pine (*Pinus elliottii*), and live oak (*Quercus virginiana*). The understory in the forested habitat contains saw palmetto (*Serenoa repens*), beautyberry (*Callicarpa americana*), black cherry (*Prunus serotina*), and Caesar weed (*Urena lobata*).

The wetland habitats observed on the Property are mostly cypress (*Taxodium distichum*), with scattered red maple (*Acer rubrum*) and wax myrtle (*Morella cerifera*) around the shallow perimeter. The Property also contains man-made or altered, open-water, Marsh habitat.

**General Listed Species Survey Methodology** - Ecologists from Applied Bionomics assessed the Property for the occurrence of, and usage by, species considered Endangered or Threatened by the Florida Fish and Wildlife Conservation Commission (FWC) under Rule 68A-27, F.A.C. or the U.S. Fish and Wildlife Service (USFWS) under 50 CFR 17. Surveys were performed in general accordance with the methodologies provided and developed by FWC, USFWS, and Florida Natural Areas Inventory (FNAI). Ecologists surveyed the Property for signs (i.e., tracks, burrows, nests, scat, whitewash, and other various indicators) of possible listed species using the Property during two separate survey events (Figures 5 and 6, Tables 1 and 3).

**Gopher Tortoise Survey** – A species-specific gopher tortoise burrow survey was conducted on the Property by FWC-Authorized Gopher Tortoise Agents (FWC Permit Nos. GTA-09-000731, GTA-22-00039, and GTA-22-00046A) and agents in training from Applied Bionomics, in accordance with methods found in the FWC Gopher Tortoise Permitting Guidelines (April 2023). The survey covered over 25% of the potentially suitable habitats on the Property using, straight-line, pedestrian transects. The transect widths varied between 5 and 20 meters, depending on vegetation density and ground visibility. Observed burrows were categorized as active, inactive, or abandoned. Burrow locations were recorded using a handheld GPS device, marked with plastic flagging in the field, and their locations were plotted on aerial photography (Figure 6).

**Survey Results** – During the 2023 listed species survey effort, Applied Bionomics’ ecologists thoroughly canvassed the habitats on the Property for a combined total of four man-days, conducting over 18 survey man-hours onsite. While conducting the 2023 survey effort, ecologist observed four potential listed species foraging or nesting on the Property, including gopher tortoises, sandhill cranes, bald eagles, and kestrels (Figures 5 and 6). An active bald eagle nest, with two bald eagles perched at or near it, was observed in a pine tree in the southern half of the Property and at least one potentially suitable kestrel nesting cavity was observed in a pine snag during this survey effort. Several sandhill cranes were also observed foraging in the northern portion of the Property (Figure 5).

During the species-specific gopher tortoise burrow survey, 39 potentially occupied (active and inactive) gopher tortoise burrows were observed while surveying approximately 27% of the potentially suitable habitats on the Property (Figure 6). Based on these survey results, it is estimated that Property has a population of 74 gopher tortoises. This population estimate is based on the results from the 27% survey

of suitable habitats while using FWC's currently accepted 0.5 tortoises per burrow conversion factor (Table 4).

Based on the available habitats identified on the Property, other listed species have the potential to occur or nest onsite under the appropriate conditions, although no additional species were observed actively nesting onsite during the 2023 listed species survey effort (Table 1, Figure 5). Table 1 lists additional listed species that have the potential to occur on the Property, their habitat preferences, and the likelihood of occurrence.

**Conclusion** – Because listed species were observed nesting onsite, additional listed species permitting will be required prior to development activities occurring on the Property (Table 1; Figures 5 and 6). Species-specific surveys may also be necessary during the spring breeding season to determine if the kestrel and sandhill cranes observed foraging onsite during this survey effort were the overwintering, non-protected migratory species, or if they are the non-migratory, State listed Threatened, sub-species (Figure 5). Species consultation and permitting with FWC may be necessary prior to site development activities if kestrel or sandhill nesting is observed during species-specific surveys.

Based on the results of the 2023 Gopher tortoise burrow survey effort, it is estimated that the Property contains a population of 74 gopher tortoises (Table 4; Figure 6). Therefore, an FWC Gopher Tortoise Conservation Permit will be required prior to future site development activities. Once a conservation (relocation) permit is issued, all tortoises will need to be humanely captured and relocated from the Property prior to commencing clearing and grading activities.

Additionally, consultation and permitting via USFWS, in accordance National Bald Eagle Management Guidelines (2007), will be required for any planned construction activities occurring within 660 feet of the bald eagle nest observed in the southern half of the Property (Figure 7).

Please feel free to contact Applied Bionomics if you have any questions or require additional information regarding the information provided in this report.

Sincerely,



Andrew Fuddy  
Senior Ecologist/Principal



Mobile: 813.625.1463

Email: [Afuddy@ABenv.com](mailto:Afuddy@ABenv.com)

- Enc:     1 – Figure 1. USGS Quad Map  
          2 – Figure 2. Location Map  
          3 – Figure 3. NRCS Soils Map  
          4 – Figure 4. FWC/FNAI Land Use Map

- 5 – Figure 5. Listed Species Survey Map
- 6 – Figure 6. Gopher Tortoise Burrow Survey Map
- 7 – Figure 7. Eagle Nest Protection Buffer Map
- 8 – Table 1 – Potential Listed Wildlife Species
- 9 – Table 2 – FWC/FNAI Habitat
- 10 – Table 3 – 2023 Listed Species Survey Effort, Weather, Observation Summary
- 11 – Table 4 – Gopher Tortoise Burrow Survey Population Data

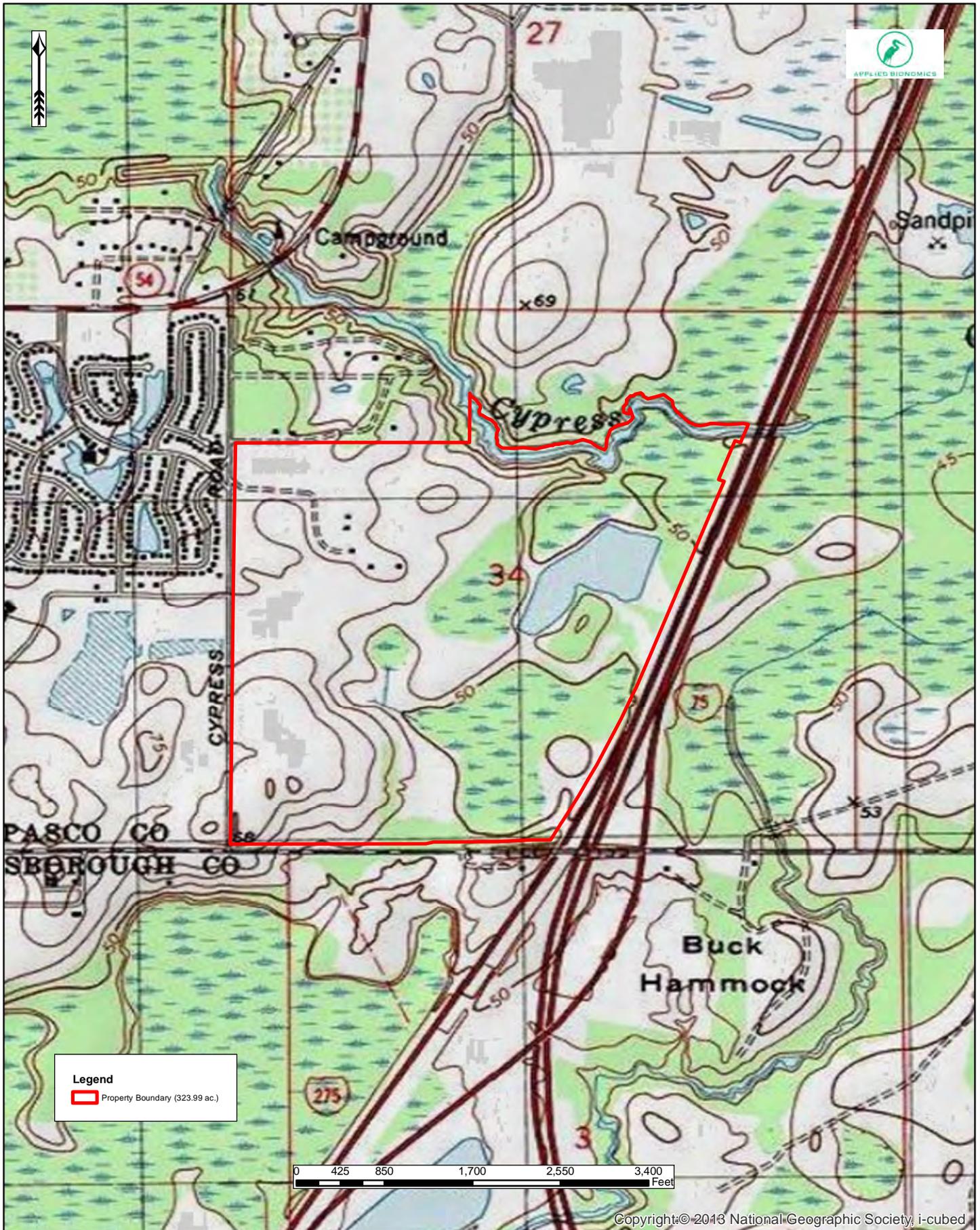


Figure 1 - USGS Quad Map  
King Ranch Property  
Clearview Land Design, P.L.  
Pasco County, Florida

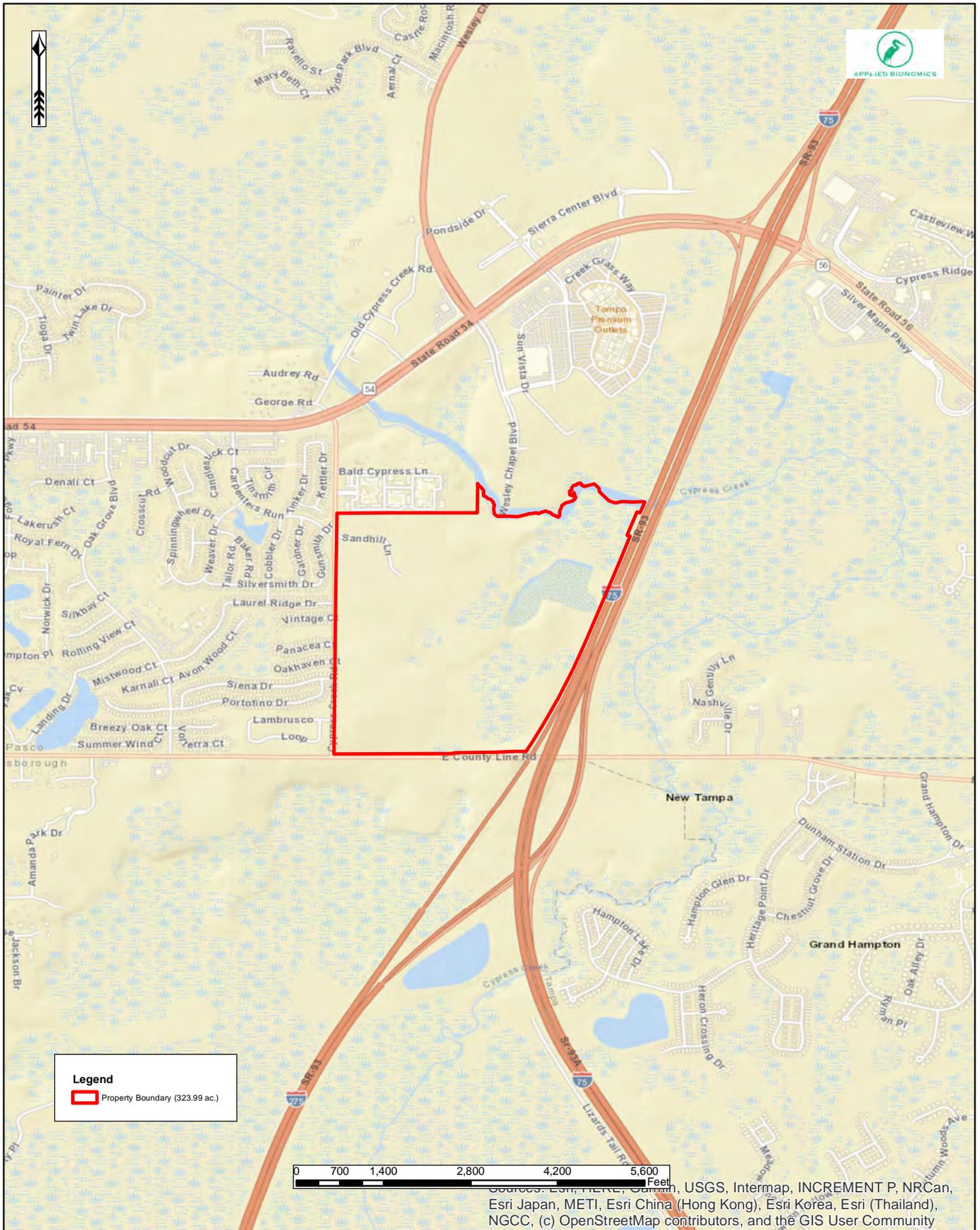


Figure 2 - Location Map  
 King Ranch Property  
 Clearview Land Design, P.L.  
 Pasco County, Florida



Figure 3 - NRCS Soils Map  
King Ranch Property  
Clearview Land Design, P.L.  
Pasco County, Florida



Figure 4 - FWC/FNAI Land Use Map  
 King Ranch Property  
 Clearview Land Design, P.L.  
 Pasco County, Florida

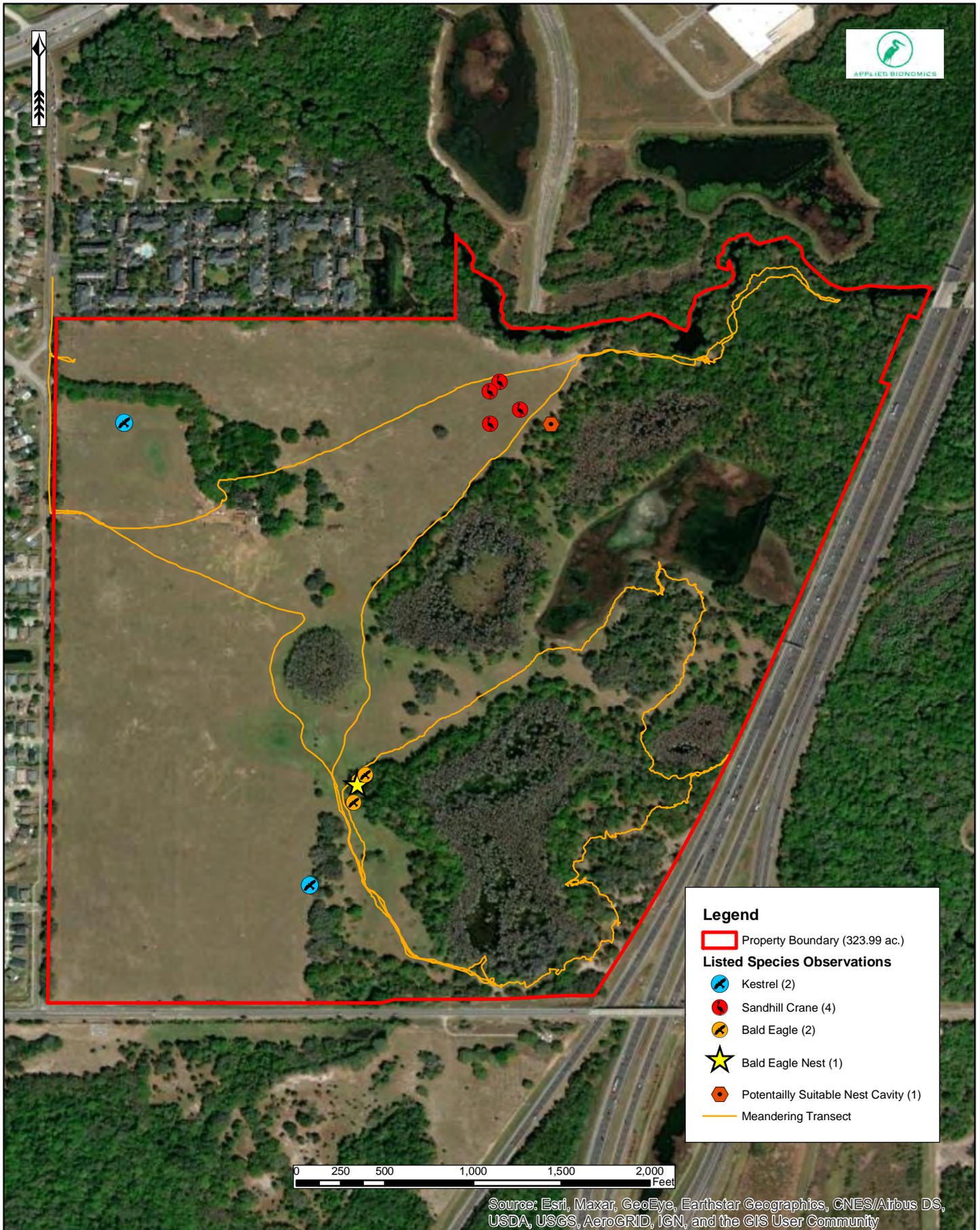


Figure 5 - Listed Species Survey Map  
 King Ranch Property  
 Clearview Land Design, P.L.  
 Pasco County, Florida

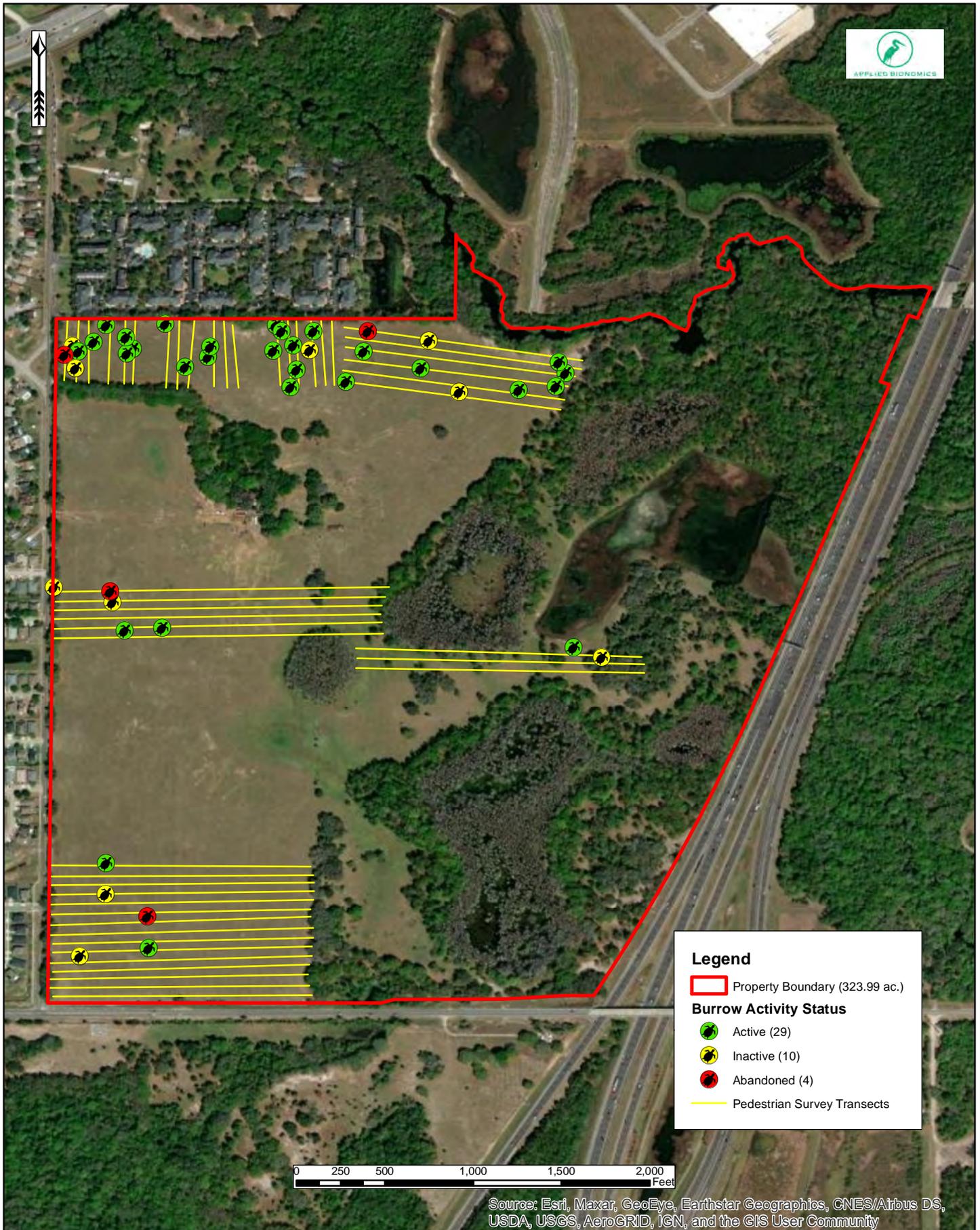


Figure 6 - Gopher Tortoise Burrow Survey Map  
 King Ranch Property  
 Clearview Land Design, P.L.  
 Pasco County, Florida

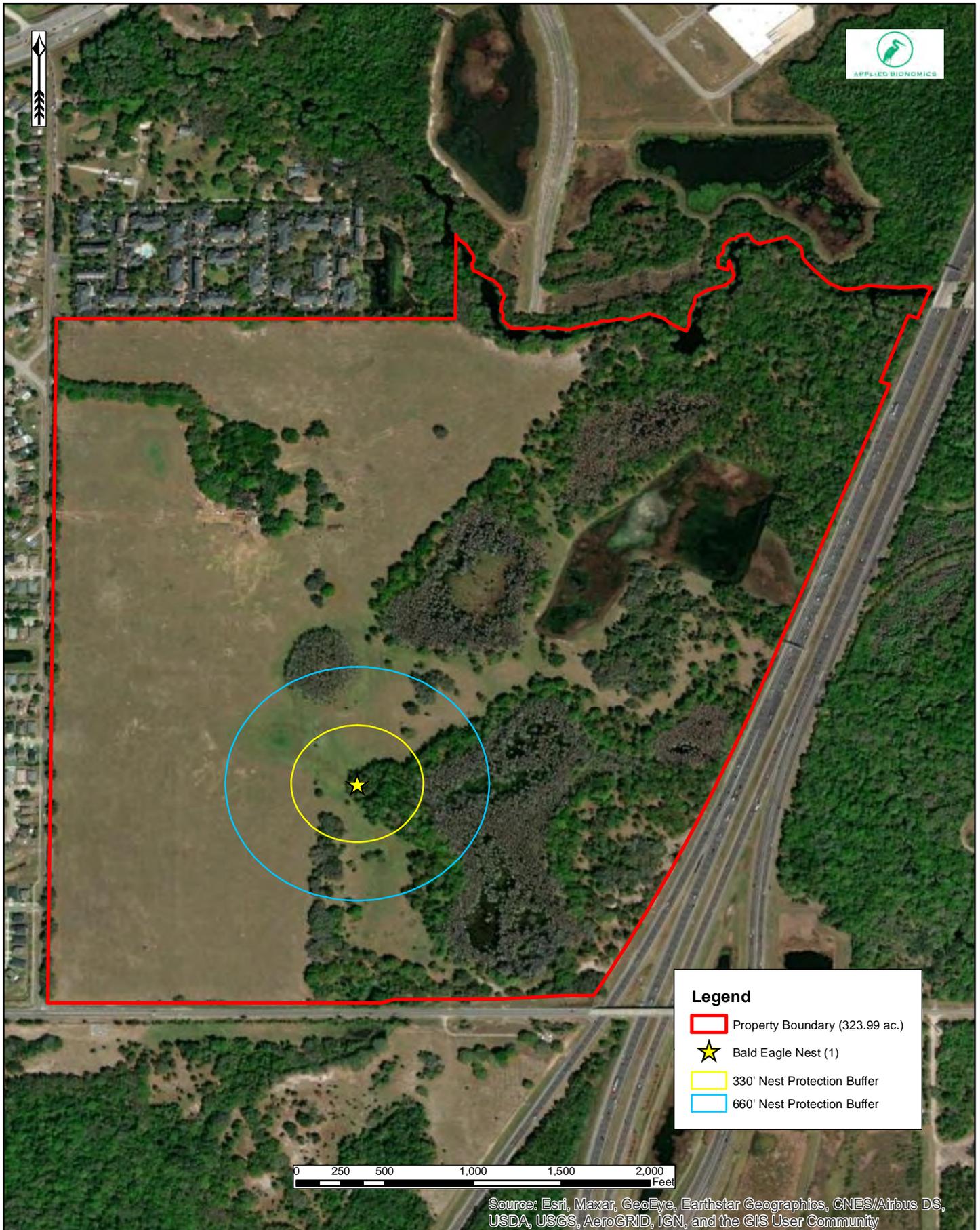


Figure 7 - Eagle Nest Protection Buffer Map  
 King Ranch Property  
 Clearview Land Design, P.L.  
 Pasco County, Florida

**Table 1. Listed Wildlife Species with the Potential to Occur on the King Ranch Property in Pasco County, Florida.**

Common Name	Scientific Name	Legal Status		Preferred Habitat	FLUCFCS	Survey Results
		USFWS	FWC			
<b>Reptiles</b>						
American alligator	<i>Alligator mississippiensis</i>	SAT	FT(SA)	Inhabits wetland areas such as streams, ditches, marshes, wet prairies, forested wetlands	500 series, 610, 621, 630, 641, and 653	No individuals were observed but the species could occur on the Property.
Eastern indigo snake	<i>Drymarchon couperi</i>	T	FT	Utilizes gopher tortoise burrows as refugia	320 series, 411, 412, 414, 421, 425, 426, 427, and 428	No individuals were observed but suitable habitat does occur on the Property.
Short-tailed snake	<i>Lampropeltis extenuata</i>	----	T	Inhabits dry upland habitats including sandhill, xeric hammock, and sand pine scrub.	411, 412, 413, 421, 432	No individuals were observed but suitable habitat does occur on the Property.
Gopher tortoise	<i>Gopherus polyphemus</i>	----	T	Inhabits sandhills, xeric oak scrub, sand pine scrub, and scrubby flatwoods	320 series, 411, 412, 421, 426, 427, 432, 473	39 potentially occupied (active or inactive) gopher tortoise burrows were observed during a 27% survey of the Property.
Florida pine snake	<i>Pituophis melanoleucus mugitus</i>	----	T	Inhabits upland, sandhill, xeric oak scrub, sand pine scrub, and scrubby flatwoods, but also pasture.	210, 411, 412, 413, 421, 432	No individuals were observed but suitable habitat does occur on the Property.
<b>Birds</b>						
Roseate spoonbill	<i>Ajaja ajaja</i>	----	T	Typically nests on coastal mangrove islands, or in Brazilian pepper near suitable foraging habitat. Forages in shallow water.	500 series, 612, 642, 652, 653, 654	No individuals were observed but the species could occur on the Property.
Little blue heron	<i>Egretta caerulea</i>	----	T	Inhabits marshes, swamps, ponds, estuaries, and rivers. Nests in shrubs and small trees.	500 series and 600 series	No individuals were observed but the species could occur on the Property.
Tricolored heron	<i>Egretta tricolor</i>	----	T	Inhabits marshes, swamps, ponds, estuaries, and rivers. Nests in shrubs and small trees.	500 series and 600 series	No individuals were observed but the species could occur on the Property.
Southeastern American kestrel	<i>Falco sparverius paulus</i>	----	T	Inhabits open lands and nests in natural cavities of dead trees and abandoned woodpecker nests.	321, 411, and 435	At least one individual was observed on the Property. Additional surveys will be necessary to determine if nesting occurs onsite.
Florida sandhill crane	<i>Grus canadensis pratensis</i>	----	T	Breeds in emergent palustrine wetlands and forages in pastures.	211, 212, 310, 321, 641	Several individuals were observed on the Property. Additional surveys will be necessary to determine if nesting occurs onsite.
Bald eagle	<i>Haliaeetus leucocephalus</i>	*O	O	Nests in trees or structures along coasts, rivers and lakes.	211, 213, 321, 411, 412	Two individuals and a nest were observed in a pine tree in the southern half of the Property.
Wood stork	<i>Mycteria americana</i>	T	FT	Inhabits estuarine or freshwater wetlands; nest in tops of trees in cypress or mangrove swamps.	560, 610, 621, 630, 640, 650	No individuals were observed but suitable habitat does occur on the Property.

Note: E: Endangered  
 T: Threatened  
 FT: State listed as Federally Threatened  
 FT(S/A): Federally Threatened due to similarity of appearance of a Threatened species.  
 SAT: Threatened due to similarity of appearance of a Threatened species  
 O\*: Bald eagles are afforded protection under the federal Bald and Golden Eagle Protection Act.

**Table 2. FWC/FNAI Cooperative Land Cover Classification Code for the King Ranch Property in Pasco County, Florida**

CLC Code	Habitat Description	Property Acreage	Percent of Property
1400	Mixed Hardwood-Coniferous	49.12	15%
2111	Wet Prairie	9.47	3%
2120	Marshes	13.97	4%
2140	Floating/Emergent Aquatic Vegetation	8.51	3%
2211	Cypress	47.16	15%
2233	Mixed Wetland Hardwoods	1.13	0%
2240	Mixed Hardwood-Coniferous Swamps	18.37	6%
18212	Low Structure Density	0.45	0%
18223	Commercial and Services	0.25	0%
183313	Improved Pasture	172.71	53%
1840	Transportation	2.85	1%
Habitat Totals		323.99	100%

**Table 3. 2023 Listed Species Survey Effort, Weather, and Observation Summary for the King Ranch Property in Pasco County, Florida**

Date	Ecologist	Start Time	Starting Weather	End Time	Ending Weather	Focus
5/18/2023	AF, AD, DD	0850	60°, W 4-7 mph, 60% CC, Good Vis., No precipitation	1405	75°, NNW 4-7 mph, 80% CC, Good Vis., No precipitation	GT/General Listed Species
12/15/2023	AF	0750	62°, NE 8-12 mph, 100% CC, Good Vis., No precipitation	1020	69°, ENE 10-15 mph, 90% CC, Good Vis., No precipitation	General Listed Species
<b>Total Survey</b>		<b>4 Survey Man-days, 18.25 Survey Hours</b>				

**Table 4. Gopher Tortoise Burrow Survey Population Data for the King Ranch Property in Pasco County, Florida**

Potentially Suitable Habitat Acreage	Acreage Surveyed	% Surveyed	Burrows (A & I)	FWC Burrow Conversion Factor	Estimated Tortoises	Tortoise Density	Estimated Population
225.38	59.88	27%	39	0.50	19.5	0.326	74