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July 5, 2022

Missy Daniels, Director, Growth Management Dept.
10 SW 2nd Avenue
Gainesville, FL 32601
mdaniels@alachuacounty.us

Via email and hand-delivery

Steve Hofstetter, Director, Environmental Protection Dept.
408 West University Avenue, Suite 106
Gainesville, FL 32601
SHofstetter@alachuacounty.us

Re: Special Area Study Report (FCL Timber, Land & Cattle, LLLP)

Dear Ms. Daniels and Mr. Hofstetter:

FCL Timber, Land & Cattle, LLLP ("FCL"), is pleased to submit the following Supplement to the Special Area Study Report for FCL's 4,068-acre tract in unincorporated Alachua County. We request that Staff schedule the matter for the Board of County Commissioners at the earliest possible date in August 2022.

Sincerely,

/S/ PATRICE BOYES, ESQ.

_____
Patrice Boyes, Esq.

Encl: Supplemnent to Special Area Study Report w/ Appendices
cc: Board of County Commissioners
Michele Lieberman, County Manager
Corbin Hanson, Sr. Asst. County Attorney

Section 402.101 Special Area Study of the ULDC sets forth the contents of the Special Area Study (SAS): (a) Stakeholders Workshop; (b) Ground-Truthing of Site; (c) Public Infrastructure and Services; and (d) Land Use Analysis. FCL Timber, Land & Cattle, LLLP submitted its Special Area Study Report on April 11, 2022 (the "April 11, 2022 SAS Report") to Alachua County. County Staff responded with comments, which has engendered this supplement to the April 11, 2022 Report. This Supplement is organized according to the required topics of Section 402.101, ULDC as follows:

§402.101(a) Stakeholders Workshop

To reiterate this information from the April 11, 2022 SAS Report for ease of reference, FCL's consultants conducted two Stakeholder Workshops, the first one in person on March 23, 2022 and the second one via a virtual (Zoom) platform on March 30, 2022.

§402.101(b) Ground-Truthing of the Site

The results of the ground-truthing work is contained in the revised Cardno Report dated June 2022, which has been submitted with and as part of this supplement to the April 11, 2022 SAS Report.

§402.101(c) Public Infrastructure and Services

Transportation

CHW reviewed available Florida Department of Transportation (FDOT) annual traffic data on the proximate State Roads 24 and 26, available Alachua County data, and relevant Comprehensive Plan (Plan) Transportation Mobility Element (TME) and Capital Improvement Element (CIE) policies. This review also considered anticipated Property-specific trip generation data related to the ongoing Traffic Impact Analysis (TIA), which is a preliminary planning-level analysis of background and projected future traffic conditions. CHW's analysis of the data informs the preliminary identification and location of appropriate land uses for the Property (discussed in §402.101(d) below).

It was determined that necessary densities to support transit service and multi-modal opportunities would be desirable for development of the non-conservation areas within the Property. The data CHW reviewed supports this strategy, as State Road 26/Newberry Road is operating at LOS 'C' on the segments between SW 154th Street and Parker Road and as LOS 'F' on the segments between Parker Road and I-75 (east ramp). State Road 24/Archer Road is operating at LOS 'F' on the segments between Parker Road and SW 91st Street. Parker Road is operating at LOS 'C', between the two State Facilities. See, Transportation Mobility Element (TME) Policy 1.7.3.A

The projected potential increase in traffic volume associated with recommended urban residential densities (see §402.101(d) below) can be accommodated on the abutting and adjacent roadway facilities. Moreover, with a holistic multi-modal approach from the inception of the Property's development, supportive transit and non-motorized

mobility options may be thoroughly analyzed and incorporated throughout any proposed final development plan for the Property.

The Property abuts existing established residential and mixed-use communities, which have constructed and stubbed out urban roads and utilities to the Property's boundary. Therefore, any initial development phases within the Property can occur without costly off-site extensions of infrastructure. This efficiency reduces the cost to market for much-needed housing with readily accessible transportation infrastructure. In addition, the TME contemplates a bus rapid transit corridor route through Haile Plantation, across the Property and continuing north through the Oakmont subdivision to serve Jonesville and western Alachua County. The recommended Master Planned Scenario (see below) addresses a documented and mapped priority in western Alachua County as shown on the adopted TME Map 6-(Rapid Transit Corridors in the Plan (2019-2040)).

Pursuant to the Plan Policies implementing Future Land Use Element (FLUE) Objective 1.7 for Transit Oriented Development (TOD), the proposed Master Planned Scenario and relative locations of land uses (see below) are situated geographically in a manner that supports the viability of transit service and transit stations contiguous to planned and prioritized Rapid or Express Corridor Transit Stations across the Property. Moreover, the locations can and will be situated within land use areas that address the "last mile" concept of concentrating higher density nodes along existing and proposed transit routes to promote ridership and utilization of public transit options. This design intent is consistent with and furthers the goal embodied in the adopted TME Map 6 – (Rapid Transit Corridors in the Plan (2019-2040)). One or more TOD nodes would be implemented through an approved Development Plan as required by FLUE Objective 1.7 and the implementing Policies.

CHW acknowledges the development of TODs upon the Property is predicated on the recommended application of transit-supportive FLUE 1.0 Urban Policies in the Plan to the Property and the specific recognition in the Plan that the UCL will not be expanded, *per se* (see below). CHW recommends that the Plan's TME and CIE policies and schedules be evaluated in the SAP process and potentially amended to facilitate the logical and rational continuation of the County's ability to provide a balance of housing and employment opportunities in concert with ecological protections for environmentally significant areas. The landowner has proposed a total of nearly two (2) square miles of conservation open space (COS) areas as a result of ground-truthing the Property pursuant to the County's Strategic Ecosystems mapping of the Property more than 20 years ago. While the landowner reserves all rights as it relates to the County's Strategic Ecosystem mapping and application of the related policies in the Conservation and Open Space Element (COSE), for purposes of the SAS and subsequent Special Area Plan (SAP) process, the landowner has stipulated to the proposed COS areas as depicted in the related and revised Cardno Report dated June 2022, and to the application of COSE policies to the COS areas.

As it relates to transportation, CHW specifically proposes that the TME Policies and Maps be amended to create a new Transportation Mobility District for the 4,068-acre Property. Such a district would facilitate developer funding of enhanced transit service

in the new District, with connectivity to the larger existing Regional Transit System, its routes, and community destinations. A companion amendment to the CIE is necessary to formally program the transit enhancements.

Required Facilities/Institutional and Public Services Land Uses

In furtherance of FLUE Objective 1.5 (Required Facilities), planning and engineering discussions with Gainesville Regional Utilities (GRU) and Clay Electric Cooperative confirmed their desire and capacity to serve the Property with electric, gas, central water and sewer, fiber optic, and reclaimed water. Moreover, the Property owners have requested of the County Commission to require a SAP to provide the planning mechanism to ensure a collaborative approach is undertaken to analyze and ensure all level of service standards adopted in the Plan are met. Planning level and preliminary engineering studies in the SAP will further identify specific needs as it relates to all adopted LOS in the Plan.

While it is well known the Property has numerous potential road connections from all abutting urban residential subdivisions, the Property also is served at these same connection points by urban utilities (i.e. water, sewer, gas, electric, fiber optic, telecommunications and reclaimed water). Therefore, the Property has always been within the purview of the Comprehensive Plan's considerations and is the logical antecedent for Alachua County's existing, growing population and future incoming residents.

Consistent with FLUE Policy 1.5.2(a), (b), (c), and (d), public facilities for which there is no adopted LOS (local streets, police, fire, EMS, bike/ped network, schools) will be adequately served, whether by services internal or external to the Property and necessary lands will be designated Institutional or Public Services as appropriate. Any development proposed on the Property will be served and accessed through local streets, anticipated to be both local and collector facilities. Providing a multi-modal transportation system, serving the Property's entirety, will be accomplished on both the east and west sides of Parker Road, with the facilities connecting at logical and safe locations. Consistent with FLUE Policy 1.5.3, high-speed internet will be made available to new development on the Property, with specific connection points to be determined in the development review process.

The provision of municipal services such as police, fire, and emergency medical services will be addressed through a dedicated set-aside of land designated Institutional or Public Services on the FLUM, with an exact location to be determined in the SAP and development review process. Complementing the existing abutting new elementary school and the projected high school anticipated on the former Diamond Sports Park site, the Property owner contemplates the dedication of land for a middle school. The dedication is anticipated abutting the proposed Town Center, or generally in the northeast portion of the Property east of Parker Road. This orientation will place all primary and secondary schools within close proximity, which will meet western Alachua County's growing population and decrease the vehicle miles traveled for faculty, staff, and students.

Since many of the non-residential elements that may be part of the SAP process are community facilities, they will be accessible through a variety of transportation means, not merely roads. Multi-modal connections and inclusion of a variety of mode choice will be a tenet of the SAP planning process, consistent with FLUE Objective 5.2 and its sub-Policies. This tenet will also address FLUE Objective 5.4 and its associated sub-Policies as they relate to Community Services.

Consistent with FLUE Section 5.0 Institutional Policies, Objective 5.1, and Policies 5.1.2, 5.2.1 (a-g), 5.2.2, 5.3.2, 5.3.5, and 5.3.6, the SAS has considered the requirements and the Property Owner will propose Institutional or Public Services land uses discussed in Policy 1.5.1 and 1.5.2 in form and geographic location as required in the Plan. As stated throughout this Report, the anticipated conceptual land use plan collaboratively created with Alachua County's Department of Growth Management and Environmental Protection Department will follow the spatial form predicated by the proposed COS area, with non-conservation development areas transitioning seamlessly to the surrounding context area and abutting developments' densities and intensities.

§402.101(d) Land Use Analysis

Consistent with traditional planning methods, the Special Area Study (SAS) contemplates three (3) specific Land Use scenarios: (1) No-Build; (2) By-Right, and (3) Master Planning based on application of specific FLUE Section 1.0 Urban Policies in the Plan (2019-2040) blended with conservation management of COS areas proposed for the Property (FLUE Policy 1.1.3-Urban residential land use shall be consistent with the Conservation policies in the Plan).

Of the three scenarios contemplated, CHW recommends (3) Master Planning of the Property consistent with FLUE Policy 1.1.5, which explicitly encourages Master Planning of all land under contiguous ownership. A range of potential land uses and general locations on the Property is shown in Figure A, which is attached at the end of the Report. Analysis of the three scenarios supports the recommendation, to wit:

(1) No-Build Scenario.

The No-Build Scenario effectively retains the Property in its existing rural state as agricultural land with active farming, including industrial-scale silviculture and cattle-calf grazing over the entirety of the Property. This Scenario, even as discussed by the County's consultants (KBN/Golder) in 1987 and again in 1996, has become impracticable in 2022 as urban densities and intensities have built to the Property's boundaries. Coincident to these densities and intensities has been the development of urban-scale supportive infrastructure in the form of roads, sidewalks, potable water, reclaimed water, sanitary sewer, natural gas, and telecommunications – all constructed to the Property's boundaries on the north, east, and southeast. A number of these urban services (except central water and sewer) are now provided to the Flintrock Agrihood, which is located west of Parker Road in the center of the FCL Property.

However, the No-Build Scenario does not deliver a practicable or desirable short-or long-term future for Alachua County's existing and future residents. It does not deliver a feasible path forward because, even as documented in the KBN Golder Report nearly 40 years ago, the land cannot be truly or adequately managed, as a whole, consistent with its historical and pre-historic natural seasonal wildfire / regeneration pattern. While limited small-scale controlled burning occasionally may be feasible, those opportunities have diminished greatly as new residents have built along the Property boundaries, in the middle of the Property, and as construction of public facilities such as new public schools, churches, and other urban/rural development (i.e. Flying Ten Airport) has occurred. The No-Build Scenario produces no ability to fund public infrastructure that will undoubtedly be needed by the end of the County's current planning period (2019-2040). Likewise, there is no sustainable means to fund conservation management areas, which the Plan suggests are desirable.

(2) By-Right Scenario.

The By-Right Scenario results in ±813 residential lots at build-out through a Special Area Study process, all clustered within the property under the Cluster Subdivision requirements of the Plan and Unified Land Development Code (ULDC). Based on historic development yields and criteria in Alachua County, one could reasonably expect 50% utility of the land outside the 50% required minimum set aside.

The residual land area available for development would be ± 1,017 acres for 813 residential lots, yielding approximately 1.25-acre lots. The critical downside to this Scenario is, without the provision of readily available and abutting urban utilities, each of these housing units would be reliant on private wells for potable water and septic tanks for effluent waste.

This outcome introduces at least 813 wells and septic tanks in western Alachua County's karst sensitive environs. Moreover, this low-density development pattern squanders opportunities to capture and site population adjacent to the urban core of unincorporated Alachua County and incorporated Gainesville, furthering the unsustainable leapfrog development into rural communities of western and northern Alachua County (discussed below).

(3) Master Planning Scenario.

Master Planning of the Property may be accomplished in a collaborative fashion to achieve the community vision embodied in the Plan while balancing the protection of natural resources with ownership interests and protection of private property rights, as required in the SAS governing requirements, §402.101(d), ULDC. The FLUE sets forth multiple aspirations, a key one being the provision of an urban growth boundary (General Strategy 1) to encourage dense infill and redevelopment of lands to support transit and multi-modal transportation options.

The resulting Urban Cluster Line (UCL) was set more than twenty (20) years ago and has failed to preclude inefficient leapfrog development into the rural communities of

northern and western Alachua County. There are seventeen (17) residential communities proposed simultaneously in the City of Newberry. Nearly a dozen (12) subdivisions are proposed in the City of Alachua and even High Springs is receiving development proposals for residential neighborhoods within the City limits. Moreover, the rationale for the UCL does not contemplate the efficiencies, resiliency and opportunities presented by a Master Planned community exceeding 4,000 acres under common ownership. Yet, strict adherence to the UCL policies would preclude all such advantages to the County.

The unintended consequence of the UCL coupled with the increased cost of development within both the City of Gainesville and the Urban Cluster has driven countless families and residents to seek housing, business and development options in the rural communities. Notably, the displaced population is still reliant on the employment centers within the City of Gainesville and Urban Cluster and returns daily on the County's roads to Gainesville's core for work, social, cultural, and professional services. Capturing a dense population in well-designed urban Transit Oriented Developments on the Property will, in part, slow the continued proliferation of sprawl into the unincorporated area and rural communities, and make efficient use of existing and planned public infrastructure situated at the Property's boundaries. In so doing, the Master Planned Scenario will provide a range of housing types to serve different segments of the housing market and integrate and connect this Property with surrounding neighborhoods in the community, in furtherance of FLUE Objective 1.2.

The SAS and anticipated SAP for the Property reduce the forces of urban sprawl by, specifically and in a narrowly construed manner, providing additional land in a logical and contiguous form to create a blend of housing and non-residential opportunities geographically surrounded by thousands of existing households. Since these surrounding households have been both approaching and now adjoin the Property's boundaries, the recommendation to follow the SAS with the SAP addresses the FLUE General Strategy 1 to time development approval with services/infrastructure in coordination with the CIE. In addition, or in other words, the strategic and Master Planned approach to the SAP promotes the health and safety of the community by protecting County-wide and regional resources through efficient use of existing and planned infrastructure in furtherance of FLUE General Strategy 2.

CHW recommends adoption of specific policies applicable to this unique Property as part of an amendment to FLUE Section 8.0 (Special Area Plans). CHW also anticipates applying to the Property existing FLUE Urban Residential Policies by reference in the adopted SAP. Similarly, existing applicable COSE, TME, CIE, PWSS, Recreation and other applicable Plan policies would be applied by reference in the adopted SAP.

Application of these specific existing Plan policies supports and promotes limited and specific urban development on non-conservation portions of the Property, while promoting significant conservation uses on both geographic sides of the Property (which is bisected by Parker Road). This strategy also affords protection to the Floridan Aquifer in western Alachua County by allowing potable water and sewer connections for new development on the Property to the existing, abutting utility infrastructure. Benefits

in the form of engineering efficiency and performance also accrue, with completion through the Property, of the sewer and water loops now stubbed out on the north at Oakmont subdivision and on the eastern boundaries with Haile Plantation and Lugano subdivisions. (FLUE General Strategy 1 – Maximizing use of available infrastructure while preserving environmentally sensitive areas).

The SAS and future SAP also present more opportunities for resilient and smart-growth components to development of the Property. The inclusion of innovative elements within a Master Planned development, such as solar energy-powered directed energy for the Property's development, or a micro-grid, plus utility-scale solar power production, community-scale vegetative composting, and other strategies, will support a hazard-resilient and energy-efficient community consistent with and in furtherance of Objective 3.1 of the Energy Element (Promote energy-efficient land use patterns that reduce travel costs and encourage long-term carbon sequestration) and Objective 6.1 of the Renewable Energy Element (Encourage renewable energy production and a countywide system of distributed residential and commercial power generation) and the implementing policies of the Plan. These measures are only available through the recommended Master Planning Scenario.

Strengthening the separation of urban and rural uses is accomplished in a Master Planned community by the physical and geographic retention of Agricultural Land Uses along the Property's southwest/western boundary, where rural lands and uses exist abutting the Property today. This affords protection to the existing limited large-scale landowners and rural uses, such as the grass landing strip air community at the Flying Ten Airport situated west of the Property, and between the UCL and rural communities of Newberry and Archer.

The SAP will propose Policies comporting with and furthering the General Strategies, Urban Policies, and principals in the FLUE and TME. As detailed in the Plan's TOD policies, CHW recommends the Property owner consider, then include, in the SAP a selected complementary strategy and program affording abutting properties with opportunities to access sustainable transportation alternatives, reducing reliance on single-occupant vehicles on increasingly congested roadway networks (Policy 1.2.1.1). These could be in the form of interconnected roadways or non-motorized links such as trails and sidewalks, as has been requested by attendees of stakeholder meetings, connecting to abutting neighborhoods of Oakmont and Haile Plantation.

<u>Recommended Densities</u>

CHW recommends urban density and intensity for the Property that is comparable to proximately established, successful, and relevant communities in Alachua County. (FLUE Objective 1.3 through its implementing policies sets forth Urban Residential Densities). Densities and intensities matching in form to Oakmont, Haile Plantation and the Town of Tioga are contemporary analogs. Specifically, urban residential and non-residential development would exist south of Oakmont and west of Haile Plantation, at densities comparable to these abutting properties. Abutting SW Parker Road on the east side, a mixed-use Town Center is likely in that portion of the Property's northwest

corner near Terwilliger Elementary School, where direct access to Parker Road would provide a multi-modal connection for Alachua County's citizens residing in other communities.

Within the Town Center, the recommended scenario features a mix of land uses, ranging from professional office and service-type businesses to general retail, constituting one or more transit-supportive nodes of activity in keeping with a TOD pattern of urban design. Residential dwellings, both single-family attached and multi-family would be included, with both having the ability to provide workforce housing. The landowner has committed to earmarking fifty (50) acres for the provision of workforce housing (50-80% AMI); the details of location, governance and development style to be determined in the SAP and development review process in collaboration with the County.

Residential density in proposed TOD areas of the Property is expected to be below four (4) dwelling units per acre (du/ac) in the non-Transit Supportive Areas of the TODs, with Village Center nodes having densities up to 16 du/ac and seven (7) du/ac in the transit supportive areas of the TODs. This SAS recommends a SAP that will promote mixed uses in one or more TODs through the development plan process, free from the influence of incompatible land uses (FLUE Policy 1.2.1). Development design of the Property can ensure Policy 1.2.1 is met, based on its unique size, location, and proximate uses.

These proposed urban TOD densities are consistent with FLUE Policy 1.7.5.1 and will create a transit-supportive development pattern within the Property. The higher density areas will be interspersed strategically throughout the site, to provide diversity in housing options and opportunities, including workforce housing, located or served by and contiguous to transit service such that residents can live, work and play in the community, without the need to drive single-occupant vehicles.

The higher density nodes and surrounding lower density residential areas will be interconnected internally and externally to mixed-use and non-residential areas through a series of interconnected sidewalks, contiguous to a gridded street network and a trail system that complements the transportation network and provides access to multiple destinations and reasons for bicyclists and pedestrians to frequent the area (FLUE Policy 1.7.4).

Creation of much-needed housing across the broad spectrum of size and price points, made possible by varying lot sizes and configurations in the Master Planned scenario, will promote greater opportunity for home ownership in the future neighborhoods created on the Property for both existing and future residents of Alachua County. This range of housing types is best located in the urbanized area rather than the trending exodus to the rural municipalities.

Appropriately situated Village Center non-residential development, scaled to meet the needs of the Property, context area and proximate population (FLUE Policy 1.5.2), will be included adjacent to existing community landmarks such as Terwilliger Elementary

and Diamond Sports Park, now owned by Alachua County Public Schools. The inclusion of appropriately scaled non-residential land use adjacent to thousands of existing Alachua County residents helps address the unmet needs of Oakmont, Haile Plantation, Parker Place, and other adjacent residents. It further reduces residents' frequent reliance on accessing either State Road 24/Archer Road or State Road 26/Newberry Road to obtain daily needs and essential professional services, such as health care.

General location of proposed land uses

Please see Figure A for a generalized map of preliminarily identified locations for the following types of land uses:

Mixed Use/Town Center: Based on the distance to existing Alachua County Activity Centers, the northwest area of the Property east of Parker Road is an ideal location for more concentrated land uses that serve the internal residents and offer immediate connection to Oakmont, Haile Plantation, and other neighborhoods without the need to access the County's major collectors such as SW 122nd Street/Parker Road and SW 24th Avenue, or State Road 26/Newberry Road and State Road 24/Archer Road. In addition, with the Alachua County School Board's purchase of Diamond Sports Park, that site is positioned to be a future public high school. The Town Center area of the Property could incorporate a middle school, if needed, which would complete the primary and secondary public education offerings situated within walking distance of future residents of the Property and available to abutting subdivisions through multi-modal access.

Recreation: The Master Planned Scenario envisions siting of a major recreational facility in the southeastern portion of the Property, namely a University of Florida golf course on approximately 580 acres. There are no current plans to develop the golf course under the auspices of the Campus Master Plan. In the event the golf course is not developed, the alternate scenario envisions single-family and multi-family residential uses.

Creation of a wildlife corridor system, connecting from the golf course through the proposed Conservation Open Space north to corresponding open space in Oakmont and Haile Plantation, will afford additional opportunities for passive recreation, birding, bicycling and walking. A significant corridor system is proposed west of Parker Road, originating at the proposed Conservation Open Space/gopher tortoise recipient site and connecting along open space in the adjacent Flintrock Agrihood, the future GRU Groundwater Recharge Park and Diamond Sports Park property to its terminus at the future conservation open space area on the south end of Town of Tioga subdivision.

Conservation lands**:** The Conservation Open Space (COS) lands east of Parker Road are designed to interconnect and buffer Significant Geologic Features, as that term is defined by the Plan and ULDC, as well as provide a linkage from the future golf course to the green spaces existing or planned to the north and east of the Property. Details of

the COS may be found in the Cardno Report dated June 2022, which is part of this Supplemental Report.

A COS designation also is proposed for a one (1) square mile portion of the Property west of Parker Road, as generally depicted in Figure A. This parcel is also proposed for a state-licensed gopher tortoise recipient site, pending State of Florida approval. Natural corridors are proposed for creation from the COS area northward to connect wildlife and pedestrian/bicyclists through the property to activity nodes and adjacent subdivisions. It is anticipated that conservation management plans will be proposed for adoption by the County Commission for the proposed COS areas on all of the Property.

Residential: The balance of the non-conservation and non-recreational land uses east of Parker Road on the Property are anticipated to be single-family and multi-family Residential with community supportive non-residential uses. The intent is to provide urban residential and non-residential development in a design that supports the more than 2-square miles of combined COS proposed east and west of Parker Road on the Property. Details of that design are beyond the scope of this Report but will be carefully considered in the planning efforts under the SAP, in accordance with design policies in the FLUE for TODs and surrounding development. COSE Policy 4.9.2 states that these measures are to occur "(d)uring the land use planning and development review processes."

The balance of the lands proximate to Flintrock Agrihood, Town of Tioga, Parker Place and the west side of Parker Road are proposed for residential development commensurate with the surrounding developed subdivisions, with care taken in design to use best environmental management practices (See, COSE Policy 3.6.6) to minimize the effect of the density and intensity adjacent to the proposed 1-square-mile COS area on the west side of Parker Road. COSE Policy 4.9.2 states that these measures are to occur "(d)uring the land use planning and development review processes."

Agricultural/Photovoltaic Facilities: On the portion of the Property west of Parker Road, scenario planning also calls for the siting of photovoltaic facilities on the western reaches of the Property where retention of Agricultural land use and zoning is recommended. The photovoltaic facilities under consideration are utility scale and/or directed energy, micro-grid in scale, and are permitted uses in Agricultural land use and zoning districts. Vegetative management and composting of land clearing debris and routine yard and common area maintenance is proposed for a ~20-acre parcel to be located west of Parker Road. Precise locations for these facilities will be refined in the SAP and development review process. The retention of Agricultural land use and zoning for the westernmost reaches of the Property supports the visual separation of rural and urban uses, in lieu of a physical barrier functioning as a separator (i.e. lakes, rivers, ravines, mountains).

Industrial: The landowner is not proposing intensive Industrial uses of the Property.

Institutional/Public Facilities: The landowner proposes to designate land on the FLUM for siting of a school, if needed, plus police, fire, and EMS stations.

Design Policies

CHW recommends, consistent with Objective 1.4 – Neighborhood Design and Site Standards, the County Commission direct the landowner to formulate an SAP focusing on one or more TOD nodes within the Property as a whole. This recommendation is based on the Property's potential of being readily and adequately served by necessary supporting facilities in an efficient, environmentally sensitive, and attractive manner.

The design standards for the Master Planned community, to be further reinforced by adoption in the SAP, will be consistent with the design policies enumerated in FLUE Policies 1.6.6 through 1.6.6.9, and with Policy 1.7.5.2 for non-residential areas. The TOD form is desirable for this Property to curb urban sprawl and leapfrog development, which is prevalent beyond the Urban Cluster edge in the rural communities. Moreover, the TOD form concentrates residents and services in proximity to reduce Vehicle Miles Traveled (VMT) and decrease carbon emissions associated with development in the rural communities – all in furtherance of TME Principles 2 and 3 plus Energy Element Objective 3.1, Policy 3.1.1.

The TOD-related Policies in the Plan will promote design characteristics and urban form that supports FLUE Objective 1.4. Any design proposed through the development review process would be required to comply with the implementing Policies such as FLUE Policies 1.4.1.4 and 1.4.2, which address quality urban design principles, accessible open space, special attention to design of neighborhood edges, gridded streets and multi-modal environments. As documented in this Report, Policy 1.4.1.4 (a), (b), and (c) has been considered during the SAS and Policy 1.4.1.4 (b) and (c) are specific to the recommendation of a combined two (2) square-mile COS area on the Property.

None of the new development shall preclude public access to the development, as required by FLUE Policy 1.2.1.1. Rather, development of the Property will be designed through the SAP and development review processes to include an interconnected system of internal circulation, including the provision of streets dedicated to the public connecting the residential areas to the major street system. As stated throughout the Report, interconnecting facilities will be provided to best encourage mode shift, consistent with FLUE Implementation Policy 7.1.4 and 7.15.

Urban Cluster Line

To complement the application of Urban Policies in the Plan to the Property, CHW recommends the extension of central water and sewer to serve new development on the non-conservation portions of the Property to protect Alachua County's groundwater resources in direct association with the proposed urban densities recommended in the SAS. Moreover, the extension of the abutting utilities across the Property presents an opportunity to curb the above-described leapfrog development into the rural areas and municipalities of the County. Extension of central utilities is predicated on COSE Policies 3.1.5 and 3.1.6 for extension to serve the SAS Property.

Proposed extension of utilities necessitates the following discussion of the Urban Cluster-related policies in FLUE Section 7.0 (Implementation) of the Plan.

As a result of the Policy 7.1.3(b)(2), there has been a functional shift from development inside the Urban Cluster to lands outside, due to several factors. As land and construction costs increase, based on the holistic cost to produce housing inside Alachua County's Urban Cluster, both local and national residential developers have shifted their focus to the municipalities outside the Urban Cluster where larger contiguous tracts of land are still available. As previously stated, there are seventeen (17) residential communities proposed simultaneously in the City of Newberry. Nearly a dozen subdivisions are proposed in the City of Alachua, and even High Springs is seeing development proposals for residential neighborhoods within the City limits.

All of this development in the rural area is expected to put additional trips on Alachua County roads as residents travel back to the urban core daily for employment and services. From a public policy standpoint, it is important to recapture populations closer to downtown Gainesville to make efficient use of public and privately funded infrastructure and to stimulate energy-efficient, resilient, urban community design. The community vision embodied in the Plan, when read as a whole, demands no less.

While the methodology in Implementation Policy 7.1.3 (a)(1-2) can result in numeric data, the data obscure two key elements – the ability to provide infrastructure and to develop sufficiently large contiguous tracts – which are necessary to identify truly available lands within the Urban Cluster for development within a price range that is practicable and competitive within the county-wide and regional context area while protecting the Floridan aquifer through central water and sewer services.

Implementation Policy 7.1.3, which addresses the periodic update of the Comprehensive Plan and ***any*** proposed amendments to the Urban Cluster, does not apply to the SAS of this unique Property. The Policy does not apply because the landowner is not proposing to amend the Urban Cluster, but rather apply specific urban policies and densities to the Property in a defined mixed-use manner in an adopted SAP. Moreover, the landowner is specifically requesting that the County Commission direct the preparation of a Special Area Plan for this Property to accomplish this Master Planning Scenario. The adopted SAP likely would reside in FLUE Section 8.0 (Special Area Plans).

This approach is paramount to the SAS and SAP Master Planning effort because Policy 7.1.3 sets forth enigmatic standards and a tautological methodology that operate to lock down all possible efforts by a private landowner to amend the Urban Cluster, resulting in the unintended consequences described in this Report. Assuming *arguendo* that population forecasts support amending the Urban Cluster, Policy 7.1.3 sends the landowner on a lengthy exercise over which it has no control or economic incentive (i.e. changing density on lands it doesn't own, persuading nearby cities to accommodate density on lands it doesn't own, changing the FLUM on lands it doesn't own). If somehow a change in the Urban Cluster is still warranted, the landowner is then subject

to the standards in subsection (d) – with which this Property can demonstrate compliance in the SAP and development plan review processes. However, the next and final requirement – subsection (e) – is impossible for anyone to achieve, including the County, to wit:

> *"[A]ny proposed amendment to expand the Urban Cluster must include a commitment to purchase development rights at a rate equivalent to or greater than the proposed increase in density or intensity through the Transfer of Development Rights program in accordance with Section 9.0 of this Element."*

This requirement is patently impracticable because no owner of real property seeking development entitlements (and the concomitant economic benefit) would purchase those rights at market value for the privilege of breaking even. Moreover, there is no – and never has been – a market in transferrable development rights in Alachua County and certainly no market containing the density required to transfer onto a 4,068-acre property under common ownership or control.

Policy 7.1.3 creates an internal inconsistency in the Plan as applied to this Property because it thwarts the goal in Objective 1.2 to provide the location and mixture of uses and implementation based on and consistent with market demand. Yet, as stated above, the Urban Cluster Policies (Policy 7.1.3 *et seq*.) mandate that if there is unmet need for a quantity of either residential or non-residential land every effort must be made to increase density and intensity first within the Urban Cluster, then within the rural communities, followed by reallocation between Land Use classifications in the Urban Cluster as a whole, and finally a phased approach to expansion of the Urban Cluster.

Meanwhile, the market in current-day, urbanizing Alachua County seeks reasonably priced housing in proximity to employment centers, schools, cultural resources, retail and professional services. If the incoming population cannot find it within the Urban Cluster, history and current patterns show they will leapfrog into the nearest rural municipality or clustered rural subdivisions on wells and septic tanks. Absent an unconstitutional ban on new residents moving to Alachua County, the recommended Master Planned Scenario for the Property serves the public health and welfare in all respects by accommodating population growth in a resilient community during the planning period (2019-2040).

The Master Planned community, to be described in the SAP and engineered through the development plan review process, will be designed to provide for adequate future urban residential development that includes a full range of housing types and densities to serve different segments of the housing market. It also will be designed to integrate into and be connected to surrounding neighborhoods and the community, with opportunities for recreation and other mixed uses within walking or bicycling distance. Recreational opportunities will be provided by creation of a greenway corridor system, open space and by the proposed UF Golf Course in the southeastern portion of the Property. In short, in addition to the foregoing, CHW's review of relevant Plan policies, development trends and the availability of central utility services from GRU and other

electric utility providers within Alachua County, support the application of urban land uses outside the Urban Cluster Line to this Property, which is bounded by urban land uses on three sides.

§402.101(e) Recommendations

As required by §402.101(e), ULDC, CHW makes the following recommendations based on the findings of the Special Area Study:

Recommendation No. 1. Undertake a Special Area Plan (SAP) for the Property to promote master planning and coordination of the public infrastructure, the management and ecological rebound of the Conservation Open Space areas, and the provision of community facilities and planned recreational uses, all in concert with mixed-use development of the Property;

Rationale: With the SAS as the guiding document for Conservation set-asides and initial Non-Conservation Open Space areas, designing in conjunction with the proposed ±2 square mile set-aside area will create the foundation for a model Florida community. The study area's residual ±4 square miles can introduce coordinated public infrastructure, key community and municipal facilities, along with planned recreational uses that preserve and protect the larger context area of western Alachua County. With the SAS study area situated between the Cities of Newberry, Archer, and Gainesville, approval of protections for the more than two-square-mile set aside area furthers the Board of County Commissioners' 'emerald necklace' concept originally envisioned in the late 1980s and early 1990s.

Moreover, as the 'emerald necklace concept' was supplanted recently by 'the Green Crescent', promoted by the current Board of County Commissioners for the eastern reaches of Alachua County, the proposed Conservation and Non-Conservation Open Space areas promote ecological rebound on this property and provide large-scale protection. The SAS also promotes linkages between several established neighborhoods and recently approved neighborhoods in western Alachua County, through direct connection to their established set-aside areas.

Recommendation No. 2. Create a new future land use category, potentially named Mixed-Use Village (MUV) and a complementary implementing zoning classification, such as Mixed-Use Village – Planned Development (MUV-PD) with specific qualifying criteria limited to large tracts proximate to the Gainesville's growing urban core;

Rationale: The study area abuts multiple established large-scale urban residential communities yet lies outside the Urban Cluster Line (UCL) precluding extension of potable water and sewer. Surrounding uses and densities represent traditional urban residential development patterns. With the exceptions of the Haile Plantation Town Center one (1) mile to the east and the Town of Tioga one-half (1/2) mile to the north, the predominant development pattern is suburban residential subdivisions or moderate-to-large lot rural subdivisions. Both Haile Plantation and the Town of Tioga contain a mixture of uses that complement each subdivision's residents and guests. Both represent more resilient and sustainable development forms, not only because of their mixed-use components, but because of their residential density range. While each has a signature form and character, they both approach thresholds where elements such as transit, interconnected open space, and ranges of housing stock allows diversity in home ownership opportunities across multiple income levels.

The study area has the potential to deliver a master planned range of land uses, linked by a truly interconnected multi-modal transportation network where residents, their guests, and visitors to the community are not wholly dependent upon the single-occupant vehicle. Moreover, if designed in concert with the proposed Conservation set-asides defined in the SAS, linked to an SAP containing specific land management strategies, the study area has the ability to deliver both interconnectivity and intra-connectivity to other established communities and both Conservation and Non-Conservation Open Space areas in the context area.

Recommendation No. 3. Prepare a Comprehensive Plan Amendment (MUV) application for the FCL Property, including a variety of land uses including workforce housing, Conservation areas and sustainable renewable passive energy options, and creation of a new Transportation Mobility District within the Transportation Mobility Element;

Rationale: The SAS study area lies outside the Urban Cluster Line (UCL) yet abuts several well-established communities and neighborhoods in western Alachua County. Historically, the most resilient and sustainable development patterns have resulted from master-planned properties. Those communities often require specific protections contained in Comprehensive Plan text and Future Land Use Map (FLUM) provisions to promote strong community form and protect existing and future open space environments within the respective community.

The FCL study area should similarly be conceptualized, planned, and ultimately entitled under similar planning methods. Research of the existing infrastructure systems abutting the study area document the Property's ability to accommodate urban residential densities and mixed-use community form. Moreover, if the study area's ±4,068-acre lands are subdivided or approached in a piecemeal manner, the benefits of collaborative master planning and its long-term strategies are forever lost to a series of unconnected and isolated individual concepts.

It is recommended that a new Transportation Mobility District be formed to encompass the Property by way of an amendment to the Transportation Mobility Element of the Plan for purposes of supporting the funding and construction of transit-related improvements incident to the development of Transportation-Oriented Development nodes within the Property. It is also recommended that provision of workforce housing be programmed into the land use plan and zoning master plan for

the Property up to the equivalent of 50 acres, but not concentrated necessarily in one location.

Recommendation No. 4. Prepare a MUV-PD zoning application for the FCL Property, denoting lands to remain Agricultural for siting of sustainable, renewable passive energy options and for the purpose of urban and rural separation, and denoting one or more Transit-Oriented Development nodes on the Property;

Rationale: As stated above, creating a cohesive master plan clearly presents the most holistic approach to address and avoid the pitfalls of piecemeal development forms. In addition, based on current and future energy needs of Alachua County, the City of Gainesville, and the consistently growing employment centers within the community, it is critically important to plan for and implement energy strategies that are not largely dependent upon fossil fuels and combustion-based energy production.

The creation of a Mixed-Use Village Zoning category (with retention of certain Agricultural lands) and respective planning document can deliver area-specific uses (i.e. photovoltaic fields, vegetative/yard debris composting) within the SAS study area that are best suited to address not only the Property but its context area's existing rural residential and agricultural neighbors. Some of these areas also are most proximate to the lowest density and intensity lands abutting the SAS study area's western boundaries. In addition, a transportation facility proximate to the Property – the Flying Ten Airport (KOJ8), a 3,200' single Fair Grass runway [18-36 orientation] can be buffered from future urban residential densities and encroachment of non-complementary land-use patterns abutting an active airport consistent with state and federal aviation regulations. In addition, it is recommended that one or more Transit-Oriented Developments be located on the Property during the rezoning process for further approval in the development review process.

Recommendation No. 5. Prepare specific development standards to be included in the FCL Comprehensive Plan Amendment(s) and Zoning application(s);

Rationale: The SAS process identified specific areas for Conservation and Non-Conservation Open Space, which represents the largest single private landowner proposed set-aside in Alachua County's history. Following adoption of the empirical data-driven approach within the SAS, preparation of a site-specific SAP containing unique Comprehensive Plan Goals, Objectives, and Policies that are directly linked to specific Zoning regulations should be the next step in the collaborative planning process, focused specifically on the design of one or more Transit-Oriented Development nodes within the Property and surrounding supportive development design.

During the SAP process, the Property owner, their environmental and planning consultants, Alachua County, and the University of Florida's Institute for Food and Agricultural Sciences (IFAS) can collaborate on strategies and regulations related to the SAS study area's conservation management.

This collaborative planning effort must combine both land management and land development strategies in a manner creating practicable short- and long-term approaches to furthering Alachua County's adopted Comprehensive Plan Goals, Objectives and Policies and the County's Unified Land Development Code (ULDC). It is envisioned, in some cases, the potential new strategies may have applicability or positive impacts upon lands abutting the FCL study area and promote long-term benefits to the context area.

Recommendation No. 6. Prepare any necessary text amendment(s) to the ULDC to implement the land use and zoning, if adopted for the FCL Property;

Rationale: Working collaboratively with Alachua County's Growth Management Department and Environmental Protection Department, and other County Staff, the owner shall define achievable Goals, Objectives, and Policies to effectuate both short- and long-term land use strategies, which likely will require creation of new text within Alachua County's Comprehensive Plan. These text amendments may include such concepts as a focus on balanced design alternatives that promote ecological rebound in concert with providing equitable housing and employment opportunities on a phased basis within the property. Enabling site-specific uses (i.e. directed energy facilities/micro-grid) and their relative location within the Property shall be addressed during the SAP, using the SAS empirical data and analysis in support of these amendments.

Recommendation No. 7. Identify potential amendments to the Capital improvements Element policies during the SAP process to incorporate programmed improvements to and expected funding for those improvements to the mass transit system, and any other facilities for which LOS is adopted; and

Rationale: Working collaboratively with Alachua County's Growth Management, Public Works, Parks & Recreation, and Environmental Protection Departments, the owner/applicant shall define practicable and achievable Goals, Objectives, and Policies identifying both short- and long-term capital improvements necessary within the SAS study area and within the context area. In addition, during the SAP, creation and memorialization of infrastructure priorities and funding options will be a primary focus. Preliminary research on utility infrastructure and planned transportation enhancements has occurred. While multiple planned and platted connections into the SAS study area exist, no physical connections are present today. Future corridors have been identified in Alachua County's Comprehensive Plan and should be considered for the

Metropolitan Transportation Planning Organization's "List of Priority Projects". This will involve testing various transportation scenarios and multi-modal opportunities to promote greater opportunities for transit and non-motorized mobility in the area.

During the SAP, when site-specific land use scenarios are conceptualized, complementary analysis shall occur that identifies probable infrastructure needs to accommodate future development within the SAS study area, accounting for abutting and adjacent existing approved development projects and planned projects. Potential amendments to the Alachua County CIE will be considered during the SAP.

Recommendation No. 8. Commence preparation of conservation management plans for the proposed Conservation set-asides, employing the expertise available through public-private partnerships, where possible.

Rationale: The landowner shall work collaboratively with their environmental and planning consultants, Alachua County, and the University of Florida's Institute for Food and Agricultural Sciences (IFAS) on strategies and regulations related to the proposed Conservation set-aside area's ecological rebound potential. The site-specific effort shall focus on preparation of conservation management plans for the Conservation lands, employing the expertise available through public-private partnerships, where possible. These partnerships shall be memorialized during the SAP process and can form the bases for both short- and long-term conservation land management.

Submitted by,

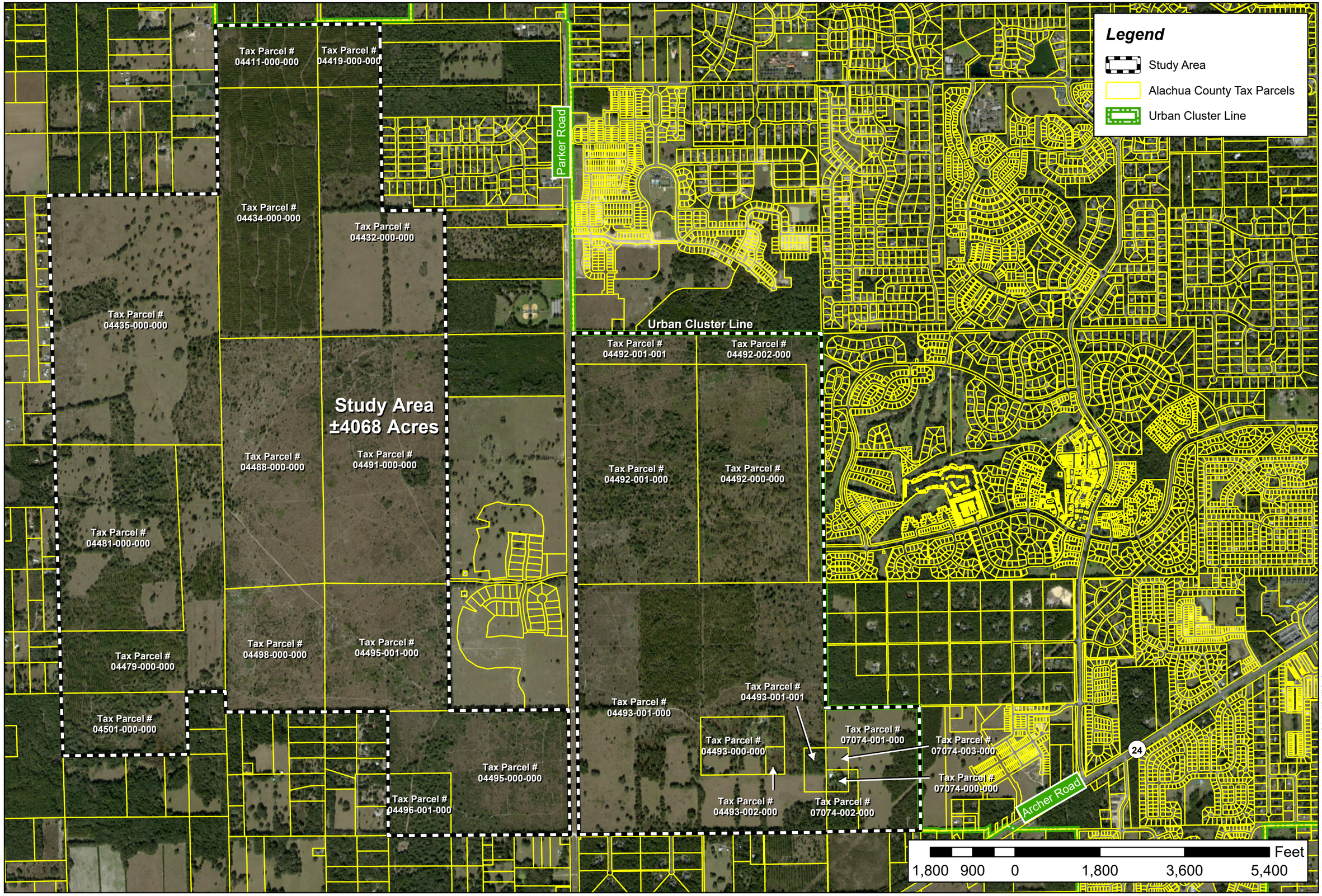
/S/ GERRY DEDENBACH, AICP

Gerry Dedenbach, AICP,
Vice President
CHW Professional Consultants, Inc.
11801 Research Drive, Alachua, FL 32615
(352) 331-1976

Attachment A Page 1

No-Build Scenario

FCL Timber, Land & Cattle, LLLP
Alachua County, FL



Professional Consultants

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False Northing: 0.000000
Central Meridian: -84.500000
Standard Parallel 1: 30.750000
Standard Parallel 2: 29.583333
Latitude Of Origin: 29.000000
GCS_North_American_1983

Prepared by: Employee ###
Date: 3/22/2022

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FCL Timber, Land & Cattle, LLLP
Alachua County, FL

C.O.S. 140 ac

200 ft

Tax Parcel # 04411-000-000

Tax Parcel # 04419-000-000

100 homes 140 ac

100 homes 140 ac

Tax Parcel # 04434-000-000

Tax Parcel # 04432-000-000

100 homes 140 ac

100 homes 140 ac

Tax Parcel # 04435-000-000

Solar Facility 430 ac

100 homes 140 ac

Study Area ±4068 Acres

Tax Parcel # 04488-000-000

Tax Parcel # 04491-000-000

Conservation Open Space 714 ac

Section & 1/2 Section Lines in proposed COS / set aside no roads here

Tax Parcel # 04481-000-000

Solar Facility 430 ac

Tax Parcel # 04498-000-000

Tax Parcel # 04495-001-000

Tax Parcel # 04479-000-000

Tax Parcel # 04501-000-000

600 ft

300 ft

300 ft

C.O.S. 82 ac

Tax Parcel # 04496-001-000

Tax Parcel # 04495-000-000

100 homes 140 ac

Parker Road

Urban Cluster Line

Tax Parcel # 04492-001-001

Tax Parcel # 04492-002-000

100 homes 140 ac

Tax Parcel # 04492-001-000

Tax Parcel # 04492-000-000

100 homes 140 ac

Conservation Open Space 1,076 ac

Tax Parcel # 04493-001-000

Tax Parcel # 04493-001-001

Tax Parcel # 04493-000-000

Tax Parcel # 04493-002-000

Tax Parcel # 07074-002-000

Tax Parcel # 07074-001-000

Tax Parcel # 07074-003-000

Tax Parcel # 07074-000-000

Archer Road

24

Legend

- Study Area
- Alachua County Tax Parcels
- Urban Cluster Line

Sec. 407.03. - Setbacks from major road centerlines, section, and half-section lines.

Within the Urban Cluster, no new building or structure shall be erected closer than seventy-five (75) feet from the centerline of any route designated and officially adopted for a major road as shown on the future transportation circulation map unless a waiver is approved by the reviewing entity. Such waivers may be based on the presence of parallel transportation corridors, environmental features, or existing development patterns.

(a) Outside of the Urban Cluster, no new building or structure shall be erected closer than seventy-five (75) feet from any section line or half-section line unless a waiver is approved by the reviewing entity. Such waivers may be based on the presence of parallel transportation corridors, environmental features, or existing development patterns.

(b) Approval of a plat by the BOCC shall constitute approval of a waiver for Subsection (a) above, and no further waiver shall be required. ***These lines are indicated in light blue in the scenario maps.***

NORTH

1,800 900 0 1,800 3,600 5,400 Feet

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Prepared by: Employee ###
Date: 3/22/2022

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Attachment A Page 3

Collaborative Planning Scenario

FCL Timber, Land & Cattle, LLLP
Alachua County, FL

Legend

- Study Area
- Alachua County Tax Parcels
- Urban Cluster Line

Sec. 407.03. - Setbacks from major road centerlines, section, and half-section lines.

Within the Urban Cluster, no new building or structure shall be erected closer than seventy-five (75) feet from the centerline of any route designated and officially adopted for a major road as shown on the future transportation circulation map unless a waiver is approved by the reviewing entity. Such waivers may be based on the presence of parallel transportation corridors, environmental features, or existing development patterns.

(a) Outside of the Urban Cluster, no new building or structure shall be erected closer than seventy-five (75) feet from any section line or half-section line unless a waiver is approved by the reviewing entity. Such waivers may be based on the presence of parallel transportation corridors, environmental features, or existing development patterns.

(b) Approval of a plat by the BOCC shall constitute approval of a waiver for Subsection (a) above, and no further waiver shall be required. ***These lines are indicated in light blue in the scenario maps.***

Tax Parcel # 04411-000-000
Tax Parcel # 04419-000-000
Parker Road
Tax Parcel # 04434-000-000
Mixed Use Village 232 ac
Tax Parcel # 04432-000-000
Mixed Use Village 191 ac
Urban Cluster Line
Tax Parcel # 04435-000-000
Solar Facility 428 ac
Mixed Use Village 88 ac
Mixed Use Village 87 ac
Study Area ±4068 Acres
Tax Parcel # 04492-001-000
MUV 92 ac
MUV 31 ac
Tax Parcel # 04492-002-000
Mixed Use Village 164 ac
Tax Parcel # 04488-000-000
Tax Parcel # 04491-000-000
Conservation Open Space 714 ac
Section & 1/2 Section Lines in proposed COS / set aside no roads here
Tax Parcel # 04492-000-000
C.O.S. 126 ac
MUV 32 ac
Mixed Use Village 125 ac
Tax Parcel # 04481-000-000
Solar Facility 429 ac
MUV 85 ac
MUV 15 ac
Mixed Use Village 50 ac
Tax Parcel # 04498-000-000
Tax Parcel # 04495-001-000
UF Golf Area 589 ac
Tax Parcel # 04493-001-000
Tax Parcel # 04493-001-001
Tax Parcel # 04479-000-000
Tax Parcel # 04501-000-000
Mixed Use Village 232 ac
Tax Parcel # 04495-000-000
Tax Parcel # 04493-000-000
Tax Parcel # 07074-001-000
Tax Parcel # 07074-003-000
Tax Parcel # 07074-000-000
Tax Parcel # 04496-001-000
Tax Parcel # 04493-002-000
Tax Parcel # 07074-002-000
24
Archer Road

Feet
1,800 900 0 1,800 3,600 5,400

NORTH

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Prepared by: Employee ###
Date: 3/22/2022

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FCL Timber, Land & Cattle LLLP Property

Special Area Study Report

June 2022

Cardno®

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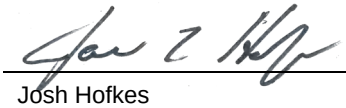
Author(s) John Bailey, PWS
Senior Consultant



Approved By Josh Hofkes
Senior Consultant

Ray Loraine
Senior Scientist

Document Information

Prepared for	FCL Timber, Land & Cattle LLLP
Property Name	FCL Timber, Land & Cattle LLLP Property 0BSpecial Area Study Report
Date	June 2022
Version Number	2.0

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Tables

Appendices

Figures

1 Introduction

Cardno, Inc. (Cardno) was retained by FCL Timber, Land & Cattle, LLLP (FCL) to provide an ecological evaluation for a Special Area Study (SAS) per Policy 4.10.1 of the Conservation and Open Space Element (COSE) of the Alachua County Comprehensive Plan (2019-2040) (the Plan) of FCL's approximately 4,068-acre property (Property) located in Alachua County, Florida. The Property is specifically located on either side of Parker Road, beginning approximately 1.3 miles north of SR 24 (Archer Road) in Gainesville, FL (see Figure 1. Location Map, Figure 2. 2020 Aerial Map, Figure 3. 1956 Aerial Map, and Figure 4. USGS Quadrangle Map). The proposed future uses of the Property include residential, non-residential, passive recreation, active recreational development, public infrastructure, and open space/conservation areas. The distribution of proposed future land uses is beyond the scope of this specific environmental report.

The purpose of the Cardno assessment is to make recommendations for a conservation set-aside as required by the SAS, in preparation for master planning of the Property by FCL. This analysis includes habitat mapping and an assessment of wildlife species' use of the Property, including a 15 percent gopher tortoise survey, consisting of approximately 123 linear miles of pedestrian transects. Cardno's empirical ground truthing results are contained in this report.

More specifically, the purpose of the Cardno report is to: (1) document whether, or to what extent, areas qualifying as a Strategic Ecosystem (SE) exist on the approximately 2,279-acre portion of the Property mapped by Alachua County as SE; and (2) provide, based on the data and analysis from ground-truthing and other professionally accepted sources, the proposed set-aside for conservation management purposes, as required by the COSE. Pursuant to Section 402.98, Alachua County Unified Land Development Code (ULDC), FCL has opted to undertake a SAS to ground-truth the County mapped Property to determine whether, or to what extent, SEs exist using COSE Objective 4.10, Policies 4.10.1 through 4.10.8, and the KBN/Golder Report as a guide. [COSE Objective 4.10 states, "Protect, conserve, enhance, and manage the ecological integrity of strategic ecosystems in Alachua County."].

A portion of the Property is included in the "Hickory Sink Strategic Ecosystem" shown on the Alachua County Strategic Ecosystems Map (Figure 5). The SE Map Units were originally identified in the KBN/Golder Associates report, "Alachua County Ecological Inventory Property" (1996) (Report) and were mapped generally by the KBN/Golder Ecological Inventory Map. A total of 47 SEs were mapped throughout Alachua County in the Report (see Figure 5). The information collected for the Report covered 900 square miles of Alachua County over a 90-day period, and most sites, including the Property, were accessed via roadside observation and analysis of aerial imagery. The intent, at that time, was to identify areas for potential public acquisition and management.

The area identified as Hickory Sink Strategic Ecosystem in Figure 5 is an approximately 3,005-acre parcel (approximately 2,279 acres of which is located within the Property boundaries) that is described in the Report as being "an area of well drained, moderately fertile soil that once supported an upland pine forest." (Figure 6. Hickory Sink Mapped Strategic Ecosystem Boundary Map and Appendix A - Hickory Sink excerpt from the KBN/Golder Report, pages 4-57 and 4-58). The Report ranked the Hickory Sink SE as below average in acquisition priority due to its lack of connections to existing conservation areas (Figure 7. Conservation Areas Within Three Miles Map), encroachment of the metropolitan area of Gainesville and Parker Road adding difficulty to necessary management, and the size of the property not being large enough to support the full spectrum of upland pine forest habitat species. The color code on the Legend to Figure 5 identifies the Hickory Sink SE as "poor" and further details it as low to below average based on the criteria of vegetation, endangered species habitat, wildlife habitat, hydrology, landscape ecology and management potential. The KBN/Golder Report did not recommend the Property be protected under public conservation, but rather focused on a cave located on the Property that supports cave invertebrates (troglobites).

In 2017, FCL sought to sell a conservation easement over the Property to Alachua County through the Alachua County Forever Program. Affidavit of L. Valentine Lee, May 31, 2022. Ultimately, the Property was added to the Program's Bargain-Share category, which required a financial partner and matching funds. A potential partner, the State Rural and Family Lands Protection Program, evaluated the Property

as Tier 2 and rejected acquisition of it for a variety of reasons, including lack of connectivity or buffering benefit, bisection by a high-speed, high traffic volume road, its location in the path of development, ecological management difficulty, degradation of the habitat from longleaf pine to traditional silviculture and the presence of planted bahia grass for cattle grazing. Affidavit of L. Valentine Lee, May 31, 2022. In a letter dated January 31, 2019, the County informed FCL principals that they had not secured a financial partner. On January 28, 2020, the County declined the Property owner's request to move the Property to the Program's Active Acquisition List for Full Price, a category that would not require matching funds to purchase.

2 Assessment Methodology

2.1 Methodology

Chapter 406 of Article 5 [Strategic Ecosystems], ULDC, implements the Plan and provides that the specific location and extent of strategic ecosystem resources shall be determined through ground-truthing using the KBN/Golder Report as a guide and performed either as part of the development review process or, as here, the SAS Process. The SAS level of resource-based planning does not contemplate the detailed level of analysis that accompanies a development application (i.e., ULDC Section 406.04 – Resource assessment requirements). For this assessment, Cardno reviewed available data, conducted extensive ground truthing of the property, literature review, and desktop analysis of available local, state, and federal resources mapping and databases. Because of the known population, Cardno, at this juncture, did perform a 15% survey of gopher tortoise habitat on the Property.

2.2 Alachua County Set-Aside Limitations

No more than 50% of the upland portion of a parcel may be required to be preserved because it is or includes a mapped strategic ecosystem unless the landowner provides consent or state or federal agencies require additional protection (ULDC Section 406.35 – Onsite habitat protection set-aside limitations).

In this case, Cardno's set-aside recommendation is based on an overall evaluation of the actual and potential presence of the following characteristics pursuant to COSE Policy 4.10.1:

- Natural ecological communities that exhibit native biodiversity within or across natural ecological communities, ecological integrity, rarity, and functional connectedness;
- Plant and animal species habitat that is documented for listed species and for species with large home ranges; documented as a special wildlife migration or aggregation site for activities, such as breeding, roosting, colonial nesting, or overwintering; high in vegetation quality and species diversity, and low in non-native invasive species; and
- Size, shape, and landscape features that allow the ecosystem to be restored to, or maintained in, good condition with regular management activities, such as prescribed burning, removal of exotic vegetation, or hydrological restoration.

Additionally, the criteria of ULDC Article XVII Section 406.97 Site Selection and Design of Conservation Management Areas were considered in formulating the recommendation of the SE set-aside. In particular, the Section goal of designating areas "…in functional, clustered arrangement, with logical contiguous boundaries to eliminate or minimize fragmentation to the greatest extent practicable…" was prioritized as this planning strategy also similarly benefits planning and design of potential land development opportunities on the remainder of the Property.

2.3 Desktop Evaluation of Data

Cardno performed a desktop evaluation of the Property that focused on identifying certain signatures and contours suggestive of potential wetlands, waterbodies, and habitats within the Property boundary. A desktop review and inventory of potential federal and state rare, threatened, and endangered species (listed species) that may utilize the site and surroundings was also conducted. Sources of professionally accepted data used to complete the evaluation included but were not limited to the following:

- United States Geological Survey (USGS): 7.5-minute topographic quadrangle maps;
- Digital aerial imagery;
- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS): Soil Survey of Alachua, Florida;

- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database;
- Florida Fish and Wildlife Conservation Commission (FWC) Florida's Imperiled Species Management Plan;
- Audubon Society Florida EagleWatch Public Nest App; and
- FWC Water Bird Locator

2.4 Habitat Assessment

Cardno conducted a habitat assessment including 123 linear miles of pedestrian transects required for the 15% gopher tortoise survey, pursuant to FWC *Gopher Tortoise Permitting Guidelines*, and a review of previously collected data in order to assess if any habitats on the Property are suitable to support federal and state protected species.

2.4.1 Field Evaluation

Cardno ecologists conducted a review of the Property on February 9, 2021; April 12, 2021; May 3-7; 2021; and May 10-13, 2021, for a total of 43 person-days to assess and document current conditions. The site was also reviewed with Alachua County staff on August 13th, August 31, and December 17, 2021. The distribution of multiple field visits throughout the year allowed a more thorough assessment of the Property than would be achieved by a lesser number of visits at just one time during the year. All habitat types on the Property, including key areas identified in the desktop evaluation and in previously collected on-site data, were investigated via pedestrian and vehicular transects. Habitat types were assigned a land use code consistent with the nomenclature of the Florida Department of Transportation's Florida Land Use, Cover and Forms Classification System (FLUCFCS) code that best fit the current site conditions and were recorded and mapped on 1' = 3,000' aerial prints of the Property (Land Use Map).

2.4.2 Data Evaluation

Cardno also conducted an evaluation of the data collected by ERC in October 2020 to supplement the data collected during field evaluation. Data includes field evaluations and listed species observations conducted across the Property using a team of FWC Authorized Gopher Tortoise Agents (AGTAs), traversing the site by both 4-wheel drive vehicles and pedestrian access.

2.5 Federal and State Listed Species Assessment

2.5.1 Species of Interest

Cardno developed an inventory of potential listed species of interest for the Property. In accordance with the ULDC Article 3, Chapter 410 (Definitions) Defined Terms definition of "Listed species," the species listed by state or federal agencies and the species ranked as S1, S2, or S3 by the Florida Natural Areas Inventory (FNAI) were included in this assessment. The following provided the basis for this assessment:

- A query of the USFWS IPaC System;
- Review of the FNAI Biodiversity Matrix for Alachua County, Florida;
- Review of USFWS and FWC GIS database files; and
- Cardno's extensive previous history and knowledge of wildlife habitats in Alachua, Gilchrist, and Levy County, Florida, in habitats similar to the historical habitat on-site.

The USFWS IPaC resource list, FNAI Biodiversity Matrices, and full species of interest list are presented in Appendices C, D, and E, respectively. Where these screening tools identified species with geographic ranges in Alachua County that did not include the Property, or for which suitable habitat was not present on the Property, the species were excluded from further discussion after verification during the field assessment. Refer to Section 4.0 Listed Species for the discussion on species that have the potential to

occur within the Property. Any required species-specific surveys will be conducted prior to development in accordance with the Alachua County ULDC.

2.5.2 General Listed Species Assessment

Following a review of available resources and online data, habitat assessment surveys were conducted for plant and wildlife species anticipated to occur within the Property. During the general habitat assessment survey, Cardno ecologists conducted meandering pedestrian and motorized transects throughout the Property. At all times, ecologists were vigilant and recorded any sighting or evidence of the presence or potential use of the property by species afforded protection by the USFWS under the *Endangered Species Act of 1973* (fauna in 50 CFR 17 and flora in 50 CFR 23), the FWC under Rule 68A-27.003, 68A-27.0031 and 68A-27.005 F.A.C. and *Preservation of native flora of Florida* (Section 581.185 F.S. and Chapter 5B-40 F.A.C.).

The assessment was performed in general accordance with methods found in the Florida Wildlife Conservation Guide as developed by the USFWS, FWC, and FNAI. During each survey event, observations of all listed species, as well as physical features that may indicate the presence of these species (e.g., tracks, scat, nests, burrows, cavity trees, etc.) were recorded with hand held gps or on 1"= 600' aerial prints of the Property and attached to this Report (see Figures 11 and 13). The field assessment did not include directed species-specific surveys as those surveys are not typically conducted before the development-specific site planning in Alachua County. Additionally, the cryptic nature, low population densities, or inaccessible habitats of a number of species that could potentially occur on the site made directed species-surveys impractical.

2.5.3 Gopher Tortoise Survey Methodology

During the field assessment, Cardno FWC AGTAs conducted field surveys within the Property to complete a specific 15% survey to locate gopher tortoise (*Gopherus polyphemus*) burrows and estimate the density of gopher tortoises in upland habitats. The tortoise survey was conducted in accordance with the standard methodology from the Gopher Tortoise Permitting Guidelines (Updated July 2020). Gopher tortoise burrows were censused along straight-line transects in potentially suitable habitats throughout the Property. Widths of the transects were determined by visibility, a function of the density and height of the existing vegetation. Observed burrows were categorized as potentially occupied (e.g., active, inactive or abandoned). Burrow locations were recorded using a hand-held GPS device, marked with flagging in the field, and their locations were plotted on aerial photography (Figure 13).

3 Habitat Assessment

3.1 Historic Site Management

Cardno conducted a review of historical aerials and landowner management practices to assess past and current use of the property. Review of the imagery and interviews of the Property owner show that agricultural use of the Property has been underway since at least the 1930s. The Property has been intensely managed for cattle, timber, and quail hunting by both the current and previous owners of the Property. The Property has been repeatedly logged and cleared. Based on discussions with the current landowners, land conversion activities have included clear-cutting, selective harvesting, burning, mowing, chopping, herbicide use, and plating of bahia grass. In the 1980s the old growth long leaf pine was removed and the site was “chopped” and replanted with slash pine. The second growth slash pine forest of the western and northern third of the Property was removed during a large scale clear-cut operation in 2004. The last large-scale harvesting was conducted over a 6-month period in 2017 and consisted of thinning and clearcutting of oaks and slash pines.

During the period between 1998 and 2004, little to no burning was possible because of drought conditions. As a result, oak growth became uncontrollable in many areas of the Property. The resultant oak thickets are essentially impenetrable and have excluded the historic native understories in these areas. At some point in history, essentially all portions of the Property have been clear-cut during various agricultural practices, and essentially no undisturbed habitat exists on-site.

Prescribed burning is the only practical method for management of the Property and prevention of the formation of oak thickets. However, as identified in the KBN/Golder report, several factors may make continued prescribed burning of this large Property difficult if not infeasible moving forward. Risk management and smoke containment will become more difficult as development continues in western Alachua County. The future proximity to schools, daycare centers, residential housing and other property uses associated with developed areas will make prescribed burning of the property difficult in the long term. While implementation of prescribed burning using smaller management units may help ameliorate these risks, the costs associated with implementation of burns on multiple small burn units is disproportionately high when compared to burning a unit of similar total size as a single unit.

3.2 Soils

The attached Natural Resources Conservation Service (NRCS) Soils Map (Figure 8) shows 11 soil mapping units within the Property:

- 2-Candler fine sand, 0 to 5 percent slopes;
- 30-Kendrick sand, 2 to 5 percent slopes;
- 39-Bonneau fine sand, 2 to 5 percent slopes;
- 3-Arredondo fine sand, 0 to 5 percent slopes;
- 41-Pedro fine sand, 0 to 5 percent slopes;
- 42-Pedro-Jonesville complex, 0 to 5 percent slopes;
- 46-Jonesville-Cadillac-Bonneau complex, 0 to 5 percent slopes;
- 68-Candler fine sand, 5 to 8 percent slopes;
- 69-Arredondo fine sand, 5 to 8 percent slopes;
- 6-Apopka sand, 0 to 5 percent slopes; and
- 8-Millhopper sand, 0 to 5 percent slopes.

In their undisturbed state, these soil types range from excessively drained to somewhat poorly drained. No hydric soils were mapped by the NRCS on Property (although there is one relatively small wetland located in the southwest portion of the property.

3.3 Land Use/Existing Habitat

As part of the field assessment, Cardno ecologists "ground-truthed" habitats within the Property to aid in the determination of the specific location and extent of areas of sufficient ecological quality and value to qualify as potential SE resources. Results of the SE assessment can be found in Section 5.0.

All portions of the Property were classified based on FLUCFCS. The Property-specific Land Use/Existing Habitat Map (Figure 9) is attached. Table 3.3-1 provides a summary of the land uses mapped on-site by FLUCFCS code and is followed by a description of each land use type based on field observations made while conducting the 123 linear miles of pedestrian transects required to complete the 15 percent gopher tortoise survey.

Table 3.3-1 Property Land Uses

FLUCCS Code	Description	Total Site Acres	Within KBN/Golder Mapped SE
110	Residential, Low Density (Less than 2 dwellings per ac.)	13.1	0.0
211	Improved Pasture	965.0	5.0
310	Range Land, Herbaceous (Dry Prairie)	34.3	0.0
320	Shrub and Brushland	821.3	783.3
321	Palmetto Prairies	78.0	77.8
412	Longleaf Pine – Xeric Oak	27.2	0.00
420	Upland Hardwood Forests	100.7	4.6
434	Hardwood Coniferous - Mixed	280.0	7.9
441	Coniferous Plantations	728.1	583.3
443	Forest Regeneration Areas	1,017.4	817.3
641	Freshwater Marshes	2.7	0.00
Grand total		**4,067.8**	**2,279.2**

3.3.1 Residential, Low Density <Less than two dwelling units per acre> (FLUCFCS 110)

This land use type is associated with the residential buildings located on property. Bahia grass (*Paspalum notatum*) dominates the vegetative coverage in these areas.

3.3.2 Improved Pasture (FLUCFCS 211)

This is typically associated with open pastures located on the eastern portion of the Property. This vegetation is dominated by Bahia grass, and broomsedge (*Andropogon virginicus*).

3.3.3 Rangeland, Herbaceous (Dry Prairie) (FLUCFCS 310)

This land use type is dominated by bahia grass, saw palmetto (*Serenoa repens*), wire grass (*Aristida stricta*), shiny blueberry (*Vaccinium myrsinities*), blackberry (*Rubus pensilvanicus*), broomsedge, and winged sumac (R*hus copallinum*). Scattered slash pine (*Pinus elliottii*) and oaks (*Quercus* spp.) are found throughout this land use.

3.3.4 Shrub and Brushland (FLUCFCS 320)

This is the dominant upland habitat community type on the western side of the Property. Analysis of historic imagery shows that these areas historically consisted of longleaf pine (*Pinus palustris*) dominated sandhill habitat. Native undisturbed sandhill plant communities are characterized by an overstory of longleaf pine and an open savannah-like understory dominated by grasses and a small oak component. They are pyrogenic communities requiring frequent low intensity fires on a two- to five-year interval to maintain the area in an open condition by controlling the invasion of oaks and other shrubs, and to stimulate flowering and germination of herbaceous species that are typically found in sandhill habitat (such as wire grass). Maintenance of the longleaf pine overstory is dependent on fire to remove oak competition and expose bare soil for seed germination. Essentially, all the longleaf pine has been logged off the property by both the previous or current owners of the Property.

In their current condition, as a result of lack of the frequent low intensity fires required to maintain the habitat, the areas mapped as shrub and brushland are generally dominated shrub and small trees sized oaks, including darlington oak (*Quercus hemisphaerica*), bluejack oak (*Q. incana*), live oak (*Q. virginiana*) and sand live oak (*Q. geminata*). Southern red oak (*Q. falcata*), turkey oak (*Q. laevis*), mockernut hickory (*Carya tomentosa*), and black cherry (P*runus serotina*) can also be observed in these areas. The dominant shrub species is saw palmetto with scattered winged sumac (*Rhus coppalina*) also present. The most prevalent understory plant cover observed include bahia grass, wire grass, broomsedge, and bracken fern (*Pteridium aquilinum*).

Woody/shrub and herbaceous dominated vegetation assemblages are present as a patchy mosaic throughout this designation. Large areas are dominated by thickets of oaks (primarily live oak) and other areas dominated by dense saw palmetto. Herbaceous vegetation is essentially excluded in these areas. The prevalence of oak thickets and palmetto patches is concentrated in the northern portion of this area, the southeast corner, and to a lesser extent the southwest portion of the area (Figure 9. Land Use/Existing Habitat Map). Patches dominated by bahia grass are also found through this area. Representative photos of this area are provided in Appendix B.

3.3.5 Longleaf Pine – Xeric Oak (FLUCFCS 412)

This land use type is only found on the western Property boundary. It is dominated by longleaf pine (*Pinus palutris*), and thickets of various oaks such as turkey oak (*Quercus laevis*), blue jack oak (*Quercus incana*), Darlington (upland laurel) oak (*Quercus hemisphaerica*), and southern red oak (*Quercus falcata*). The thickets have very little understory herbaceous vegetation resulting from the extreme young oak tree density.

3.3.6 Upland Hardwood Forests (FLUCFCS 420)

Upland hardwood forests within the Property boundaries are dominated by thickets of turkey oak, blue jack oak, laurel oak, and southern red oak, with a vegetated understory of muscadine grape (*Vitis rotundifolia*), Virginia creeper (*Parthenocissus quinquefolia*), blackberry, Bahia grass, and saw green briar (*Smilax bona-nox*).

3.3.7 Hardwood Coniferous – Mixed (FLUCFCS 434)

This land use type is typically associated with the areas around sink holes within the Property. Its understory is dominated by vines such as muscadine grape, Virginia creeper, Carolina jessamine (*Gelsemium sempervirons*), and saw green briar, with little herbaceous vegetation present. Canopy cover is dominated by cabbage palm (*Sabal palmetto*), dogwood (*Cornus florida*), and red bay (*Persea borbonia*) trees.

3.3.8 Coniferous Plantations (FLUCFCS 441)

This land use type is an active pine plantation that is thinned every few years following best management practices. The vegetation is dominated by a canopy of slash pine with a maintained understory of dog fennel (*Eupatorium capillifolium*), broomsedge, and knotroot foxtail (*Seteria parviflora*).

3.3.9 Forest Regeneration Areas (FLUCFCS 443)

This land use type accounts for the majority of the areas east of Parker Road. These are areas of historic long leaf pine/sandhills that have been logged and subsequently become colonized and overgrown by oaks. They appear very “weedy” in character. The dominant species are live oak and darlington oak. Oak cover is a thicket over much of this area resulting in the virtual exclusion of groundcover vegetation. Where ground cover is present, the prevalent species include broom sedge, dog fennel *(Eupatorium capillifolium*), bahia grass, blackberry, grape vine (*Vitis spp.*) cogon grass (*Imperata cylindrica*) and bracken fern.

3.3.10 Freshwater Marshes (FLUCFCS 641)

This land use type is located on the southwest most portion of the Property. It is dominated by yellow-eyed grass (*Xyris* spp.), smartweed, (*Persicaria hydropiperoides*), spike rush (*Eleocharis baldwinii*), soft rush (*Juncus effusus),* and various sedges (*Cyperus* spp.).

3.4 USGS Quadrangle and FEMA Floodplain

The attached USGS Quadrangle (Figure 4) indicates the presence of a single wetland located in the southwestern portion of the Property. The USGS Quadrangle also indicates that there are a number of sinkholes across the Property, and one sinkhole labeled as Hickory Sink on the eastern portion of the Property.

The attached FEMA Flood Zone Map (Figure 10) shows isolated portions of the eastern portion of the Property are mapped as FEMA Flood Zone A. Flood Zone A areas are subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies.

4 Listed Species

4.1 Study Area Potential Species

According to the FNAI database and IPaC Unofficial Species List, 37 species meeting the ULDC definition of Listed Species are known to occur or have the potential to occur in Alachua County (Appendix E - Listed Flora and Fauna Species with the Potential to Occur in Alachua County). During the desktop analysis and from our field work, Cardno determined that 16 animals and 8 plants from this initial screening have the potential to occur within the Property based on potential habitat on-site. The text below discusses only these 24 species with a reasonable potential of occurring on the Project. Species that do not occur in western Alachua County, i.e., red-cockaded woodpecker, or for which very limited or no habitat exists, e.g., Florida sandhill crane and wood stork, are included in Appendix E for completeness, but are not discussed below. Neither Cardno nor ERC performed formal species-specific surveys, outside of Cardno's 15% gopher tortoise survey. A map showing incidental listed species observations during the tortoise survey is provided as Figure 11. Species with the potential to occur within the Property and their likelihood to occur are discussed below.

4.1.1 Frosted Flatwoods Salamander (*Ambystoma cingulatum*)

Frosted flatwoods salamanders are unlikely to be present on the Property as historic records of the species do not occur in western Alachua County (Ashton 1992) and existing habitats are generally unsuitable because of altered ground layer vegetation and the lack of wetlands for breeding (only a single, approximately 3.7-acre, freshwater herbaceous wetland located in the far southwestern corner of the Property).

Flatwoods salamanders inhabit wet terrestrial environments with breeding sites that include vernal pools, roadside ditches, cypress or other forest swamps, marshes, and sphagnum patches. While mainly staying in/near freshwater, these salamanders can tolerate low salt concentrations. Non-breeding sites include fire-dependent pine flatwoods.

4.1.2 Striped Newt (*Notopthalmus perstriatus*)

Striped newts are rare and declining throughout their range. As with the frosted flatwoods salamander, the historic disturbance of the native ground cover and the lack of small, isolated wetland for breeding make the presence of striped newts unlikely. Habitat management appropriate to maintain or restore native upland communities would benefit striped newts, if present in the Project area.

4.1.3 Gopher Frog (*Lithobates capito*)

Gopher frogs use gopher tortoise burrows and other subterranean retreats and may travel as much as one (1) mile to reach suitable wetland breeding sites (Godley 1992). Gopher frogs are primarily nocturnal but may sometimes be observed sitting in the mouths of gopher tortoise burrows during the day. None were observed during Cardno's field work. However, suitable habitat for the species does occur on the Property and they could potentially be present. Habitat management to maintain or restore native upland communities and to benefit gopher tortoises would also benefit gopher frogs, if present in the Project area.

4.1.4 Eastern Diamondback Rattlesnake (*Crotalus adamanteus*)

Eastern diamondback rattlesnakes occupy open pinelands and resulting regenerating communities after logging. Cardno ecologists observed an eastern diamondback while conducting gopher tortoise surveys on the Property. Habitat management to maintain or restore native upland communities will benefit eastern diamondback rattlesnakes. The design of conservation set-aside areas using the criteria of ULDC Article XVII Section 406.97 including reduced perimeter-to-area ratios may help to minimize detrimental interactions between rattlesnakes and future residents of any developed portions of the Property.

4.1.5 Eastern Indigo Snake (*Drymarchon couperi*)

The eastern indigo snake is a large, wide-ranging predator that occupies large areas of native upland and wetland habitats in Florida. Indigo snakes are often associated with gopher tortoise burrows, which they use as refugia from extreme temperatures. No indigo snakes were documented within the Property, but appropriate habitat exists, and indigo snakes could occur within the Property. However, research has shown that at least 1,000 hectares (2,471 acres) of contiguous habitat is required to sustain a population of eastern indigo snakes (Moler 1992). Not only does this species require large undisturbed habitat, but the habitat must be relatively roadless. The effect of road mortality and intentional killing of eastern indigo has been demonstrated to substantially impact populations (Enge and Wood 2002; Breininger et al. 2004 2011, 2012). A study of snake mortality on rural roads (less than 1,000 vehicles per day) in Hernando County found a mean annual snake mortality of 12.8/kilometer/year (Enge and Wood 2002). Paired drift fence/funnel trap surveys have shown indigo snakes were proportionately trapped three times more frequently in intact habitats on public lands than on rural sites with roads, suggesting that road mortality had reduced the indigo snake population at the rural site with roads (Enge and Wood 2002). Deliberate killing of snakes on roads is known to be a common activity throughout the world (Andrews et al. 2006).

Based on recent studies, the size of the property, and its isolation from other areas of potential habitat, it is likely that the site does not support a viable population of eastern indigo snakes if present (Breininger et al. 2011, and Hyslop 2007). Furthermore, with increasing urbanization of western Alachua County it may be difficult to impossible to manage the Property to allow eastern indigo snakes to persist regardless of future plans for the Property.

4.1.6 Gopher Tortoise (*Gopherus polyphemus*)

During the preliminary gopher tortoise survey, Cardno AGTA's surveyed approximately 608 acres of 4,015 acres estimated to be potentially suitable habitat (15%) (refer to attached Figure 12. Gopher Tortoise 15% Survey Transects Map) of the 4068-acre Property. A total of 461 potentially occupied burrows and 69 abandoned burrows were observed within the Property (Figure 13. Gopher Tortoise Burrow Locations Map). Tortoises were observed in most open habitats on the Property but were generally absent from the southern portion of the Property east of Parker Road and from areas of dense woody vegetation on the portion of the Property west of Parker Road. Based on the FWC population density calculation, the property is estimated to have approximately 1,522 tortoises.

4.1.7 Southern Hognose Snake (*Heterodon simus*)

Southern hognose snakes are a rare snake that occurs in sandy, well drained habitats. The rarity and fossorial habits of this species make it difficult to survey, and none was observed during any of the multiple days during Cardno's field work. The Property contains suitable habitat for southern hognose snakes, and they potentially could occur on the property and much of western Alachua County.

4.1.8 Short-tailed Snake (*Lampropeltis extenuata*)

The short-tailed snake is an extremely slender, spotted snake with a cylindrical body rarely exceeding 20 inches in total length. A secretive burrower, the short-tailed snake is only rarely seen above ground or under cover objects. The snake inhabits dry upland habitats, principally sandhill, xeric hammock, and sand pine scrub. No short-tailed snakes were documented within the Property. However, appropriate habitat exists, and short-tailed snakes could occur within the Property and much of western Alachua County.

4.1.9 Florida Pine Snake (*Pituophis melanoleucus mugitus*)

Florida pine snakes are large, stocky, tan, or rusty colored snakes with an indistinct pattern of large blotches on a lighter background. These snakes are typically found within areas with open canopies and dry sandy soils in which it burrows. These species often coexist with pocket gophers (*Geomys pinetis*) and gopher tortoises. No pine snakes were documented within the Property, but appropriate habitat exists, and pine snakes could occur within the Property and much of western Alachua County.

4.1.10 Florida Burrowing Owl (*Athene cuncularia floridana)*

Burrowing owls typically occur in open, well-drained, treeless areas where herbaceous ground cover is short. Florida burrowing owls usually construct their own burrows where they lay their eggs and brood their young. Burrows are utilized for nesting in the spring and for cover in the winter. While potentially suitable habitat is present within the Property, no burrowing owls or burrowing owl burrows were observed during the field evaluation. Due to the species characteristics of burrowing owls, it is likely that if any individuals exist on-site, they would have been observed during the field evaluation or during County field reviews in the Fall of 2021. Since no observations have ever been documented within the Property, it is unlikely that the species is present on site.

4.1.11 Southeastern American Kestrel (*Falco sparverius paulus*)

Kestrels prefer to nest in old woodpecker or squirrel cavities, located 15-40 feet above the ground in pine trees; however, they will also nest in artificial nest boxes and other available cavities. The listed southeastern American kestrel (SEAK) is a year-round resident in Florida, whereas the northern subspecies, which is unlisted, is migratory (arrive in September/depart in March or early April). Open areas suitable for southeastern American kestrel foraging, and cavity trees/snags suitable for nesting, are present within the Property. A single kestrel was observed on the east side of the Property (Figure 11. Incidental Listed Species Observations Map). Potential nest sites were inspected for signs of kestrel activity, such as prey remains, feathers, and whitewash stains. No evidence of on-site kestrel nesting was observed during the field evaluation.

4.1.12 Bald Eagle (*Haliaeetus leucocephalus*)

Bald eagles have the potential to occur in any of the native upland habitats within the Property. Using the best available data, six bald eagle nests are known to occur within 5 miles of the Property (refer to attached Figure 14. Bald Eagle Nests Location Map). No bald eagles were observed during the field evaluation and are unlikely to occur within the Property because of several factors, including, but not limited to, the lack of mature pines and open water habitats.

4.1.13 Bachman's Sparrow (*Puecaea aestivalus*)

Bachman's sparrows are a rare and declining songbird that occurs within the historic range of the long leaf pine dominated communities in the southeastern U.S. They may also occupy shrubby areas lacking a tree canopy. During a site review with County staff, several Bachman's sparrows were documented on the Property.

4.1.14 Southeastern Bat (*Myotis austroriparis*)

Hog Sink Cave located on the eastern side of the Property is known to have historically supported a large colony of an estimated 30,000 southern bats in the 1950's (Rice 1955a in Gore, J.A. and J.A. Hovis. 1994). More recent surveys for bats completed by the FWC in 1991 failed to detect bats (Gore, J.A. and J.A. Hovis. 1994). Changes in conditions within the cave, including water levels, may have contributed to a change in suitability over this timeframe. Protection measures Hog Sink Cave and other karst features on the Property will help to maintain these habitats.

4.1.15 Southeastern Fox Squirrel (*Sciurus niger niger*)

Fox squirrels are a characteristic component of southeastern US pine forests fauna. Fox squirrels frequent open pine-dominated communities but will also use oak-dominated forests during the mast season when acorns are plentiful (Humphrey and Jodice (1992). Cardno ecologists observed a fox squirrel during field work the eastern side of the Property (Figure 11).

4.1.16 Cave Invertebrates

Five invertebrates associated with caves and other karst features may occur on the Property, but sampling for these species is difficult because of the habitats occupied and the specialized survey methods required. Karst Environmental Services, Inc. (2006) conducted an *Evaluation of Cave Resources and Fauna* (2006) on portions of the Property and documented three (3) species of troglobite crayfish.

Protection and management of karst features in accordance with the provisions of ULDC Section 406.90 will help to protect these features and species that occupy them.

4.1.17 Listed Plants

A search of the FNAI database using their Biodiversity Matrix tool lists 12 species of plants as having been recorded in proximity of the Property (See appendices C and E). However, because of the way the tool is configured, data is pulled from areas that are not part of the property area of interest. Of the 12 plant species that are listed in the FNAI Biodiversity Matrix, four are unlikely to occur on the Property because there is no suitable habitat present. The eight species listed for which suitable habitat is present on the property include, incised groove-bar (*Agrimonia incisa)*, Flyr's brickell-bush (*Brickellia cordifolia*), woodland poppymallow (*Callirhoe papaver*), Godfrey's swampprivet (*Forestiera godfreyi*), angularfruit milkvine, (*Gonolobus suberosus*), pondspice (*Litsea aestivalis*), Florida spiny-pod (*Matelea floridana*), Florida mountain-mint (*Pycnanthemum floridanum*) and silver buckthorn (*Sideroxylon alachuense*). Two species, the angularfruit milkvine and woodland poppymallow, were observed within the Property boundary (Figure 15) during 2021 surveys on the Property. The protection and management of the conservation set-aside areas discussed in Section 5 can be expected to maintain documented listed plant species on the Property.

4.2 Listed Species Conservation Considerations

This section discusses proposed listed species conservation and management measures anticipated on the Property as required to comply with the requirements of ULDC Article IV – Listed Plant and Animal Species Habitat and the similar and broadly overlapping requirements of ULDC Article III – Significant Plant and Wildlife Habitat and Article V – Strategic Ecosystems.

It is important for the reader to recognize that, of the species observed or identified as potentially occurring on the Property, none has species specific management requirements that differ from management appropriate for the vegetation communities/habitat types that they occupy. Therefore, this discussion will use the target habitat types to be proposed within the conservation set asides, i.e., sandhill/high pine, upland mixed forest and karst communities (Figure 18. Proposed Set-Aside CMA Target Habitat Map), to summarize anticipated conservation benefits to associated listed species.

4.2.1 Sandhill/High Pine

Five vertebrate listed species documented on the Property (gopher tortoise, eastern diamondback rattlesnake, southeastern American kestrel, Bachman’s sparrow and southeastern fox squirrel) are characteristic of sandhill/high pine habitats. Several other species, including a number that are difficult to survey, may also occur in the remnants of these habitats. From an initial 15% survey, gopher tortoises are estimated to occupy some 3,327 acres of the Property (Figure 13). Areas determined by survey to not be occupied by tortoises were generally areas heavily overgrown by woody vegetation and likely also not suitable for other sandhill/high pine species, such as the southeastern American kestrel and southeastern fox squirrel.

Therefore, occupied gopher tortoise habitat provides an appropriate surrogate and has been used as the primary determinant for the set-aside on the western portion of the Property. As detailed later in this Report and shown on Figure 17, the Property owner has identified the specific location of approximately 850 acres of Conservation Open Space on the Property over which it will retain control and an additional 300 acres of Conservation Open Space on the proposed University of Florida golf course for a total of 1,150 acres of Conservation Open Space.

As gopher tortoises are the most common listed species on the Property, they will serve as a primary driver for land management and conservation efforts targeting the maintenance and restoration of sandhill/high pine communities. As suggested above, land management appropriate for gopher tortoises can also be expected to benefit commensal species, including both listed or common species that may occur on the Property.

Because State listed gopher tortoises are prevalent, the landowner is consulting with the Florida FWC to explore the feasibility of establishing an on-site gopher tortoise conservation area with a goal of maintaining a significant portion of the existing population on-site. If these efforts are successful, and initial efforts are proving so, the landowner's conservation efforts can also be expected to benefit other sandhill and high pine species that may be present as well, including both common and listed species.

4.2.2 Karst Habitat Species

Southeastern bats and three cave crayfish species were previously documented in karst features on the Property (Gore and Hovis, 1994; Karst Environmental Services, 2006). All Significant Geologic Features (SGF) will be buffered in compliance with the requirements of ULDC Article XVI – SGF, including Section 406.90. Protection of SGF and topography will form the basis of the protection of these systems and the wildlife that use them. The set-aside acreage encompassed by the karst features and their recommended buffers is 23.63 acres (Figure 16).

In addition to the buffering requirements, management of surrounding uplands to enhance or restore an upland mixed forest community type can be expected to have additional benefits. Also, future planning and design of any proposed development will include consideration of the need to protect surface and ground water quality and levels, as these are vital to the health of SSGF. Additionally, operational management of the proposed University of Florida Golf Course is expected to include considerations for protection of surface and ground water.

4.2.3 Upland Hardwood Forest

The advanced successional state of areas mapped as Forest Regeneration on the eastern side of Property coupled with the proximity of existing development to the north and east make management of these areas as sandhill or high pine communities inappropriate. Therefore, upland hardwood forest is a more appropriate target for habitat enhancement and restoration in set-aside areas east of Parker Road. These target habitat types should continue to be suitable for the species that currently occupy these areas.

4.2.4 Listed Plants

The listed plants observed or potentially occurring on the Property fall into three broad groups based on habitat: Sandhill / High Pine, Upland Hardwood Forest around Karst Features, and Upland Mixed Forest Edges. Anticipated habitat management will maintain or improve habitat conditions for plants that occupy each of these habitats on the Property. Observations of listed plants on the Property were not used as a primary determinant for the delineation of conservation set-asides because potential impacts to plants outside of the set-aside areas may be offset by population enhancement measures such as the physical translocation of plants or establishment by reseeding or re-introduction.

5 Recommended Set-Aside Acreage

The Alachua County SE Map shows the Hickory Sink SE map unit coded as “poor” resulting from the lack of connectivity to existing conservation areas, encroachment of the metropolitan area of Gainesville, the bisection by Parker Road adding difficulty to necessary management, and the size of the property not being large enough to support the full spectrum of upland pine-habitat species. The original KBN/Golder Report did not recommend the Property, as a whole, to be protected under public conservation but rather focused on protecting the caves on the Property that support cave invertebrates (Appendix A, Excerpt from KBN/Golder Report).

Cardno agrees with the evaluation provided in the original KBN/Golder report that the Property overall is in poor ecological condition and does not support intact native communities. As summarized in Table 3.3-1 and in Figure 9, of some 2,279 acres mapped by KBN/Golder as SE, approximately 583 acres (25.5%) are Coniferous Plantations, an anthropogenic land use that clearly doesn’t warrant SE designation. Of the SE mapped by KBN/Golder, approximately 783 acres (34.3%) are best characterized as Shrub and Brushland (FLUCFCS Code 320) and approximately 817 acres (35.9%) are best characterized as Forest Regeneration (Figure 9. Land Use/Existing Habitat Map). Both of these latter FLUCFCS categories are successional states following silvicultural degradation of historic pine dominated forest. The remaining, approximately 4%, of the mapped SE portions of the property are classified as either improved pasture, palmetto prairie or upland hardwood forest.

The purpose of the proposed set-aside is to meet the overlapping set-aside requirements of Articles III (Significant Plant and Animal Habitat), IV (Listed Plant and Animal Species Habitat), XVI (Significant Geologic Features) and in consideration of Article V (Strategic Ecosystems) of the ULDC. The proposed set-aside will include all wetlands on the property; all Significant Geologic Features located on the Property; and habitats that provide opportunities for the restoration of sandhill, high/pine and upland mixed forest. The Property is unlikely to be able to support the long-term survival of keystone species, such as the red-cockaded woodpecker and eastern indigo snake, that require expansive areas of high quality, unfragmented habitat.

Toward this goal, a set-aside is proposed consisting of 1,150.12 acres of the relatively highest quality on-site habitat, in the sense that it can facilitate creation of enhanced habitats as described above and creation of corridors connecting all habitat to undeveloped areas on adjacent properties. The set-aside acreages are summarized in Table 5.1 and shown on Figure 17. Proposed Set-Aside Map.

Table 5.1 Proposed Conservation Set Aside Summary Table

Set-Aside Components	Acres
West Set-Aside (future gopher tortoise recipient site and offsite corridors)	715.44
East Set-Aside - North Portion and Significant Geologic Features Buffers	134.68
East Set-Aside - UF Golf Course - Buffer and additional areas	300.00
Total Conservation Area Open Space Set-Aside	**1,150.12**

The proposed West Set-Aside is anchored by an approximately 691-acre area targeted for sandhill/high pine restoration on the portion of the Property located west of Parker Road (Figure 18). (The balance of the West Set-Aside is composed of created corridors). This represents the area best suited for ecological rebound under proper and continued management efforts. The habitat to the north of this area exhibits a greater proportion of oak and palmetto thickets that lack the understory herbaceous diversity of the areas to the south (that are recommended for inclusion in the set-aside).

The areas east of Parker Road are in a more ecologically degraded condition than the proposed West Set-Aside. The limits of the proposed set-aside for the area east of Parker Road were configured based less on habitat quality and more with the intention of creating wildlife corridors linking the Significant Geologic Features (to the extent practicable) to current and future off-site preservation areas.

The priority of the proposed West Set-Aside is the maintenance of habitat for species such as the state threatened gopher tortoise, gopher frog, southeastern American kestrel, Bachman's sparrow, and southeastern fox squirrel. Corridors from the core of this set-aside are proposed along the northeastern and southwestern perimeters of the Property to create opportunity for recreational and biological linkages to the Gainesville Regional Utilities groundwater recharge park, the Flintrock Agrihood subdivision, and open space areas of adjacent developed properties east and north/northwest of Parker Road.

The recommended East Set-Asides prioritize the preservation and buffering of karst features, which are incorporated into an area proposed for enhancement or restoration as upland mixed forest. The advanced ruderal successional state of these areas and the proximity of adjacent existing development will hinder the ability to manage these areas with prescribed fire. Therefore, a mixed hardwood forest is an appropriate restoration target. The linear arrangement of the karst features creates an opportunity for environmental and recreational linkage across the Property between proposed set-asides on the proposed University of Florida golf course (totaling 300 acres) and the future set-aside in the Town of Tioga subdivision to the north.

It is the property owner's intention that a portion of the property east of Parker Road will be developed as a recreational facility to include golf and related amenities. This facility will be utilized by the intercollegiate golf programs at the University of Florida and will include facilities for youth development programs as well as other golf related uses. The property owner anticipates that the ecological characteristics provided and/or restored or enhanced on this portion of the property east of Parker Road would satisfy the balance of any required maximum set aside as referenced above.

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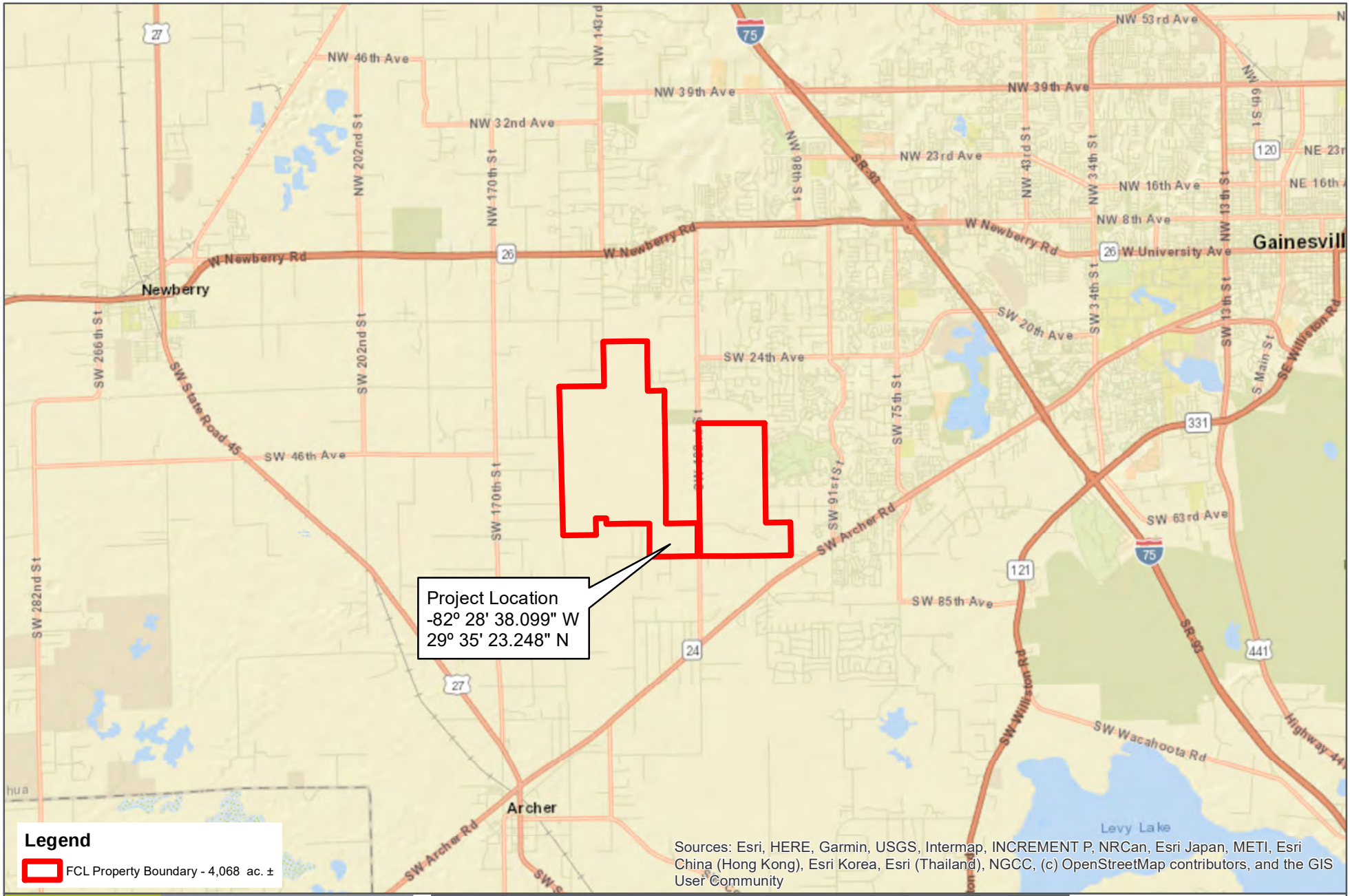

Image:Streetmap

Data Source: ESRI

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

Figure 1. Property Location Map

FCL Property
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0 2 4 Miles
0 3.2 6.4 Kilometers

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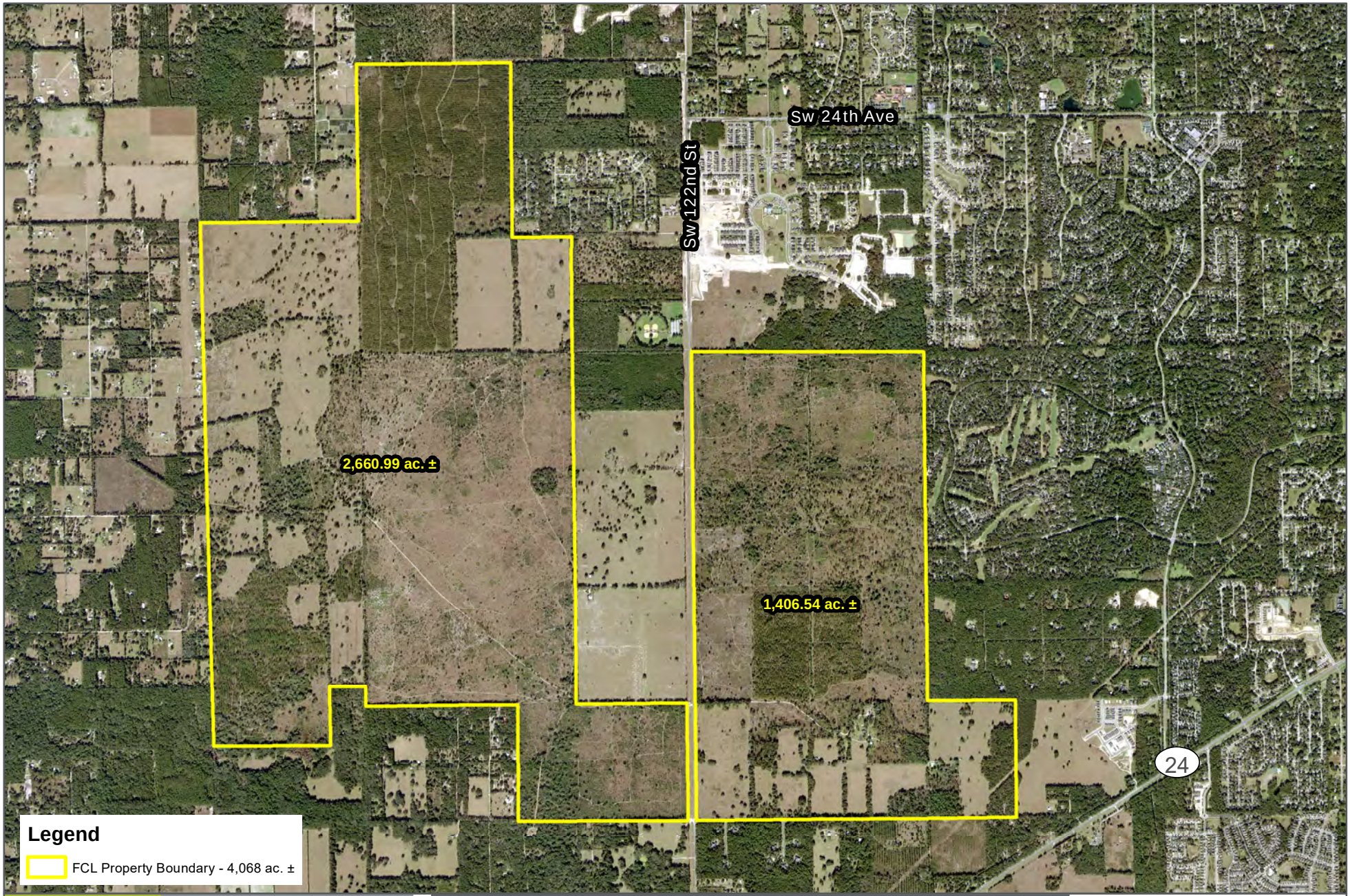

Image:2020

Data Source: FDOT

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

Figure 2. 2020 Aerial Map

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0 3,000 6,000 Feet
0 914 1,828 Meters

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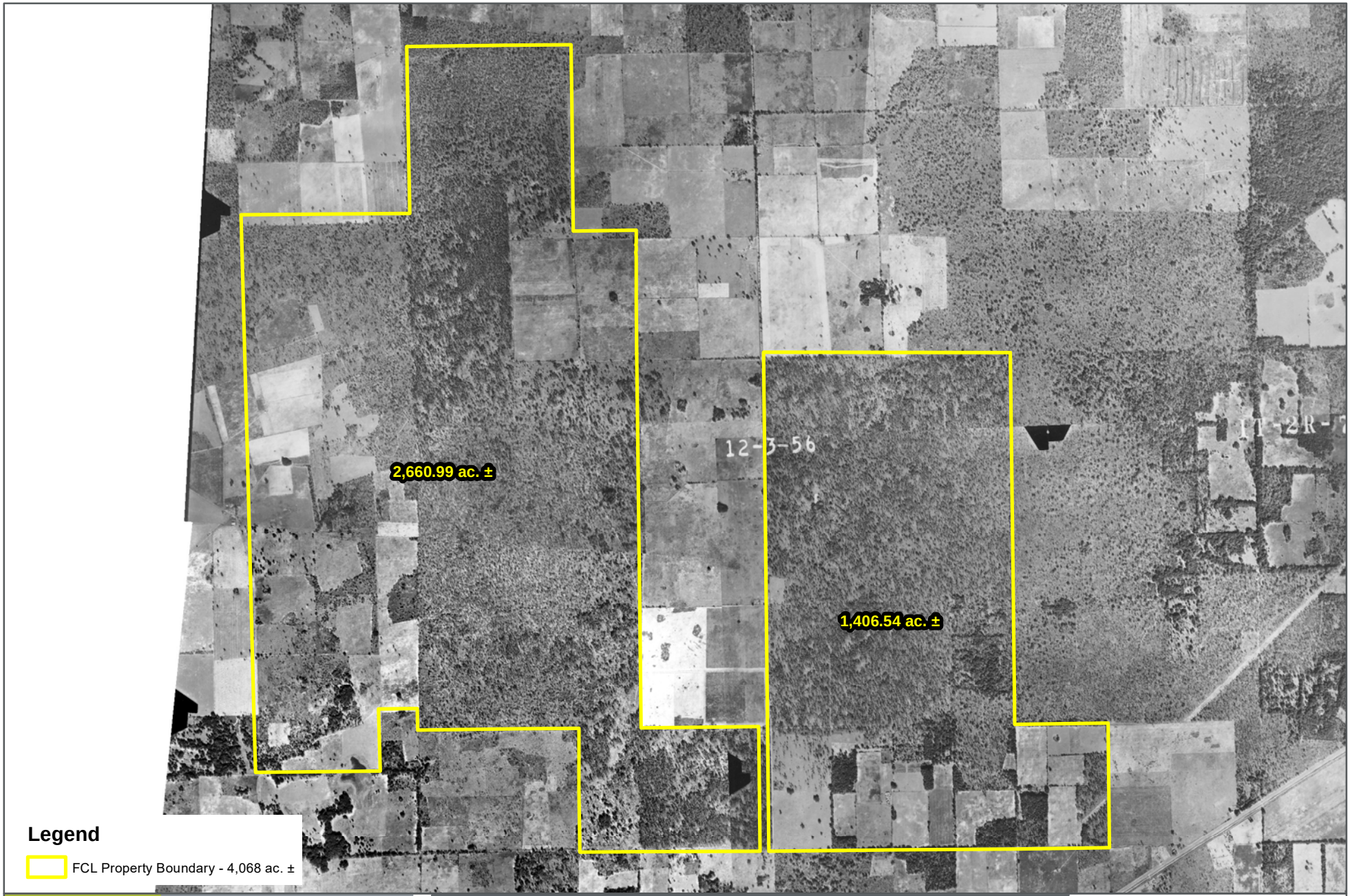

Legend

FCL Property Boundary - 4,068 ac. ±

Image:1956

Data Source: UF

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

Figure 3. 1956 Aerial Map

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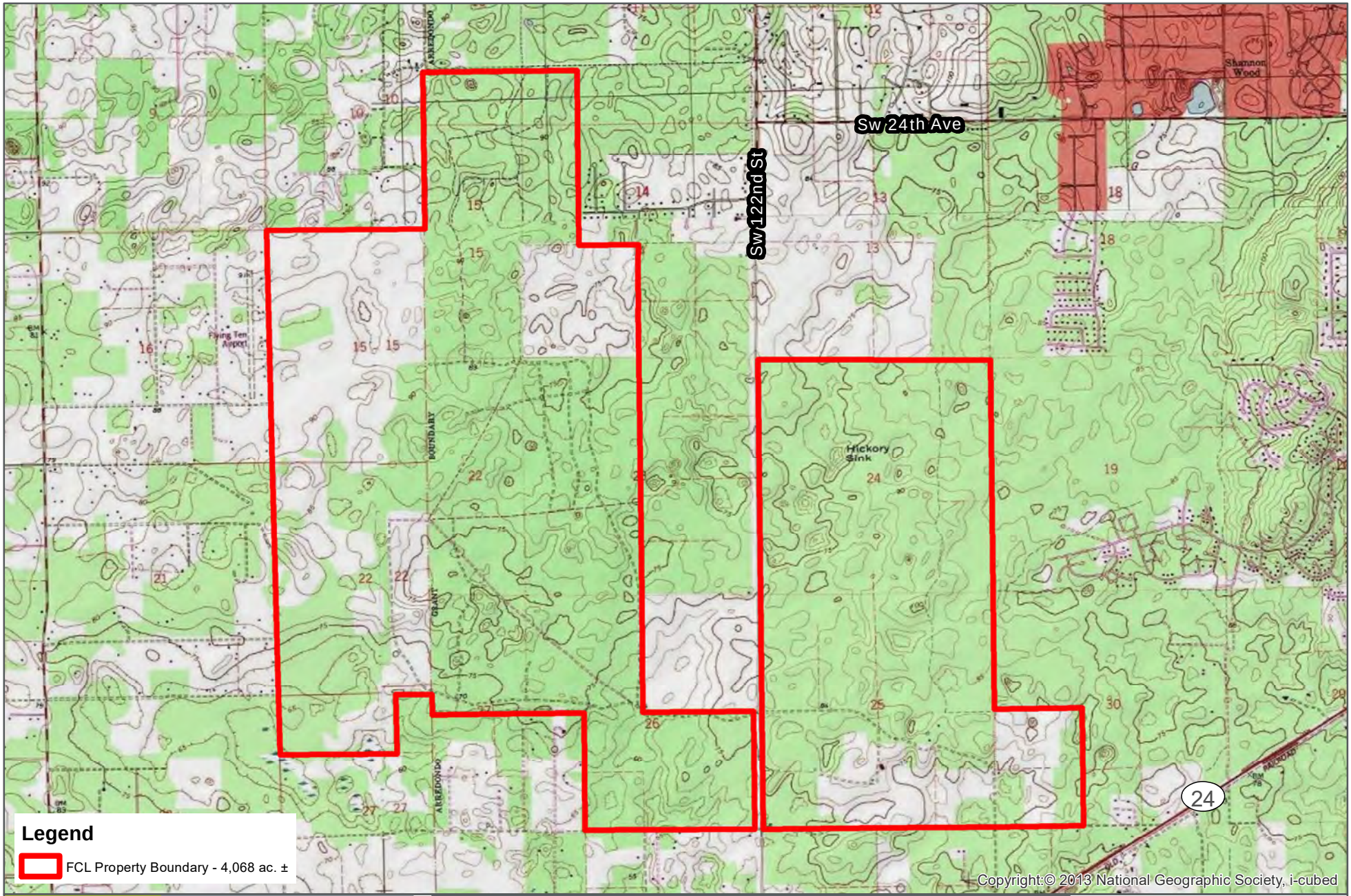

Image:USGS QUAD

Data Source: ESRI

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

Figure 4. USGS Quadrangle Map

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0 913 1,826 Meters

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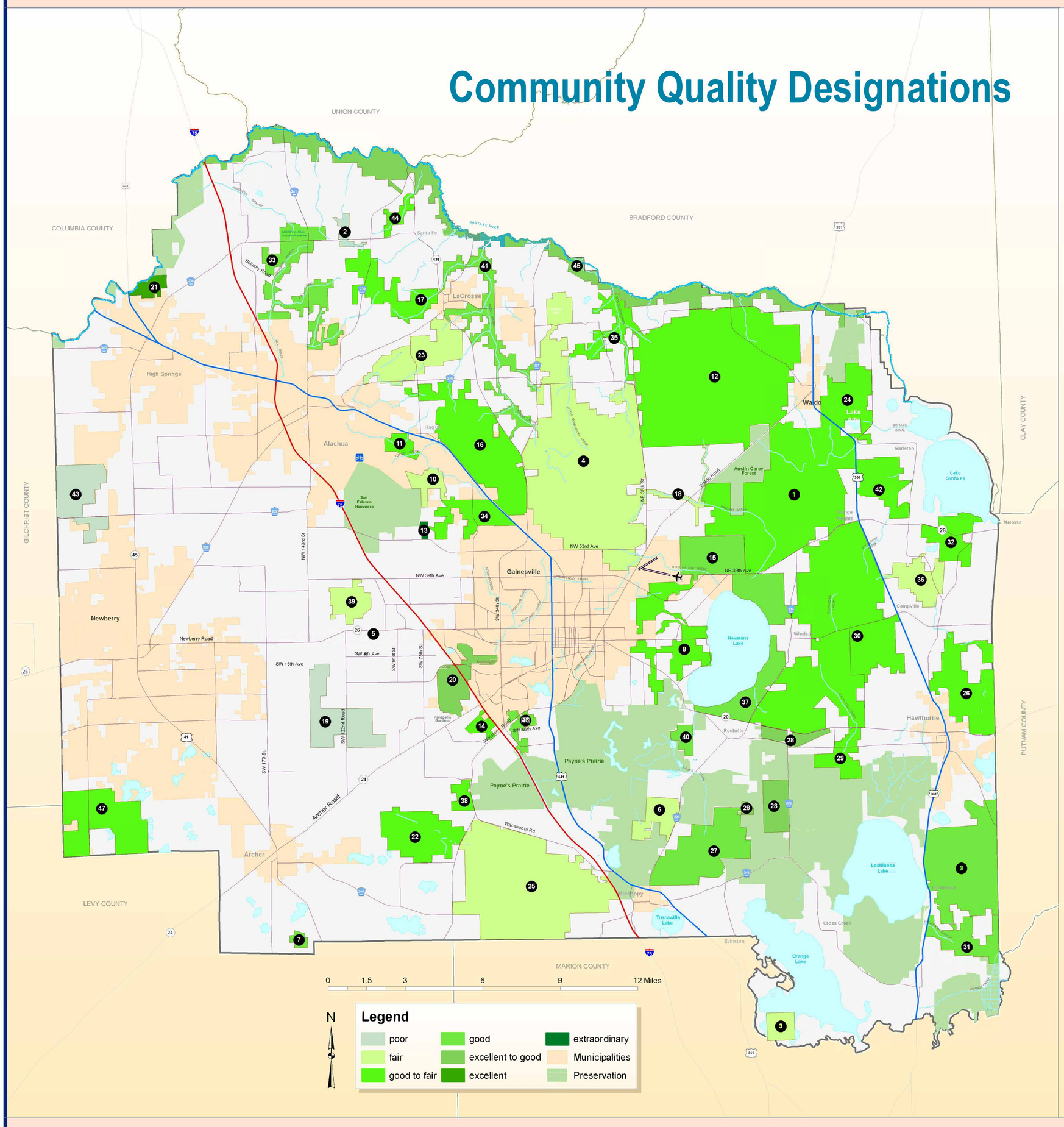
GIS Analyst: Peter.Marsey

STRATEGIC ECOSYSTEMS - ALACHUA COUNTY, FLORIDA

Community Quality Designations



Introduction

A few years ago Alachua County conducted two studies to create an Ecological Inventory for the County. The first study was conducted in 1987 and the second in 1996. The studies aimed to identify, inventory, map, describe, and evaluate the most significant natural biological communities, both upland and wetland, that were in private ownership in Alachua County and to make recommendations for protecting these natural resources. The studies do not focus on the public water bodies and publicly owned lands in the County. This map captures the GIST of the analysis used.

Community Quality Designations

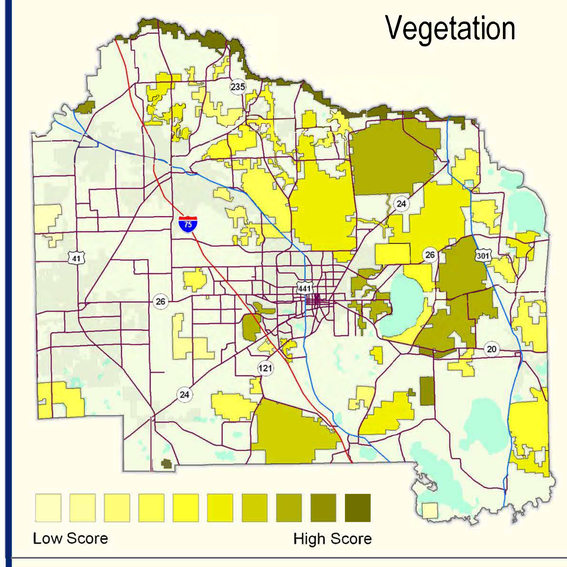
The biological communities on each site were evaluated for overall ecosystem quality. While the scope of the project precluded certain statistical analysis, the approach taken combined limited site visits and judgment based on other sources of information. Some decisions were made on the basis of aerial photography combined with a judgment based on the general condition of such ecosystems throughout Alachua County. Most communities were visited in the field at least once. Evaluations of quality are based primarily on the biodiversity and functional integrity of the community as reported in the field data sheets or by the evaluators.

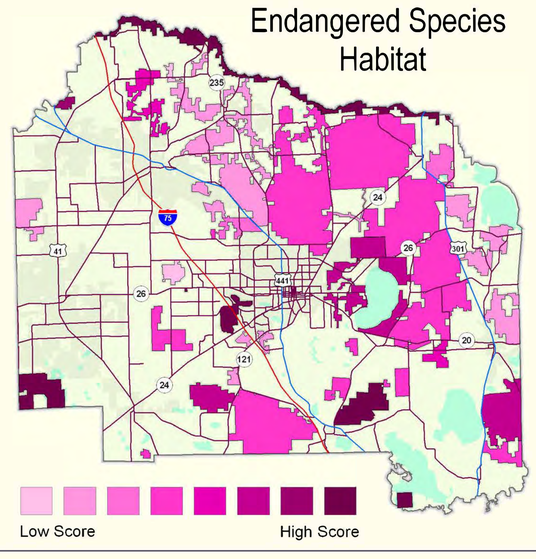
SITE NUMBER	SITE NAME	PARAMETER RANK	SUB-PARAMETER RANK
1	AUSTIN CARY FLATWOODS	18	15
2	BEECH VALLEY	47	47
3	BIRD ISLAND	18	28
4	BUCK BAY FLATWOODS	18	20
5	BUZZARDS ROOST	24	20
6	CHACALA POND	18	15
7	DOMINO HAMMOCK	27	26
8	EAST SIDE GREENWAY	18	14
9	EAST LOCHLOOSA FOREST	12	26
10	EAST SAN FELASCO HAMMOCK	33	28
11	NORTH SAN FELASCO HAMMOCK	24	23
12	NORTHEAST FLATWOODS	18	15
13	FOX POND	5	5
14	FRED BEAR HAMMOCK	40	39
15	GUM ROOT SWAMP	6	8
16	HAGUE FLATWOODS	24	23
17	HASAN FLATWOODS	43	44
18	HATCHETT CREEK	33	31
19	HICKORY SINK	27	36
20	HOGTOWN PRAIRIE	3	3
21	HORNSBY SPRINGS	2	2
22	KANAPAHA PRAIRIE	12	9
23	SOUTH LACROSSE FOREST	40	39
24	LAKE ALTO SWAMP	27	31
25	BARR HAMMOCK - LEVY LAKE	6	6
26	LITTLE ORANGE CREEK	40	39
27	LOCHLOOSA FOREST WEST	3	4
28	LOCHLOOSA FOREST ADDITIONS	8	9
29	LOCHLOOSA CREEK	12	20
30	LOCHLOOSA CREEK FLATWOODS	8	9
31	LOCHLOOSA SLOUGH	12	15
32	SOUTH MELROSE FLATWOODS	27	31
33	MILL CREEK	12	9
34	MILLHOPPER FLATWOODS	27	23
35	MONTEOCHA CREEK	33	39
36	MORANS PRAIRIE	43	45
37	EAST SIDE NEWNANS LAKE	6	13
38	PAYNES PRAIRIE WEST	33	31
39	PINE HILL FOREST	43	36
40	PRAIRIE CREEK	8	6
41	ROCKY CREEK	33	31
42	SALUDA SWAMP	33	36
43	BUDA SANDHILLS	46	46
44	SANTA FE CREEK	33	43
45	SANTA FE RIVER	1	1
46	SERENOLA FOREST	27	28
47	WATERMELON POND	12	15

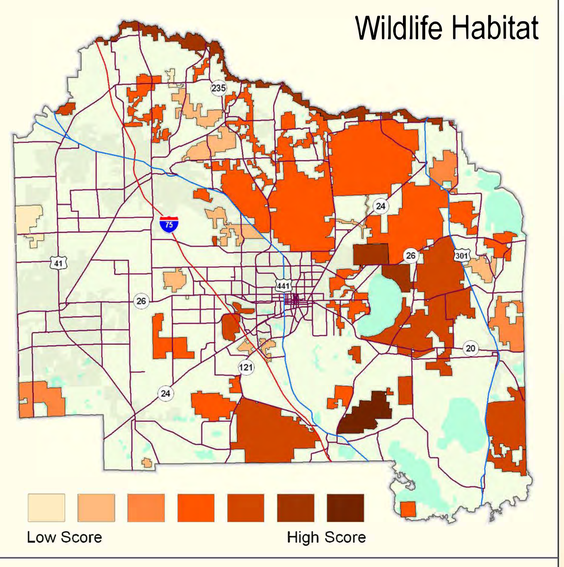
Site Ranking

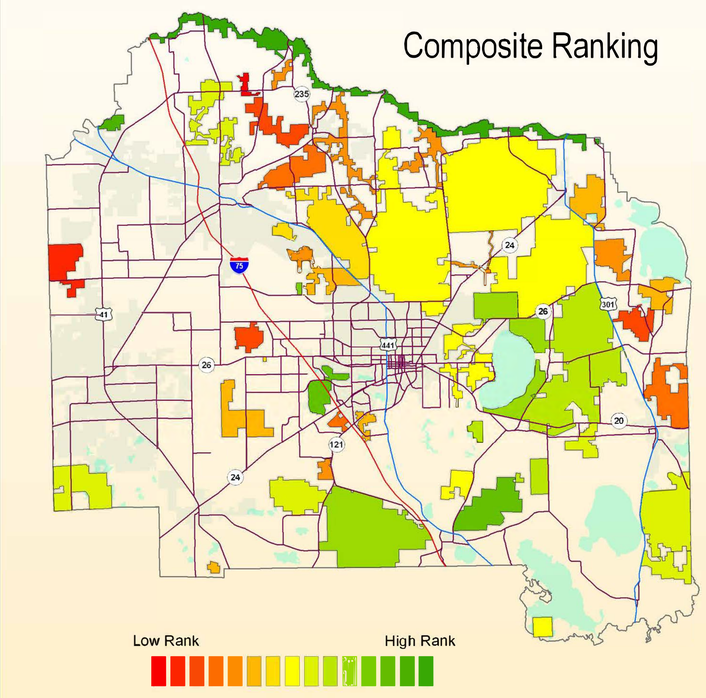
A numerical scoring and ranking system was developed to determine the relative importance of the sites based on their ecological, hydrological, and management characteristics. Each site was evaluated and ranked by three project scientists for six ecological, hydrological, and management parameters. In some cases, a parameter was subdivided into subparameters to better define the relationship. Definitions were developed for each parameter and subparameter. Based on these definitions, a score of 1 (low) to 5 (high) was assigned by consensus to each site based on the characteristics it exhibited. These scores were summed to obtain a total site score. Sites were ranked by comparing their total scores.

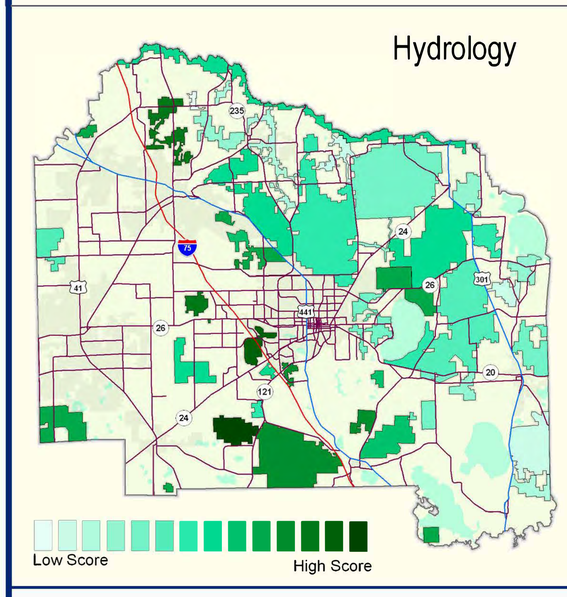
Site Rankings for each Criteria

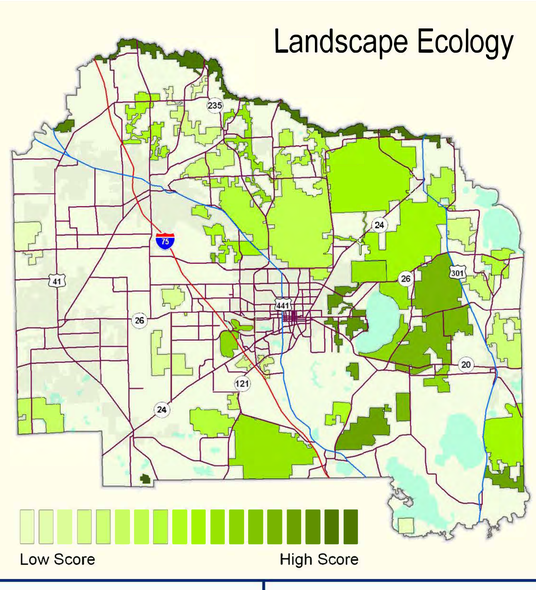


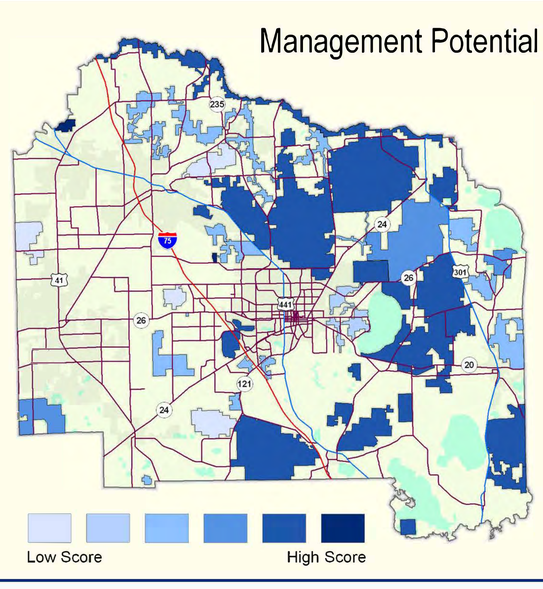












Prepared by:
Alachua County
Department of Growth Management
10 SW 2nd Avenue, Gainesville, Fl 32601
(352) 374-5249
http://growth-management.alachuacounty.us/

Figure 5. Alachua County Strategic Ecosystems Map

Notes:

Poster Size: 36 x 49
Date of Production: 02/03/2011
File on Disk: M:/Projects/Strategic_Ecosystems/Strategic_Ecosystems_Ratings.mxd

Data Sources:
KBN/Golder Associates. 1996. "Ecological Inventory of Alachua County, Florida." Report prepared for the Alachua County Department of Growth Management by KBN/Golder Associates.

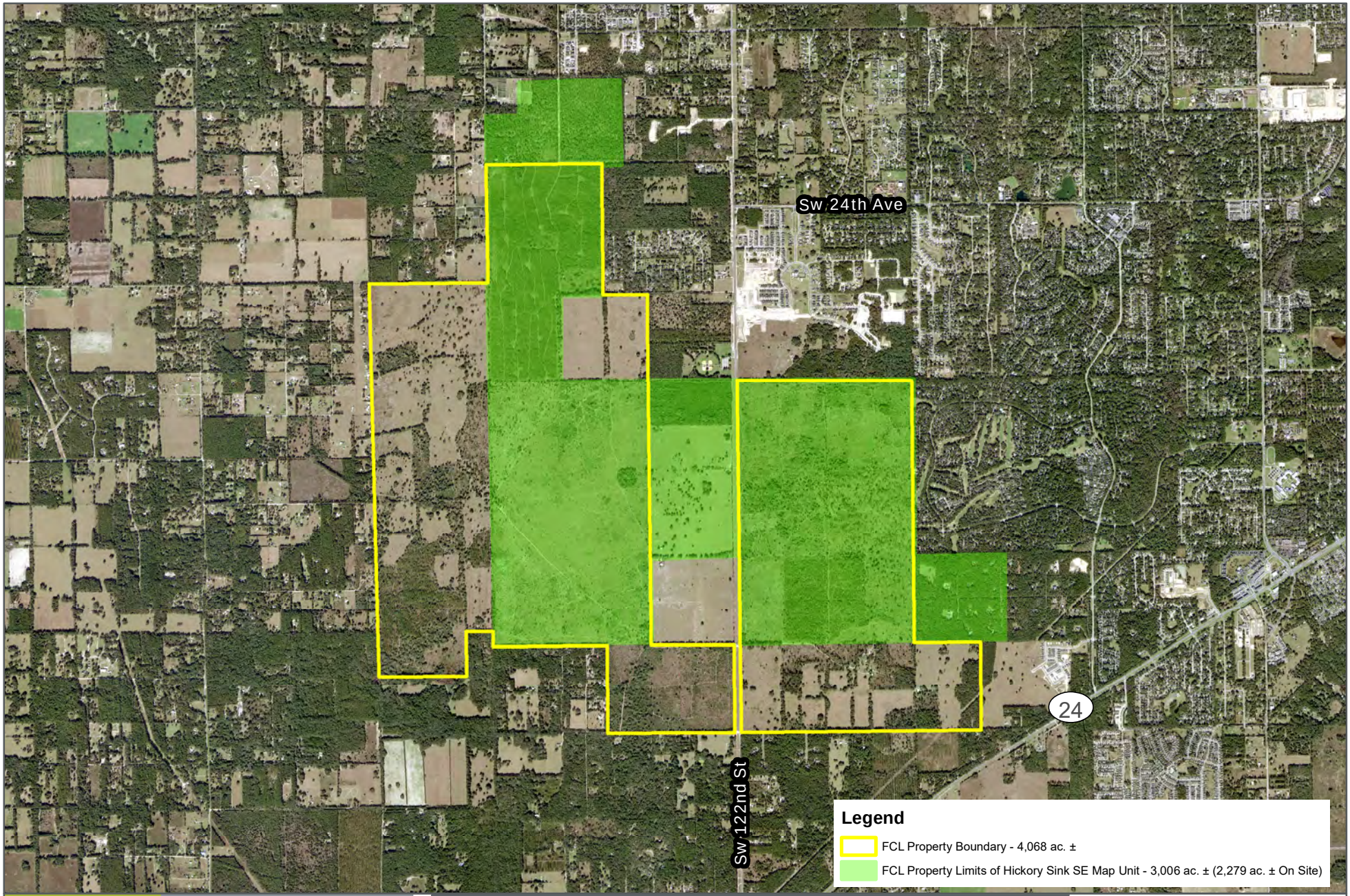


Image:2020

Data Source: FDOT

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

Figure 6. Hickory Sink Mapped Strategic Ecosystem Boundary Map

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0 4,000 8,000 Feet
0 1,219 2,438 Meters

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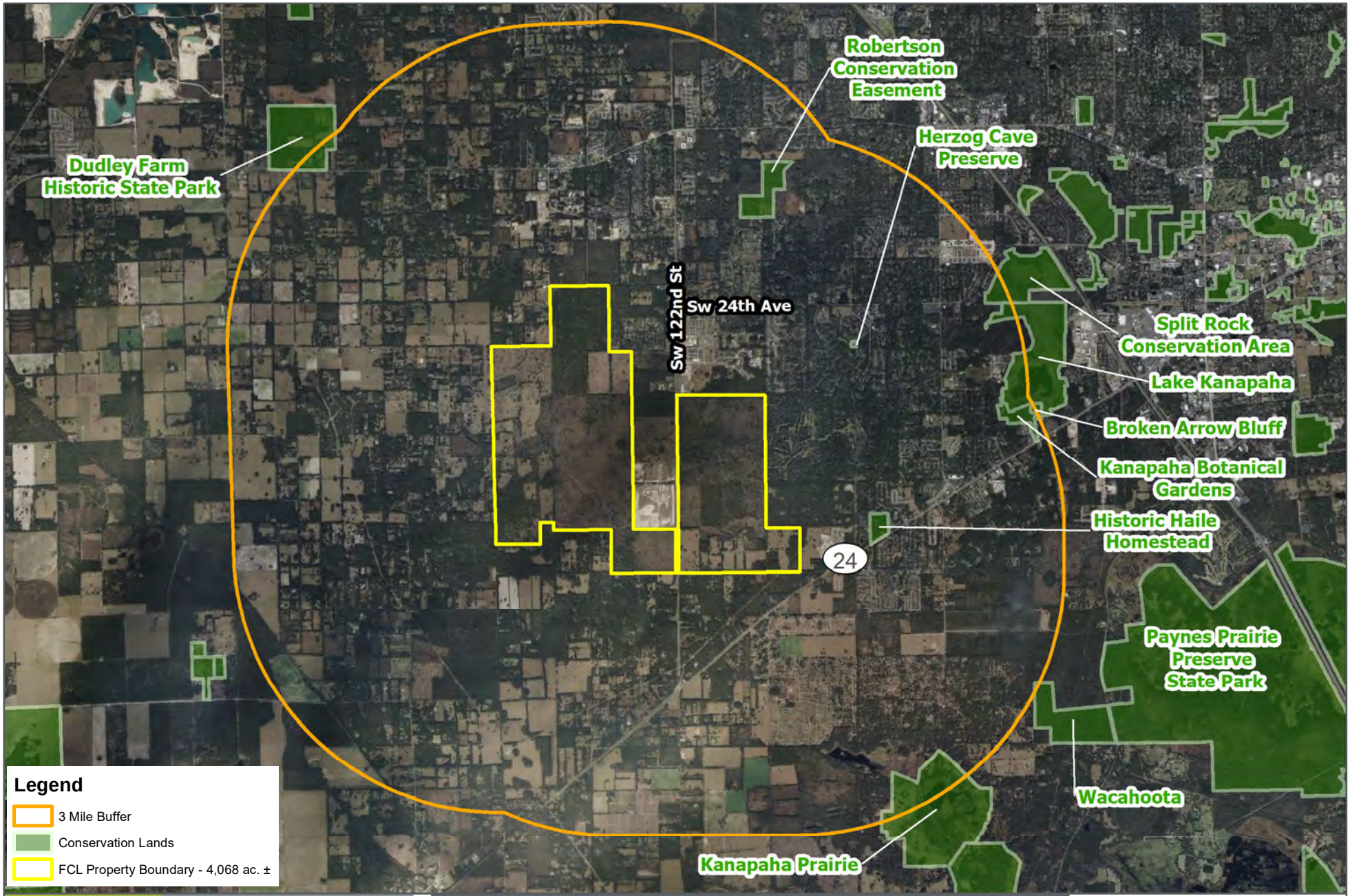
GIS Analyst: Peter.Marsey



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Data Source: bing

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

Figure 7. Conservation Areas Within 3 Miles Map

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0 1.5 3 Miles
0 2.4 4.8 Kilometers

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GIS Analyst: Peter.Marsey

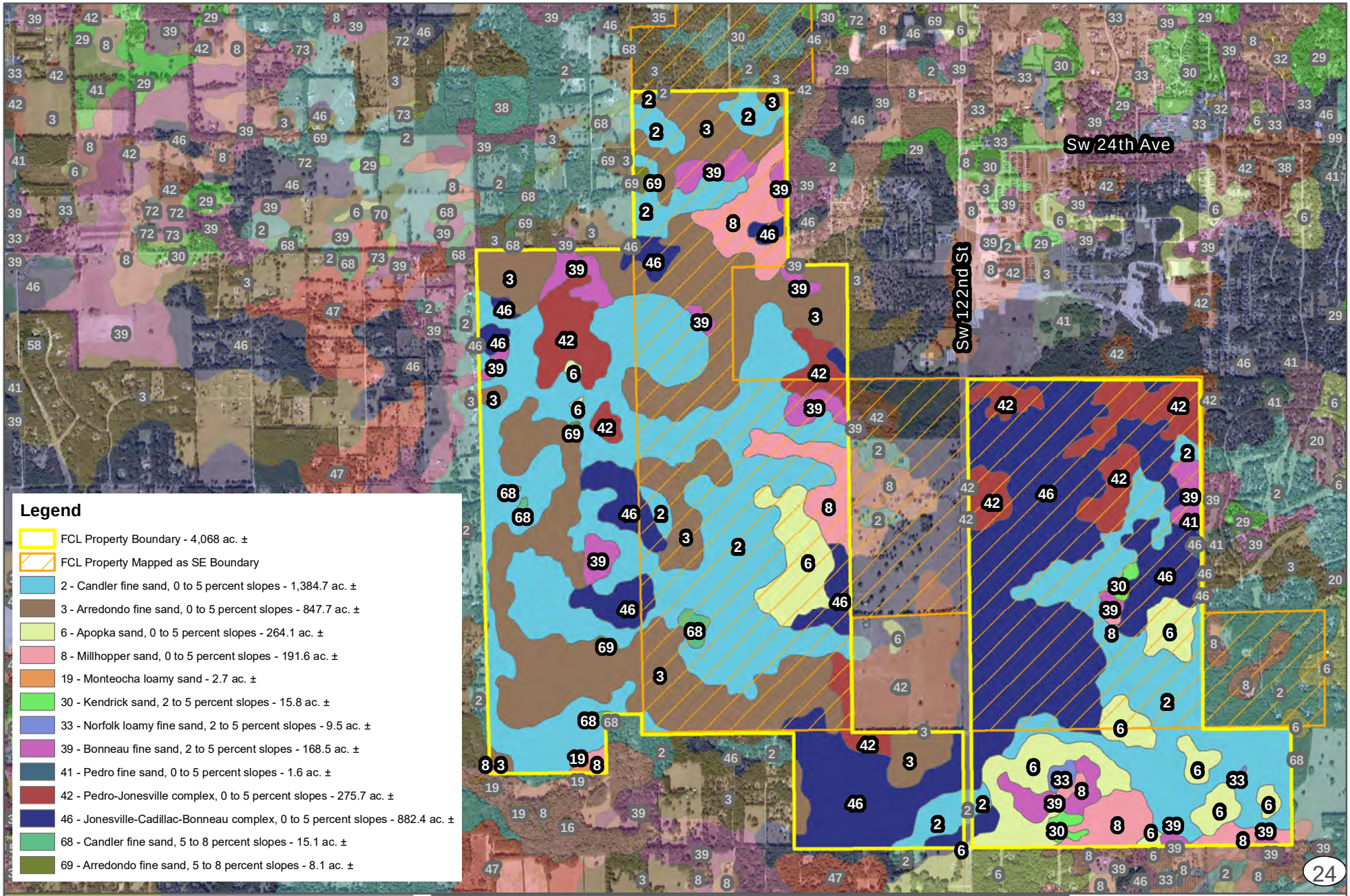

Image:2020

Data Source: FDOT

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

Figure 8. NRCS Soils Map

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0 914 1,828 Meters

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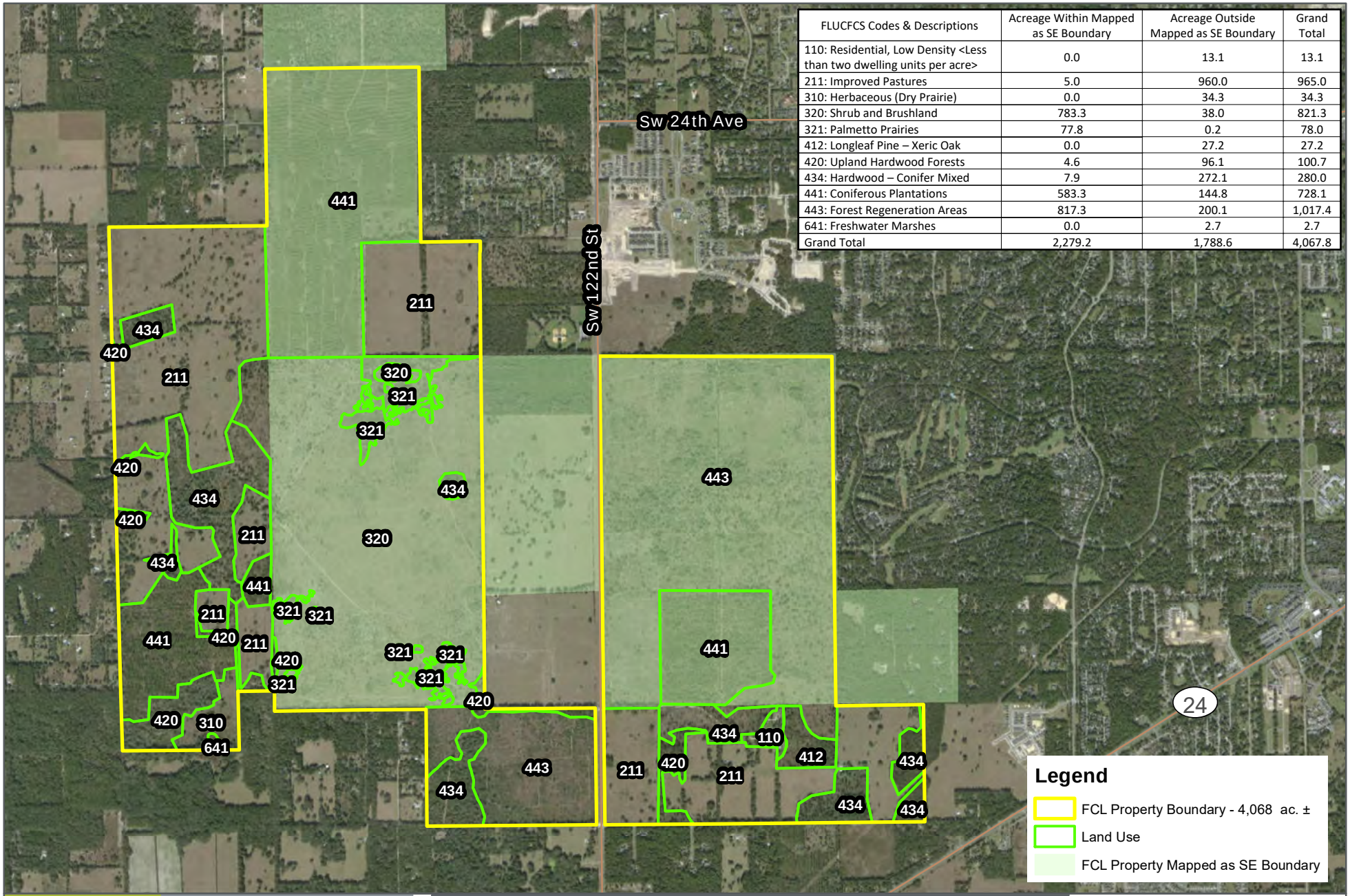
GIS Analyst: Peter.Marsey



FLUCFCS Codes & Descriptions	Acreage Within Mapped as SE Boundary	Acreage Outside Mapped as SE Boundary	Grand Total
110: Residential, Low Density <Less than two dwelling units per acre>	0.0	13.1	13.1
211: Improved Pastures	5.0	960.0	965.0
310: Herbaceous (Dry Prairie)	0.0	34.3	34.3
320: Shrub and Brushland	783.3	38.0	821.3
321: Palmetto Prairies	77.8	0.2	78.0
412: Longleaf Pine – Xeric Oak	0.0	27.2	27.2
420: Upland Hardwood Forests	4.6	96.1	100.7
434: Hardwood – Conifer Mixed	7.9	272.1	280.0
441: Coniferous Plantations	583.3	144.8	728.1
443: Forest Regeneration Areas	817.3	200.1	1,017.4
641: Freshwater Marshes	0.0	2.7	2.7
Grand Total	2,279.2	1,788.6	4,067.8

Image:2020

Data Source: FDOT

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

Figure 9. Land Use/Existing Habitat Map

FCL Property
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0 3,000 6,000 Feet
0 914 1,828 Meters

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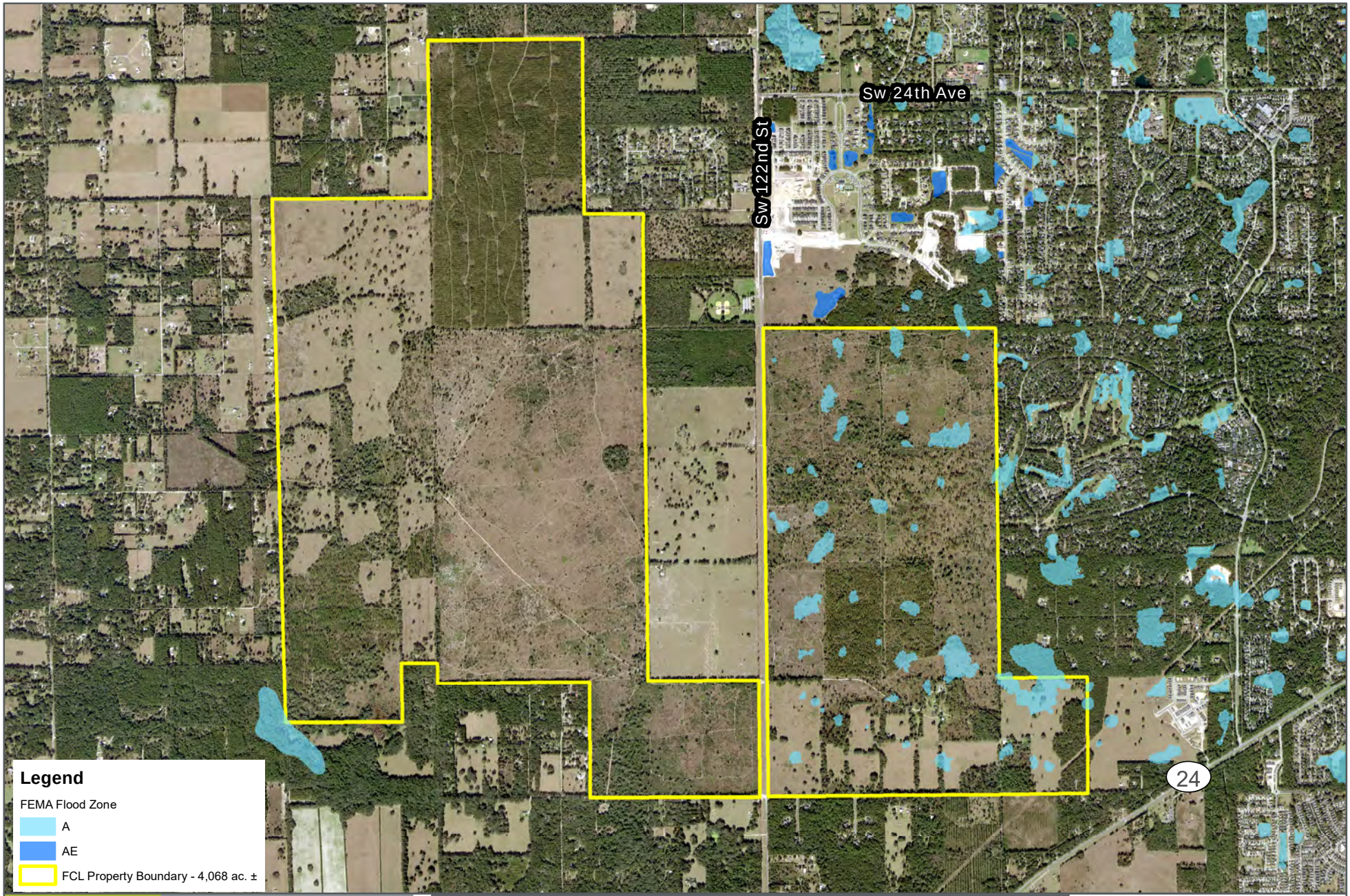
GIS Analyst: Peter.Marsey



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Data Source: FDOT

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

Figure 10. FEMA Flood Zone Map

FCL Property
Alachua County, Florida

0 3,000 6,000 Feet

0 914 1,828 Meters

Cardno®

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Date Created: 6/23/2022 Date Revised: 6/23/2022 File Path: S:\GIS\Misc\Hickory Sink\MXD\Figure 10 - FEMA Flood Zone Map_20220623.mxd
GIS Analyst: Peter.Marsey

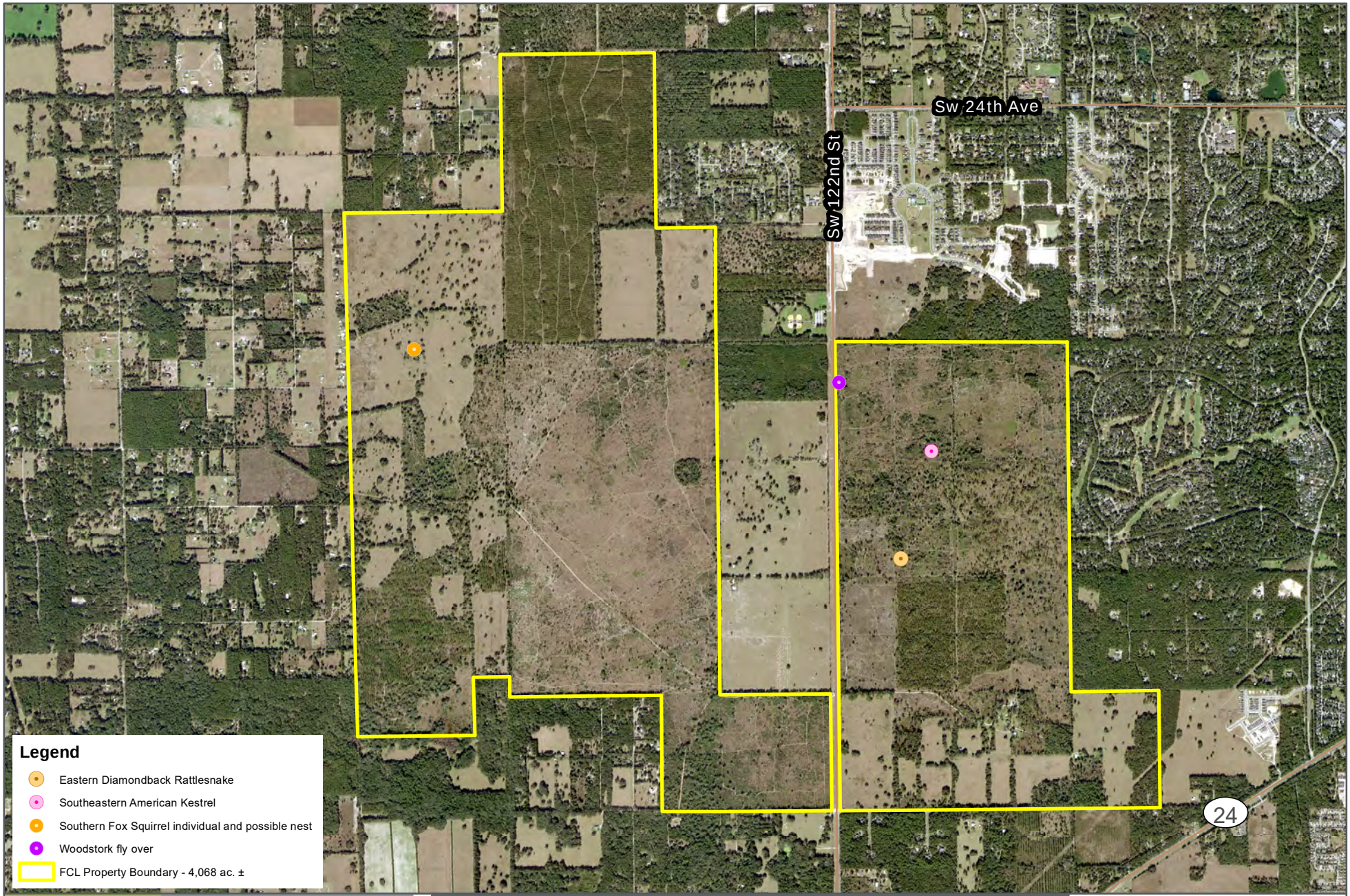

Image:2020

Data Source: FDOT

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

Figure 11. Incidental Listed Species Observations Map

FCL Property
Alachua County, Florida

0 3,000 6,000 Feet
0 914 1,828 Meters

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Date Created: 6/13/2022 Date Revised: 6/23/2022 File Path: S:\GIS\Misc\Hickory Sink\MXD\Figure 11 - Incidental Listed Species Observations Map_20220623.mxd
GIS Analyst: Peter.Marsey

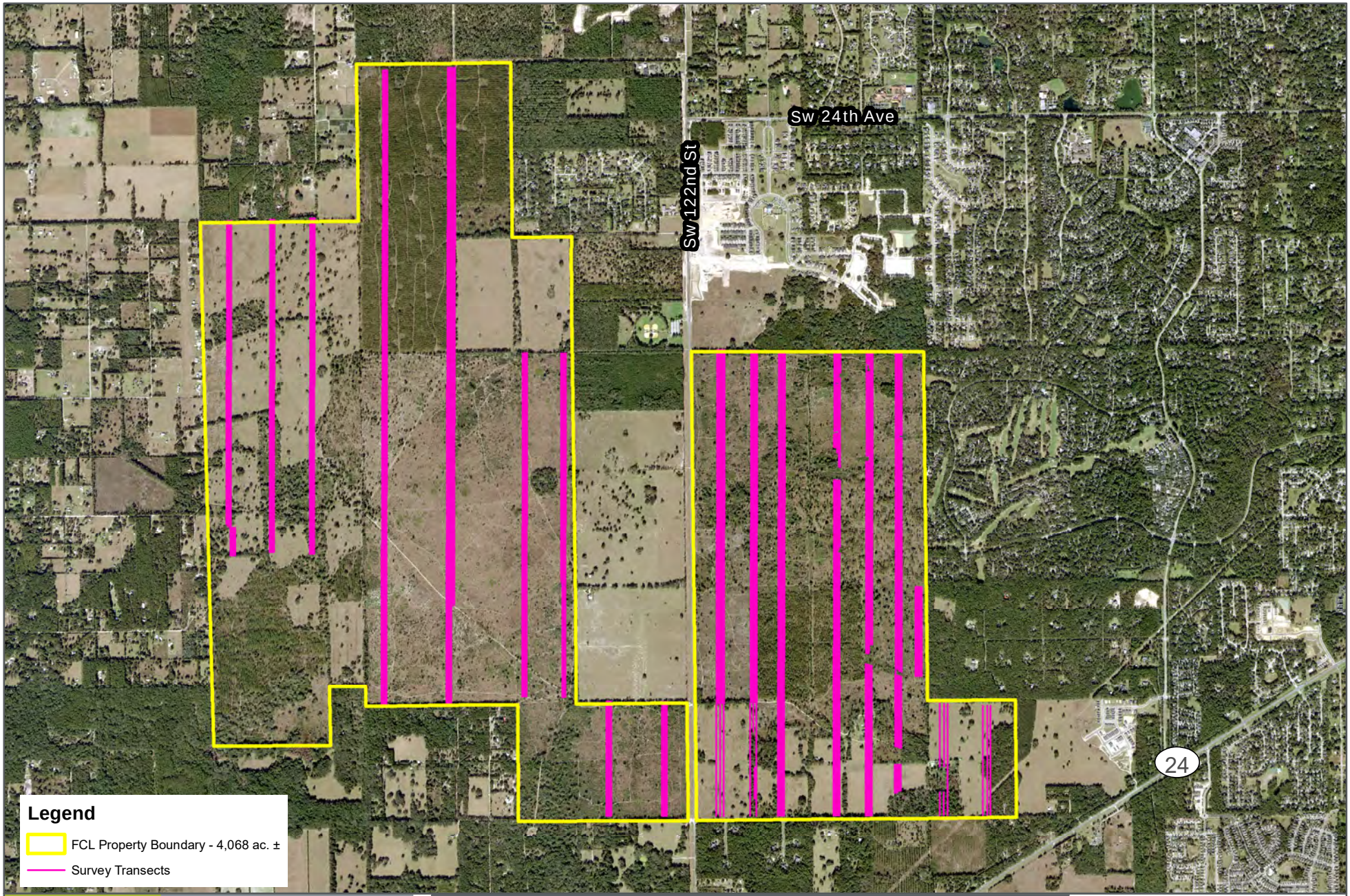

Image:2020

Data Source: FDOT

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

Figure 12. Gopher Tortoise 15% Survey Transects Map

FCL Property
Alachua County, Florida

0 3,000 6,000 Feet

0 914 1,828 Meters

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Date Created: 6/23/2021 Date Revised: 6/23/2022 File Path: S:\GIS\Misc\Hickory Sink\MXD\Figure 12 - Gopher Tortoise 15pct Survey Transects Map_20210623.mxd
GIS Analyst: Peter.Marsey

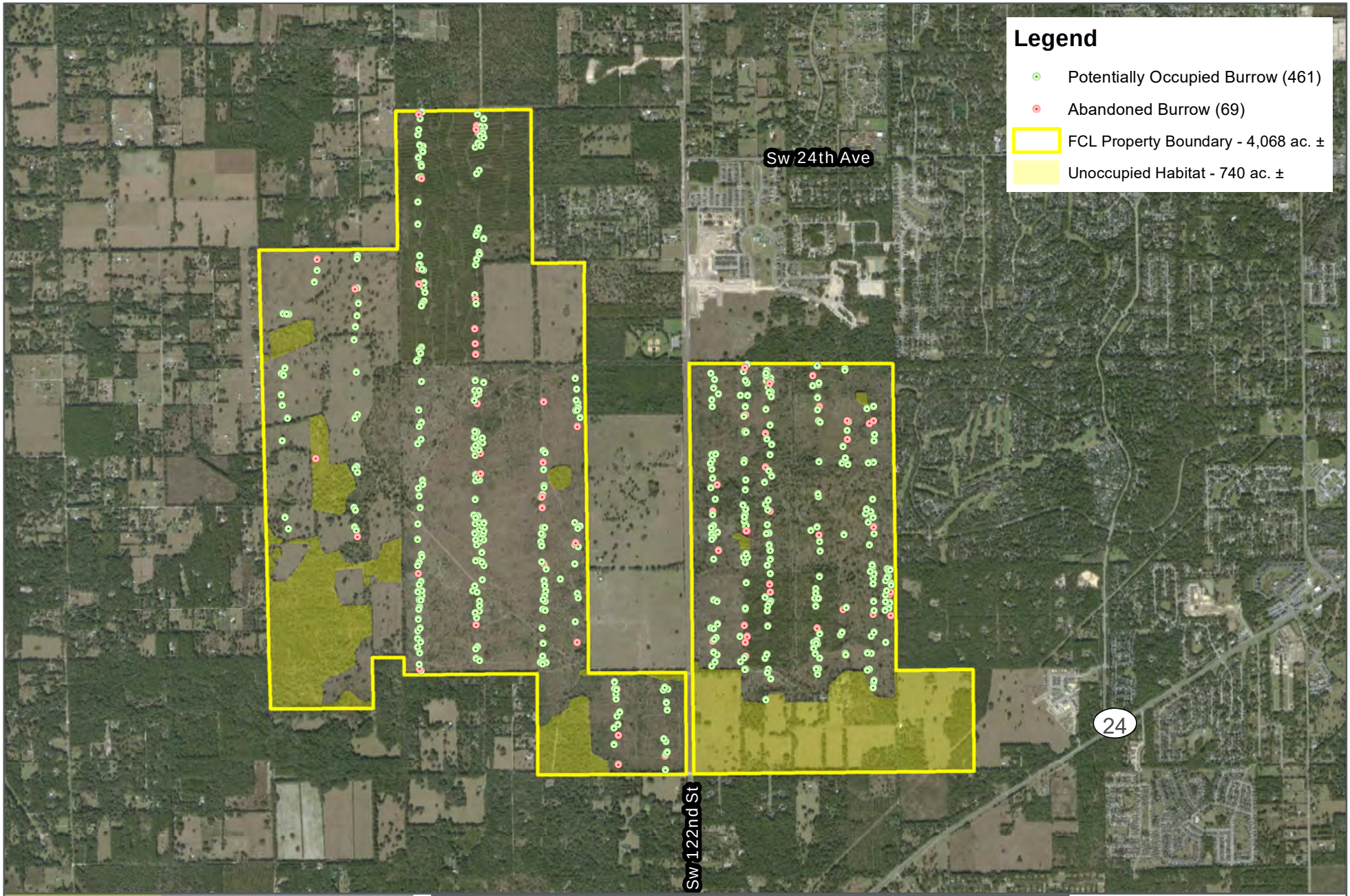

Image:2020

Data Source: FDOT

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

Figure 13. Gopher Tortoise Burrow Locations Map

FCL Property
Alachua County, Florida

0 3,000 6,000 Feet
0 914 1,828 Meters

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Date Created: 6/24/2022 Date Revised: 6/24/2022 File Path: S:\GIS\Misc\Hickory Sink\MXD\Figure 13 - Gopher Tortoise Burrow Locations Map_20220610.mxd
GIS Analyst: Peter.Marsey

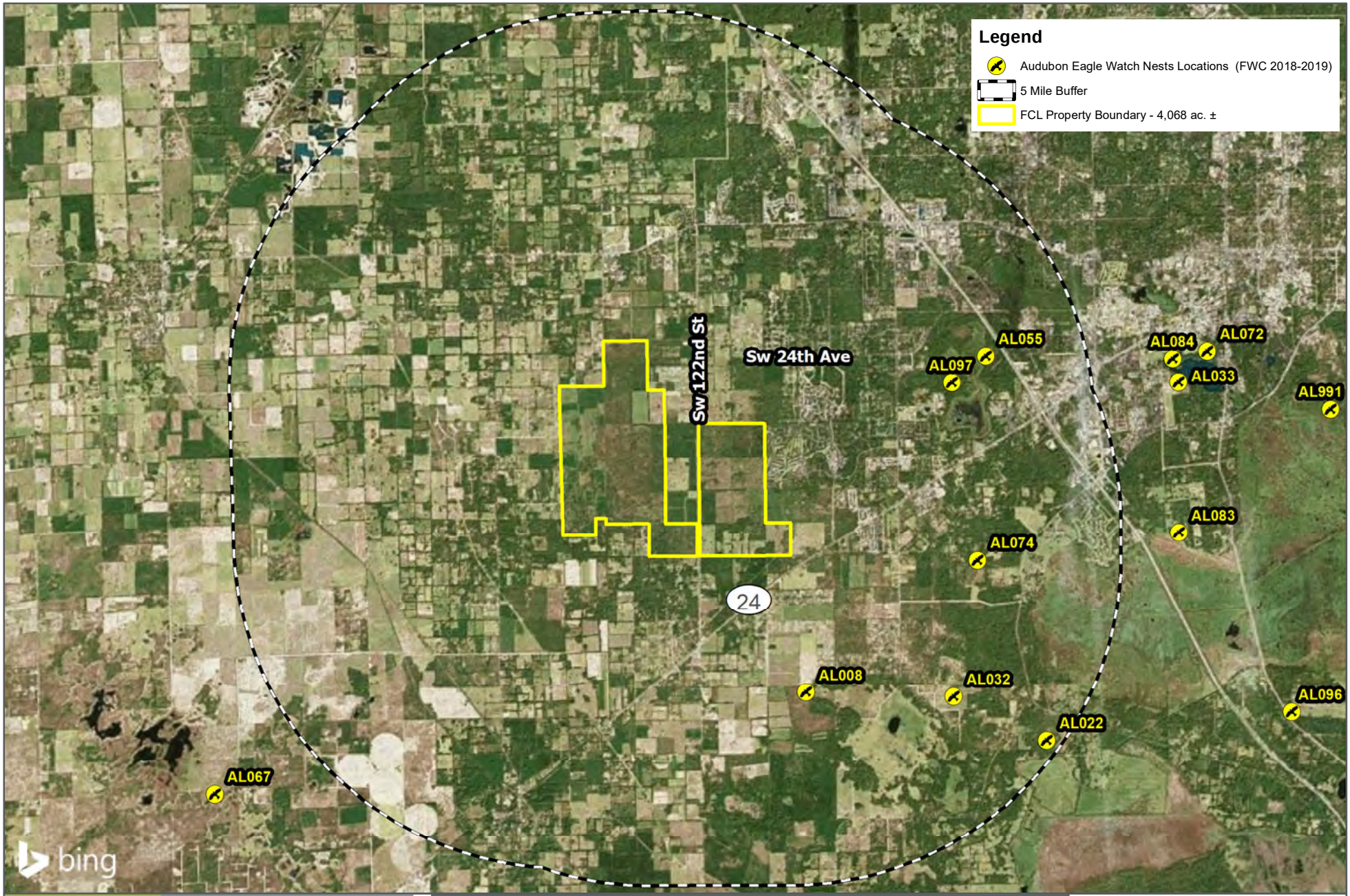

Image:2020

Data Source: BING

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

Figure 14. Bald Eagle Nest Locations Map

FCL Property
Alachua County, Florida

0 2 4 Miles
0 3.2 6.4 Kilometers

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Date Created: 6/23/2021 Date Revised: 6/23/2022 File Path: S:\GIS\Misc\Hickory Sink\MXD\Figure 14 - Bald Eagle Nest Location Map_20220623.mxd
GIS Analyst: Peter.Marsey

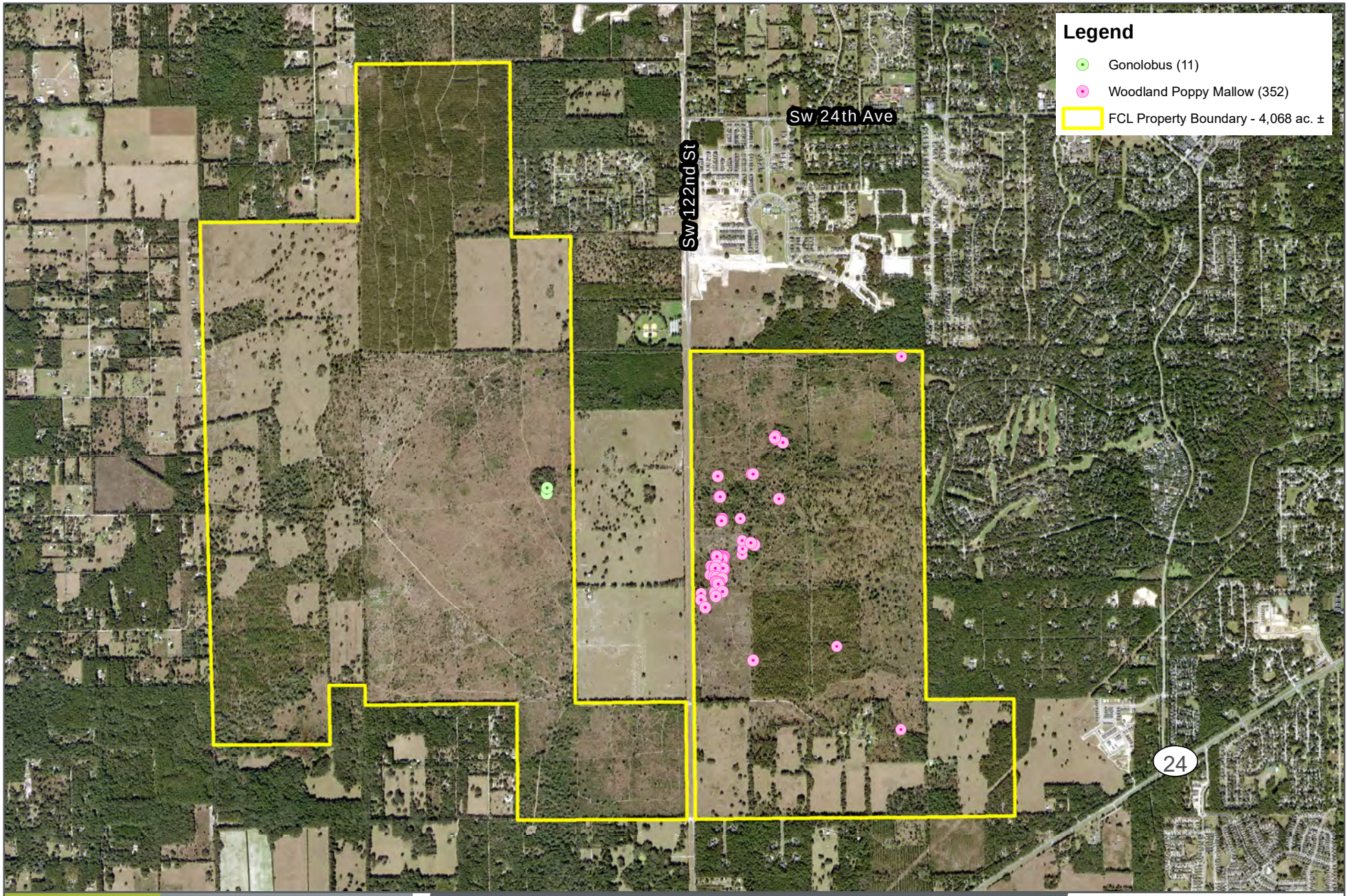

Image:2020

Data Source: FDOT

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

Figure 15. Listed Plant Locations Map

FCL Property
Alachua County, Florida

0 3,000 6,000 Feet
0 914 1,828 Meters

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Date Created: 6/23/2022 Date Revised: 6/23/2022 File Path: S:\GIS\Misc\Hickory Sink\MXD\Figure 15 - Listed Plant Locations Map_20220623.mxd
GIS Analyst: Peter.Marsey

Significant Geologic Feature Buffer Criteria			
Type	Description	Buffer Area (calculated from edge)	Minimum dist edge of buffer to edge of sink
A	sinkholes	50 feet	35
B	caves	75 feet	50
C	sinkholes where water is expression of the Floridan aquifer	150 feet	100

GPS Numbers	Type	SGF Area (ac.)	SGF Buffer Area (ac.)	Total Area of SGF and Buffer (ac.)
26, 27, 16038, 16039	C	0.06	2.26	2.32
29, 16046	C	0.06	2.24	2.30
122	A	0.43	0.76	1.19
333	C	0.32	3.12	3.44
367	C	0.05	2.24	2.29
371	C	0.07	2.31	2.38
698	A	0.02	0.29	0.31
760	A	0.04	0.35	0.39
746	A	0.34	0.67	1.01
1225	A	0.05	0.37	0.42
1544	A	0.02	0.30	0.32
1577	C	0.07	2.31	2.38
1663	A	0.02	0.31	0.33
1766	A	0.10	0.46	0.56
1810, 1812, 1813, 1815	A	0.16	0.54	0.70
2003, 2004	A	1.15	1.14	2.29
5220	A	<0.01	0.21	0.21
6108	A	<0.01	0.22	0.22
7699	A	0.01	0.28	0.29
14202	A	0.01	0.27	0.28
	Total:	2.98	20.65	23.63

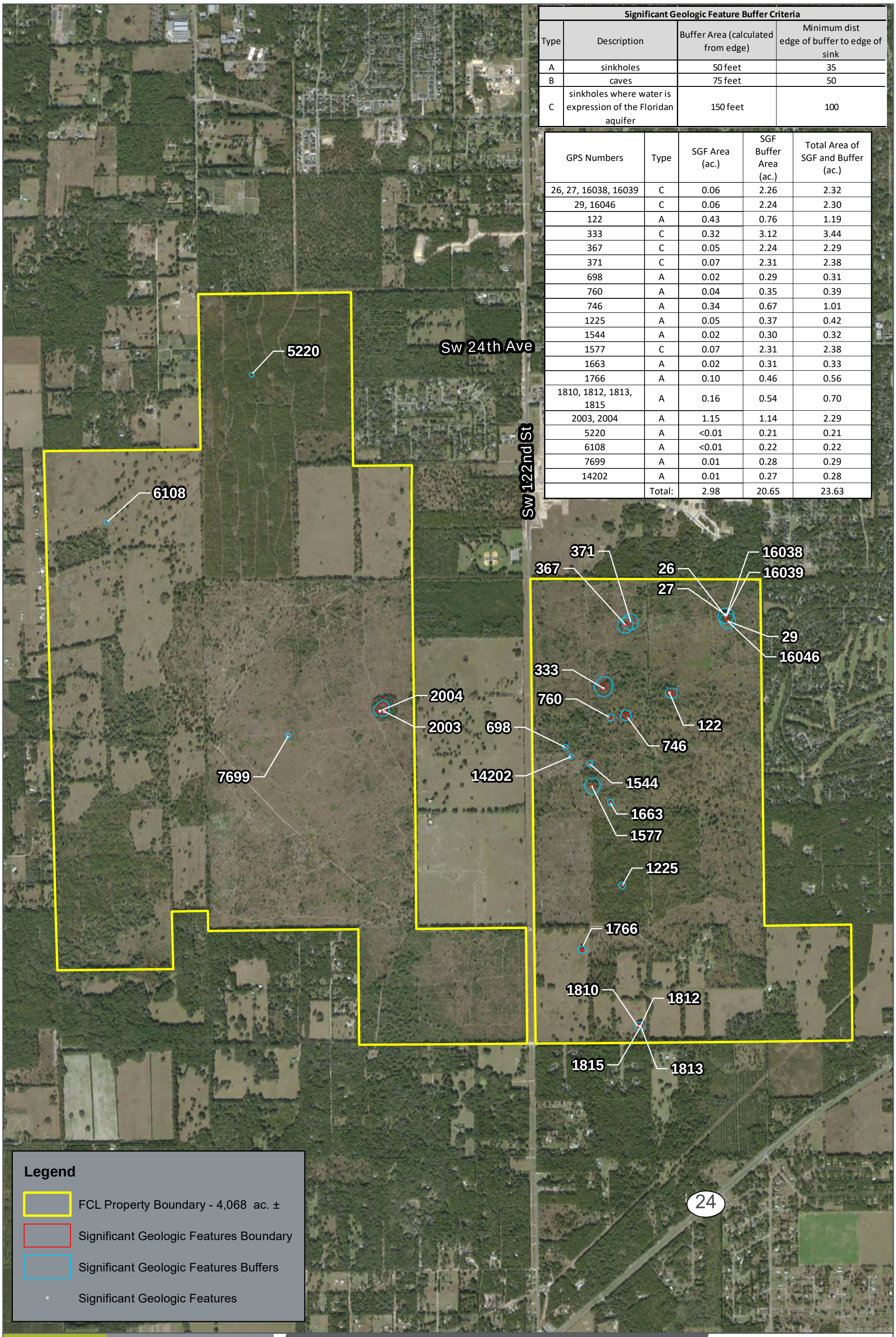

Image:2020

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

Figure 16. Significant Geologic Features and Buffers
FCL Property
Alachua County, Florida

0 2,400 4,800 Feet
0 700 1,400 Meters

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Date Created: 6/7/2022 Date Revised: 6/23/2022 File Path: S:\GIS\Misc\Hickory Sink\MXD\Figure 16 - Signficant Geologic Features Map_20220623.mxd
GIS Analyst: Peter.Marsey

Legend

- FCL Property Boundary: 4,068 ac. ±
- SGF Boundary Buffer
- Proposed UF Golf Course: 580 acres, to include 300 acres of COS
- Conservation Open Space: : 850 ac. ±
- Total Area of COS: 1,150 ac. ±

N

Image:12/01/2021

Data Source: Planet

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

0 2,000 4,000 Feet

0 610 1,220 Meters

Figure 17. Proposed Set Aside Map

FCL Property
Alachua County, Florida

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Date Created: 6/23/2022 Date Revised: 6/23/2022 File Path: S:\GIS\Misc\Hickory Sink\MXD\Figure 17 - Proposed Set Aside Map_20220623.mxd
GIS Analyst: Peter.Marsey

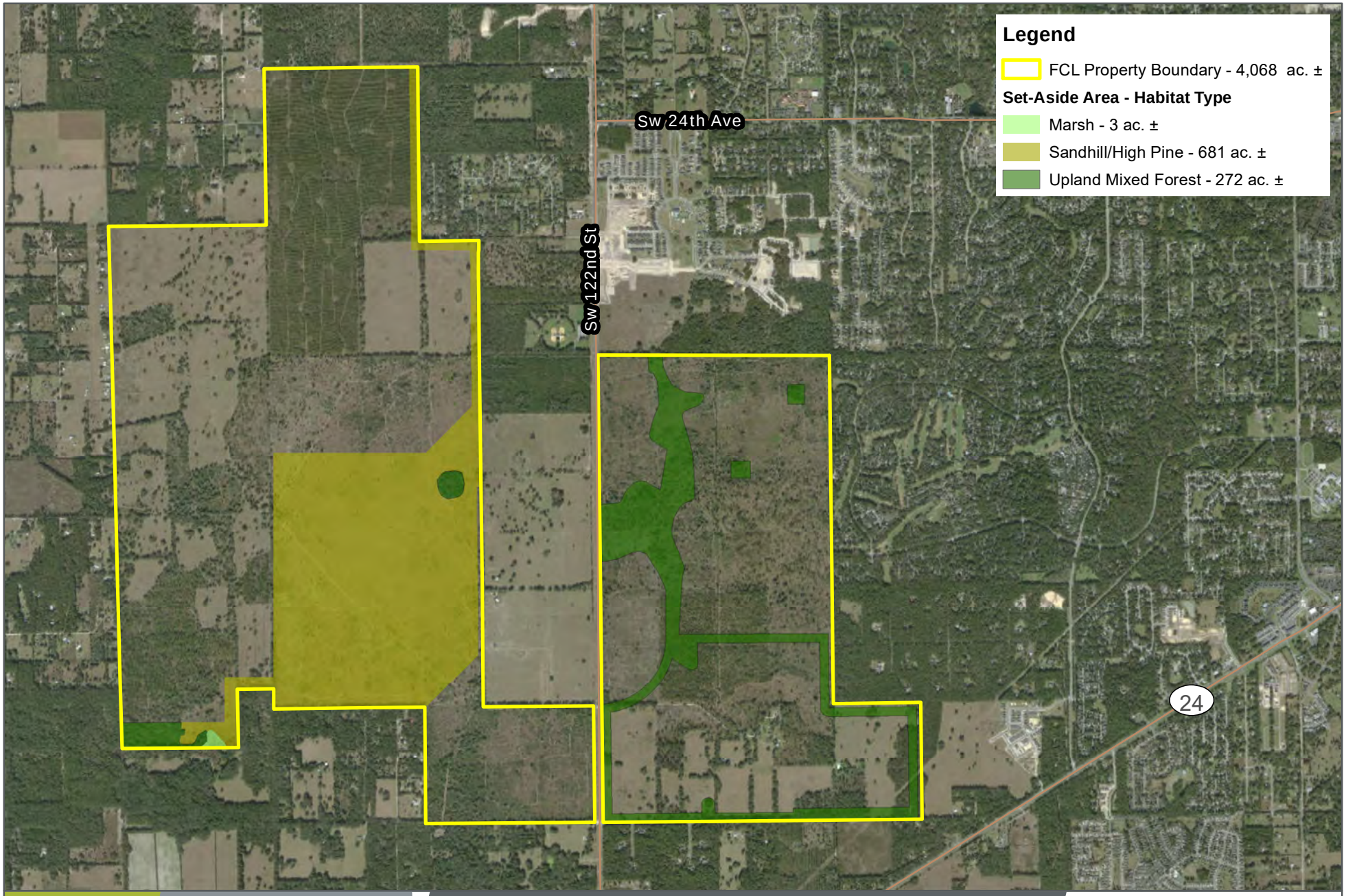

Image:2020

Data Source: FDOT

Sec 10, 11, 14, 15, 22, 23, 24, 25, 26 & 27
Twp 10 S
Rng 18 E

Sec 30
Twp 10 S
Rng 19 E

Figure 18. Set Aside CMA Target Habitat Map

FCL Property
Alachua County, Florida

0 3,000 6,000 Feet
0 914 1,828 Meters

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Date Created: 6/23/2022 Date Revised: 6/23/2022 File Path: S:\GIS\Misc\Hickory Sink\MXD\Figure 18 - Proposed Set-Aside CMA Target Habitat Map_20220623.mxd
GIS Analyst: Peter.Marsey

APPENDIX A

KBN/GOLDER REPORT EXCERPT

HICKORY SINK

PRIORITY: 36 (below average) (from unweighted sub-parameter score)

KEY FEATURES: This is an area of well drained, moderately fertile soil that once supported an upland pine forest. Most of the area is now slash pine (*Pinus elliottii*) plantation and some is pasture. The ground cover vegetation of the high pine community is still somewhat intact on most of the area. There are several sink holes and caves, one of which supported a major bat colony (Humphrey, 1992, 1996), and two of which support specialized aquatic cave invertebrates (Franz et al., 1994).

USGS QUAD: Gainesville West, Arredondo
SIZE: 3,006 acres

BIO-COMMUNITY TYPES	ACRES	CONDITION OF BIO-COMMUNITY
Upland Mixed Forest	81	poor (pioneer hammock)
Upland Pine Forest	2560	poor
Sinkhole	56	good to fair
Sinkhole Pond	1	good
Cave (dry)		good
Old Field Pine Plantation *	205	
Improved Pasture *	103	

* Categories not used by FNAI

CONNECTIONS: none

SITE BOUNDARY CONDITIONS: The boundaries are regular in shape and generally conform to property boundaries, roads, section lines, or other surveyed lines. The area is bisected by a paved road that is destined to become a busy highway.

GEOLOGIC/HYDROLOGIC FEATURES: Soils this area are shallow sands over porous limerock. All rainfall percolates directly to the Floridan Aquifer. There are several sink holes, a small sinkhole pond, and several dry caves, some of which connect to aquatic caves within the Floridan Aquifer.

WILDLIFE HABITAT: There is still a reasonably good ground cover of blackberry plants (*Rubus* spp.), chinquapin (*Castanea pumila*), poison oak (*Toxicodendron toxicarium*), and other native plants that supports animals such as cottontail rabbits (*Sylvilagus floridanus*), gopher tortoises (*Gopherus polyphemus*), pocket gophers (*Geomys pinetis*), and cotton rats (*Sigmodon hispidus*). These in turn support gray fox (*Urocyon cinereoargenteus*), bobcat (*Lynx rufus*), diamondback rattlesnakes (*Crotalus adamanteus*), and other predators. There is no longer much habitat for the pine canopy species. There are few cavities and little mast production. One of the caves on the property had one of the biggest bat colonies in Alachua County. An estimated 30,000 southeastern brown bats, *Myotis austroriparius*, occupied the cave in the early 1950's (Rice, 1957). It is currently not an active colony, probably due to declining water levels in the cave, making the environment in the cave less humid (Hovis, 1996).

RARE, THREATENED, AND ENDANGERED SPECIES: Gopher tortoises, pine snakes (*Pituophis melanoleucus mugitus*), eastern indigo snakes (*Drymarchon corais couperi*), and southeastern American kestrels (*Falco sparverius paulus*) still inhabit the area, but are all declining, and they will decline further as the young pines grow and shade out more of the ground cover that supports most of what is left of the wildlife here. One interesting plant that is here is poppy mallow (*Callirhoe papaver*), which is listed by the state as endangered.

EXOTICS: There is mimosa (*Albizia julibrissin*), chinaberry (*Melia azedarach*), centipede grass (*Eremochloa ophiuroides*), and bahia grass (*Paspalum notatum*) scattered throughout much of the property. Only the mimosa is a threat to the native habitats.

RESTORATION AND MANAGEMENT POTENTIAL: This area is interesting mainly for its potential for restoration to the former upland pine forest habitat. This still could be done, although the wire grass (*Aristida stricta*) that was the dominant ground cover is gone, as are the longleaf pine (*Pinus palustris*), Southern red oak (*Quercus falcata*), mockernut hickory (*Carya tomentosa*), and many other species. Another difficulty would be the need for frequent prescribed burning. The metropolitan area of Gainesville has now occurs at the eastern edge of this site, and Parker Road runs through the middle of it. Also, it is not big enough to ever support a viable population of red-cockaded woodpeckers *(Picoides borealis)*, even if longleaf pines 100 years old were eventually established there. It could support many of the other species characteristic of this habitat, but the trend is obviously in the other direction.

RECOMMENDED CONSERVATION STRATEGIES: The former bat cave, which supports aquatic cave invertebrates, and the other caves on the property that support cave invertebrates should be protected. Perhaps they could be purchased, along with a few acres of land, and the ownership given, with deed restrictions, to some organization willing to help protect them. The current owners are doing a good job of protecting the caves, so that this is not an urgent need (Doonan, 1996). The property as a whole is not recommended for public conservation action. The reasons are its lack of connection to any other conservation area, the poor location for the frequent prescribed burning that its management would require, and its size, which, combined with its isolation, is not large enough to support the full spectrum of upland pine habitat species.

COMPREHENSIVE PLAN CONSIDERATIONS: There are no wetlands, floodplains or streams and only one small open water pond here. The sinkhole and caves here are well known and documented. At least two of them open into aquatic caves within the Floridan Aquifer (Doonan, 1996).

SITE VISITS: On the edge only: David Clayton, 1996; Bob Simons, 1996, 1987.

SITE EVALUATION SCORING

Vegetation:	
Species Diversity	1
Exotics	3
Endangered Species Habitat	3
Wildlife Habitat	3
Hydrology:	
Floridan Aquifer	4
Surficial Aquifer Resource Protection	1
Vulnerability of Aquifer	4
Landscape Ecology:	
Community Diversity	1
Ecological Quality	1
Community Rarity	4
Functional Connectedness	1
Management Potential	3

Note: See Table 2-1 for parameter descriptions.

APPENDIX B

REPRESENTATIVE PHOTOGRAPHS OF EXISTING HABITAT

Photo 1. Shrub and brushland located in southern portion of the main block of habitat proposed to be set-aside west of Parker Road. Palmetto, wiregrass, turkey oak and Bluejack oak are prevalent.

Photo 2. Shrub and brushland located in southern portion of the main block of habitat proposed to be set-aside west of Parker Road. Very dense palmetto, wiregrass dominant with large oaks in background.

Photo 3. Shrub and brushland located in southern portion of the main block of habitat proposed to be set-aside west of Parker Road.

Photo 4. Shrub and brushland located in southern portion of the main block of habitat proposed to be set-aside west of Parker Road. Dominance of saw palmetto and shrub sized live oak. Turkey oak, wire grass and bluejack oak also present.

Photo 5. Photo taken in northern portion of shrub and brushland area located west of Parker Road. Bahia grass dominated herbaceous stratum surrounded by an area dominated by shrubby oaks.

Photo 6. Photo taken in northern portion of shrub and brushland area located west of Parker Road. Vegetation consists of a thicket of oaks. Understory vegetation is lacking.

Photo 7. Photo taken in northern portion of shrub and brushland area located west of Parker Road. Bahia grass and oak dominance. Very little herbaceous vegetation present.

Photo 8. Photo taken in northern portion of shrub and brushland area located west of Parker Road. Bahia grass and oak dominance.

Photo 9. "Weedy" area located on northern portion of area mapped as shrub and brushland area west of Parker Road.

Photo 10. Southwest portion of area designated as forest regeneration area located eat of Parker Road. Following logging, the area has been colonized by oaks.

Photo 11. Forest regeneration area located east of Parker Road. Oak dominated.

Photo 12. Forest regeneration area located east of Parker Road. Habitat is very shrubby. Oaks and sumac are present in the photo.

Photo 13. An oak thick located in the area designated as forest regeneration east of Parker Road.

Photo 14. Forest Regeneration area located on the east side of Parker Road. Oaks are dominant. Herbaceous vegetation dominated by bahia grass and broom sedge.

Special Area Study
Report

APPENDIX C

USFWS IPAC RESOURCE LIST

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

Alachua County, Florida

Local office

Florida Ecological Services Field Office

TBD

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.

---

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
Wood Stork Mycteria americana No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8477	Threatened

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
Gopher Tortoise Gopherus polyphemus No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6994	Candidate

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

Crustaceans

NAME	STATUS

Squirrel Chimney Cave Shrimp Palaemonetes cummingi Threatened
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/1551

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.

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 should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- 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

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, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
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
Bachman's Sparrow Aimophila aestivalis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6177	Breeds May 1 to Sep 30
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

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
Henslow's Sparrow Ammodramus henslowii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3941	Breeds elsewhere
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
Prairie Warbler Dendroica discolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
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 This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30

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 and understand the FAQ "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.

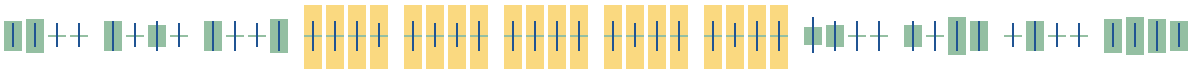
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

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

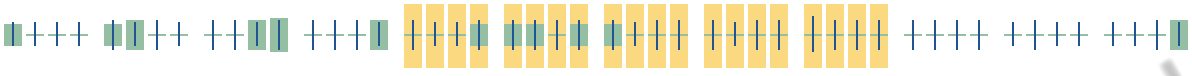
No Data (–)
A week is marked as having no data if there were no survey events for that week.

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.

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

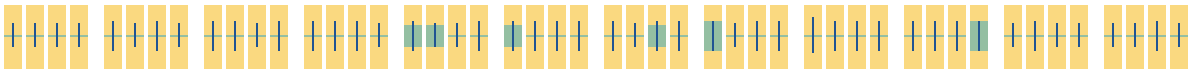


Bachman's Sparrow BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Bald Eagle Non-BCC Vulnerable (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.)

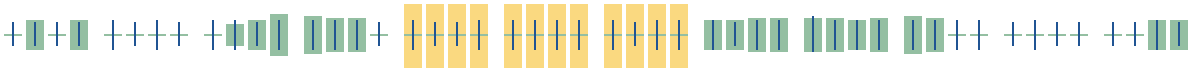
Great Blue Heron BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Henslow's Sparrow BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

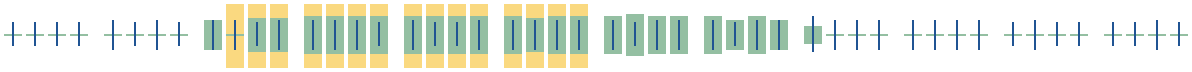
Lesser Yellowlegs BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Prairie Warbler BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Red-headed Woodpecker BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Swallow-tailed Kite BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



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 migratory birds potentially occurring 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 AKN Phenology 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, migrating or present year-round in my project 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 refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. 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.

THERE ARE NO KNOWN 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

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.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

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.

Special Area Study
Report

APPENDIX D

FNAI BIODIVERSITY MATRICES

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

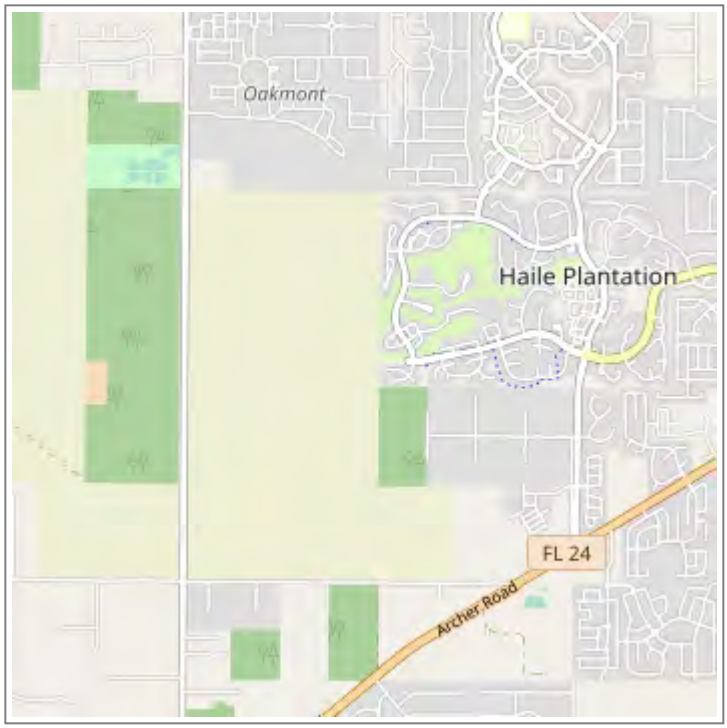
UNOFFICIAL REPORT

Created 6/8/2022

(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 6 Matrix Units: 25093 , 25094 , 25357 , 25358 , 25622 , 25623



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: 25093

1 **Documented** Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Crotalus adamanteus Eastern Diamondback Rattlesnake	G3	S3	N	N

0 **Documented-Historic** Elements Found

1 **Likely** Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT

Matrix Unit ID: 25094

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

1 **Likely** Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT

Matrix Unit ID: 25357

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

1 **Likely** Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT

Matrix Unit ID: 25358

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

2 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT
Gopherus polyphemus Gopher Tortoise	G3	S3	C	ST

Matrix Unit ID: 25622

1 **Documented** Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Gopherus polyphemus Gopher Tortoise	G3	S3	C	ST

0 **Documented-Historic** Elements Found

3 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT
Mycteria americana Wood Stork	G4	S2	T	FT
Sandhill	G3	S2	N	N

Matrix Unit ID: 25623

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

2 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Gopherus polyphemus Gopher Tortoise	G3	S3	C	ST
Mycteria americana Wood Stork	G4	S2	T	FT

Matrix Unit IDs: 25093 , 25094 , 25357 , 25358 , 25622 , 25623

42 **Potential** Elements Common to Any of the 6 Matrix Units

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Agrimonia incisa incised groove-bur	G3	S2	N	T
Ambystoma cingulatum Frosted Flatwoods Salamander	G2	S1	T	FT
Antigone canadensis pratensis Florida Sandhill Crane	G5T2	S2	N	ST
Aquatic cave	G3	S3	N	N
Arnoglossum diversifolium variable-leaved Indian-plantain	G2	S2	N	T
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
Brickellia cordifolia Flyr's brickell-bush	G3	S2	N	E
Corynorhinus rafinesquii Rafinesque's Big-eared Bat	G3G4	S1	N	N
Crangonyx hobbsi Hobbs's Cave Amphipod	G2G3	S2S3	N	N
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT
Dryobates borealis Red-cockaded Woodpecker	G3	S2	E, PT	FE
Falco sparverius paulus Southeastern American Kestrel	G5T4	S3	N	ST
Forestiera godfreyi Godfrey's swampprivet	G2	S2	N	E
Gopherus polyphemus Gopher Tortoise	G3	S3	C	ST
Hartwrightia floridana hartwrightia	G2	S2	N	T
Heterodon simus Southern Hognose Snake	G2	S2S3	N	N
Lampropeltis extenuata Short-tailed Snake	G3	S3	N	ST
Lithobates capito Gopher Frog	G2G3	S3	N	N
Litsea aestivalis pondspice	G3?	S2	N	E
Matelea floridana Florida spiny-pod	G2	S2	N	E
Myotis austroriparius Southeastern Myotis	G4	S3	N	N
Neofiber alleni	G2	S2	N	N

Round-tailed Muskrat				
Notophthalmus perstriatus Striped Newt	G2G3	S2	N	C
Onthophagus polyphemi polyphemi Punctate Gopher Tortoise Onthophagus Beetle	G2G3T2T3	S2	N	N
Peucaea aestivalis Bachman's Sparrow	G3	S3	N	N
Phidippus workmani Workman's Jumping Spider	G2G3	S2S3	N	N
Phyllanthus liebmannianus ssp. platylepis pinewoods dainties	G4T2	S2	N	E
Podomys floridanus Florida Mouse	G3	S3	N	N
Procambarus lucifugus Light-fleeing Cave Crayfish	G1G2	S2	N	N
Procambarus pallidus Pallid Cave Crayfish	G2G3	S2S3	N	N
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
Selonodon mandibularis Large-Jawed Cebrionid Beetle	G2G4	S2S4	N	N
Sideroxylon alachuense silver buckthorn	G1	S1	N	E
Terrestrial cave	G3	S2	N	N
Troglocambarus maclanei North Florida Spider Cave Crayfish	G2	S2	N	N
Ursus americanus floridanus Florida Black Bear	G5T4	S4	N	N

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Florida Natural Areas Inventory

Biodiversity Matrix Query Results

UNOFFICIAL REPORT

Created 6/8/2022

(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 8 Matrix Units: 24573 , 24574 , 24575 , 24576 , 24830 , 24831 , 24832 , 24833

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: 24573

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

2 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT
Upland hardwood forest	G5	S3	N	N

Matrix Unit ID: 24574

0 **Documented** Elements Found

1 **Documented-Historic** Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Athene cunicularia floridana Florida Burrowing Owl	G4T3	S3	N	ST

4 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT
Gopherus polyphemus Gopher Tortoise	G3	S3	C	ST
Sandhill	G3	S2	N	N
Upland hardwood forest	G5	S3	N	N

Matrix Unit ID: 24575

1 **Documented** Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Gopherus polyphemus Gopher Tortoise	G3	S3	C	ST

0 **Documented-Historic** Elements Found

2 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT
Upland hardwood forest	G5	S3	N	N

Matrix Unit ID: 24576

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

2 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT
Upland hardwood forest	G5	S3	N	N

Matrix Unit ID: 24830

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

2 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT
Upland hardwood forest	G5	S3	N	N

Matrix Unit ID: 24831

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

2 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT
Sandhill	G3	S2	N	N

Matrix Unit ID: 24832

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

1 **Likely** Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT

Matrix Unit ID: 24833

1 **Documented** Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Gopherus polyphemus Gopher Tortoise	G3	S3	C	ST

0 **Documented-Historic** Elements Found

1 **Likely** Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT

Matrix Unit IDs: 24573 , 24574 , 24575 , 24576 , 24830 , 24831 , 24832 , 24833

31 **Potential** Elements Common to Any of the 8 Matrix Units

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Agrimonia incisa incised groove-bur	G3	S2	N	T
Ambystoma cingulatum Frosted Flatwoods Salamander	G2	S1	T	FT
Antigone canadensis pratensis Florida Sandhill Crane	G5T2	S2	N	ST
Arnoglossum diversifolium variable-leaved Indian-plantain	G2	S2	N	T
Asplenium x curtissii Curtiss' spleenwort	GNA	S1	N	N
Asplenium x heteroresiliens Morzenti's spleenwort	G2	S1	N	N
Asplenium x plenum	G1Q	S1	N	N

ruffled spleenwort				
Athene cunicularia floridana Florida Burrowing Owl	G4T3	S3	N	ST
Corynorhinus rafinesquii Rafinesque's Big-eared Bat	G3G4	S1	N	N
Dryobates borealis Red-cockaded Woodpecker	G3	S2	E, PT	FE
Falco sparverius paulus Southeastern American Kestrel	G5T4	S3	N	ST
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
Litsea aestivalis pondspice	G3?	S2	N	E
Matelea floridana Florida spiny-pod	G2	S2	N	E
Myotis austroriparius Southeastern Myotis	G4	S3	N	N
Neofiber alleni Round-tailed Muskrat	G2	S2	N	N
Notophthalmus perstriatus Striped Newt	G2G3	S2	N	C
Onthophagus polyphemi polyphemi Punctate Gopher Tortoise Onthophagus Beetle	G2G3T2T3	S2	N	N
Peucaea aestivalis Bachman's Sparrow	G3	S3	N	N
Phyllanthus liebmannianus ssp. platylepis pinewoods dainties	G4T2	S2	N	E
Pituophis melanoleucus Pine Snake	G4	S3	N	ST
Podomys floridanus Florida Mouse	G3	S3	N	N
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
Ursus americanus floridanus Florida Black Bear	G5T4	S4	N	N

Special Area Study Report

APPENDIX E

LISTED FLORA AND FAUNA SPECIES WITH THE POTENTIAL TO OCCUR IN ALACHUA COUNTY

Listed flora and fauna species with the potential to occur on the FCL TLC, LLLP Property

Common Name	Scientific Name	Listed Status[1]	FNAI Status[2]	Potential Habitats	Potential to Occur On Site?
Amphibians					
Frosted Flatwoods Salamander	*Ambystoma cingulatum*	FT	S1	Slash and longleaf pine flatwoods that have a wiregrass floor and scattered wetlands.	Unlikely - Outside Range
Gopher Frog	*Lithobates capito*	--	S3	Dry upland habitats, often using gopher tortoise burrows. Breeds in isolated wetlands lacking fish.	Potentially
Striped Newt	*Notophthalmus perstriatus*	--	S2	Xeric upland communities, principally sandhill but also scrub; occasionally in pine flatwoods. Breeds in isolated, mostly ephemeral wetlands that lack predatory fish.	Unlikely - Unsuitable Habitat
Reptiles					
Eastern Diamondback Rattlesnake	*Crotalus adamanteus*	--	S3	Longleaf pine savannas, pine flatwoods, wiregrass areas, and turkey oak forests.	Observed
Eastern Indigo Snake	*Drymarchon couperi*	FT	S3	Broad range of habitats, from scrub and sandhill to wet prairies and mangrove swamps.	Potentially
Gopher Tortoise	*Gopherus polyphemus*	ST	S3	Dry upland habitats, including sandhills, scrub, xeric oak hammock, and dry pine flatwoods.	Observed
Southern Hognose Snake	*Heterodon simus*	--	S2	Xeric sandy uplands, especially sandhill, scrub, xeric hammock.	Potentially
Short-tailed Snake	*Lampropeltis extenuata*	ST	S3	Burrows in sandy soils in longleaf pine and xeric oak sandhills, sometimes other scrub and xeric habitats.	Potentially
Florida Pine snake	*Pituophis melanoleucus mugitus*	ST	S3	Burrows in well-drained sandy soils with a moderate to fully open canopy.	Potentially
Birds					
Florida Burrowing Owl	*Athene cunicularia floridana*	ST	S3	Open dry prairies with very little understory vegetation, including human-modified habitats like airports and pastures.	Potentially
Red-cockaded Woodpecker	*Dryobates borealis*	FE	S2	Inhabits open, mature pine woodlands that have a diversity of grass, forb, and shrub species.	Unlikely - Outside Range/Unsuitable Habitat
Southeastern American Kestrel	*Falco sparverius paulus*	ST	S3	Found in open pine habitat woodland edges, prairies, and pastures with snag trees.	Observed
Florida Sandhill Crane	*Grus canadensis pratensis)*	ST	S2	Prairies, freshwater marshes and pasture lands.	Unlikely - Unsuitable Habitat
Bald Eagle	*Haliaeetus leucocephalus*	BGEPA	--	Forested habitats for nesting and roosting, and expanses of shallow fresh or salt water for foraging. Nests in tall trees with unobstructed views of surroundings.	Closest documented nest, AL008 is located approximately 2 miles south of the Project Study Area

Common Name	Scientific Name	Listed Status[1]	FNAI Status[2]	Potential Habitats	Potential to Occur On Site?
Wood Stork	*Mycteria americana*	FT	S2	Forages in shallow water wetlands, nests in mixed hardwood swamps, sloughs, mangroves, and cypress domes.	Unlikely - Limited Foraging Habitat
Bachman's Sparrow	*Peucaea aestivalis*	--	S3	Open longleaf pine forests, groundcover of grasses or forbs, with little or no understory of trees or shrubs.	Observed
Mammals					
Rafinesque's Big-eared Bat	*Corynorhinus rafinesquii*	--	S1	Forested communities, forested floodplains with large hollow trees, pine flatwoods and mixed oak-pine forests.	Unlikely - Unsuitable Habitat
Southeastern Bat	*Myotis austroriparius*	--	S3	Roosts in caves, culverts, bridges, and hollow trees and occasionally in houses. Forages principally over creeks, rivers, and lakes.	Unlikely. Conditions in the on-site caves appear to have become unsuitable for the species.
Florida Mouse	*Podomys floridanus*	--	S3	Xeric uplands, particularly sandhill and scrub.	Unlikely - Unsuitable Habitat
Southeastern Fox Squirrel	*Sciurus niger niger*	--	S3	Open, fire-maintained longleaf pine, turkey oak, sandhills, and flatwoods.	Observed
Invertebrates					
Hobbs' Cave Amphipod	*Crangonyx hobbsi*	--	S2/S3	Groundwater within a flooded solution cave in limestone	Potentially
Squirrel Chimney Cave Shrimp	*Palaemonetes cummingi*	FT	S1	Endemic to the Squirrel Chimney sinkhole in Alachua County, Florida, and has not been found anywhere else.	Unknown
Light-fleeing Cave Crayfish	*Procambarus lucifugus*	--	S2	Groundwater within a flooded solution cave in limestone	Documented by Karst Environmental Services, Inc. 2006
Pallid Cave Crayfish	*Procambarus pallidus*	--	S2/S3	Groundwater within a flooded solution cave in limestone	Documented by Karst Environmental Services, Inc. 2006
North Florida Spider Cave Crayfish	*Troglocambarus maclanei*	--	S2/S3	Groundwater within a flooded solution cave in limestone	Documented by Karst Environmental Services, Inc. 2006
Plants					
Incised Groove-Bar	*Agrimonia incisa*	ST	S2	Dry to moist, longleaf pine-oak woods, oak-hickory slopes, roadsides, sand or shell maritime thickets.	Potentially
Variable-leaved Indian-plantain	*Arnoglossum diversifolium*	ST	S2	Hydric hammocks and floodplain forest clearings, streambanks.	Unlikely - Unsuitable Habitat
Flyr's Brickell-bush	*Brickellia cordifolia*	SE	S2	Dry, upland pine-oak woods, often with southern red oak and loblolly pine.	Potentially
Woodland Poppymallow	*Callirhoe papaver*	SE	S2	Upland mixed forest. Found in edges or understory and on roadsides.	Observed
Godfrey's Swampprivet	*Forestiera godfreyi*	SE	S2	Upland hardwood forests with limestone at or near the surface.	Potentially
Angularfruit milkvine	*Gonolobus suberosus*	ST	--	Rich hydric hammocks, upland hardwood forests and bottomland forests; often where limestone is near the surface.	Observed
Hartwrightia	*Hartwrightia floridana*	ST	S2	Seepage slopes, edges of baygalls and springheads, wet prairies, and flatwoods with wet, peaty soils.	Unlikely - Unsuitable Habitat

Common Name	Scientific Name	Listed Status[1]	FNAI Status[2]	Potential Habitats	Potential to Occur On Site?
Pondspice	*Litsea aestivalis*	SE	S2	Peaty soils in edges of baygalls, flatwoods ponds, and cypress domes.	Unlikely - Unsuitable Habitat
Florida Spiny-pod	*Matelea floridana*	SE	S2	Sandhills, upland forests, open habitat.	Observed
Pinewood Dainties	*Phyllanthus liebmanniaus ssp. platylepis*	SE	S2	Hydric hammocks, floodplain and bottomland forests, often on hummocks at bases of trees.	Unlikely - Unsuitable Habitat
Florida Mountain-mint	*Pycnanthemum floridanum*	ST	S3	Roadside ditches, and sandhill communities in moist areas.	Potentially
Silver Buckthorn	*Sideroxylon alachyense*	SE	S1	Upland hardwood forests around limesinks and on shell mounds.	Potentially

[1] Listed Statuses are FE = Federally Endangered, FT = Federally Threatened, SE = State Endangered, ST = State Threatened, BGEPA = protected by the Bald and Golden Eagle Protection Act.

[2] FNAI Statuses are S1 = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor. S2 = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor. S3 = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.

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F

STAFF RESUMES

John Bailey, PWS

Current Position
Senior Project Scientist

Discipline Areas
Wetland Delineation
> Mitigation Bank Permitting
> USACE Wetland Permitting
> ERP Permitting
> Wetland Functional Assessment (UMAM)
> Wetland Mitigation Design
> Listed Species Surveys
> Permit Compliance and Enforcement

Years' Experience
31

Joined Cardno
1993

Education
> MS, Wetland Ecology, University of Florida, 1994
> BS, Forest Resources Management, Southern Illinois University, 1986

Certifications
> Professional Wetland Scientist, #763, Society of Wetland Scientists, 1995
> MSHA Training
> YMCA, Open Water Diver, 1993
> PADI, Advanced Open Water Dive, 2008
> PADI, Enriched Air Diver, 2009
> Accomplished nature and underwater photographer

Summary of Experience

Mr. John Bailey is a Certified Professional Wetland Scientist (PWS) with 31 years of experience in South and Central Florida ecosystems. He is an expert in wetland delineation and Florida ecology. His master's research at the Center for Wetlands at the University of Florida focused on assessing changes in wetland plant communities associated with cattle ranching and ditching. His project experience is in ecological assessments of wetlands and uplands, environmental resource permitting, wetland delineation, listed species assessments and surveys, wetland mitigation design, wetland hydroperiod assessment, and data analysis. He has conducted formal wetland determinations with the Florida Department of Environmental Protection (FDEP), Florida and US Army Corps of Engineers on thousands of acres of wetlands including a 14,000 acre phosphate mine site located in Hardee County, Florida. His project experience includes small and large residential developments, phosphate mines, regional malls, mitigation banking, roadways, landfills and other types of construction projects.

Significant Projects

Environmental and Mitigation Bank Permitting (Section 404 and ERP)

Project Manager – Permit Coordination/Enforcement and Compliance – Various Counties, Florida

Mr. Bailey has represented and managed projects for agricultural, residential and commercial development, transportation, and mitigation/conservation banking industries. Projects include due diligence, wetland and listed species surveys, permitting with local, state, and federal agencies. He has prepared and submitted Environmental Resource Permit (ERP) and Standard General Applications to the Florida Department of Environmental Protection, Southwest Florida Water Management District, South Florida Water Management District, and St. John's River Water Management District. He has prepared and submitted Individual and Nationwide Permit Applications and Requests for No Permit Needed findings to the USACE.

Project Scientist – Two Rivers Ranch Mitigation Bank – Hillsborough and Pasco Counties, Florida

Mr. Bailey provided environmental support for the permitting of an approximately 1500- acre mitigation bank located in Hillsborough and Pasco Counties, Florida. Permits for the bank were secured from both the U.S. Army Corps of Engineers (USACE) and Southwest Florida Water Management District (SWFWMD). Services provided included mitigation bank design, project coordination and oversight, preparation of permit application packages, response to requests for additional information, wetland delineations, listed species surveys, and Uniform Mitigation Assessment Method (UMAM) analyses/credit determination.

Project Scientist – Crystal River Commons – Citrus County, Florida

Mr. Bailey provided biological support for the environmental permitting of this approximately 265-acre mixed use development located in Citrus County, Florida. Services included pre-construction permit coordination, wetland delineations, listed species surveys, agency permitting (federal USACE and state SWFWMD), UMAM analyses, wetland impact avoidance and minimization, and development

of a mitigation plan to compensate for unavoidable impacts to on-site wetlands.

Project Scientist – JED Landfill Expansion – Florida

Mr. Bailey managed the State Environmental Resource Report (ERP) and federal USACE wetland impact permitting of this 100-acre expansion to the existing Osceola Omni Waste Disposal Facility. This included a re-evaluation of the USACE wetland jurisdiction based on the Rapanos decision, UMAM assessment of on-site wetlands, and evaluation of the use of the expansion area by listed species, including the crested caracara and Florida grasshopper sparrow. Mitigation for impacts to wetland was provided via several mitigation banks.

Project Manager – Omni Waste Disposal Site – Osceola County, Florida

Mr. Bailey provided wetland delineation and environmental permitting for a 264-acre waste disposal facility located on a 2,179-acre site in Osceola County, Florida. This large, complicated project involved many issues, including listed species, wetland impacts, alternative site analysis, re-hydration of ditched wetlands, and potential legal challenges. Mitigation for this site consisted of a 1,200-acre upland and wetland preservation area which required the drafting of a long-term management plan.

Project Manager – Grand Hampton – Hillsborough County, Florida

Mr. Bailey managed the wetland permitting, mitigation design, upland habitat monitoring, wetland delineation, and listed species surveys for this 800-acre residential development.

Senior Ecologist – Connerton- Newland Communities – Pasco County, Florida

Mr. Bailey conducted wetland delineation, permitting, UMAM assessments, and mitigation design for a large multi-family development. Mr. Bailey managed the State Environmental Resource Report (ERP) and federal USACE wetland impact permitting. This included a re-evaluation of the USACE wetland jurisdiction based on the Rapanos decision, UMAM assessment of on-site wetlands, and evaluation of the use of the expansion area by listed species. Mitigation for impacts to wetland was provided via several mitigation banks.

Wetland Delineations

Senior Ecologist – Wetland Delineation and Assessment on Proposed Phosphate Mine Site – Hardee County, Florida

Mr. Bailey provided project coordination, wetland delineation, and evaluation of all wetlands on a 14,000-acre future mine site in Central Florida for the Farmland-Hydro Corporation. This land was purchased by the Mosaic Company and is now part of the Pioneer and Ona Tracts. Wetland quality was assessed using the Wetland Rapid Assessment Procedure (WRAP), and wetland boundaries were delineated and approved by both state and federal agencies. Delineations were based on ortho-rectified and georeferenced color infrared digital imagery flown specifically for the project. A sub-meter accuracy global positioning system (GPS) unit was used extensively to aid in ground truthing of aerially interpreted wetland boundaries.

Senior Ecologist – Cypress Creek Development of Regional Impact – Pasco County, Florida

Mr. Bailey provided wetland delineation and environmental permitting for a 404-acre mixed commercial development. The project was located on the east side of the newly- created interchange on I-75 (SR 56), a regional commercial node. Both SWFWMD and an USACE individual permit were required. The mitigation plan consisted of wetland creation, restoration, and enhancement, as well as upland preservation.

Raymond Loraine

Senior Scientist
36 years of experience · Sarasota, Florida

Mr. Raymond “Ray” K. Loraine has more than 30 years of experience and expertise in the areas of listed and non-game wildlife surveys, management, and permitting; natural community/habitat delineation and assessment; and environmental planning and permitting. He has prepared assessments, wildlife inventories, natural community mapping, and management plan recommendations for public and privately owned tracts of land up to 30,000 acres in size. His expertise is valuable throughout the life of the project, from pre-purchase assessments through design and permitting to project implementation. Ray has contributed to the preparation of numerous Developments of Regional Impact (DRIs), Project Development and Environment (PD&E), and Sector Plan studies. He also has extensive experience in wetlands and wildlife permitting at the local, state, and federal levels.

EDUCATION

Bachelor of Science, Biology, University of Kansas, Lawrence, Kansas, 1985

Master of Science, Zoology, University of South Florida, Tampa, Florida, 1990

National Interagency Prescribed Fire Training Center, Tallahassee, Florida, 1992

Wildlife Hazard Management, Embry-Riddle Aeronautical University, Daytona Beach, Florida, 2007

REGISTRATIONS

Authorized Gopher Tortoise Agent #GTA-09-00055F, Florida Fish and Wildlife Conservation Commission, April 14, 2021 - April 27, 2025

PROJECT EXPERIENCE

ENVIRONMENTAL ASSESSMENT AND PERMITTING

Red Hawk Reserve* | Clark Road Development | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager to resolve development conflicts following colonization of the 102-acre Red Hawk Reserve project by nesting bald eagles after the project had been designed and rezoned. As part of the federal permitting process, he requested an Incidental Take Statement of the nest territory pursuant to Section 7(b) (4) of the Endangered Species Act and participated in a formal Section 7 consultation between the USACE and the USFWS that resulted in issuance of a Biological Opinion, including an Incidental Take Statement, for the bald eagle territory. This critical federal approval allowed portions of the project to be developed outside of the protection zone for the nest. Subsequent monitoring by Cardno provided documentation that the nest was used only once. This monitoring ultimately enabled Cardno to request and receive a determination by state and federal agencies that the territory was “Abandoned” and no longer subject to regulation, recovering the area for development.

Baltimore Orioles * | Sarasota County, Florida | Project Manager

Mr. Loraine served as the lead biologist for state and federal permitting required to remove an active bald eagle nest from a light pole at Sarasota County’s Ed Smith Stadium, the spring training facility for the Baltimore Orioles major league baseball club. Services included behavioral and construction monitoring, permit application preparation and coordination with the FWC and USFWS, coordination of nest removal and egg recovery, and post-construction monitoring and reporting.

USACE Site 1 Impoudment D-525* | Lodge Construction, Inc. | Palm Beach County, Florida | Managing Wildlife Biologist

Mr. Loraine served as the managing wildlife biologist during the construction of the USACE Site 1 Impoundment D-525 (L-40 modifications) project. Environmental services provided by Cardno included development of the project Environmental Protection Plan, preparation and presentation of environmental training for construction staff, pre-construction gopher tortoise monitoring, and daily on-site construction monitoring to ensure the protection of listed wildlife and migratory birds.

** denotes projects completed with other firms*

Peace River Boat Lift* | The Bove Company | Charlotte County, Florida | Project Manager

Mr. Loraine was retained to assist with state (Southwest Florida Water Management District [SWFWMD]) and federal (USACE) permitting of a proposed 450-slip congregate docking facility and boat lift to allow passage of boats from the upland-excavated facility into an adjacent canal connected to the Peace River. Services included agency negotiations and the preparation of responses to state and federal wetlands and wildlife (USFWS and FWC) agency requests for additional information received in response to the initial application materials prepared by an earlier consultant for the project. Prepared supporting materials included a detailed alternatives analysis for the proposed docking facility, evaluation of potential project effects on listed species (West Indian manatee and small-toothed sawfish), and a comparison of the potential boat population at the proposed facility with that currently present in an adjacent, extensive canal network. Based on these analyses, consulting wildlife agencies determined that the proposed project was not likely to adversely affect federally listed species and the USACE was prepared to issue the permit for the project. The client subsequently withdrew the permit application because of factors not related to environmental issues.

Riverwood DRI Sawgrass Pointe* | Centex Homes | Charlotte County, Florida | Project Manager

Mr. Loraine served as project manager for the 300-acre Riverwood DRI Sawgrass Pointe residential subdivision. Cardno's multi-disciplinary services included wetland delineation; local, state, and federal wetland permitting; wetland mitigation design and implementation; upland preserve management design and implementation; and listed species monitoring and permitting. Mr. Loraine coordinated a formal Section 7 consultation between the USFWS and USACE leading to the issuance of a Biological Opinion and Incidental Take Statement for listed bald eagles and Florida scrub-jays. Working with the project archeologist, he also coordinated the protection of an on-site Indian burial mound and stabilization measures for a historically significant midden at risk to erosion by the Myakka River.

PROJECT MANAGEMENT

Hammock Preserve on Palmer Ranch, Palmer Ranch DRI Increment XXIII* | DiVosta Homes, LP | Sarasota County , Florida | Project Manager

Mr. Loraine served as project manager for the 224-acre Hammock Preserve on Palmer Ranch residential development. Services included wetland delineation; habitat mapping; listed species assessment; entitlement support (Comprehensive Plan Amendment, DRI Incremental Development Approval and Rezoning); environmental planning; local, state, and federal wetlands permitting; and gopher tortoise relocation.

Arbor Lakes on Palmer Ranch, Palmer Ranch DRI Increment XX* | Taylor Morrison of Florida Inc. | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the 217-acre Arbor Lakes on Palmer Ranch residential development. Services included wetland delineation; habitat mapping; listed species assessment; entitlement support (Comprehensive Plan Amendment, DRI Incremental Development Approval and Rezoning); environmental planning; local, state, and federal wetlands permitting; wetland mitigation design; and gopher tortoise relocation.

IslandWalk* | DiVosta Homes, LP | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for environmental services in support of the IslandWalk residential subdivision. Services included due diligence analyses; wetland delineation; habitat mapping; listed species assessment; environmental planning; local, state, and federal wetlands permitting support; wetland mitigation design and implementation; lake management; mitigation area monitoring and maintenance; and water consumptive use permitting. Cardno also obtained an incidental take permit for gopher tortoises on the site.

Lowe's Home Improvement Store* | Lincks and Associates, Inc. | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager in support of a proposed Lowe's home improvement store. Services included wetland delineation; habitat mapping; listed species assessment; entitlement support (DRI Notice of Proposed Change, Sarasota County Rezoning and Special Exception approvals); environmental planning; local, state, and federal wetlands permitting; and gopher tortoise relocation permitting.

Pulte Homes * | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for due diligence analyses, wetland delineations, and environmental planning associated with the proposed conversion of a derelict golf course to a multi-family residential subdivision.

Centex Homes * | Charlotte County, Florida | Environmental Support

Mr. Loraine provided environmental support for a DRI Notice of Proposed Change.

Villa Rosa* | Centex Homes | Sarasota County, Florida | Environmental Documentation Support

Mr. Loraine provided environmental documentation in support of construction permitting of the Villa Rosa multi-family residential development.

** denotes projects completed with other firms*

Arielle at Palmer Ranch* | Pulte Homes | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the Arielle at Palmer Ranch multi-family residential development. Services included wetland delineation; habitat mapping; listed species assessment; entitlement support (DRI Notice of Proposed Change and Sarasota County Rezoning); environmental planning; and local, state and federal wetlands permitting. Cardno also provided an implementation of wetland mitigation and enhancement plans for the project and coordinated special protection measures for a Sarasota County-regulated grand live oak.

Lowe's Home Improvement Store * | Lincks and Associates, Inc. | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the environmental permitting support of a Lowe's home improvement store.

SeaTek Communities, Inc.* | Sarasota County, Florida | Project Manager

Mr. Loraine provided environmental support for a proposed rezoning application of this eight-acre parcel comprised entirely of native pine flatwoods.

Anson on Palmer Ranch, Palmer Ranch DRI Increment IV* | The Spanos Company | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the 20-acre Anson on Palmer Ranch multi-family residential development. Services included wetland delineation; habitat mapping; listed species assessment; entitlement support (Comprehensive Plan Amendment, DRI Notice of Proposed Change and Rezoning); environmental planning; local, state and federal wetlands permitting; and wetland restoration design and implementation.

VillageWalk on Palmer Ranch* | DiVosta Homes, LP | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for environmental services in support of the VillageWalk residential subdivision on Palmer Ranch. Services included due diligence analyses; wetland delineation; habitat mapping; listed species assessment; bald eagle monitoring; entitlement support (DRI Notice of Proposed Change and Sarasota County Rezoning); environmental planning; local, state, and federal wetlands permitting support; wetland mitigation design and implementation; lake management; and mitigation area monitoring and maintenance.

San Palermo* | DiVosta Homes, LP | Manatee County, Florida | Project Manager

Mr. Loraine served as project manager for the environmental design and construction permitting of the San Palermo multi-family residential development.

Legacy Estates on Palmer Ranch, Palmer Ranch DRI Increment XXII, * | Taylor Morrison of Florida Inc. | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the 104-acre Legacy Estates on Palmer Ranch residential development. Services included wetland delineation; habitat mapping; listed species assessment; entitlement support (Comprehensive Plan Amendment, DRI Incremental Development Approval and Rezoning); environmental planning; local, state, and federal wetlands permitting; and gopher tortoise relocation.

Isles of Sarasota* | DiVosta Homes, LP | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the Isles of Sarasota on Palmer Ranch residential development. Services included wetland delineation; habitat mapping; listed species assessment; entitlement support (DRI Notice of Proposed Change and Sarasota County Rezoning); environmental planning; local, state, and federal wetlands permitting; and gopher tortoise relocation permitting. Cardno also provided an implementation of wetland mitigation and enhancement plans for the project.

Bayonne Development, LLC * | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager in the entitlement (rezoning) and local, state, and federal permitting of this commercial and residential condominium project. Services included participation in a formal Section 7 consultation between the USACE and USFWS, resulting in the issuance of a Biological Opinion and Incidental Take Statement for bald eagles. SWFWMD and USACE wetland permitting included the design of wetland mitigation/enhancement areas to offset unavoidable wetland impacts.

Charlotte County Trucking Distribution Facility* | Southeastern Freight Lines | Charlotte County, Florida | Project Manager

Mr. Loraine served as project manager for environmental support of local government (Charlotte County) construction authorizations for a proposed trucking distribution facility.

North Port Gardens Shopping Center DRI* | Lee Pallardy, Inc. | Sarasota , Florida | Project Manager

Mr. Loraine served as project manager for the proposed North Port Gardens Shopping Center DRI Application for Development Approval (ADA). Services included wetland delineation; listed species censuses; environmental planning support; preparation of ADA Questions 12 – Vegetation and Wildlife, 13 – Wetlands, and 14 – Water; preparation of Sufficiency Responses for these ADA Questions; and agency negotiations.

** denotes projects completed with other firms*

Hammocks* | Boykin Barnett | Charlotte County, Florida | Project Manager

Mr. Loraine served as project manager for the Hammocks as Cape Haze multi-family residential development. Services included wetland delineation, habitat mapping, gopher tortoise and Florida scrub-jay censuses, and local (Charlotte County) and state (SWFWMD) construction permitting. Cardno also obtained an incidental take permit for gopher tortoises on the site.

Englewood YMCA * | Sarasota County | Englewood, Florida | Project Manager

Mr. Loraine served as project manager for the Englewood YMCA project. Services included wetland delineation; habitat mapping; listed species assessment; entitlement support (Sarasota County Rezoning and Special Exception); environmental planning; and local, state, and federal wetlands permitting.

San Michelle* | DiVosta Homes, LP | Manatee County, Florida | Project Manager

Mr. Loraine served as project manager for the environmental design and construction permitting of the San Michelle multi-family residential development. Services included design and oversight of special protection measures for an existing 70” DBH live oak tree that was preserved on the site.

Cobblestone on Palmer Ranch, Palmer Ranch DRI Increment VI* | Taylor Morrison of Florida Inc. | Sarasota County, Florida | Project Management

Mr. Loraine served as project manager for the 68-acre Cobblestone on Palmer Ranch residential development. Services included wetland delineation; habitat mapping; listed species assessment; entitlement support (Comprehensive Plan Amendment, DRI Incremental Development Approval and Rezoning); environmental planning; and local, state, and federal wetlands permitting.

Publix Super Markets * | Sarasota County, Florida | Project Manager

Mr. Loraine served as the project manager for the local entitlement (rezoning) and local, state, and federal wetlands permitting for the contentious expansion of a Publix Super Markets Distribution Center warehouse, doubling its size from 344,507 square feet to 690,307 square feet. Services included environmental support of a Sarasota County rezoning application; wetland delineation and assessment; listed species surveys; and local, state, and federal wetland permitting. As part of the permit application, Cardno prepared an alternative site analysis to demonstrate that no practicable alternative existed, but the proposed site and the proposed wetland impacts were, therefore, unavoidable. The Wetland Rapid Assessment Procedure (WRAP) was used to establish lost wetland functional values and appropriate compensation, implemented through a combination of on-site wetland creation and enhancement. Cardno also provided construction oversight of the compensation areas, wetland plant installation, and monitoring and maintenance of the sites.

Stonebridge* | Sandler at Manatee, LLC | Manatee County, Florida | Project Manager

Mr. Loraine served as project manager for environmental services in support of the proposed 48-acre Stonebridge residential subdivision. Services included wetland delineation; habitat mapping; listed species assessment; bald eagle monitoring and management plan development; environmental planning; and local, state, and federal wetlands permitting support. As part of the federal permitting process, Mr. Loraine requested an Incidental Take Statement of the nest territory pursuant to Section 7(b) (4) of the Endangered Species Act and participated in a formal Section 7 consultation between the USACE and the USFWS that resulted in an issuance of a Biological Opinion, including an Incidental Take Statement, for the bald eagle territory.

Ventura on Palmer Ranch * | Pulte Homes | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for environmental services in support of the proposed Ventura residential subdivision on Palmer Ranch. Services included wetland delineation; habitat mapping; listed species assessment; bald eagle monitoring; entitlement support (DRI Notice of Proposed Change and Sarasota County Rezoning); environmental planning; and local, state, and federal wetlands permitting support.

Northport Investments #3 * | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the preparation of permit applications and agency negotiations with the SWFWMD and USACE to modify two existing borrow pits. Services also included negotiations with the FWC regarding potential project impacts on state listed species.

Phillippi Harbor Club * | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the permitting of a 309-slip dry storage facility. Services included negotiations with Sarasota County regarding the appropriate baseline for proposed additional boat storage units, support of local and state permit applications, and negotiations with the Florida Department of Environmental Protection, FWC, and Sarasota County reviewers.

Sarasota County Coastal Setback Variance Petition* | Bladstrum, Laidlaw | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager to provide environmental support for a Sarasota County Coastal Setback Variance Petition for a proposed seawall to protect 15 properties on Casey Key from erosion by the Gulf of Mexico. Services included habitat mapping, environmental documentation, agency negotiations, and public hearing testimony.

StoneLake Ranch, LLC * | Hillsborough County, Florida | Project Manager

Mr. Loraine served as project manager for environmental services in support of the StoneLake Ranch 147-lot rural subdivision on 645 acres on the eastern shore of Lake Thonotosassa. Services included wetland delineation; habitat mapping; listed species censuses; bald eagle monitoring; environmental planning; and local, state and federal wetlands permitting and Hillsborough County rezoning support. Cardno also obtained an incidental take permit for gopher tortoises on the site.

Promenade on Palmer Ranch, Palmer Ranch DRI Increment IV* | D.R. Horton Homes | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the 21-acre Promenade on Palmer Ranch multi-family residential development. Services included wetland delineation; habitat mapping; listed species assessment; gopher tortoise relocation; entitlement support (Comprehensive Plan Amendment, DRI Notice of Proposed Change, and Rezoning); environmental planning; local, state, and federal wetlands permitting; and gopher tortoise relocation.

Sarasota County Comprehensive Plan Amendment* | North American Properties | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager and provided environmental support for applications for a Sarasota County Comprehensive Plan Amendment, rezoning, and construction approvals for a proposed shopping center. Services also included the relocation of on-site gopher tortoises under permit from the FWC.

Sandhill Preserve on Palmer Ranch, Palmer Ranch DRI Increment XXI* | DiVosta Homes, LP | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the 139-acre Sandhill Preserve on Palmer Ranch residential development. Services included wetland delineation; habitat mapping; listed species assessment; entitlement support (Comprehensive Plan Amendment, DRI Incremental Development Approval and Rezoning); environmental planning; and local, state and federal wetlands permitting.

LT Ranch 2050 * | Taylor Morrison of Florida, Inc. and LT Partners, LLLP | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the entitlement and permitting of the 1725 - acre LT Ranch 2050 Village. Services included wetland delineation; habitat mapping; extensive listed species assessment; entitlement support (Sarasota 2050 Plan Rezoning); environmental planning; local, state, and federal wetlands permitting; state and federal bald eagle permitting; wetland creation and restoration design; and upland habitat enhancement planning.

Heritage U.S. Home Corporation, Inc. * | Manatee County, Florida | Project Manager

Mr. Loraine served as project manager for the preparation of ADA Questions 12 - Vegetation and Wildlife, 13 - Wetlands, and 14 - Water for the more than 2800-acre DRI.

ENVIRONMENTAL ASSESSMENTS

City of Venice * | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the design and census of gopher tortoises on a City of Venice park site. Following completion of the census, Cardno ecologists obtained relocation permits from the FWC and relocated the tortoises from a proposed construction area to other suitable habitats in the park.

Villages at Pine Tree* | Ridgewood Building and Development Company | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for bald eagle monitoring, management plan development, and site plan revisions after discovery of a new bald eagle nest immediately adjacent to the proposed Villages at Pine Tree residential subdivision. Cardno also testified in support of the proposed project during the rezoning of the site.

Laguna Veneta* | Venice H.G., L.C. | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for Florida scrub-jay censuses and gopher tortoise incidental take permit application preparation for Laguna Veneta.

Linebaugh Avenue Improvements* | Hillsborough County Engineering & Construction Serv. | Hillsborough County, Florida | Project Manager

Mr. Loraine served as project manager for the preparation of a gopher tortoise incidental take permit application for Linebaugh Avenue Improvements.

Abel Band * | Sarasota County, Florida | Technical Support

Mr. Loraine provided technical support for an application for rezoning of four parcels previously annexed into the City of Venice.

Karpay Berger Residential Corporation * | Karpay Berger Residential Corporation | Hillsborough County, Florida | Project Manager

Mr. Loraine served as the project manager for a gopher tortoise assessment and incidental take permitting at a 30-acre subdivision.

Walton Tract, Sarasota County Landfill* | Camp, Dresser & McKee, Inc. | Sarasota County, Florida | Lead Ecologist

Mr. Loraine was the lead ecologist for listed wildlife surveys and habitat mapping of the 6,151-acre Walton Tract, the proposed site of a Sarasota County Landfill.

Vector Space Site* | Ivey – Harris, and Walls, Inc. | Brevard County, Florida | Census

Mr. Loraine completed a Florida scrub-jay census of the Vector Space Site.

Day and Zimmerman Infrastructure* | Sarasota County Environmental Stormwater Utility | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the inventory of wildlife along South Creek in Oscar Scherer State Park to assess possible effects of the restoration of South Creek on wildlife for the Day and Zimmerman Infrastructure.

J & J Homes * | Sarasota County, Florida | Project Manager

Mr. Loraine conducted an assessment of potential effects of construction of a single-family home on an adjacent bald eagle nesting territory and worked with the Client and USFWS to develop a construction schedule that avoided impacts to the nest and the need for permitting.

Villa Rosa* | Westfield Development Corporation | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the preparation of a gopher tortoise incidental take permit application for Villa Rosa.

Jones Edmunds * | Martin County, Florida | Project Manager

Mr. Loraine served as project manager for the design and sampling of potential recipient sites and subsequent relocation of gopher tortoises from South Florida Water Management District lands.

Murdock Village, Stock Development * | Charlotte County, Florida | Project Manager

Mr. Loraine served as project manager for wetland delineations and environmental analyses associated with the proposed Murdock Village project.

Sarasota County's Shamrock Park* | Sarasota County | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the census and banding of Florida scrub-jays inhabiting Sarasota County's Shamrock Park.

Northwest Regional Mall* | JMB Urban Development | Hillsborough County, Florida | Lead Ecologist

Mr. Loraine was the lead ecologist for gopher tortoise relocation and habitat analysis for the Northwest Regional Mall.

Foxwood* | Ranch Property Partners, Ltd. | Manatee County, Florida | Project Manager

Mr. Loraine served as project manager for Florida scrub-jay censuses and management plan preparation and negotiation with the USFWS for Foxwood.

Villages of Palm Aire* | Taylor Woodrow Communities, Inc. | Manatee County, Florida | Project Manager

Mr. Loraine served as project manager for gopher tortoise incidental take permit application preparation for Villages of Palm Aire.

Sunshine Natural Gas Pipeline* | Florida | Team Leader

Mr. Loraine served as the team leader for field work to census listed species, delineate wetlands, and assess habitat quality along the proposed route of the Sunshine natural gas pipeline.

Colonial Pipeline Company * | Colonial Pipeline Company | Jefferson County, Florida | Lead Ecologist

Mr. Loraine was the lead ecologist for an endangered and threatened species assessment for a proposed petroleum pipeline.

Leslie Land Corporation * | Leslie Land Corporation | Hillsborough County, Florida | Project Manager

Mr. Loraine was project manager for a gopher tortoise assessment and incidental take permitting for a proposed borrow pit.

Knob Hill Tract* | The Pugliese Company | Palm Beach County, Florida | Lead Ecologist

Mr. Loraine was the lead ecologist for small mammal and gopher tortoise burrow commensal trappings and gopher tortoise burrow occupancy rate research on the Knob Hill Tract.

Rock Springs Ridge Tract* | Springstead Engineering, Inc | Marion County, Florida | Project Manager

Mr. Loraine served as the project manager for an endangered and threatened species assessment of the ±1,100-acre Rock Springs Ridge tract.

City of Tallahassee Southeast Priority Planning Study Area* | City of Tallahassee | Leon County, Florida | Project Manager

Mr. Loraine provided identification of potential environmentally sensitive areas within the City of Tallahassee Southeast Priority Planning Study Area.

Pottberg Trust * | Pasco County, Florida | Wildlife Surveys

Mr. Loraine was involved with the wildlife surveys and DRI Questions 16 – Wetlands and 18 – Vegetation and Wildlife at Serenova, a ±6,700-acre DRI.

Eagle Lake RV Park* | Jay Ramsey Trustee | Pasco County, Florida | Project Manager

Mr. Loraine served as the project manager for an endangered and threatened species assessment and incidental take permitting of gopher tortoises at the Eagle Lake RV Park.

Rock Crusher Road School Site * | Citrus County, Florida | Project Manager

Mr. Loraine was project manager for gopher tortoise preserve design and population relocation at the Rock Crusher Road School Site.

** denotes projects completed with other firms*

Sage Oaks* | DFR Engineering | Pinellas County, Florida | Lead Ecologist

Mr. Loraine was the lead ecologist for a gopher tortoise assessment and incidental take permitting for Sage Oaks.

Willow Bend* | Scarborough Corporation | Hillsborough County, Florida

Mr. Loraine completed the gopher tortoise relocation at Willow Bend.

Sam Rodgers Properties * | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the census of Florida scrub-jays and wildlife agency negotiations in support of a proposed rezoning of a 47-acre parcel.

Jaclyn Oaks* | White Oak Development | Manatee County, Florida | Project Manager

Mr. Loraine served as project manager for bald eagle monitoring and management plan development after discovery of a new bald eagle nest on the proposed Jaclyn Oaks residential subdivision. Cardno also provided construction monitoring for the bald eagle nest.

Conservation Consultants, Inc. * | Conservation Consultants, Inc. | Orange County, Florida | Project Manager

Mr. Loraine served as the project manager for gopher tortoise burrow occupancy rate determination using a closed-circuit camera system at Avalon.

Save Our Rivers Program* | Northwest Florida Water Management District | Florida | Project Manager

Mr. Loraine served as the project manager for Timber Appraisals completed on four tracts proposed for acquisition under the Save Our Rivers Program.

Sawgrass* | Taylor Woodrow Communities, Inc. | Sarasota County, Florida | Lead Ecologist

Mr. Loraine was lead ecologist for gopher tortoise incidental take permit application preparation and census of Florida scrub-jays for Sawgrass.

Moriber Rock Mine* | Berman and Murray | Dade County, Florida | Data Collection

Mr. Loraine participated in the sampling design and data collection for a GIS-based Habitat Suitability Analysis (HEP) of the ±1,200-acre Moriber Rock Mine at the edge of the Florida Everglades.

Rinker Materials Corporation * | Rinker Materials Corporation | Lake County, Florida | Project Manager

Mr. Loraine served as the project manager for the assessment, permitting, and relocation of gopher tortoises from a proposed sand mine.

State Road 44 Improvements* | Brown & Root-Genesis for Florida Department of Transportation | Species Assessment

Mr. Loraine completed an endangered and threatened species assessment for State Road 44 improvements.

Wading Bird Golf and Country Club* | Florida West Coast Development Corporation | Manatee County, Florida | Project Manager

Mr. Loraine prepared bald eagle and West Indian manatee Management Plans and completed negotiations with the USFWS resulting in a Biological Opinion of No Affect for bald eagles and May Affect Not Likely to Adversely Affect for West Indian manatees for the Wading Bird Golf and Country Club.

Save-Our-Rivers Lands* | Suwannee River Water Management District | Six North Florida Counties, Florida | Project Manager

Mr. Loraine was project manager for habitat identification and assessment, and wildlife and listed plant surveys in 28,000± acres of Save-Our-Rivers lands.

LeMax Development * | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the due diligence assessment of a 14-acre parcel containing Sarasota County-regulated scrub habitats and supporting Florida scrub-jays.

Anchin Trust * | Sarasota County, Florida | Project Manager

Mr. Loraine served as project manager for the census of Florida scrub-jays on the 280-acre Anchin Trust parcel.

USACE C-51 STA-1E Culvert Repairs* | L. J. Clark, Inc. | Palm Beach County, Florida | Managing Wildlife Biologist

Mr. Loraine served as managing wildlife biologist for the preparation of the Environmental Protection Plan and environmental training materials for construction staff of the USACE C-51 STA-1E culvert repairs construction project.

Orlando International Airport Fourth Runway Expansion* | Greater Orlando Aviation Authority | Orange County, Florida | Species Assessment

Mr. Loraine participated in an endangered and threatened species assessment of Orlando International Airport fourth runway expansion and proposed mitigation sites.

Palmer Ranch DRI* | Palmer Ranch Holdings Ltd. | Sarasota County, Florida | Expert Witness

Mr. Loraine served as an expert witness representing Palmer Ranch Holdings against the Commissioner of Internal Revenue before the United States Tax Court (Docket No. 17017-11). Services included the preparation of an Environmental Assessment Report detailing state and federal regulations pertaining to the permitting of bald eagles (Haliaeetus leucocephalus) and the permitting history of bald eagles on the Palmer Ranch DRI. The report also provided opinions regarding the development potential of the subject property with respect to the applicable bald eagle permitting requirements in 2006. Mr. Loraine also testified as an expert witness in federal Tax Court on this matter. The Court ruled in favor of Palmer Ranch Holdings, Ltd.

Trout Creek Tract* | Trout Creek Associates Inc. | Pasco County, Florida | Species Assessment

Mr. Loraine participated in an endangered species assessment and gopher tortoise incidental take permitting on the 1,821-acre Trout Creek Tract.

Savannah River Ecology Laboratory, Savannah River Site * | Aiken, South Carolina | Research Technician

Mr. Loraine was a research technician for a radiotelemetric study of the thermal ecology of the American alligator in thermally impacted streams.

Iowa Natural Areas Inventory/The Nature Conservancy * | Iowa | Principal Investigator

Mr. Loraine was principal investigator for the study of the distribution and habitat preferences of the state-endangered wood turtle (Clemmys insculpta).

Kansas Fish and Game Commission * | Cherokee County, Kansas | Principal Investigator

Mr. Loraine was principal investigator for the study of the distribution, population status, and habitat preferences of two state-endangered amphibians in southeastern Kansas.

C.W. Bill Young Regional Reservoir* | Tampa Bay Water | Hillsborough County, Florida | Project Manager

Mr. Loraine served as project manager for the development and implementation of a monitoring program and protection measures for sandhill cranes during construction of the C.W. Bill Young Regional Reservoir project in eastern Hillsborough County.

Rhodine Road Borrow* | Phillips and Jordon Inc. | Hillsborough County, Florida | Lead Ecologist

Mr. Loraine was the lead ecologist for the gopher tortoise relocation at Rhodine Road Borrow.

Firethorn County Club* | Summar Properties, Inc. | Hernando County, Florida | Lead Ecologist

Mr. Loraine was the lead ecologist for a gopher tortoise assessment at Firethorn County Club.

Hunter's Green Population Censuses * | Markborough Florida, Inc. | Hillsborough County, Florida | Lead Ecologist

Mr. Loraine was the lead ecologist for gopher tortoise population censuses and relocation at Hunter's Green.

Savannah River Ecology Laboratory, Savannah River Site * | Aiken, South Carolina | Research Technician

Mr. Loraine was a research technician for mark-recapture studies of aquatic and terrestrial snake community, foraging, and reproductive ecology.

Osceola Corporate Center* | Ivey, Harris & Walls | Orange County, Florida | Species Assessment

Mr. Loraine was involved with the endangered species assessment, gopher tortoise incidental take permitting, and Sandhill Crane management plan preparation at the Osceola Corporate Center.

USACE C-44 Reservoir* | Phillips and Jordon, Inc | Martin County, Florida | Managing Wildlife Biologist

Mr. Loraine served as the managing wildlife biologist during the construction of the U.S. Army Corps of Engineers (USACE) C-44 Reservoir and STA Contract 1 project. Environmental services provided by Cardno included development of the project Environmental Protection Plan, preparation and presentation of environmental training for construction staff, pre-construction gopher tortoise surveys, breeding season crested caracara monitoring, and coordination and reporting on daily on-site construction monitoring to ensure the protection of listed wildlife and migratory birds.

ENVIRONMENTAL RESOURCE PERMITTING

Villa Rosa* | Westfield Development Corporation | Sarasota County, Florida | Project Manager

Mr. Loraine served as the project manager for a local (Sarasota County) and state (SWFWMD) permitting for the 63-acre Villa Rosa residential development.

Goldfield * | Leon County, Florida | Environmental Analysis

Mr. Loraine completed environmental analyses and local (City of Tallahassee) environmental permitting for the Goldfield subdivision, a 38-unit residential planned development.

Tuscaloosa Waste Water Treatment Facility * | Tuscaloosa County, Alabama | Quantitative Monitoring

Mr. Loraine conducted quantitative monitoring of a ten-acre wetland mitigation area to ensure compliance with a permit issued by the USACE

Golf Course Maintenance Facility at Hunter's Green* | Markborough Florida, Inc. | Hillsborough County, Florida | Lead Ecologist

Mr. Loraine was the lead ecologist for environmental permitting for the Golf Course Maintenance Facility at Hunter's Green.

CCSWDC North Borrow Area – Sarasota County Public Utilities | Sarasota County, Florida | Environmental Task Manager

Mr. Loraine served as environmental task manager for the design and permitting of the CCSWDC North Borrow Area. Environmental services provided by Stantec included delineation of wetlands and surface waters, listed species surveys (including an acoustic survey for the federally endangered Florida bonneted bat), development of a wetland permitting and mitigation strategies, and preparation and support of permit applications to the US Army Corps of Engineers/Florida Department of Environmental Protection, Southwest Florida Water Management District and Sarasota County.

Cross Creek* | Gulfstream Communities | Hillsborough County, Florida | Project Coordination

Mr. Loraine provided project coordination and mitigation construction supervision at Cross Creek.

Osprey Tract* | Lowder Construction Company, Inc. | Sarasota County, Florida | Project Manager

Mr. Loraine served as the project manager for a local (Sarasota County) and state (SWFWMD) permitting for the 54-acre Osprey Tract residential development.

Gateway to Sarasota* | Sarasota Gateway Associates, Ltd. | Sarasota County, Florida | Lead Ecologist

Mr. Loraine was the lead ecologist for wetland delineations and environmental permitting (USACE, SWFWMD, and Sarasota County Natural Sciences Department) for the 91-acre Gateway to Sarasota project.

Florida Quality Development* | Markborough Florida, Inc. | Hillsborough County, Florida | Lead Ecologist

Mr. Loraine was the lead ecologist for project coordination, environmental permitting, and mitigation construction supervision at Hunter's Green, a 1,980-acre Florida Quality Development.

Maclay Gardens State Park* | Florida Department of Environmental Protection | Leon County, Florida | Lead Ecologist

Mr. Loraine was the lead ecologist for local (City of Tallahassee) environmental permitting for proposed improvements to the entrance of Maclay Gardens State Park.

Wyndtree Boulevard Extension and Wyndtree Phases III, IV, and V* | Haydon-Ruben | Pasco County, Florida | Lead Ecologist

Mr. Loraine was the lead ecologist for environmental permitting for Wyndtree Boulevard Extension and Wyndtree Phases III, IV, and V.

Coastal Oaks* | Coastal Builders, Inc. | Pinellas County, Florida | Lead Ecologist

Mr. Loraine was the lead ecologist for environmental permitting for Coastal Oaks.

The Home Depot * | Florida Land Trust VI | Venice , Florida | Project Manager

Mr. Loraine served as the project manager for a local (Sarasota County), state (SWFWMD), and federal (USACE) permitting of a The Home Depot commercial development.

Venice Parcel* | Ms. Velda L. Turner | Sarasota County, Florida | Lead Ecologist

Mr. Loraine was the lead ecologist for wetland delineations, regulatory agency verification (USACE, SWFWMD, and Sarasota County Natural Sciences Department), environmental assessment, and listed species censuses in support of a rezoning application for the 75-acre Venice Parcel.

S.R. 61 (Thomasville Road) Improvements* | Florida Department of Transportation District 3 | Leon County, Florida | Environmental Analysis

Mr. Loraine contributed to environmental analyses and permitting (City of Tallahassee and USACE) assistance to Florida Department of Transportation staff for improvements to S.R. 61 (Thomasville Road).

Florida Corporate Center* | Richard Mulholland Properties, Inc. | Hillsborough County, Florida | Permitting

Mr. Loraine participated in environmental permitting (USACE, SWFWMD, and Hillsborough County Environmental Protection Commission) for the 450-acre Florida Corporate Center site.

County Road 581 Phases I and II Improvements at Hunters Green* | Markborough Florida, Inc. | Hillsborough County, Florida | Lead Ecologist

Mr. Loraine was the lead ecologist for environmental permitting for the County Road 581 Phases I and II Improvements at Hunters Green.

ENVIRONMENTAL LITIGATION, ARBITRATION AND MEDIATION SUPPORT

Topsail Hill * | Florida Attorney General's Office | Walton County, Florida | Lead Ecologist

Mr. Loraine was lead ecologist for environmental assessments and determination of listed species and wetlands regulatory exposure of three tracts near Topsail Hill in support of opinion of probable development cost used by the Florida Department of Environmental Protection in negotiations/mediations resulting in state acquisition of these parcels.

COMMUNITY INVOLVEMENT

Member, Sarasota County Environmentally Sensitive Lands (SCESL), Sarasota, Florida

Member, The Gopher Tortoise Council (GTC), Safety Harbor, Florida

** denotes projects completed with other firms*

PUBLICATIONS

Loraine, R. K. Report to the Kansas Fish and Game Commission on the status of two species of amphibians in southeastern Kansas Fish and Game Contract. #*76 Final Report*, 1983, pp. 56.

Knight, J.L. and R.K. Loraine. Notes on turtle egg predation by Lampropeltis getulus getulus (Linnaeus) (Reptilia: Colubridae) on the Savannah River Plant. *Brimleyana*, 1986, pp. 12:1 4.

Loraine, R.K. A geographic analysis of sexual dimorphism and morphological variation in Seminatrix pygaea (Cope).. *M.S. Thesis*, 1990.

Seigel, R.A., R.K. Loraine, J.W. Gibbons. Reproductive cycles and temporal variation in fecundity in the Black Swamp Snake, Seminatrix pygaea. *American Midland Naturalist* , 1995, pp. 134:371-377.

PRESENTATIONS

Seasonal changes in foraging success and diet composition of Seminatrix pygaea. *SSAR/HL*, 1985.

State and Federally Listed Wildlife Regulatory Overview. *Administration and Enforcement of Wetlands and Endangered Species Regulations Seminar*, 2006.

Sexual dimorphism in Seminatrix pygaea: A geographic analysis. *SSAR/HL/ASIH*, 1988.

Foraging ecology of the black swamp snake, Seminatrix pygaea. *Undergraduate Seminar, Savannah River Ecology Laboratory*, 1984.

Alternative Designs Allow Fish Colonization of Created Wetlands in a Florida Surface Water Management System. *17th Annual Conference on Wetlands Restoration and Creation*, 1990.

The present status of Eurycea lucifuga in southeastern Kansas. *Kansas Herpetological Society*, 1983.

Joshua L. Hofkes, PWS

Current Position
Senior Consultant

Discipline Areas
> Project Management
> Section 404 Wetland Permitting
> Vegetation and Wildlife Monitoring
> Environmental Permitting
> Habitat Mapping and Assessment
> Listed Species Surveys/Plant Inventories
> Wetland Delineations
> NRDA/SCAT

Years' Experience
19

Joined Cardno
2004

Education
> BS, Fisheries/ Limnology & Biology, University of Wisconsin—College of Natural Resources, 2001

Certifications
> Florida Fish and Wildlife Conservation Commission Authorized Gopher Tortoise Agent
> U.S. Fish and Wildlife Service Native Threatened Species (Gopher Tortoise) Recovery Permit Holder
> Wilderness First Aid & CPR, current
> American Heart Association CPR, current

Summary of Experience

Mr. Joshua “Josh” Hofkes has over eighteen years of professional experience conducting ecological and environmental assessments locally for both public and private sector clients. His experience includes wetland delineation, biological assessment, and protected species surveys; NEPA based environmental assessments; wetland and mitigation bank permitting; rare, threatened, and endangered flora and fauna surveys and mitigation; and wetland and environmental resource permitting through state and federal agencies.

Listed Species Surveys and Permitting

Mr. Hofkes has successfully completed wildlife censuses and/or permitting for such diverse species as the gopher tortoise, eastern indigo snake, gopher frog, Sherman’s fox squirrel, West Indian manatee, Florida scrub-jay, red-cockaded woodpecker, bald eagle, crested caracara, Florida pine snake and Florida sand skink. Precise data collection, QA/QC, and excellent working relationships with representatives of local governments, the U.S. Forest Services, Florida Fish and Wildlife Conservation Commission (FWC), and the U.S. Fish and Wildlife Service (USFWS) contribute to Mr. Hofkes effectiveness.

Mr. Hofkes has been providing gopher tortoise services throughout Florida and the Southeast since 2004. Associated efforts have included population surveys, carrying capacity studies, burrow scoping, habitat assessments, state and federal permitting/approvals, excavation/translocation, bucket trapping, habitat management, recipient site (bank) establishment, long-term monitoring, exclusionary fence installation, gate guard design as well as construction oversight and personnel training.

Mr. Hofkes is a FWC authorized gopher tortoise agent and holds a USFWS Threatened Species Recovery Permit (t-wildlife) (AL, LA, MS) and Scientific Collection Permits in GA and AL.

Project Manager – Tram Road Sidewalk Project/City of Tallahassee, FL

Cardo is providing gopher tortoise survey, permitting and relocation services to the City of Tallahassee in support of a sidewalk project. These efforts include negotiation support between FWC, the city and State Lands to establish a Memorandum of Understanding (MOU) facilitating gopher tortoise bank establishment, relocation approval onto public lands as well as identifying both short and long-term management goals and division of responsibilities amongst the parties involved. 2020 - Present

Project Manager – Southeast Park/Leon County, FL

Cardno conducted listed species surveys (gopher tortoise and bent golden aster) throughout the proposed park lands. Cardno work with the city engineer, support staff and FWC to secure relocation approval under an existing permit, excavated and relocated all captured tortoises to offsite lands and provide post relocation listed species monitoring. Cardno is also preparing a restoration/planting and management plan for a multiuse 8-acre tract of relict sandhill located within the park. Cardno is also developing a restoration plan for lands slated for longleaf pine (Pinus palustris)/sandhill restoration within the + 43-acre park. Specifically, this plan focuses on an ecological restoration planning approach including supplemental vegetation planting, monitoring/reporting, nuisance/exotic species maintenance and land management. The plan approach, including required effort, schedule, and performance metrics, are being coordinated with COT staff to ensure both ecological and project specific mixed-use goals are achieved. 2020-Present

> 24-hour Hazwoper Certification, current

Professional Affiliations

> Society of Wetland Scientists

Project Manager/Lead Project Ecologist – 40MW Photovoltaic Solar Farm, City of Tallahassee - Florida

Mr. Hofkes lead all environmental assessments, permitting, construction training, biomonitoring, post-construction species monitoring and reporting associated with a 350-acre solar farm located adjacent to the Apalachicola National Forest (ANF). Site work included wetland delineations, landuse mapping, listed species surveys (gopher tortoise, pine snake, RCW, southeastern kestrel), and associated habitat mapping. Environmental approvals and permits were secured through the City of Tallahassee and FWC. A Conservation Permit was issued for the relocation of gopher tortoises, an Incidental Take Permit issued for the Florida Pine Snake and a Scientific Research Permit issued for the use of the first ever gopher tortoise gate guard in Florida. Mr. Hofkes authored a relocation and monitoring plan the State Endangered and endemic *Pityopsis flexuosa* and oversaw the translocated of over 500 specimens to protected recipient lands. 2018 – Present

Project Manager/Lead Project Ecologist - Foley Wastewater Treatment Pond Gopher Tortoise Services/Taylor County, FL

Cardno conducted 100% gopher tortoise surveys within appropriate habitat throughout the 175 acre project tract. These surveys identified 74 burrows or an estimated 37 tortoises. Of these, 59 burrows required relocation due to the proposed onsite wastewater modifications. Based on these results, Cardno prepared an application for a Conservation Permit submitted to the Florida Fish and Wildlife Conservation Commission (FWC) and conducted a site review with an FWC representative to assess the 100% gopher tortoise burrow survey results. Cardno's experienced backhoe operator and FWC Authorized Gopher Tortoise Agents excavated all onsite burrows, captured and relocated 29 gopher tortoises to an offsite mitigation bank. Upon completion of the gopher tortoise excavation/relocation efforts, Cardno submitted an After Action report summarizing the relocation effort to document that the relocation activities were completed in accordance with applicable permits and guidelines.

This projects schedule and seasonal timing required rapid mobilization of staff and demanded accurate and prompt deliverables. Due to the excavation temperature restrictions set forth by the FWC tortoise permitting guidelines and the associated winter effort of these services, Cardno maintained constant contact with Georgia Pacific, the project engineer, onsite personnel and the permitted recipient site to insure regulatory compliance and adherence to the project schedule. 2017-2018

Project Manager/Lead Project Ecologist – Southwood Capital City Office Center – City of Tallahassee, Florida

Mr. Hofkes conducted the ecological components of a Natural Features Inventory for the purpose of amending a DRI. This included listed species and wildlife surveys in accordance with the "Wildlife Methodology Guidelines for Completion of the Application for Development Approval." Additional tasks included developing and implementing a restoration plan for a Habitat Management Area (HMA), obtaining gopher tortoise relocation permits, excavations and translocations. Restoration tasks included writing contractor bid specifications; monitoring schedule, and maintenance plan incorporating herbicide treatment of non-native nuisance and exotic plant species, canopy thinning, mowing, and prescribed burns. Mr. Hofkes continues to provide maintenance and management oversight of the HMA, implementing annual vegetation and wildlife monitoring, annual tortoise surveys, coordinating progress and conducting site visits with city biologists, exotic species treatment and prescribed burn coordination with U.S. Forestry Service. 2007 – Present

Project Manager - Market District Wildlife Recovery/City of Tallahassee, FL

Cardno provided wildlife monitoring and relocation services for the City of Tallahassee during construction activities in the Market Square District. Cardno secured a Florida Fish and Wildlife Conservation Commission Special Use Permit and used live trapping methods to capture and relocate resident freshwater turtles away from impacted area. Forty six individual turtles representing three species were safely relocated to another impoundment during the project. Additional monitoring included a mating pair of resident Canada geese and FWC coordination to remove an alligator from the site. 2017

Field Team Lead – Sabal Trail Pipeline – Florida, Georgia, and Alabama

As field team lead, Mr. Hofkes coordinated and conducted listed species surveys, wetland delineations, and gopher tortoise relocations throughout the Florida portion of this 500-mile project. He assisted in implementing the field survey standard protocols, lead and oversaw tortoise burrow excavation teams, trained field staff, and QA/QC of field data. Mr. Hofkes collected information on vegetation cover/land use, the location of USACE jurisdictional wetlands and streams, protected species, and other ecological concerns. Mr. Hofkes also lead federally listed botanical surveys locating *Dicerandra cornutissima, Trillium reliquum* and *Schwalbea americana*. Through these efforts, Cardno oversaw the successful excavation of 3,577 potentially occupied burrows and the relocation of 1,379 tortoises. 2013 – 2015

Project Manager/Lead Project Ecologist – Orchard Pond Toll Road, Gopher Tortoise Services – Leon County, Florida

Mr. Hofkes conducted gopher tortoise surveys along a proposed 5.3 mile, two-lane toll road through the Orchard Pond Plantation. Initial site investigations included gopher tortoise habitat mapping and a 15% percent burrow survey. The results of these efforts were used to obtain a Conservation Permit from the FWC for the relocation of all tortoises located within the project limits to an off-site permitted gopher tortoise recipient site. Subsequent 100% burrow surveys were conducted prior to relocation efforts. Mr. Hofkes oversaw all burrow survey and excavation procedures. A total of 23 gopher tortoises were excavated and translocated off-site. 2014

Project Ecologist – Biological Assessment for the Desert Tortoise (Gopherus agassizii)/Moapa Valley, Nevada

Mr. Hofkes assisted in the biological and compliance monitoring programs during pre-construction and construction phases of a 2,100-acre photovoltaic solar facility and associated eight-mile transmission corridor. Specific skills included project management; GIS; evaluation of desert tortoise habitat conditions, visual identification, and assessment of desert tortoise activity; noxious weed/invasive plant surveys and desert tortoise clearance surveys in active construction areas; collection and analysis of relevant geographic data using Magellan Mobile Mapper 10 GIS unit; radio telemetry and technical reporting. Following clearance surveys, Mr. Hofkes work with a team to excavate and relocate all on-site tortoises to the approved recipient site. Mr. Hofkes has conducted numerous subsequent follow-up radio telemetry surveys within the recipient site and well as biological monitoring throughout the work zones. 2012 – 2014

Field Team Lead – Spring Creek Park – Decatur County, Georgia

Mr. Hofkes conducted listed species surveys on the 188-acre project site owned by the USACE to necessitate the production of an EA in order to satisfy requirements of the National Environmental Policy Act (NEPA) of 1969. Mr. Hofkes coordinated with the GDNR and received necessary approvals to excavate and relocate on-site gopher tortoises. Five gopher tortoise burrows were excavated, three gopher tortoises were captured, relocated on-site lands and a GDNR scientific collection report summary datasheet submitted. 2012

Lead Project Ecologist - Gopher Tortoise Survey and Relocation, Capital Circle Southeast, Tallahassee, Florida

Mr. Hofkes conducted 100% gopher tortoise surveys along Segments I and III of Capital Circle Southeast. Burrows were assessed for activity level, scoped with a burrow camera, and demarked in the field with uniquely labeled flagging. Off-site relocation permits were obtained from Florida Fish and Wildlife Conservation Commission (FFWCC) and Leon County for the excavation of all active and inactive burrows. Captured tortoises were relocated to approved off-site lands. 2009

Lead Project Ecologist – Mayo Correction Institute, 130 Acres – Lafayette County, Florida

A 100% survey of the subject property was conducted. All gopher tortoise burrows were assessed for activity level as well as location demarked in the field and position recorded with a sub-meter GPS. Off-site relocation permits were obtained from FWC. Mr. Hofkes provided oversight of the backhoe excavation of 243 gopher tortoise burrows. Eighty gopher tortoises were held, transported, and released at the approved off-site Concoby Wildlife Preserve recipient site in Madison, Florida. 2008

Lead Project Ecologist – Crawfordville Highway Improvements Segment I and II/Leon County, Florida

Provided project management to assist the District with state, federal, and local permitting, including detailed surveys for gopher tortoises, fox squirrels, red cockaded woodpeckers, striped newts, and gopher frogs. Provided quality assurance and quality control for all submitted documents and provided detailed insight to project ecologist, engineers, permitting agencies, and FDOT staff. Assisted project engineers with designs for newt walls and prepared responses to environmental concerns. Coordinated with FDOT, project engineers, FWC, the National Forest Service (FS), and various regulatory agencies. Project included the excavation of over 60 gopher tortoise burrows that contained the listed gopher frog. 2006 – 2007

Lead Project Ecologist – Tallahassee Ranch Club/Leon County, FL

Mr. Hofkes conducted fieldwork for a 1,600-acre Natural Features Inventory in southern Leon County. Work included listed plant and animal surveys, habitat mapping, wetland delineation, and determining the size and distribution of gopher tortoise populations. He assisted with Environmental Impact Analysis and Environmental Management Plans. Additionally, Mr. Hofkes prepared the gopher tortoise relocation permit applications, established an on-site tortoise recipient site, and supervised all relocation efforts. 2005 – 2007

Lead Project Ecologist – Pointe North NFI, 1,300 Acres/Leon County, FL

Mr. Hofkes tasks included identifying and mapping high-quality successional forest, native forest, wetlands, water courses, karst features, closed basin, Special Development Zones, Canopy Road Protection Zone, listed species and associated habitat, significant and severe slopes, and other environmentally sensitive areas. Project tasks included acquiring several on- and off-site standard and special gopher tortoise relocation permits, relocation activities, recipient site preparation and monitoring, as well as maintenance plan development. 2005 – 2006

Lead Ecologist - Snipe Island Unit, Big Bend Wildlife Management Area/Taylor County, Florida

Cardno assisted with the development of the Snipe Island Wildlife Habitat Management Plan (Plan) for the 11,687-acre Snipe Island Unit (SIU) of the Big Bend Wildlife Management Area in Taylor County, Florida. Pre- and post-plan services included extensive game/non-game monitoring, listed species surveys, and habitat delineation.

Post-plan surveys included five years of monitoring for game, non-game and listed species on SIU. Habitat restoration was conducted in accordance with the Plan that was implemented by The Forestry Company for Florida Fish and Wildlife Conservation Commission. The Plan was developed with the goal of sustaining or enhancing game, non-game, and listed species on SIU. Initial wildlife surveys were conducted in order to inventory the pre-enhancement baseline status of the wildlife species found on SIU. In particular, the areas that could potentially support listed species were surveyed to catalog species presence in support of management decisions aimed toward sustaining state and federally protected wildlife. Subsequent surveys were designed to monitor areas with known listed species and to investigate areas that were not previously traversed. In addition, popular game species were monitored coincident with habitat enhancement in an effort to track changes in carrying capacity. 2004-2008

Project Manager/Lead Project Ecologist – Solar Farm CIA's, Numerous County's, FL

Mr. Hofkes managed and oversaw environmental assessments/Critical Issues Analysis (CIA) on numerous tracts (>10,000 acres) slated for solar farms in Florida. The purpose of these analysis were to identify and evaluate various regulated environmental features and development restrictions potentially occurring within each study area. This analysis also addresses local, state and federal environmental permits, consultations, and authorizations likely required for site development. Methods to mitigate or avoid/reduce impacts of regulated features including listed species mitigation bank considerations and permitting strategies were also provided as needed. Specifically, each CIA evaluated landuse and zoning, wetlands and surface water resources, stormwater, biological communities, listed species habitat, cultural resources, floodplains and topographical features. As needed, the United States Environmental Protection Agency (USEPA) NEPAssist program was use to assess presence/absence of brownfield sites, superfund sites, Toxic Release Inventory (TRI) sites, NPDES water discharges, hazardous waste (RCRA) facilities, or air emission facilities associated with the study area. 2017-Present

Please Respect the Environment

About Cardno

Cardno is an ASX-200 professional infrastructure and environmental services company, with expertise in the development and improvement of physical and social infrastructure for communities around the world. Cardno's team includes leading professionals who plan, design, manage, and deliver sustainable Propertys and community programs. Cardno is an international company listed on the Australian Securities Exchange [ASX:CDD].

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Cardno®

STATE OF FLORIDA
COUNTY OF ALACHUA

AFFIDAVIT OF L. VALENTINE LEE

BEFORE ME, THE UNDERSIGNED AUTHORITY, personally appeared L. Valentine Lee, who being first duly sworn, under oath deposed and said:

1. I am over 18 years of age, have personal knowledge of the facts contained in this Affidavit, have no legal disabilities, and have never been adjudged mentally incompetent.

2. In May of 2017, I approached Sandra Vardaman, of Alachua County Parks and Conservation Lands, about the possibility of selling a conservation easement to Alachua County through the Alachua County Forever Program. Sandra Vardaman confirmed the FCL Timber, Land & Cattle LLLP (f/k/a Kanapaha Timber Land & Cattle) site would be considered and scheduled a visit for an evaluation. At the time, FCL was offering the whole property (4,068 acres +/-) as a conservation easement for $50 million.

3. At the October 10, 2017, Alachua County Board of County Commissioners meeting that I attended, the BOCC approved adding the property to the Alachua County Forever program Acquisition list under the Bargain-Share category for acquisition as a conservation easement. At that time, Charlie Houder was managing the project for Alachua County with Kathryn J. Tancig, Conservation Land Negotiator, who recommended applying for the Rural and Family Lands Protection Program (RFLPP), as a potential state partner.

4. In January 2018, the State of Florida sent experts to evaluate the property for the application for RFLPP and each of the then-County Commissioners, with the exception of Mike Byerly, toured the property.

5. In March 2018, RFLPP ranked the property as a Tier 2 and not desirable for acquisition. I was told by Kathryn Tancig and a Rural and Family Lands evaluator that the lack of interest was due to the lack of connectivity or buffering benefit, that it was not connected to another large property; the property was bisected by a busy road; the property was in the path of development; the property would be difficult to manage; the habitat had been degraded from longleaf pine to traditional silviculture and had been extensively planted with bahia grass for grazing cattle.

6. I had little to no communications from anyone at Alachua County Parks and Conservation Lands until I requested a letter from Alachua County regarding the status of the property on the Alachua County Forever Acquisition List/ Bargain-Share as a potential acquisition. On January 31, 2019, I was informed by letter from Kathryn Tancig that they had not secured a significant financial partner for purchasing the conservation easement and that by placing the property in the Bargain-Share category, the BOCC required matching funds to even pursue a deal. In other words, without a financial partner the County would not move forward to negotiate any terms leading to a sale of a conservation easement.

7. I then requested Charlie Houder place the property on the Active Acquisition List, which required going back to the Alachua County Land Conservation review board who could request it be placed on the agenda before the County Commission. The Land Conservation review board told me at their meeting that the property was not valuable to them and there were better ways to spend the money but agreed to forward the request to the County Commission.

8. On January 28, 2020, before the County Commission, Charlie Houder submitted our request to change the status of property from the Bargain-Share to Active Acquisition List for Full Price and to authorize the staff to negotiate an agreement that may include the purchase of a conservation easement. Houder stated that there has been no evaluation of the value of the property due to the Bargain-Share restrictions that prohibit negotiating a deal without first securing a financial partner. The Board took no action and during the course of the meeting then Commissioner Mike Byerly stated this land was valuable for development and why pay market price for it when the County could take half of it anyway for Strategic Ecosystems.

9. As a result, the property remains on the Bargain-Share list and there has never been any effort from the County independently either through Charlie Houder or anyone in his office or any other County representative to negotiate a deal.

FURTHER AFFIANT SAYETH NAUGHT.

L. VALENTINE LEE, AFFIANT

State of Florida
County of Alachua

The foregoing instrument was acknowledged before me by means of physical presence this 31st day of May 2022 by L. Valentine Lee who is personally known to me or provided _____ as identification.

[Notary Seal]

CAMERON HEATON
Notary Public, State of Florida
Commission No. GG969836
Commission Expires 03/16/2024

Notary Public

Printed Name: Cameron Heaton

My Commission Expires: 3/16/24