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February 2, 2022

Pankaj Singh  
1875 Manor View  
Cumming, GA 30041

Re: Preliminary Resource Assessment (Desktop)  
West State Road 325, Alachua, Gainesville, FL  
Alachua County, Parcels No: 05727-003-000, 05727-003-002, 05727-003-003, and  
05726-001-000  
Verde Environmental – Proj. No. 22-012

Dear Mr. Singh,

Verde Environmental Co. (Verde) completed a preliminary environmental resource assessment (desktop review and field verification) to evaluate potential environmental resources on the above referenced property. Prior to visiting the site, Verde scientists reviewed available Geographic Information Systems (GIS) datasets to evaluate the extent of different habitats anticipated to be found onsite, as well as the potential presence of listed species and/or their preferred habitats within the subject property. The information obtained during the GIS review was considered while conducting the site visit. Conversely, the information collected during the site visit was incorporated into the information evaluated during the desktop review and described in this letter report. Additionally, a site-specific Florida Natural Area Inventory (FNAI) Biodiversity Matrix Query was obtained for the property and adjacent areas (enclosed). The results of the query were reviewed to determine the potential for listed species on and around the subject property.

Verde scientists visited the site on January 25, 2022, and thoroughly traversed the property on foot. While onsite, our scientists recorded the condition of encountered habitats, existing community structure, direct or indirect observations (i.e., scat, tracks, burrows, nests, etc.) of listed species, and the extent of potential habitats or other habitats of significant quality. Onsite vegetative communities were further described in accordance with the Florida Land Use, Cover, and Forms Classification System (FLUCFCS, FDOT 1999), and the type and quality of onsite habitats were evaluated relative to the preferred habitats of the listed species returned in the FNAI Biodiversity Matrix Query.

During the site visit, Verde scientists reviewed select locations along the wetland habitat interpreted as part of the desktop review. This field review was performed in accordance with the methods outlined in the Florida Unified Wetland Delineation Methodology (Chapter 62-340, F.A.C.) and the Army Corps of Engineers Wetland Delineation Manual (1987). The location of each field-verified wetland boundary point was recorded using hand-held GPS. These locations were later used to adjust the remotely interpreted wetland habitat, the extent of which is shown on the enclosed Natural Resources Map. In total, 35.41 acres of wetland and 0.89 acres of farm ponds (Other Surface Waters (OSW)) were identified and mapped within the property boundaries.

The onsite wetland is a combination of Mixed Wetland Hardwood and Bay Swamp (FLUCCS 6170 and 6110, respectively) communities. The wetland consisted of a sparse to moderately closed canopy (45-85 percent closure) of predominantly small to medium sized trees (3-18 inches diameter at breast height (dbh)) with a scattering of large trees greater than 20 inches in diameter. Large canopy gaps were frequently observed throughout the wetland. The sparse to moderately dense understory and groundcover strata consisted of various tree seedling/saplings, shrubs, grasses and forbs. Dominant species included: sweetgum (*Liquidambar styraciflua*), sweet bay (*Magnolia virginiana*), red maple (*Acer rubrum*), water oak (*Quercus nigra*), swamp tupelo (*Nyssa biflora*), loblolly bay (*Gordonia lasianthus*), slash pine (*Pinus elliottii*), Virginia willow (*Itea virginica*), fetterbush (*Lyonia lucida*), large gallberry (*Ilex coriacea*), swamp bay (*Persea palustris*), dahoon holly (*Ilex cassine*), buttonbush (*Cephalanthus occidentalis*), elderberry (*Sambucus nigra*), cinnamon fern (*Osmundastrum cinnamomeum*), royal fern (*Osmunda regalis*), netted chain fern (*Woodwardia areolata*), soft rush (*Juncus effusus*), yellow jessamine (*Gelsemium sempervirens*), marsh pennywort (*Hydrocotyle umbellata*), lizard tail (*Saururus cernuus*), green brier (*Smilax* sp.), and arrow arum (*Peltandra* sp.). Wetland soils were characterized by the hydric soils Muck, Dark Surface and Sandy Redox. Elevated lichen lines, buttressing, and the presence of muck were noted indicators of wetland hydrology.

The upland habitat is primarily a combination of Improved Pasture and Fallow Cropland (FLUCCS 2110 and 2610, respectively) communities. Additionally, a narrow strip of an Upland Hardwood Forest (FLUCCS 4200) was observed immediately south of the onsite wetland habitat. Dominant species included: bahia grass (*Paspalum notatum*), blackberry (*Rubus* sp.), hairy indigo (*Indigofera hirsuta*), Florida betony (*Stachys floridana*), bluestem (*Andropogon* sp.), Brazilian vervain (*Verbena brasiliensis*), beggarticks (*Bidens alba*), Cuban jute (*Sida rhombifolia*), septic weed (*Senna occidentalis*), sweet everlasting (*Pseudognaphalium obtusifolium*), woodland false buttonweed (*Spermacoce remota*), Carolina pony foot (*Dichondra carolinensis*), Carolina cranesbill (*Geranium carolinianum*), woodsorrels (*Oxalis* spp.), Caesar weed (*Urena lobata*), hairy-fruit chervil (*Chaerophyllum tainturieri*), common chickweed (*Stellaria media*), American pokeweed (*Phytolacca americana*), and tropical soda apple (*Solanum viarum*).

A few scattered live oak (*Quercus virginiana*), pecan (*Carya illinoensis*), and laurel oak (*Quercus laurifolia*) were occasionally encountered within the improved pasture community. The upland hardwood forest community consisted of a moderately dense canopy (65-85 percent closure) of small trees (3-12 inches dbh) with an occasional tree greater than 20 inches in diameter. Dominant species within the upland hardwood forest included: laurel oak, live oak, water oak, sweetgum, pignut hickory (*Carya glabra*), green brier, yellow jessamine, coral ardisia (*Ardisia crenata*), and groundsel bush (*Baccharis halimifolia*). No hydric soils or indicators of wetland hydrology were observed within either of the upland habitats.

Although the vast majority of trees onsite had a dbh less than 20 inches, a few large trees (greater than 40 inches) were observed onsite. These trees were primarily represented by large live oaks located within the improved pasture community. The locations of these larger trees are shown on the enclosed map.

Additionally, a FEMA Flood Zone "A" has been mapped on the property. The flood zone is associated with and almost entirely located within the wetland habitat described above. A small sliver of the flood zone slightly extends beyond the southeastern boundary of the wetland by approximately 15

feet. Avoidance of the wetland and associated wetland buffer would also preclude any impacts/alterations to the FEMA Flood Zone.

No listed species were observed during the field visit. In general, the onsite vegetative communities do not provide suitable habitat for listed species potentially occurring within the local landscape. As part of our initial desktop review, we also ran a FNAI Biodiversity Matrix Query (enclosed) on the property to further assess the potential for listed species to utilize the property. The query returned Eastern indigo snake (*Drymarchon couperi*) and wood stork (*Mycteria americana*) as being likely animal elements in the surrounding area. Gopher tortoise (*Gopherus polyphemus*) and several other elements were returned as having a potential to be present in the region. It is our opinion that these species would not be present or utilize the property to any significant extent considering past land use and management, as well as the quality of habitats present onsite. The elements most relevant to permitting are discussed below.

No gopher tortoises were observed onsite and the property lacks preferred tortoise habitat. Most of the upland soils onsite have been mapped as being somewhat poorly drained. These types of soils are generally not conducive to gopher tortoises that prefer various open habitats that develop on well-drained sandy soils. Similarly, other listed species including Florida burrowing owl (*Athene cunicularia floridana*), short-tailed snake (*Lampropeltis extenuata*), Florida pine snake (*Pituophis melanoleucus mugitus*), and Florida mouse (*Podomys floridanus*) also prefer various xeric habitats found on well-drained to excessively well-drained soils.

Several listed species are considered to be gopher tortoise commensal species. Indigo snake, gopher frog (*Lithobates capito*), Florida pine snake, and Florida mouse typically utilize gopher tortoise burrows, depending on them during various times of year/life cycle stages. The lack of tortoise burrows found onsite makes it further unlikely that these commensal species would be found on the property.

Wood storks utilize wetland habitats for nesting and foraging. The species could potentially utilize the onsite wetland and farm ponds as foraging habitat; however, none of these features would be considered optimal habitat for wood storks considering the observed bathymetry, vegetative structure/density, and presumed hydroperiod. Furthermore, the property is located more than 25 miles away from the nearest known wood stork nesting colony, and thus, the site is not located within a Wood Stork Core Foraging Area. Development onsite would have minimal to no effect on wood storks, especially if the project avoids impacts to the onsite wetland habitat.

As a result of this assessment, we identified four resources requiring consideration related to the potential development of the site: wetlands, wetland buffers, flood zone, and trees. The presence of wetland habitat onsite will require that any development comply the Countywide Wetland Protection Code (Chapter 77, Article 2 of the Alachua County Administrative Code) and Chapter 406, Article 6 of the Alachua County Unified Land Development Code (ULDC). The county will require that the wetland and a 75-foot undisturbed buffer be avoided by any development.

Due to the FEMA Flood Zone mapped onsite, potential development will have to comply with Chapter 406, Article 7 of the ULDC.

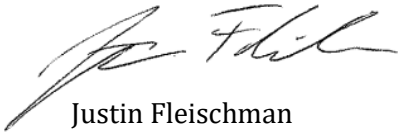
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The project will also need to comply with Chapter 406, Article 2 of the ULDC as it relates to tree protection and replacement. Consequently, the live oaks with a dbh greater than 60 inches may be considered high quality specimen trees. Alachua County will prohibit the removal of such trees unless it is demonstrated that the development activity cannot occur in any other location onsite.

Lastly, although not discussed in detail above, the property is located within a High Aquifer Recharge Area as defined in Chapter 406, Article 8 (Springs and High Aquifer Recharge Areas) of the ULDC. As such, the developer(s) may be required to comply with the Stormwater Element of the Comprehensive Plan and Chapters 407 (General Development Standards) and 353 (Hazardous Materials) of the ULDC.

Thank you for this opportunity to provide professional consulting services. Please email me at [justin@verdeenv.com](mailto:justin@verdeenv.com) if you have any questions or wish to discuss this project further.

Sincerely,

A handwritten signature in black ink, appearing to read "Justin Fleischman". The signature is fluid and cursive, with a long, sweeping underline that extends to the left.









Justin Fleischman  
CEO, Verde Environmental

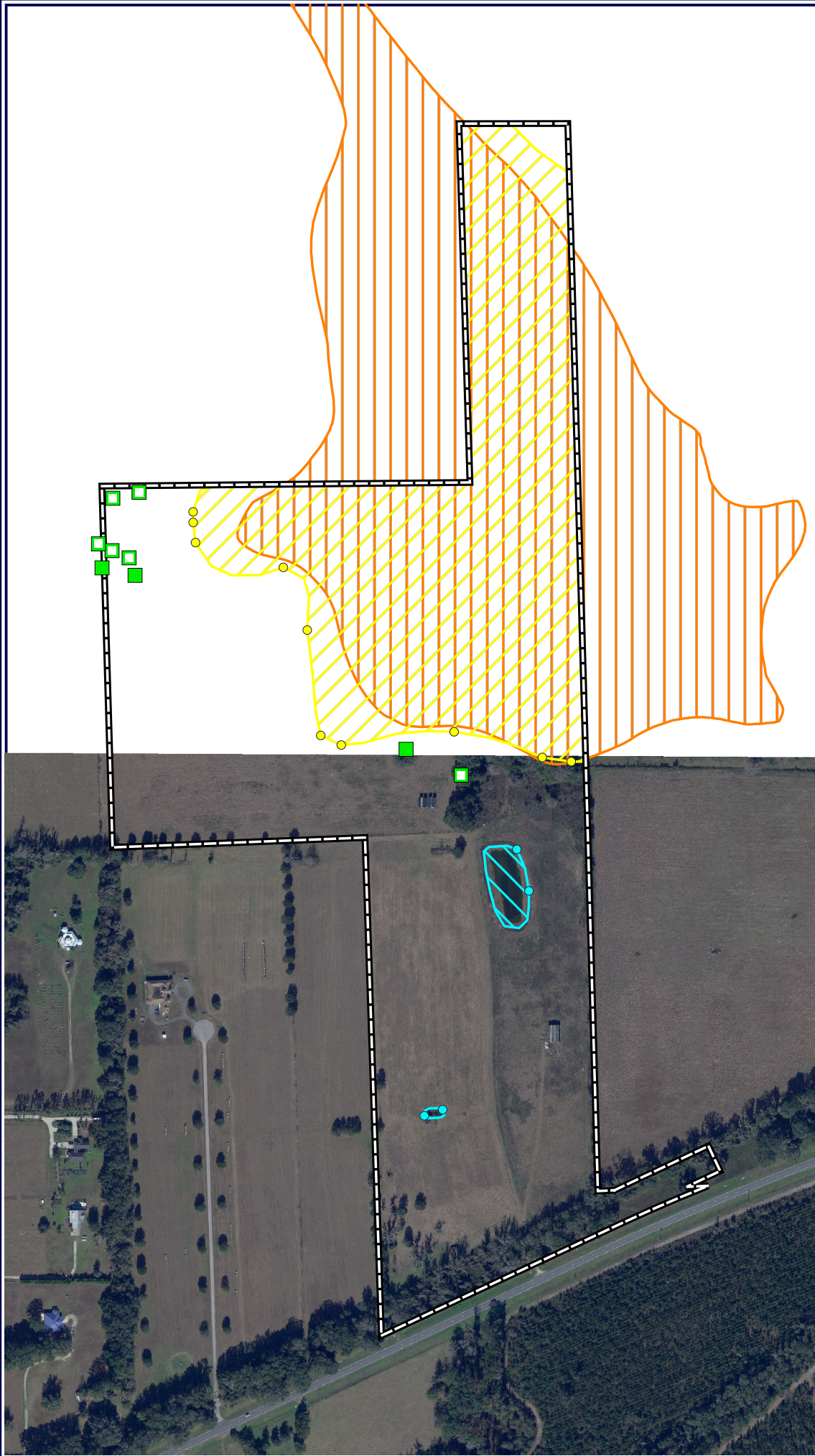
Enclosures: Environmental Resources Map  
FNAI Biodiversity Matrix Query Report

**NATURAL RESOURCES  
SINGH TRACT  
W SR 235, ALACHUA, FL  
ALACHUA COUNTY PARCELS:  
05727 003 000, 05727 003 002,  
05727 003 003, and  
05726 001 000  
2020 TRUE COLOR AERIAL**

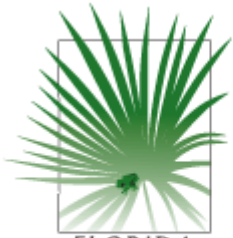


**LEGEND**

-  LARGE HERITAGE TREES  
(40-59 IN. DBH)
-  LARGE HIGH QUALITY  
SPECIMEN TREES  
(60+ IN. DBH)
-  FARM POND POINTS (TOB)  
(GROUND-TRUTHED)
-  FARM PONDS +/-0.89 AC.  
(GROUND-TRUTHED)
-  WETLAND LINE POINTS  
(GROUND-TRUTHED)
-  WETLANDS +/-35.41  
(GROUND-TRUTHED)
-  FEMA FLOOD ZONE "A"  
100-YR FLOODPLAIN  
(HIGH RISK AREA)
-  PROJECT BOUNDARY



DATA SOURCES: ALACHUA CO., SRWMD, USGS/NHD,  
USFWS, NRCS, FL DOT, FDOR, FDEP, FGDL AND VERDE.  
DATA ARE PROVIDED "AS IS". ACREAGES ARE  
APPROXIMATE AND GIS DERIVED.  
SCALED FOR PRINTING ON 8.5X11" PAPER.



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FLORIDA  
**Natural Areas**  
 INVENTORY

## Florida Natural Areas Inventory

### Biodiversity Matrix Query Results

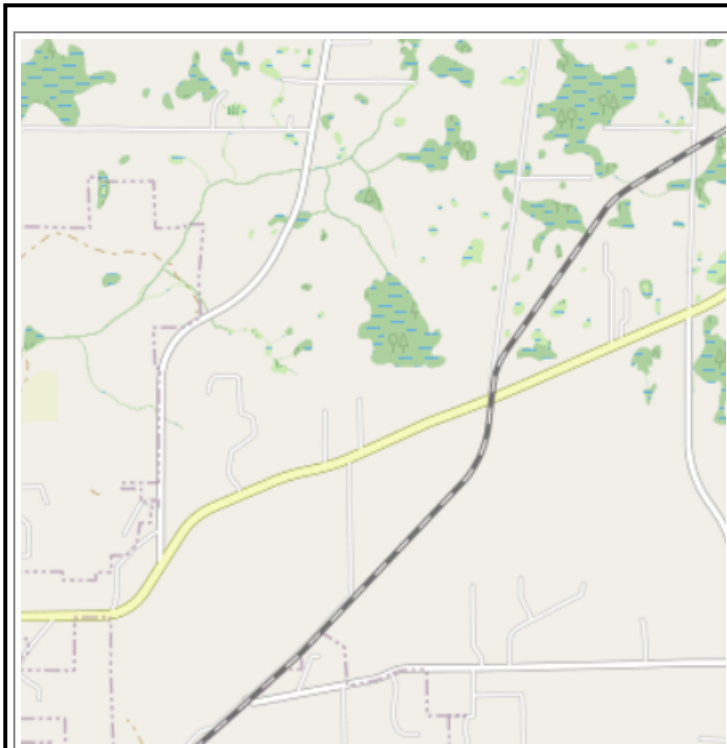
#### UNOFFICIAL REPORT

Created 2/1/2022

(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 2 Matrix Units: 25372 , 25373



#### 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: 25372

0 Documented Elements Found

0 Documented-Historic Elements Found

3 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<a href="#">Drymarchon couperi</a> Eastern Indigo Snake	G3	S3	LT	FT
<a href="#">Mycteria americana</a> Wood Stork	G4	S2	LT	FT
<i>Upland hardwood forest</i>	G5	S3	N	N

#### Matrix Unit ID: 25373

0 Documented Elements Found

0 Documented-Historic Elements Found

3 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<a href="#">Drymarchon couperi</a> Eastern Indigo Snake	G3	S3	LT	FT
<a href="#">Mycteria americana</a> Wood Stork	G4	S2	LT	FT
<a href="#">Upland hardwood forest</a>	G5	S3	N	N

**Matrix Unit IDs: 25372, 25373**

27 Potential Elements Common to Any of the 2 Matrix Units

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<a href="#">Agrimonia incisa</a> Incised Groove-bur	G3	S2	N	T
<a href="#">Asplenium heteroresiliens</a> Wagner's Spleenwort	GNA	S1	N	N
<a href="#">Asplenium plenum</a> Ruffled Spleenwort	G1Q	S1	N	N
<a href="#">Asplenium x curtissii</a> Curtiss' Spleenwort	GNA	S1	N	N
<a href="#">Athene cunicularia floridana</a> Florida Burrowing Owl	G4T3	S3	N	SSC
<a href="#">Brickellia cordifolia</a> Flyr's Brickell-bush	G2G3	S2	N	E
<a href="#">Calopogon multiflorus</a> Many-flowered Grass-pink	G2G3	S2S3	N	T
<a href="#">Corynorhinus rafinesquii</a> Rafinesque's Big-eared Bat	G3G4	S2	N	N
<a href="#">Ctenium floridanum</a> Florida Toothache Grass	G2	S2	N	E
<a href="#">Gopherus polyphemus</a> Gopher Tortoise	G3	S3	C	ST
<a href="#">Grus canadensis pratensis</a> Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<a href="#">Hartwrightia floridana</a> Hartwrightia	G2	S2	N	T
<a href="#">Lampropeltis extenuata</a> Short-tailed Snake	G3	S3	N	ST
<a href="#">Lithobates capito</a> Gopher Frog	G3	S3	N	SSC
<a href="#">Litsea aestivalis</a> Pondspice	G3?	S2	N	E
<a href="#">Matelea floridana</a> Florida Spiny-pod	G2	S2	N	E
<a href="#">Myotis austroriparius</a> Southeastern Bat	G3G4	S3	N	N
<a href="#">Neofiber alleni</a> Round-tailed Muskrat	G3	S3	N	N
<a href="#">Notophthalmus perstriatus</a> Striped Newt	G2G3	S2	C	N
<a href="#">Peucaea aestivalis</a> Bachman's Sparrow	G3	S3	N	N
<a href="#">Pituophis melanoleucus mugitus</a> Florida Pine Snake	G4T3	S3	N	SSC
<a href="#">Podomys floridanus</a> Florida Mouse	G3	S3	N	SSC
<a href="#">Pycnanthemum floridanum</a> Florida Mountain-mint	G3	S3	N	T
<a href="#">Salix floridana</a>	G2	S2	N	E

Florida Willow				
<a href="#"><i>Sciurus niger shermani</i></a>	G5T3	S3	N	SSC
Sherman's Fox Squirrel				
<a href="#"><i>Sideroxylon alachuense</i></a>	G1	S1	N	E
Silver Buckthorn				
<a href="#"><i>Ursus americanus floridanus</i></a>	G5T2	S2	N	N
Florida Black Bear				

**Disclaimer**

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

**Unofficial Report**

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