PROPOSED LARGE-SCALE
FUTURE LAND USE MAP (FLUM) AMENDMENT

OVERVIEW

ORDINANCE: 2019-425 **APPLICATION: L-5349-18A-3-11**

APPLICANT: PAUL HARDEN, ESQ.

PROPERTY LOCATION: 1.3 MILES EAST OF I-295 BETWEEN PHILIPS HIGHWAY (US-1) AND J. TURNER BUTLER BOULEVARD (SR-202)

Acreage: 2,512.23

Requested Action:

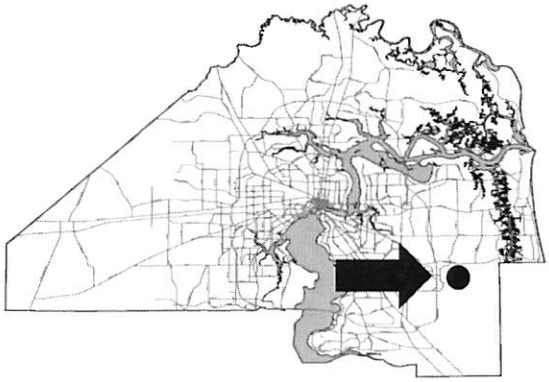
	Current	Proposed
LAND USE	AGR-I, AGR-II, AGR-III,	LDR*
ZONING	AGR	RR-Acre

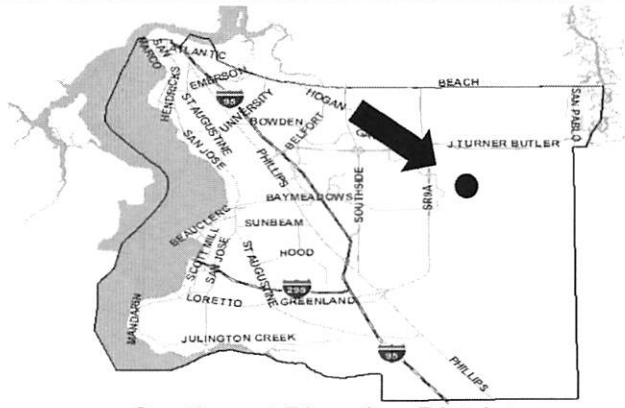
Subject to Site Specific Policy

Existing FLUM Category	Proposed FLUM Category	Existing Maximum Density (DU/Acre)	Proposed Maximum Density (DU/Acre)	Existing Maximum Intensity (FAR)	Proposed Maximum Intensity (FAR)	Net Increase or Decrease in Maximum Density	Non-Residential Net Increase or Decrease in Potential Floor Area
AGR-I,AGR-II, and AGR-III	LDR	119 DUs (AGR I- 1DU/100 acres AGR II – 1 DU/40 acres AGR III – 1 DU/ 10 acres)	12,561 DUs (5 DU/Acre)	N/A	N/A	Increase of 12,442 DUs	N/A

PLANNING AND DEVELOPMENT DEPARTMENT'S RECOMMENDATION: APPROVAL subject to the site specific FLUE Policy 4.4.12

LOCATION MAPS:

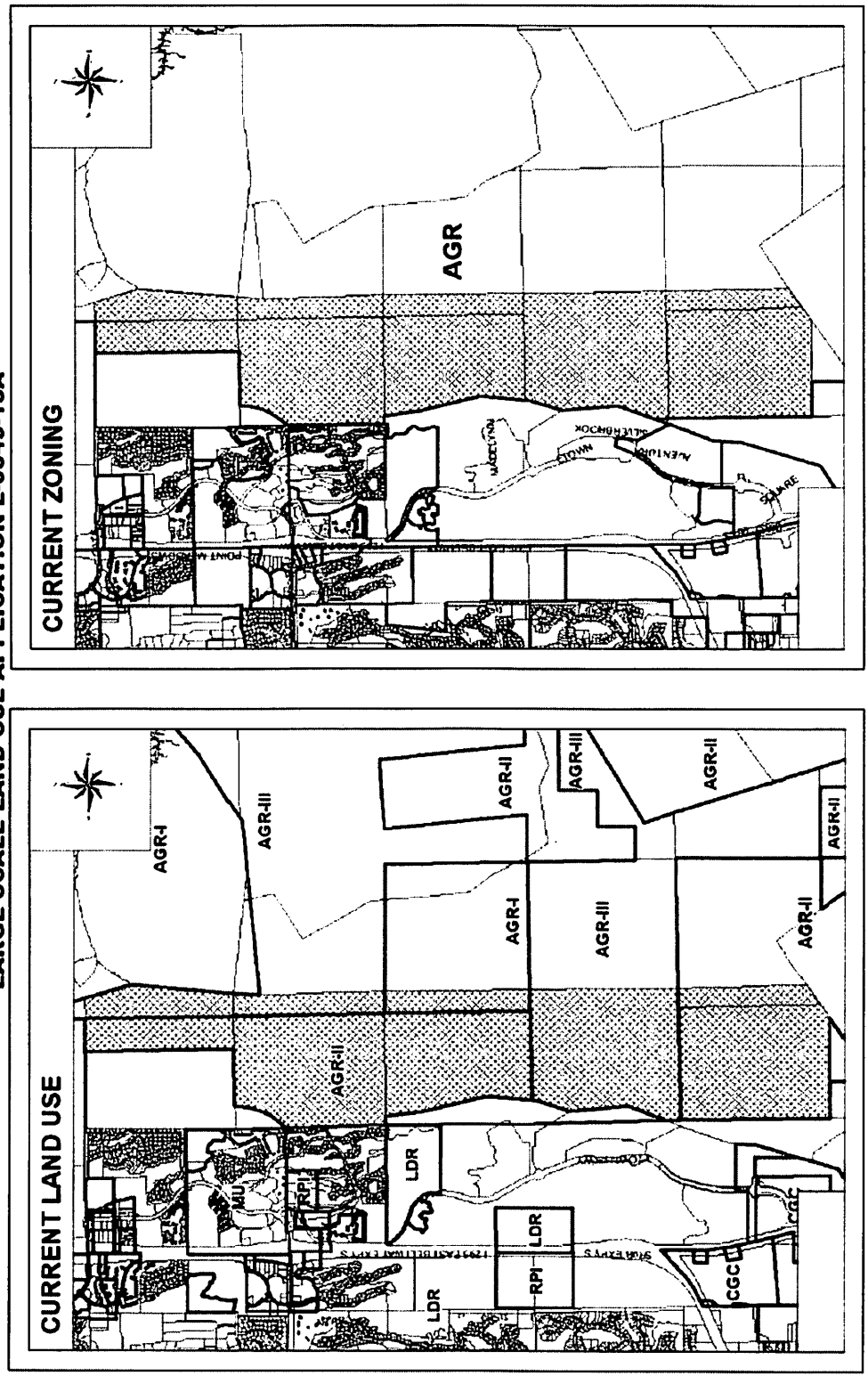




Southeast Planning District

DUAL MAPS

LARGE SCALE LAND USE APPLICATION L-5349-18A



Current Zoning District(s): Agriculture (AGR)

Requested Zoning District(s): Residential Rural – Acre (RR-Acre)

Existing FLUM Land Use Categories: Agriculture- I (AGR-I), Agriculture- II (AGR-II), & Agriculture- III (AGR-III)

Requested FLUM Land Use Category: Low Density Residential (LDR)

ANALYSIS

Background:

The 2,512.23 acre subject property is located approximately 1.3 miles east of I-295, between J. Turner Butler Boulevard (SR-202) and Philips Highway (US-1). The property is located in Council District 11, the Southeast Planning District, and within the boundaries of the Southeast Vision Plan. The property is also located along the Boundary of the Suburban and Rural Development Areas, as identified in the Future Land Use Map series (FLUMs) of the Future Land Use Element (FLUE) of the 2030 Comprehensive Plan. The majority of the subject site is located within the Rural Development Area; however, due to its location along the boundary line, a very small portion, approximately one (1) acre, of the western side of the property is within the Suburban Development Area (Attachment A-2).

The undeveloped subject site has Agriculture-I (AGR-I), Agriculture-II (AGR-II), Agriculture-III (AGR-III) land use designations. The applicant proposes a future land use map amendment from AGR-I, AGR-II, and AGR-III to Low Density Residential (LDR) to develop residential uses. Although the companion rezoning application is not required for the transmittal round of legislation and will be processed during the adoption round of this large scale future land use amendment, the applicant has indicated the intent to file the companion rezoning to the RR-Acre zoning district. The RR-Acre zoning district allows single-family residential on lots that are a minimum of one (1) acre.

Attachment A-4 shows the proximate land use amendments in the area. The approximately 1,068 acre property directly abutting the subject site to the north was amended in 2005 from Residential-Professional-Institutional (RPI), Medium Density Residential (MDR), LDR, AGR-II, and Community/General Commercial (CGC) to Multi-Use (MU). This amendment included a site-specific policy, FLUE Policy 4.3.12, which defines the maximum development potential for the Route 9A/J. Turner Butler Boulevard/Baymeadows Road area of the Transportation Management Area (Sector A-3). Development on this property is limited to approximately 5,400 residential units and 6.1 million square feet of non-residential uses (Ordinance 2005-1225-E). Another land use change took place in 2002 west of the subject property. This change, pursuant to 2002-927-E, amended the land use on an approximately 316 acre site from LDR, MDR, RPI, CGC and Public Buildings and Facilities (PBF) to MU. This amendment included a site-specific policy, FLUE Policy 4.3.7, which defines the maximum development potential for the Route 9A, J. Turner Butler Boulevard and Baymeadows Road Transportation Management Area (Sector C-2). Development on this site is limited to approximately 2,200 residential units and 1.2 million square feet of non-residential uses. Just east of Atlantic Coast High School, on the western side of the subject site, a property (approximately 135 acres) was amended from AGR-II and AGR-III to LDR pursuant to Ordinance 2014-338-E. Southwest of the subject property two (2) land use changes were made in 2014 as part of the E Town development. Ordinance 2014-340-E changed the land use from LDR and RPI to CGC (approximately 45 acres), and Ordinance 2014-341-E changed the land use from RPI to CGC (approximately 67 acres).

East of the subject site is undeveloped land, including the Pablo Creek Preserve. To the north is the presently undeveloped Southeast Quad Planned Unit Development (PUD), a 1,000 +

acre site which was recently approved for future mixed-use development by Ordinance 2019-235-E, and agricultural uses. West of the subject site are a wide range of uses including Atlantic Coast High School, mixed-use developments, residential and commercial uses. The development currently under construction known as E Town is located to the southwest of the subject site, near State Route 9B. South of the subject site is undeveloped land, for which a 2,795 acre land use change is currently being sought from AGR-I, AGR-II, AGR-III and AGR-IV to LDR, pursuant to Ordinance 2019-424 (See Attachment A-3).

Detailed information about the surrounding area can be found on the Dual Map on page 2, and on Attachment A-1 – Existing Land Utilization Map. The adjacent land uses and zoning districts are as follows:

Adjacent Property	Land Use	Zoning District	Current Use(s)
North	MU, AGR-III	PUD, AGR	Vacant, Agricultural
South	AGR-I,AGR-II, AGR-III, AGR-IV	AGR, RR-Acre, PUD	Vacant
East	AGR-I,AGR-II, AGR-III	AGR	Vacant, Pablo Creek Preserve
West	LDR, CSV, MU, RPI, CGC	PUD,RLD-40, RLD-50, RR-Acre	Residential, Commercial, Atlantic Coast High School, Undeveloped

Impact Assessment:

Potential impacts of a proposed land use map amendment have been analyzed by comparing the Development Impact Standards for the subject site's existing vs. proposed land use categories unless maximum density/intensity is noted on the Annotated FLUM or is in a site specific policy. Development Impact Standards are detailed in FLUE Policy 1.2.16, *Development Standards for Impact Assessment.* These standards produce development potentials as shown in this section.

Utility Capacity

The calculations to determine the water and sewer flows contained in this report and/or this spreadsheet have been established by the City of Jacksonville Planning and Development Department and have been adopted by JEA solely for the purpose of preparing this report and/or this spreadsheet. The method of calculating water and sewer flows in order to properly size infrastructure shall continue to be based on JEA's Water, Sewer and Reuse for New Development Projects document (latest edition).

Maximum gross density for LDR in the Rural Area is 7 units/acre when connected to both centralized (JEA) water and sewer. Maximum gross density for LDR in the Rural Area shall be 4 units/acre and the minimum lot size shall be ¼ of an acre if either one of centralized potable water or wastewater services are not available. However, Policy 1.2.9 of the Sanitary Sewer Sub-Element of the Infrastructure Element requires a minimum of one acre of unsubmerged land per dwelling unit for sites that are not connected to centralized (JEA) sewer and are located in the Rural Development Area.

JEA has provided a Water and Sewer Demand Analysis for the development potential of the subject land use amendment identifying improvements that would be required to provide service to the development which include the following:

- Water treatment plant (including associated property and easement needs) will be required to support the water needs of the development.
- Electric substations (including associated property and easement needs) will be required to support the electric needs for the development.

See Attachment C for the JEA Analysis. A JEA Review and Availability letter will be required at the adoption round of this land use amendment with the companion rezoning application.

Infrastructure Element, Sanitary Sewer Sub-Element

Policy 1.2.9 Septic tanks shall be permitted in Rural Areas, provided they meet the requirements of Chapter 64E-6, F.A.C., and that all lots created after shall have a minimum of 1 acre of un-submerged property.

The site-specific policy recommendation included in this report calls for the creation of a long-term master plan that will identify the future mix of uses and densities and the associated strategy for providing centralized utilities for water and sewer service throughout the planning area.

Transportation

The Planning and Development Department completed a transportation analysis (see Attachment B) and determined that the proposed amendment has the potential to result in an increase of 117,452 net new daily external trips. This analysis is based upon the comparison of what potentially could be built on that site (as detailed in FLUE Policy 1.2.16 Development Standards for Impact Assessment) versus the maximum development potential. Trips generated by the new development will be processed through the Concurrency and Mobility Management System Office.

Transportation Element

Policy 1.2.1 The City shall use the Institute of Transportation Engineers *Trip Generation Manual*, latest edition, to determine the number of trips to be produced or attracted to a particular land use when assessing a traffic impact.

Capital Improvements Element

Policy 1.6.1 Upon adoption of the Mobility Plan implementing ordinance, the City shall cease transportation concurrency and use a quantitative formula for purposes of assessing a landowner's mobility fee for transportation impacts generated from a proposed development, where the landowner's mobility fee shall equal the cost per vehicle miles traveled (A); multiplied by the average vehicle miles traveled per Development Area (B); multiplied by the daily trips (C); subtracted by any trip reduction adjustments assessed to the development.

Supplemental Transportation Information

Objective 2.4 of the Transportation Element (TE) of the 2030 Comprehensive Plan requires that the City shall coordinate the mobility circulation system with the future land uses shown on the Future Land Use Map series in order to ensure that roads, road improvements and other mobility alternative improvements are provided as necessary to support development in an economically efficient and environmentally sound manner.

Policy 2.4.2 of the TE of the 2030 Comprehensive Plan requires that the City shall amend the adopted Comprehensive Plan to incorporate the data and analysis generated by a periodic regional transportation model and study and facilitate the implementation of the study recommendations.

These two Comprehensive Plan policies ensure that the transportation impact related to land use amendments are captured in the Long Range Transportation Plan (LRTP) that is conducted every 5 years. This analysis includes the cumulative effect of all land use amendments that were approved within this time period. This plan identifies the future transportation needs and is used to create cost feasible roadway needs that can be funded by the City's Mobility Strategy Plan.

Mobility needs vary throughout the city and in order to quantify these needs, the city was divided into 10 Mobility Zones. The Mobility Strategy Plan identifies specific transportation strategies and improvements to address traffic congestion and mobility needs for each mode of transportation. The project site is located in Mobility Zone 1.

Existing available roadway capacity for the vehicle/truck mode for the entire zone was tested based on volume demand to capacity ratio (V/C), where the average daily traffic volumes determined from the most recent City of Jacksonville traffic count data were compared to the *Maximum Service Volumes* (*MSV*) from the current *FDOT Quality/Level of Service Handbook (2012)* for each functionally classified roadway within the zone. A V/C ratio of 1.0 indicates the roadway network is operating at its capacity.

The result of the V/C ratio analysis for the overall Mobility Zone 1 is **0.73**.

The proposed land use amendment based on impact assessment standards has the development potential of 12,561 single family homes and generating approximately 118,576 daily vehicular trips onto the roadway network. The Transportation Planning Division recommends that a traffic operational analysis of the adjacent roadway network be conducted

by a licensed professional traffic engineer, to determine the impact to the external trips as a result of the land use change.

School Capacity

Based on the impact assessment standards detailed in FLUE Policy 1.2.16, the 2,512.23 acre proposed land use map amendment has a development potential of 12,561 single-family dwelling units. The proposed development was analyzed in accordance with the adopted level of service standards (LOS) for school capacity as established in the Interlocal Agreement (ILA) and the Public Schools and Facilities Element. The ILA was entered into in coordination with the Duval County Public School System (DCPS) and the other municipalities within Duval County.

School concurrency LOS is the methodology used to analyze and to determine whether there is adequate school capacity for each school type (elementary, middle, and high school) to accommodate a proposed development. The LOS (105% of permanent capacity) is based on Concurrency Service Areas (CSAs), not the closest school in the area for elementary, middle and high schools, as well as on other standards set forth in the City of Jacksonville School Concurrency Ordinance.

In evaluating the proposed residential development for school concurrency, the following results were documented:

School Impact Analysis

L-5349-18A

Development Potential: 12,561 Residential Units

School Type	CSA	2018-19 Enrollment/CSA	Current Utilization (%)	New Student/ Development	5-Year Utilization (%)	Available Seats - CSA	Available Seats - Adjacent CSA 3, 4 & 6
Elementary	5	8,745	88%	2,098	94%	16	1,845
Middle	5	2,595	92%	917	88%	52	417
High	5	7,750	100%	1,168	98%	13	358
Total New Students				4,183			

Total Student Generation Yield: 0.333
Elementary: 0.167
Middle: 0.073
High: 0.093

The analysis of the proposed residential development reveals a deficiency for school capacity within the CSA and adjacent CSAs. Potential school capacity impacts will be addressed through the Concurrency and Mobility Management System Office.

Public School Facilities Element

Policy 2.3.2 The City will coordinate with DCPS to establish plan review procedures to manage the timing of Future Land Use Map amendments and other land use decisions so that these decisions coordinate with adequate school capacity.

Policy 2.3.3 The City will take into consideration the DCPS comments and findings on the availability of adequate school capacity in the evaluation of comprehensive plan amendments, and other land use decisions as provided in Section 163.3177(6)(a), F.S. and development of regional impacts as provided in 1380.06, F.S

Objective 3.2 Adopted Level of Service (LOS) Standards
Through the implementation of its concurrency management systems and in coordination with the DCPS, the City shall ensure that the capacity of schools is sufficient to support new residential developments at the adopted level of service (LOS) standards within the period covered in the five-year schedule of capital improvements and the long range planning period. These standards shall be consistent with the Interlocal Agreement agreed upon by the DCPS, the City and the other municipalities. Minor deviations to the LOS standards may occur, so long as they are limited, temporary and with scheduled capacity improvements, school capacity is maximized to the greatest extent feasible.

Policy 3.1.1 The LOS standards set forth herein shall be applied consistently for the purpose of implementing school concurrency, including determining whether sufficient school capacity exists to accommodate a particular development application, and determining the financial feasibility of DCPS Five-Year Capital Facilities Plan and the City's Capital Improvement Plan.

Policy 3.3.6 In any instance where the DCPS, in consultation with the City, has determined that a proposed development will cause level of service standards for schools to be exceeded within the testing period in both the affected School Concurrency Service Area and the adjacent School Concurrency Service areas, then the City shall coordinate with the applicant for the proposed development and the DCPS to determine whether improvements will be in place or under actual construction within three years after issuance of final subdivision or site plan approval, or the functional equivalent, sufficient to provide adequate capacity to meet the adopted level of service. If adequate capacity does not exist, then the City will coordinate with the applicant for the development and the DCPS to determine whether improvements are planned in the Capital Improvement Plan with adequate capacity after the 3rd year of the Capital Facilities Plan. The City will also request that the DCPS determine whether it has the capacity to further maximize school usage in the system to accommodate the anticipated impact without requiring the construction of new school facilities.

After all alternatives to providing sufficient capacity to provide for the adopted level of service are considered and determined not to be feasible, the City, the applicant and the DCPS may: (i) enter into a mitigation agreement whereby the applicant will pay for his proportionate share of the impacts; or (ii) some other form of acceptable mitigation will be provided, and upon payment of the proportionate share mitigation, the developer will be allowed to proceed with development. If no mitigation agreement can be reached that is acceptable to all parties, and proportionate share mitigation is not feasible, then the school capacity deficiency shall be a basis for denial of the application.

Supplemental School Information:

The following additional information regarding the capacity of the assigned neighborhood schools was provided by the Duval County School Board. This is not based on criteria utilized by the City of Jacksonville School Concurrency Ordinance.

SCHOOL	CONCURRENCY SERVICE AREA	STUDENTS GENERATED	SCHOOL CAPACITY (Permanent/Portables)	CURRENT ENROLLMENT 20 Day Count (2018/19)	% OCCUPIED	4 YEAR PROJECTION
Bartram Springs ES #161	5	2,098	964	973	101%	103%
Twin Lakes MS #253	5	917	1,462	1,152	79%	91%
Atlantic Coast HS #268	5	1,168	2,443	2,354	96%	112%

- Does not include ESE & room exclusions
- Analysis based on a maximum 12,561 dwelling units – L-5349-18A

The percentage occupied may not appear correct due to ESE space requirements

Archaeological Sensitivity

According to the Duval County Archaeological Predictive Model, the subject property is located within an area of low, medium, and high sensitivity for the presence of archaeological resources. Projects that move forward through the Site Review process may be required to perform a Professional Archaeological Reconnaissance Survey on the portion of the site that is in a high sensitivity area. If archaeological resources are found during future development/redevelopment of the site, Section 654.122 of the Code of Subdivision Regulations should be followed.

Historic Preservation Element

Policy 1.2.6 The Planning and Development Department shall maintain and update for planning and permitting purposes, a U.S.G.S. series of topographic maps upon which recorded archaeological sites are shown.

Aquifer Recharge

A portion of the site is located within an area identified as being in the 0 to 4 inch per year aquifer recharge area. This range is below the threshold of 12 inches or more per year which would constitute a prime recharge area as defined in the Infrastructure Element – Aquifer Recharge Sub-Element (IE-AR). Prime aquifer recharge areas are the primary focus of groundwater resource protections. However, development resulting from the proposed land use amendment will be reviewed during the site plan review and permitting process for compliance with the land development regulations that have been established to protect groundwater resources. Such regulations address issues such as drainage systems, septic systems, and landscape/irrigation regulations.

Infrastructure Element Aquifer Recharge Sub-Element (IE-AR)

Policy 1.2.8 Within two years of establishment by the SJRWMD and the Water Resources Management Plan of prime recharge areas for the Floridian Aquifer, the Planning and Development Department shall prepare maps of

such designated areas showing the special zoning and land use consideration the City has established for such areas as designated by the latest update of the Floridian Aquifer Recharge GIS grid coverage.

Wetlands

The applicant submitted a wetland map and a wetland assessment and listed wildlife assessment for the 2,512.23 acre subject site that shows approximately 1,125.2 acres of wetlands and 1,397.7 acres of uplands. The applicant's wetlands and wildlife report, in addition to further evaluation with the use of the City's GIS system and photogrammetric analysis, shows that the wetlands on site are Category II and III wetlands. Based on the information noted below, the proposed amendment may be consistent with the Conservation/Coastal Management Element (CCME) wetlands policies. Due to the presence of Category II wetlands associated with Pablo Creek, the amendment has been referred to the Waterways Commission for review on August 28th. (Attachment D, Wetlands Assessment Map) (Attachment H, Preliminary Wetland Assessment and Listed Wildlife Assessment Report). The site-specific policy recommendation included in this report calls for creation of a long-term master plan that will include the general distribution of conservation areas and wetland buffers.

Wetlands Characteristics:

Approximate Size:	1,125.2 Acres
General Location(s):	Wetlands are located throughout the entire subject site. (See Wetlands Map in Attachment D)
Quality/Functional Value:	The northern section of wetlands located near Pablo Creek has an extremely high functional value for water filtration attenuation and flood water capacity, is located within the 100 year flood zone, and has a direct impact on the City's waterways. The remainder of wetlands on the site have a high functional value for water filtration attenuation and flood water capacity and are located in flood zones, yet have an indirect impact on the City's waterways.
Soil Types/ Characteristics:	See the USDA Soil Survey within the Preliminary Wetland Assessment and Listed Wildlife Assessment Report (Attachment H)
Wetland Category:	The wetlands near Pablo Creek are Category II and all other wetlands on the property are considered Category III.

Consistency of Permitted Uses:	Category II: Uses outlined by CCME Policies 4.1.3 and 4.1.5. Category III: All uses. Must meet CCME Policies 4.1.3 and 4.1.6.
Environmental Resource Permit (ERP):	Not provided by the applicant.
Wetlands Impact:	Insufficient information to determine impacts.
Associated Impacts:	The Category II wetland area is associated with Pablo Creek, the AE, AE Floodway, and 0.2 Percent Annual Flood Hazard Flood zones. Portions of the Category III wetland areas are associated with the AO flood zone.

Relevant Policies:

CCME Policy 4.1.3
The following performance standards shall apply to all development, except public utilities and roadways, permitted within Category I, II, and III wetlands:

(a) Encroachment

Encroachment in Category I, II, or III wetlands is the least damaging and no practicable on-site alternative exists; and

(b) No net loss

Development is designed and located in such a manner that there is no net loss to the wetland functions including but not limited to:

ithe habitat of fish, wildlife and threatened or endangered species,

ii the abundance and diversity of fish, wildlife and threatened or endangered species,

iii the food sources of fish and wildlife including those which are threatened or endangered,

iv the water quality of the wetland, and

v the flood storage and flood conveyance capabilities of the wetland; and

(c) Floodplain protection

Buildings are built at an elevation of sufficient height to meet the designated flood zone standards as set forth by the Federal Emergency Management Agency. The design must be in conformance with Chapter 652 (Floodplain Regulations) of the Ordinance Code; and

(d) Stormwater quality

In the design and review of developments which will discharge stormwater into the Category I, II, or III wetlands the following performance standards shall be used to protect water quality:

i Issuance of a Management and Storage of Surface Waters permit pursuant to Chapter 40C-4 or 40C-40, F.A.C. or a stormwater permit issued pursuant to Chapter 40C-42, F.A.C., provides assurances necessary for compliance with subsections (i) - (iv) above provided the stormwater management system is constructed in accordance with the permit; and

ii Regular monitoring and maintenance program on an annual basis for the performance of stormwater treatment systems

(e) Septic tanks

Septic tanks, drainfields and/or greywater systems are located outside the Category I, II , or III wetland area and not within 75 feet of the mean high water line of tidal bodies or within 75 feet of any wetland unless the Duval County Health Department grants a variance for a hardship case pursuant to the provisions of Section 381.0065, F.S. Where public utilities are available, development is required to connect to these facilities; and

(f) Hydrology

The design of the fill shall include measures to maintain the wetlands hydrology of the site.

CCME Policy 4.1.5
The permitted uses within Category I and II wetlands shall be limited to the following land uses and associated standards, provided such use is consistent with the Future Land Use Map series (FLUMs):

(1) Conservation uses, provided the following standards are met:

(a) Dredge and fill
Dredging or filling of the Category I and II wetlands shall not exceed more than 5% of the wetlands on-site; and

(b) Vegetation

For Category I wetlands:
All native vegetation outside the development area is maintained in its natural state

For Category II wetlands:
No more than 10% of the arial extent of the vegetation outside the development area may be altered or removed; and

(2) Residential uses, provided the following standards are met:

(a)Density/Dredge and fill

Where lots, except for lots of record as defined in the Future Land Use Element, are located totally within the wetlands:

i density shall not exceed one (1) dwelling unit per five (5) acres; and

ii buildings shall be clustered together to the maximum extent practicable; and

iii dredging or filling shall not exceed 5% of the wetlands on-site; and

(b) Vegetation

For Category I wetlands:
All native vegetation outside the development area is maintained in its natural state

For Category II wetlands:
No more than 10% of the arial extent of the vegetation outside the development area may be altered or removed; and

(3) Water-dependent and water-related uses, provided the following standards are met:

(a) Vegetation

For Category I wetlands:
All native vegetation outside the development area is maintained in its natural state

For Category II wetlands:
No more than 10% of the arial extent of the vegetation outside the development area may be altered or removed; and

(b) Boat facilities siting and operation

Boat facilities are further subject to Objectives 10.1, 10.2, 10.3, 10.5 and 10.6 and their related policies of this element.

(4) Access to a permitted use, subject to the requirements of (a), (b), and (f) as noted in the performance standards outlined in Policy 4.1.3 above.

(5) Any use which can be shown to be clearly in the public interest, subject to the requirements of (a), (b), (d) and (f) as noted in the performance standards outlined in Policy 4.1.3 above.

(6) For Category II wetlands only, silvicultural uses are allowed, provided the following standards are met:

Best Management Practices: Silviculture

Such activities are conducted in compliance with the provisions of the "Silvicultural Best Management Practices Manual", as may be amended, published by the Florida Division of Forestry, Department of Agriculture and Consumer Services.

CCME Policy 4.1.6

The permitted uses within Category III wetlands shall be limited to the following land uses and associated standards, provided such use is consistent with the Future Land Use Map series (FLUMs)

(1) Any use not otherwise listed below, provided all of the basic requirements outlined in Policy 4.1.3 above are met:

(a) Silvicultural uses, provided the following standards are met:

Best Management Practices: Silviculture

Such activities are conducted in compliance with the provisions of the "Silvicultural Best Management Practices Manual", as may be amended, published by the Florida Division of Forestry, Department of Agriculture and Consumer Services.

(b) Agricultural uses, provided the following standards are met:

Best Management Practices: Agriculture

Such activities are to be in compliance with Chapter 40C-44, F.A.C.

(2) Any use that can be shown to be clearly in the public interest, subject to the requirements of (a), (b), (d) and (f) as noted in the performance standards outlined in Policy 4.1.3 above.

Flood Zones

Approximately 460 acres of the subject site is located within either the AO, AE, AE Floodway, or 0.2 Percent Annual Chance Flood Hazard flood zone (Attachment E). Flood zone designations are assigned by the Federal Emergency Management Agency (FEMA). FEMA defines the various flooding characteristics of different lands based on a 100-year storm. The 100-year storm or Special Flood Hazard Area (SFHA) refers to a flood occurring from a storm event that happens an average of every 100 years. This does not mean that a storm of this type will happen every 100-years. There is a 1-percent chance that a storm of this magnitude will occur in any given year.

The AO flood zone is defined as an area of relatively shallow flooding within the 100-year floodplain or SFHA. Flood insurance is mandatory within the AO flood zone. The AE flood zone is defined as an area within the 100-year floodplain or SFHA where flood insurance is mandatory. The AE Floodway flood zone is defined as an area within the 100-year floodplain or SFHA where flood insurance is mandatory if construction is allowed within the floodway. Areas located within AE Floodway zones should be left intact as construction and filling within these areas is severely restricted. The 0.2 Percent Annual Chance Flood Hazard flood zone is defined as an area within the 500-year floodplain and outside of the SFHA. Flood insurance is not mandatory within the 0.2 Percent Annual Chance Flood Hazard flood zones and the areas are deemed to be subject to moderate flood hazards. Any development within the floodplain will be required to comply with Chapter 652, the Floodplain Management Ordinance.

Conservation /Coastal Management Element (CCME)

Policy 1.4.4 The City shall require all development within the 100-year flood plain to be in strict conformance with all applicable federal, State, regional and local development regulations.

Policy 2.7.1 The City shall continue to define the surface hydrology of the area to determine flood plain vulnerability and sensitivity, and will determine appropriate protection measures.

Policy 2.7.3 The City shall protect appropriate floodplain areas for the public benefit and restore degraded floodplain areas by:

A. Land acquisition or conservation easement acquisition;

B. Regulation, including setbacks, buffer zones, designated wildlife corridors, low density zoning, performance standards and open space requirements; and

C. Incentives, including tax benefits and transfer of development rights.

Wildlife

The applicant submitted a wildlife assessment report of the site identifying existing habitat types and wildlife survey fieldwork results. Documented evidence of state threatened gopher tortoises was found during the assessment. The gopher tortoise is classified as a state-threatened species and is protected by Florida's Endangered and Threatened Species Rule (Chapter 68A-27.0031, F.A.C.). A gopher tortoise relocation permit would be required by the

state Fish and Wildlife Commission (FWC) prior to any land disturbing activities, beyond the current land use of silviculture, within occupied gopher tortoise habitat. Additionally, the presence of red-cockaded woodpeckers were documented during the assessment. The red-cockaded woodpecker is listed as endangered by the federal Endangered Species Act (ESA) and as federally-designated Endangered by Florida's Endangered and Threatened Species Rule (Chapter 68A-27.0031, F.A.C.). As such, the wildlife survey recommends a 100% coverage species-specific survey of the suitable red-cockaded woodpecker habitat. The report also notes that additional information may be requested from the applicant if permits from the United States Army Corps of Engineers (USACE) and/or St Johns River Water Management District (SJRWMD) are required prior to development. (Preliminary Wetland Assessment and Listed Wildlife Assessment Report, Attachment H)

Conservation Coastal Management Element

Policy 3.5.5 The City shall maintain a land development review process for the assessment and protection of listed species and their habitat, which shall apply to issuance of development permits and land clearing, excluding bona fide silvicultural and agricultural activities. Projects which contain areas identified for protection shall be required to incorporate creative project designs through utilization of such measures as clustering, mixed land use designations and transfer of development rights programs. For purposes of Policy 3.5.5, the term listed species shall be limited to listed animal species as defined in the Definitions Section of this Element.

A. All proposed developments or land clearing, with the exception of bona fide silvicultural or agricultural activities, which are located on all or part of a parcel or contiguous parcels of land containing 50 acres or more under common ownership shall be reviewed by the City to determine if the site contains listed species.

IMPACT ASSESSMENT

IMPACT ASSESSMENT L-5349-18A

DEVELOPMENT ANALYSIS		
Development Boundary	Suburban Area	
Roadway Frontage Classification	No roadway frontage	
Plans/Studies	Southeast Vision Plan	
	CURRENT	**PROPOSED**
Site Utilization	Undeveloped	Residential
Land Use/Zoning	AGR I. II & III / AGR	LDR* / RR-Acre
Development Standards For Impact Assessment	AGR I – 1 DU/100 Acres AGR II – 1 DU/40 Acres AGR III – 1 DU/10 Acres	5 DU/Acre
Development Potential	119 DU	12,561 DU
Population Potential	316 people	33, 412 people
SPECIAL DESIGNATIONS AREAS		
	YES	**NO**
Aquatic Preserve		X
Septic Tank Failure Area		X
Airport Environ Zone		X
Industrial Preservation Area		X
Cultural Resources		X
Archaeological Sensitivity	Low, Medium, & High	
Historic District		X
Coastal High Hazard/Adaptation Action Areas		X
Ground Water Aquifer Recharge Area	0-4 inches and discharge	
Well Head Protection Zone		X
Boat Facility Siting Zone		X
Brownfield		X
State Road (SR)	SR Name:	X
PUBLIC FACILITIES		
Potential Roadway Impact	Increase of 117,452 net new daily trips	
Potential Public School Impact	Increase of 4,183 students	
Water Provider	JEA	
Potential Water Impact	Increase of 3,309,838 gallons per day	
Sewer Provider	JEA	
Potential Sewer Impact	Increase of 2,482,378 gallons per day	
Potential Solid Waste Impact	Increase of 32,352 tons per year	
Drainage Basin / Sub-Basin	Intracoastal Waterway and Julington Creek/ Pablo Creek, Big Davis Creek, and Powers Bay	
Recreation and Parks	Pablo Creek Preserve	
Mass Transit	None	

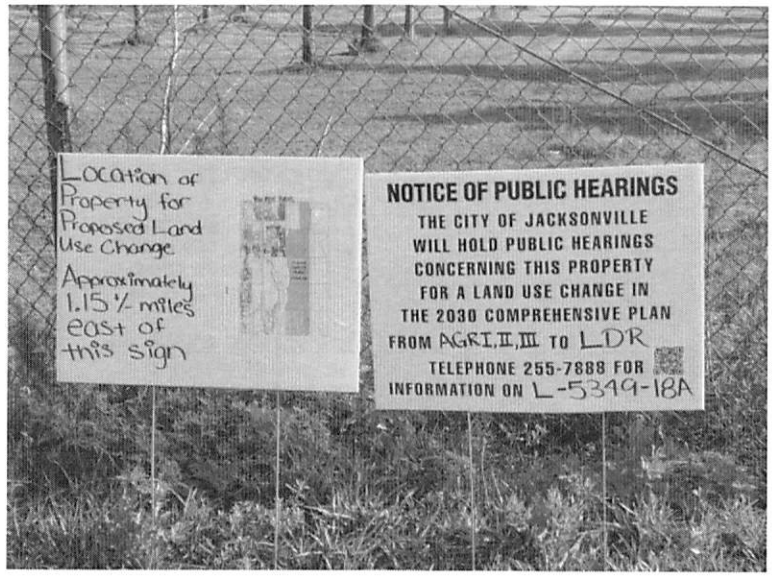
NATURAL FEATURES	
Elevations	5'-50'
Land Cover	1890- Other recreational;4110- Pine Flatwoods; 4120-Longlead Pine ; 4340- Upland mixed coniferous hardwood;4410-Coniferous plantations ;4430- Forest regeneration areas ; 6170- Mixed wetland hardwoods; 6210-Cypress ; 6250- Wet pinelands/hydric pine ; 6300-Wetland forest mixed ; 6440- Emergent aquatic vegetation
Soils	See Preliminary Wetland Assessment and Listed Wildlife Assessment Report
Floodzone	AO, AE, AE Floodway, 0.2 Percent Annual Chance
Wetlands	See Preliminary Wetland Assessment and Listed Wildlife Assessment Report
Wildlife (sites greater than 50 acres)	See Preliminary Wetland Assessment and Listed Wildlife Assessment Report

**Subject to Site Specific FLUE Policy 4.4.12*

PROCEDURAL COMPLIANCE

Upon site inspection by the Planning and Development Department on June 14, 2019, the required notices of public hearing signs were posted. Four hundred and twelve (412) notices were mailed out to adjoining property owners informing them of the proposed land use change and pertinent public hearing and meeting dates.

The Citizen Information Meeting was held on June 17, 2019. A number of people attended to discuss the proposed amendment. Those who attended were concerned with school capacity, transportation access, and the timeframe of development for the proposed amendment.



CONSISTENCY EVALUATION

2030 Comprehensive Plan

Proposed amendment analysis in relation to the Goals, Objectives, and Policies of the *2030 Comprehensive Plan*:

Future Land Use Element (FLUE)

Development Area
Rural Area (RA): The RA consists of all lands outside of the Suburban Area and corresponds with predominantly undeveloped portions of the City with land uses such as Agriculture, Recreation, Conservation, or Public Buildings Facilities. Development should occur at very low densities which create little demand for new infrastructure and community serving supporting uses, unless development occurs under the Multi-Use Category, as a Rural Village or as a Master Planned Community as defined in this element. Development may occur within the Rural Area provided that it is consistent with the Operational Provisions and the Land Use category descriptions. Otherwise, development beyond such boundaries is considered urban sprawl and is to be discouraged.

Goal 1	To ensure that the character and location of land uses optimize the combined potentials for economic benefit and enjoyment and protection of natural resources, while minimizing the threat to health, safety and welfare posed by hazards, nuisances, incompatible land uses and environmental degradation.
Objective 1.1	Ensure that the type, rate, and distribution of growth in the City results in compact and compatible land use patterns, an increasingly efficient urban service delivery system and discourages proliferation of urban sprawl through implementation of regulatory programs, intergovernmental coordination mechanisms, and public/private coordination.
Policy 1.1.10	Gradual transition of densities and intensities between land uses in conformance with the provisions of this element shall be achieved through zoning and development review process.
Policy 1.1.12	Promote the use of Planned Unit Developments (PUDs), cluster developments, and other innovative site planning and smart growth techniques in all commercial, industrial and residential plan categories, in order to allow for appropriate combinations of complementary land uses, and innovation in site planning and design, subject to the standards of this element and all applicable local, regional, State and federal regulations.
Policy 1.1.20	Development uses and densities shall be determined by the Development Areas described in the Operational Provisions for the Central Business District (CBD); Urban Priority Area (UPA); the Urban Area (UA); the Suburban Area (SA); and the Rural Area (RA) as identified in the 2030

Comprehensive Plan, in order to prevent urban sprawl, protect agricultural lands, conserve natural open space, and to minimize the cost of public facilities and services.

Policy 1.1.21 Future amendments to the Future Land Use Map series (FLUMs) shall include consideration of their potential to further the goal of meeting or exceeding the amount of land required to accommodate anticipated growth and the projected population of the area and to allow for the operation of real estate markets to provide adequate choices for permanent and seasonal residents and business consistent with FLUE Policy 1.1.5. The projected growth needs and population projections must be based on relevant and appropriate data which is collected pursuant to a professionally acceptable methodology. In considering the growth needs and the allocation of land, the City shall also evaluate land use need based on the characteristics and land development pattern of localized areas. Land use need identifiers include but may not be limited to, proximity to compatible uses, development scale, site limitations, and the likelihood of furthering growth management and mobility goals.

Policy 1.1.22 Future development orders, development permits and plan amendments shall maintain compact and compatible land use patterns, maintain an increasingly efficient urban service delivery system and discourage urban sprawl as described in the Development Areas and the Plan Category Descriptions of the Operative Provisions.

Objective 1.2 Manage the use of land in the City by approving new development and redevelopment only if necessary public facilities are provided concurrent with the impacts of development. Ensure the availability of adequate land suitable for utility facilities necessary to support proposed development. Verify prior to development order issuance that all new development and redevelopment will be served with potable water, wastewater, solid waste disposal, stormwater management facilities, and parks that meet or exceed the adopted Levels of Service established in the Capital Improvements Element.

Policy 1.2.1 The City shall ensure that the location and timing of new development and redevelopment will be coordinated with the ability to provide public facilities and services through the implementation of growth management measures such as the Development Areas and the Plan Category Descriptions of the Operative Provisions, development phasing, programming and appropriate oversizing of public facilities, and zoning and subdivision regulations.

Policy 1.2.6 The City shall ensure through the implementation of Chapter 654, Ordinance Code (Code of Subdivision Regulations) that suitable lands and/or easements are available for the provision of utility and transportation facilities necessary to support proposed development, and implement

improvements with minimum land use, social and environmental disruption. Consider the location and timing of new public facility construction in requests for Future Land Use Map series amendments.

Policy 1.5.14 In accordance with the Conservation and Coastal Management Element, the City shall encourage environmentally sensitive areas to be placed in a Conservation land use category, Conservation zoning district, and/or conservation easement.

Policy 2.10.2 The City shall include incentives in the development review process to encourage residential development with supporting uses such as retail, restaurant, recreation and open space that relate physically and visually to nearby areas of the City through a design concept, which includes, but is not limited to:

1. Residential development with a full range of urban uses and support facilities; and
2. Physically connected neighborhoods bound together by pedestrian paths and public spaces.

Goal 3 To achieve a well-balanced and organized combination of residential, non-residential, recreational and public uses served by a convenient and efficient transportation network, while protecting and preserving the fabric and character of the City's neighborhoods and enhancing the viability of non-residential areas.

Objective 3.1 Continue to maintain adequate land designated for residential uses which can accommodate the projected population and provide safe, decent, sanitary and affordable housing opportunities for the citizens. Protect single-family residential neighborhoods by requiring that any other land uses within single-family areas meet all applicable requirements described in the Development Areas and the Plan Category Descriptions of the Operative Provisions of the 2030 Comprehensive Plan and Land Development Regulations.

Policy 3.1.11 The City shall require new residential areas to be designed to include an efficient system of internal circulation and connection to adjacent developments and neighborhoods. The Land Development Regulations shall detail the requirements for public access and interconnectivity within and between developments based on standards such as but not limited to a connectivity score, maximum separations between connections to adjacent developments, and rules relative to hours, operations, and public safety considerations for any restriction of access through the use of gates.

According to the Category Description of the Future Land Use Element (FLUE), the AGR functional land use categories accommodate primarily agriculture activities with some single family dwellings and are intended to preserve the existing rural character of outlying areas of the City.

According to the Category Description of the FLUE, the Low Density Residential (LDR) land use category in the Rural Area primarily permits low density residential development in the form of single-family and multi-family dwellings at up to seven dwelling units per acre when full urban services are available. Plan amendment requests for new LDR designations are discouraged in the Rural Area because they would potentially encourage urban sprawl.

The majority of the 2,512.23 acre subject site is located within the Rural Development Area, however, due to its location along the boundary line, a very small portion, approximately one (1) acre, of the western side of the property is within the Suburban Development Area. According to the Locational Criteria within the Operative Provisions of the FLUE, development in the Rural Area should occur at very low densities. The LDR land use category allows a maximum of 7 dwelling units per acre and the LDR category description states that plan amendment requests for new LDR designations are discouraged in the Rural Area because they could encourage urban sprawl. However, directly abutting the subject site to the west are several sites within the LDR land use category and the Suburban Development Area. The proposed amendment also has the potential to serve as a transition of density and intensity between the Mixed-Use (MU) and LDR land to the north and west of the site and the Agricultural (AGR) lands to the east, which would be consistent with FLUE Policy 1.1.10. Additionally, the applicant has indicated the intent to submit the companion rezoning application for the RR-Acre zoning district. The RR-Acre zoning permits residential development on lots that are a minimum of one (1) acre and would serve to hold potential development to a low-density scale consistent with the intent of the Rural Area designation.

The operative provisions of the FLUE also call for consideration of the availability of public services, facilities and infrastructure to serve proposed development. The ability to provide municipal utilities, drainage, schools, solid waste disposal, and recreational sites consistent with the level of service standards in the Capital Improvements Element will be evaluated and addressed in accordance with established concurrency and mobility processes. Currently, the proposed amendment does not have any road frontage, and it is unclear how the proposed development would connect to the City's transportation network.

Given the adjacent land use categories of LDR and MU, the proposed land use amendment would result in a compatible and appropriate transition of density for the area, meeting FLUE Goal 1 and Policy 1.1.10. While at a much larger scale than past land use amendments in the surrounding area, the proposed land use is consistent with the development trends in the area as called for in FLUE Objective 1.1 and 3.1.

The proposed amendment would allow for the development of new housing, which would increase the amount of residentially designated land available to accommodate future growth of the City, meeting FLUE Objective 3.1 and Policy 1.1.21.

Due to the scale and size of the proposed land use amendment, the development will produce substantial impacts and increase the need for infrastructure and facilities. A strategically designed long-term master plan would provide for an innovative site planning mechanism to ensure that development resulting from this amendment occurs in an orderly, efficient, effective and predictable manner. It is critical to understand how new public facilities to accommodate development will be provided to ensure a well-balanced and organized combination of residential, non-residential, recreational and public uses. Additionally, according to the applicant, the adoption round companion rezoning will be filed for the RR-Acre zoning district; thus limiting the allowed density until such time as a long term master plan for the area is completed pursuant to the site-specific policy recommendation included in this report.

In order to ensure adequate public facilities are provided concurrent with development and to facilitate the integration of land uses with an efficient system of internal circulation and connection, a site specific policy is recommended requiring a long-term master plan subject to review and approval prior to the submittal of land development reviews and approvals. Proposed Future Land Use Element Policy 4.4.12 is as follows:

Future Land Use Element (FLUE), Policy 4.4.12

In accordance with Ordinance 2019-425, which designates a 2,512 acre LDR land use category on the Future Land Map, the owner or authorized agent shall develop a conceptual long-term master plan addressing the entire 2,512 acre site. The conceptual master plan, and proposed revisions or amendments to the approved plan, shall be subject to review and approval by the Planning Commission prior to submittal of land development reviews and approvals. Revisions or amendments to the plan that do not change the approved densities or intensities may be administratively modified by the Planning and Development Department. Development within the site shall be consistent with the conceptual master plan. The conceptual master plan shall, at a minimum, address the following conditions:

1. The general distribution, location and densities/intensities of residential and non-residential (if anticipated) development;
2. Acknowledgement that future land use map amendments and rezonings will be required where such uses and densities are inconsistent with the current land use and/or zoning designations;
3. The general distribution and location of conservation areas and wetland buffers;
4. The strategy for providing centralized utilities for water and sewer service throughout the planning area.
5. Identification of the major internal transportation facilities necessary to serve the future land uses through an efficient and connected network;
6. General identification of how the major internal transportation facilities will connect to the external transportation network.

The approved conceptual master plan shall be on file with the Planning and Development Department and posted on the Department's website.
The proposed land use amendment, in conjunction with the recommended site-specific policy, ensures that development of the site will result in:

- the appropriate character and location of uses and development, taking into consideration future uses, densities and intensities;
- a compatible and connected land use pattern;
- the identification of conservation areas and wetland buffers to protect environmentally sensitive land; and
- the predictable, orderly and effective provision of public facilities and infrastructure.

Therefore, the proposed amendment is consistent with and furthers the intent of FLUE Goals 1 and 3, Objectives 1.1, 1.2 and 3.1 and Policies 1.1.10, 1.1.12, 1.1.20, 1.1.21, 1.1.22, 1.2.1, 1.2.6, 1.5.14, 2.10.2, and 3.1.11.

Vision Plan

The application site lies within the Southeast Vision Plan area. The plan does not identify specific recommendations for the subject site. However, the Plan provides a summary of recommendations for future planning efforts in the vision plan area. Transportation connectivity, compact development, quality open space and walkable neighborhoods with a mix of uses is preferred to balance the quality of life assets in the area. The proposed land use change to Low Density Residential could provide the opportunity to achieve these vision plan goals, thereby illustrating the proposed land use amendment's consistency with the Southeast Jacksonville Vision Plan. A long-term master plan will promote consistency with these recommendations.

Strategic Regional Policy Plan

The proposed amendment is consistent with the following Policy of the Strategic Regional Policy Plan:

Policy 21: The Region supports diverse and sufficient housing stock to provide choices for all households, from single persons to extended families with children.

The proposed land use amendment would create a location for the development of new housing stock for the area. Therefore, the proposed amendment is consistent with Policy 21 of the Strategic Regional Policy Plan, Regional Health Element.

RECOMMENDATION

The Planning and Development Department recommends **Approval of this application subject to the addition of site specific policy 4.4.12** based on its consistency with the overall intent of the 2030 Comprehensive Plan and the Strategic Regional Plan.

Future Land Use Element (FLUE), Policy 4.4.12

In accordance with Ordinance 2019-425, which designates a 2,512 acre LDR land use category on the Future Land Map, the owner or authorized agent shall develop a conceptual long-term master plan addressing the entire 2,512 acre site. The conceptual master plan, and proposed revisions or amendments to the approved plan, shall be subject to review and approval by the

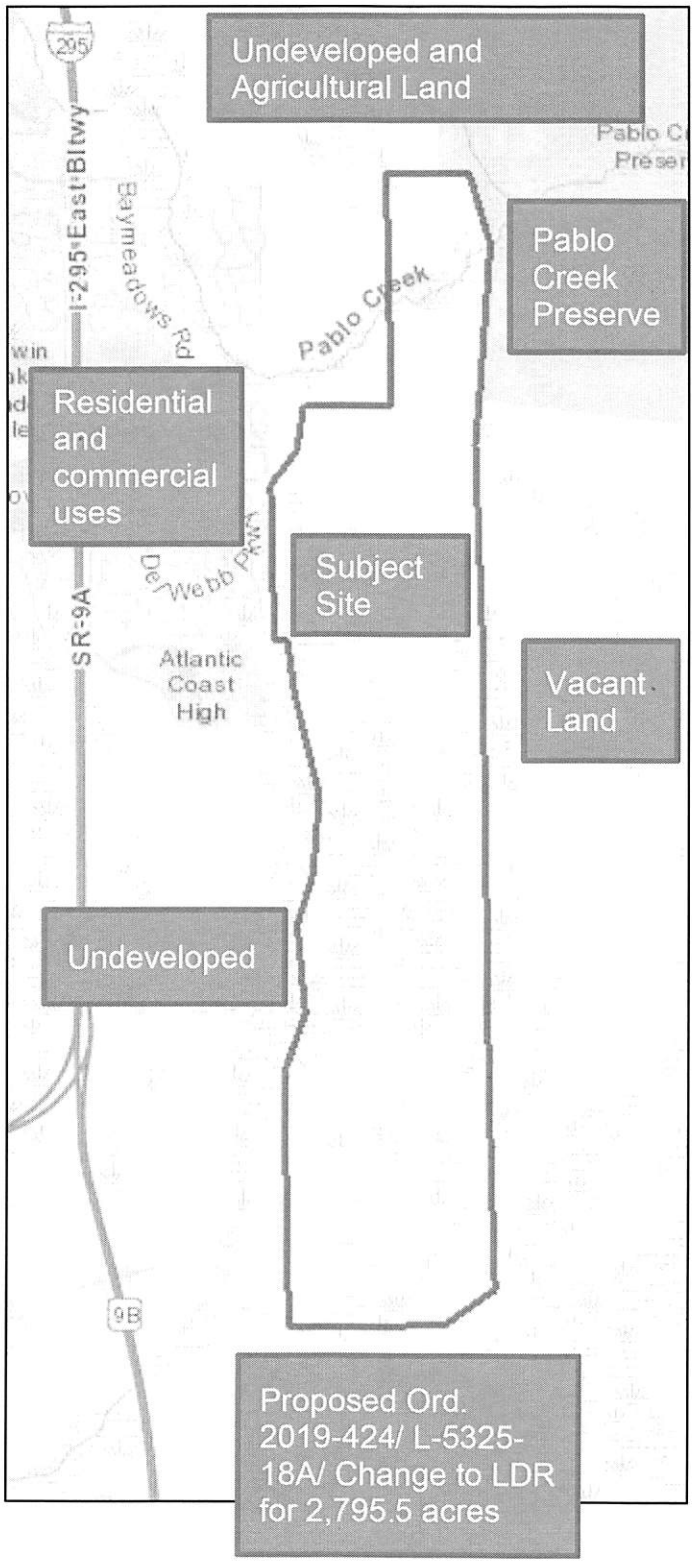
Planning Commission prior to submittal of land development reviews and approvals. Revisions or amendments to the plan that do not change the approved densities or intensities may be administratively modified by the Planning and Development Department. Development within the site shall be consistent with the conceptual master plan. The conceptual master plan shall, at a minimum, address the following conditions:

1. The general distribution, location and densities/intensities of residential and non-residential (if anticipated) development;
2. Acknowledgement that future land use map amendments and rezonings will be required where such uses and densities are inconsistent with the current land use and/or zoning designations;
3. The general distribution and location of conservation areas and wetland buffers;
4. The strategy for providing centralized utilities for water and sewer service throughout the planning area.
5. Identification of the major internal transportation facilities necessary to serve the future land uses through an efficient and connected network;
6. General identification of how the major internal transportation facilities will connect to the external transportation network.

The approved conceptual master plan shall be on file with the Planning and Development Department and posted on the Department's website.

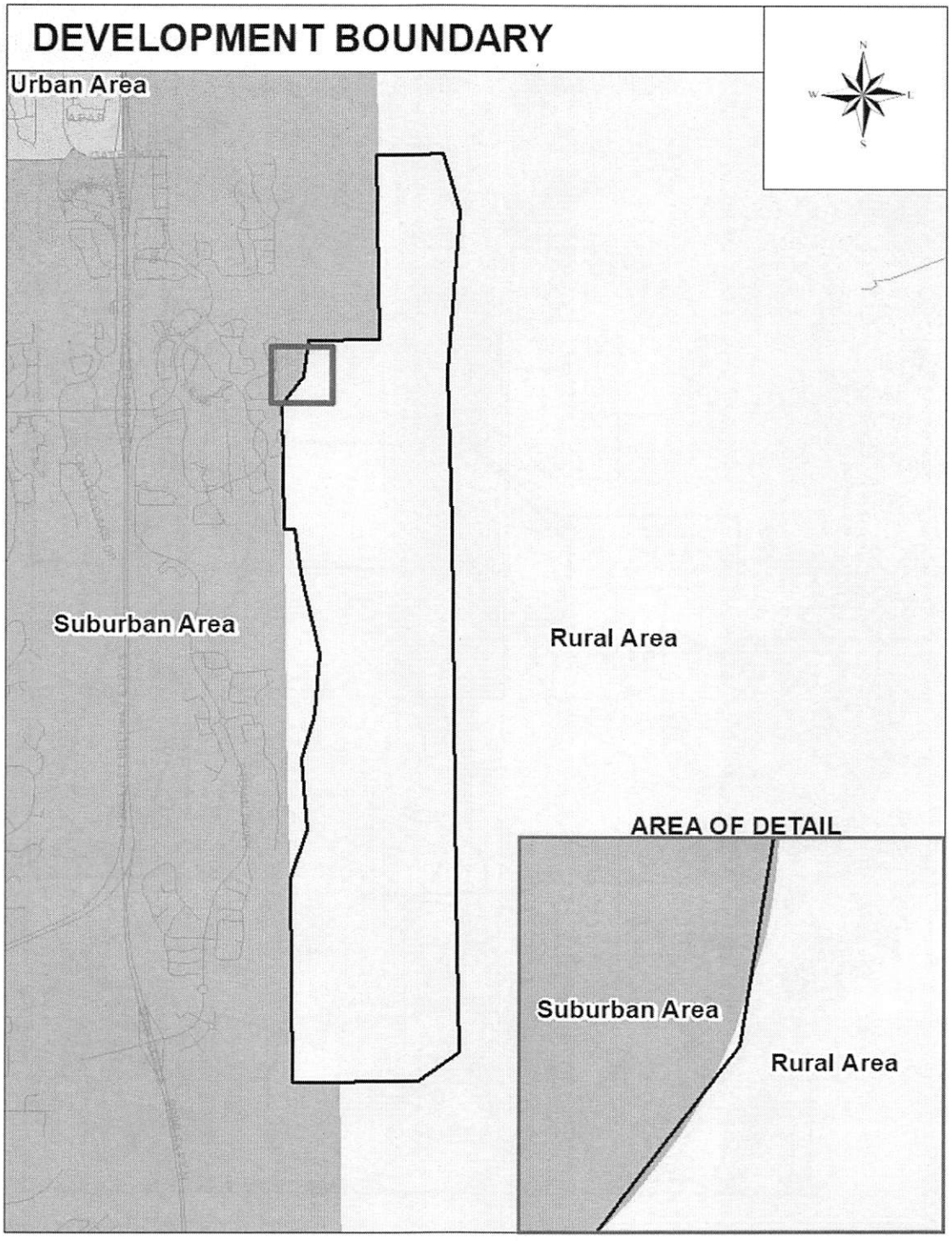
ATTACHMENT A-1

Existing Land Utilization:



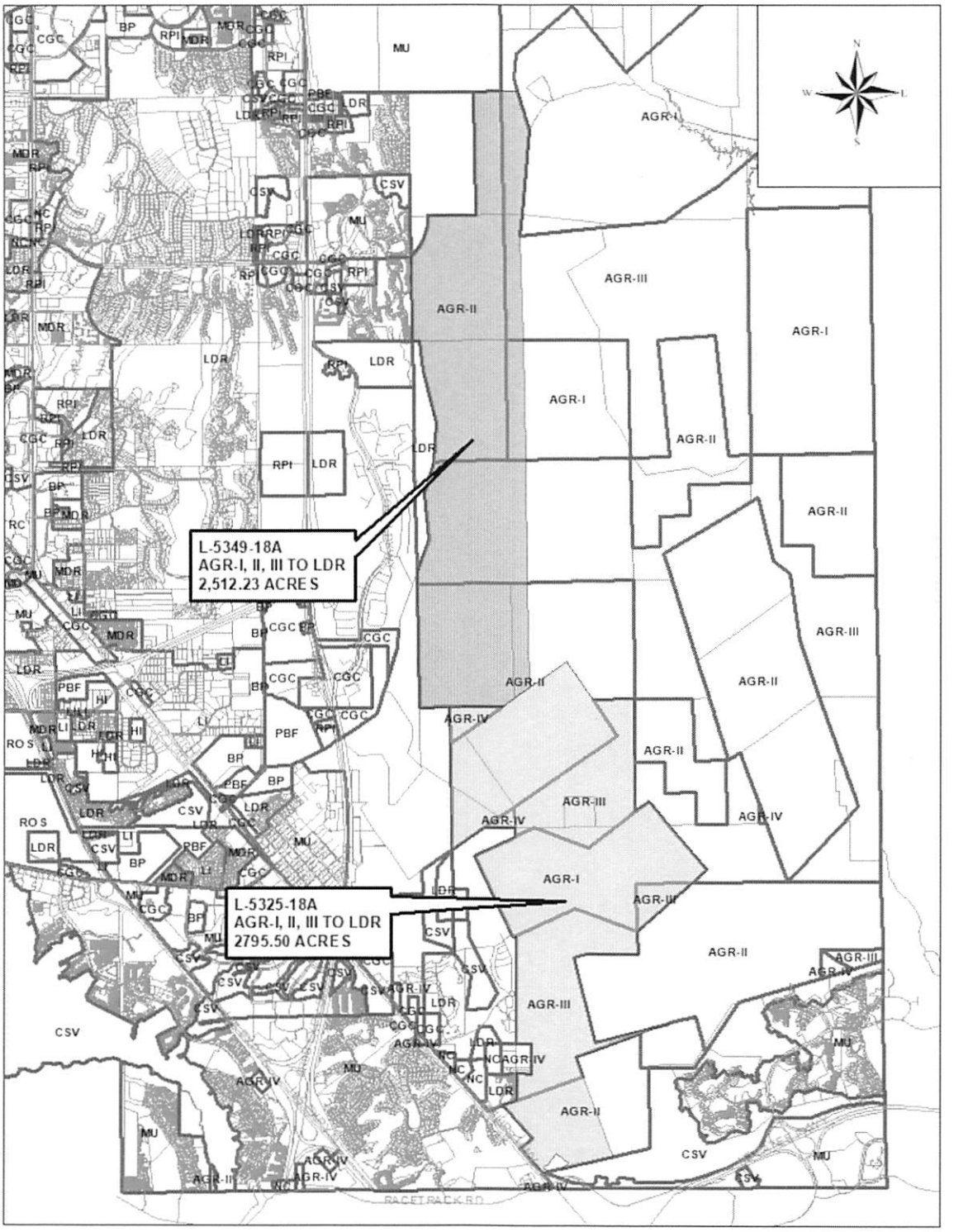
ATTACHMENT A-2

Development Boundary:



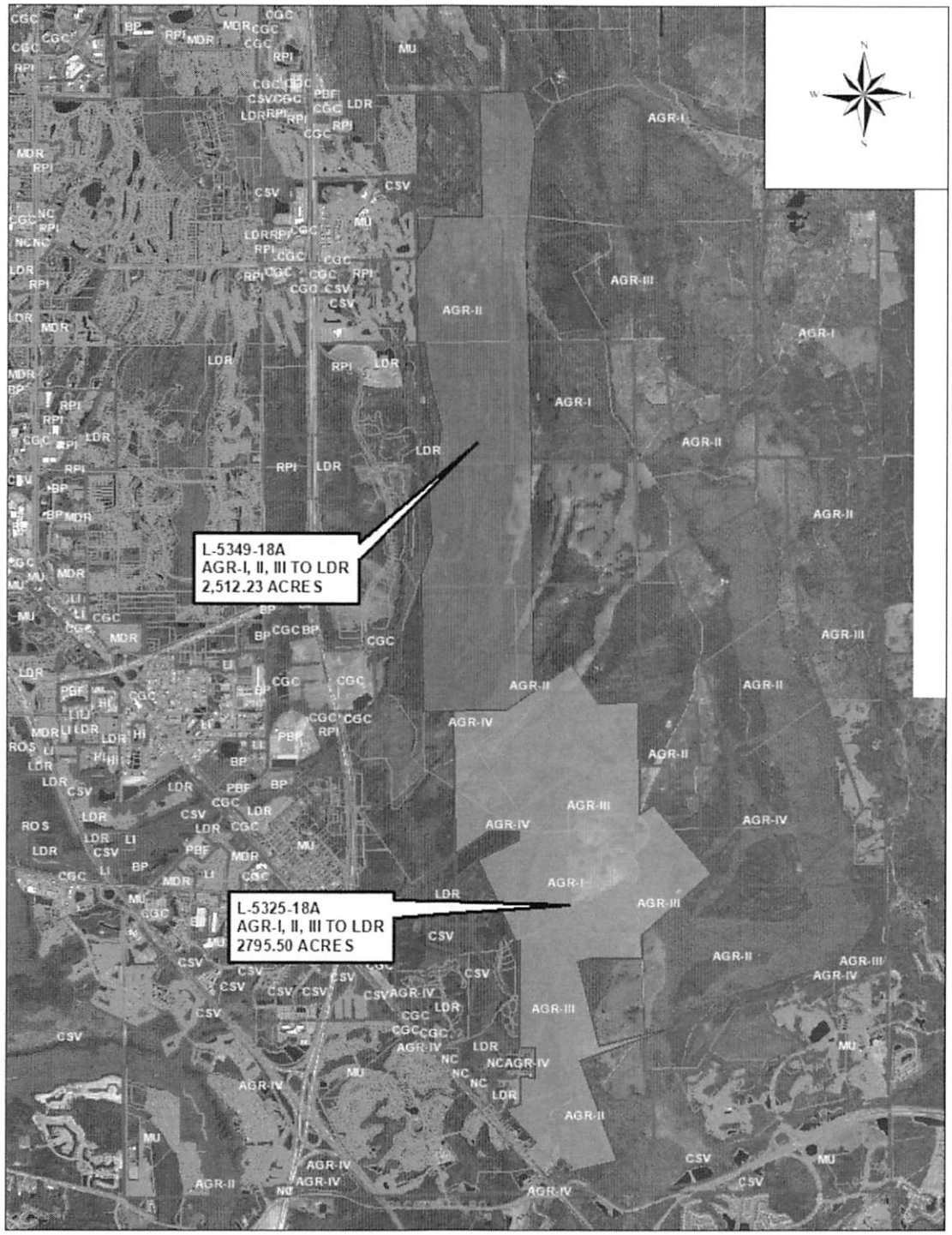
ATTACHMENT A-3

Proximate Land Use Applications:



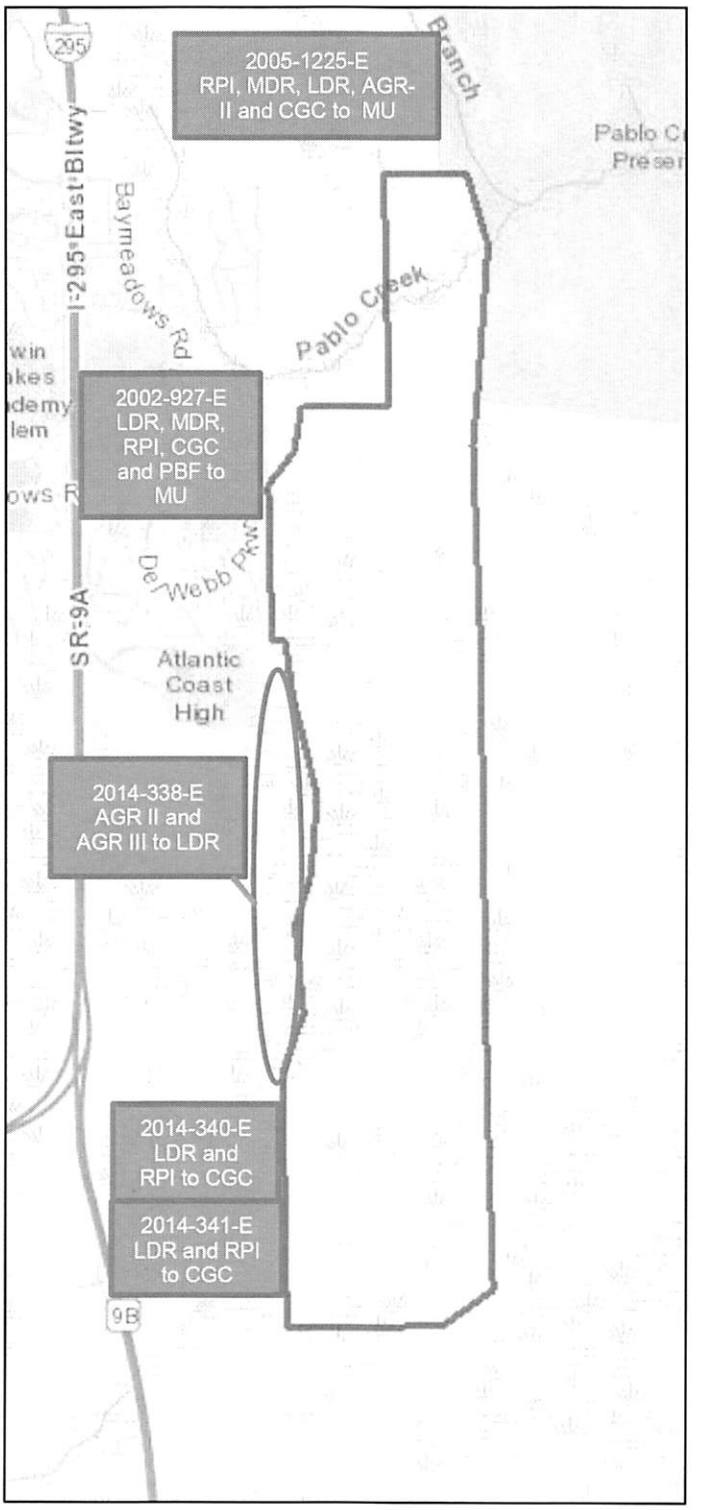
ATTACHMENT A-3 (continued)

Proximate Land Use Applications:



ATTACHMENT A-4

Proximate Land Use Changes:



ATTACHMENT B

Transportation Analysis:

A trip generation analysis was conducted for Land Use Amendment L-5349-18A, located east of SR 9A/I-295 East Beltway and SR 9B, and south of J. Turner Butler Boulevard in the Suburban and Rural Development Area of Jacksonville, Florida. The subject site consist of multiple parcels with an existing mixtures of Agriculture I, -II, and -III (AGR-I, AGR-II, AGR-III) land use categories. The proposed land use amendment is to allow for Low Density Residential (LDR) on approximately 2,512.23 +/- acres.

Transportation Element Policy 1.2.1 of the 2030 Comprehensive Plan requires the use of the most current ITE Trip Generation Manual (10th Edition) to calculate the vehicular trips based on the maximum development potential for existing and proposed land uses. In accordance with development standards for impact assessments established in the Future Land Use Element Policy 1.2.16, the AGR-I, -II, and -III land use categories development impact assessment standards result in a development potential of 119 single family homes (ITE Land Use Code 210), generating 1,123 new daily vehicular trips. The proposed LDR land use category development impact assessment standard is 5-single family dwelling units per acre, resulting in a development potential of 12,561 homes (ITE Land Use Code 210), generating 118,576 new daily vehicular trips. This will result in 117,452 net new daily vehicular trips if the land use is amended from AGR-I, -II, and –III to LDR, as shown in Table A.

Table A

Trip Generation Estimation

Current Land Use	ITE Land Use Code	Potential Number of Units (X)	Estimation Method (Rate or Equation)	Gross Trips	Less Pass-By Trips	Net New Daily Trip Ends
AGR - I	210	1 SF DUs	T = 9.44 (X)	9	0.00%	9
AGR - II	210	41 SF DUs	T = 9.44 (X)	387	0.00%	387
AGR - III	210	77 SF DUs	T = 9.44 (X)	727	0.00%	727
					Total Section 1	**1,123**
Proposed Land Use	**ITE Land Use Code**	**Potential Number of Units (X)**	**Estimation Method (Rate or Equation)**	**Gross Trips PM/Daily**	**Less Pass-By Trips**	**Net New Daily Trip Ends**
LDR	210	12,561 SF DUs	T = 9.44 (X)	118,576	0.00%	118,576
					Total Section 2	**118,576**
					Net New Daily Trips	**117,452**

Source: Trip Generation Manual, 10th Edition, Institute of Engineers

ATTACHMENT B (cont)

Transportation Analysis:

Additional Information:

Objective 2.4 of the Transportation Element (TE) of the 2030 Comprehensive Plan requires that the City shall coordinate the mobility circulation system with the future land uses shown on the Future Land Use Map series in order to ensure that roads, road improvements and other mobility alternative improvements are provided as necessary to support development in an economically efficient and environmentally sound manner.

Policy 2.4.2 of the TE of the 2030 Comprehensive Plan requires that the City shall amend the adopted Comprehensive Plan to incorporate the data and analysis generated by a periodic regional transportation model and study and facilitate the implementation of the study recommendations.

These two Comprehensive Plan policies ensure that the transportation impact related to land use amendments are captured in the Long Range Transportation Plan (LRTP) that is conducted every 5 years. This analysis includes the cumulative effect of all land use amendments that were approved within this time period. This plan identifies the future transportation needs and is used to create cost feasible roadway needs that can be funded by the City's Mobility Strategy Plan.

Mobility needs vary throughout the city and in order to quantify these needs, the city was divided into 10 Mobility Zones. The Mobility Strategy Plan identifies specific transportation strategies and improvements to address traffic congestion and mobility needs for each mode of transportation. The project site is located in Mobility Zone 1.

Existing available roadway capacity for the vehicle/truck mode for the entire zone was tested based on volume demand to capacity ratio (V/C), where the average daily traffic volumes determined from the most recent City of Jacksonville traffic count data were compared to the *Maximum Service Volumes* (*MSV*) from the current *FDOT Quality/Level of Service Handbook (2012)* for each functionally classified roadway within the zone. A V/C ratio of 1.0 indicates the roadway network is operating at its capacity.

The result of the V/C ratio analysis for the overall Mobility Zone 1 is **0.73**.

The proposed land use amendment based on impact assessment standards has the development potential of 12,561 single family homes and generating approximately 118,576 daily vehicular trips onto the roadway network. The Transportation Planning Division recommends that a traffic operational analysis of the adjacent roadway network be conducted by a licensed professional traffic engineer, to determine the impact to the external trips as a result of the land use change.

ATTACHMENT C

JEA Analysis:

21 West Church Street
Jacksonville, Florida 32202-3139

June 6, 2019

MEMORANDUM

To: Planning and Development Department

From: Susan R. West, PE
JEA

Subject: Land Use Amendment
L-5349-18A

Upon review of the referenced application, JEA has identified the following improvements that will be required to provide service to the development:

1. Water treatment plant (including associated property and easement needs) will be required to support the water needs of the development;
2. Electric substations (including associated property and easement needs) will be required to support the electric needs for the development.

This memorandum may not encompass all of the improvements needed. Additional service and design elements will be addressed following applicant's request for service availability. If you have any questions, please call or email me directly at 904-665-7980 or westsr@jea.com.

ATTACHMENT C (cont)

JEA Analysis:

MAY 2019 SEMI-ANNUAL SERIES IMPACTS

JEA WATER & SEWER DEMAND ANALYSIS - CITY OF JACKSONVILLE

Application #	Existing Land Use	Proposed Land Use	Current Water Demand (GPD)	Acres	Existing Dwelling Units Per Acre	Existing Total Dwelling Units	Percent Built	Projected Commercial Building Total Square Feet and/or Dwelling Units	Projected Water Demand (GPD)	Change in Water Demand (GPD)	Water Grid	Rural?	Current Sewer Demand (GPD)
L5349-18A	AGR-I, AGR-II, AGR-III	LDR	41,650	2512.23	NA	NA	0%	12,561	4,396,350	4,354,700	South	Yes	33320
Total Change in Demand							Total Change in Water Demand for this Series (GPD)			4,354,700			

Legend for Land Use

AGR = Agriculture
BP = Business Park
Commercial
HI = Heavy Indusrial
LDR = Low Density Residential
LI - Light Industrual
CSV = Conservation
Residential
PBF = Public Building & Facilities
HDR = High Density Residential
RPI = Residential Professional Institutional
ROS = Recreation and Open Space

		Apr 18 - Mar 19 Plant Pumpage (MGY)	Current Committed (1)	Total Need	CY2019 CUP Allocation	Remaining CUP Allocation (2)
Total Change this Series North (GPD)	0					
North Totals (MGY)	0.0	23,450	787	24,237	30,660	6,423
Total Change this Series South (GPD)	4,354,700					
South Totals (MGY)	1,589.5	16,778	1,372	19,739	17,794	-1,945
North & South Totals (MGY)	1,589.5	40,228	2,159	43,976	48,454	4,478

Minimum NG to SG Transfer (MGY)	1,945
Minimum NG to SG Transfer (MGD)	5.33

Notes

From JEA calcWater = 350-gpd/Unit SF, 250 gpd/Unit MF Sewer = 80% of Water
Commercial and Office Use Sewer =0.15-gpd/SF
RPI water use based on 50% building coverage of site at 0.05 GPD per Sq. Ft
NC water use based on 45% building coverage of site at 0.05 GPD per Sq. Ft
PBF & CGC water use based on 35% building coverage of site at 0.05 GPD per Sq. Ft
LI water use based on 40% building coverage of site at 0.0342 GPD per Sq. Ft
HI water use based on 40% building coverage of site at 0.0382 GPD per Sq. Ft
WD-WR water use based on 25% building coverage of site at 0.05 GPD per Sq. Ft
CUP Allocation for 2017 utilized based on allocations by the SJRWMD
MU water use based on per approved development plan/policy

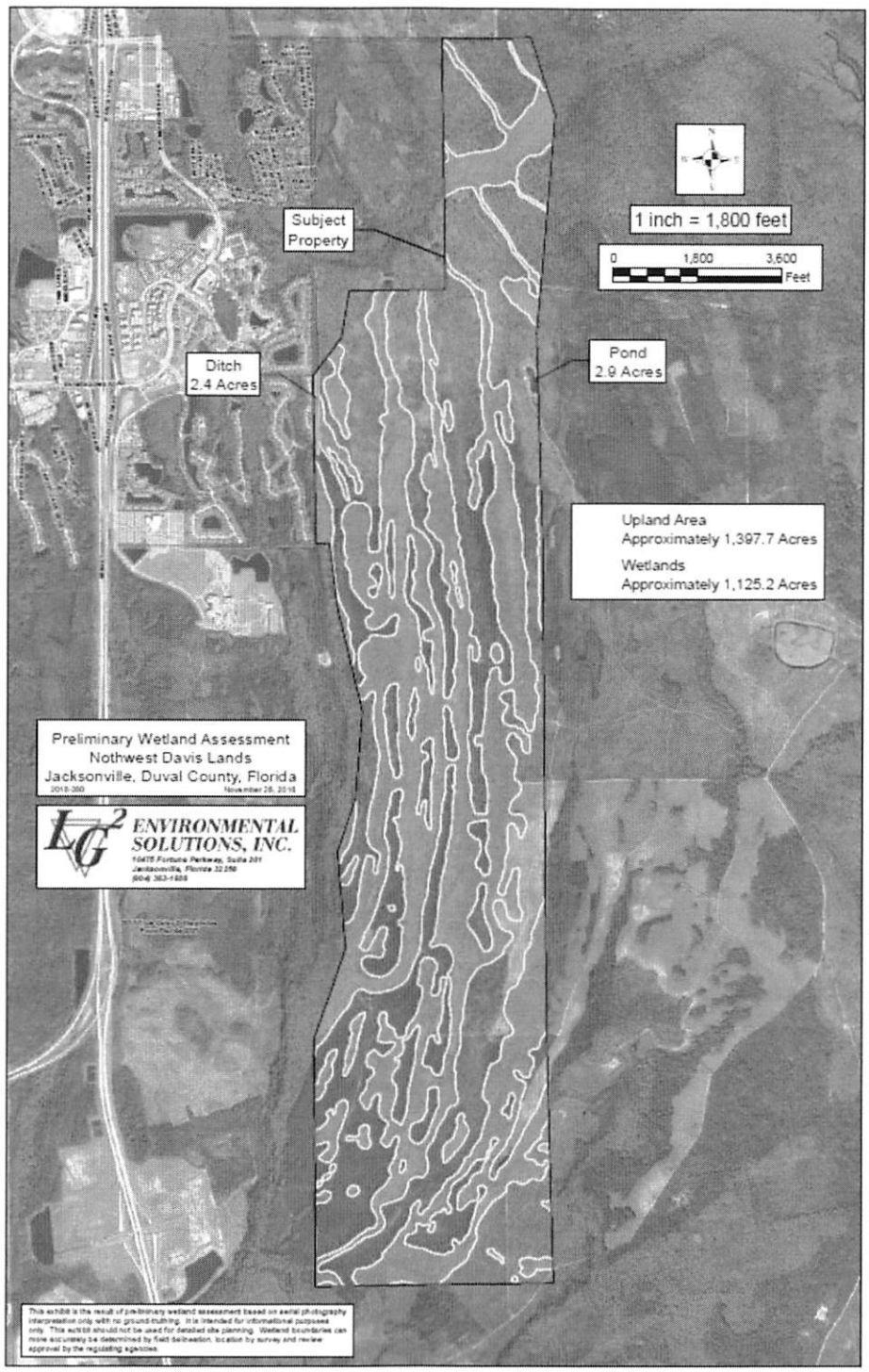
(1) Current Committed Capacity from JEA Environmental Group (MGY)

(2) JEA has received a 20 year Consumptive Use Permit (CUP) from the SJRWMD in August 2016 (88271-16). The allocations used in this spreadsheet represent the allocations issued in the CUP

Disclaimer: The calculations to determine the water and sewer flows contained in this spreadsheet have been established by the City of Jacksonville Planning and Development Department, and have been adopted by JEA solely for the purpose of preparing this spreadsheet. The method of calculating water and sewer flows in order to property size infrastructure shall continue to be based on JEA's Water, Sewer and Reuse for New Development Projects document (latest edition)

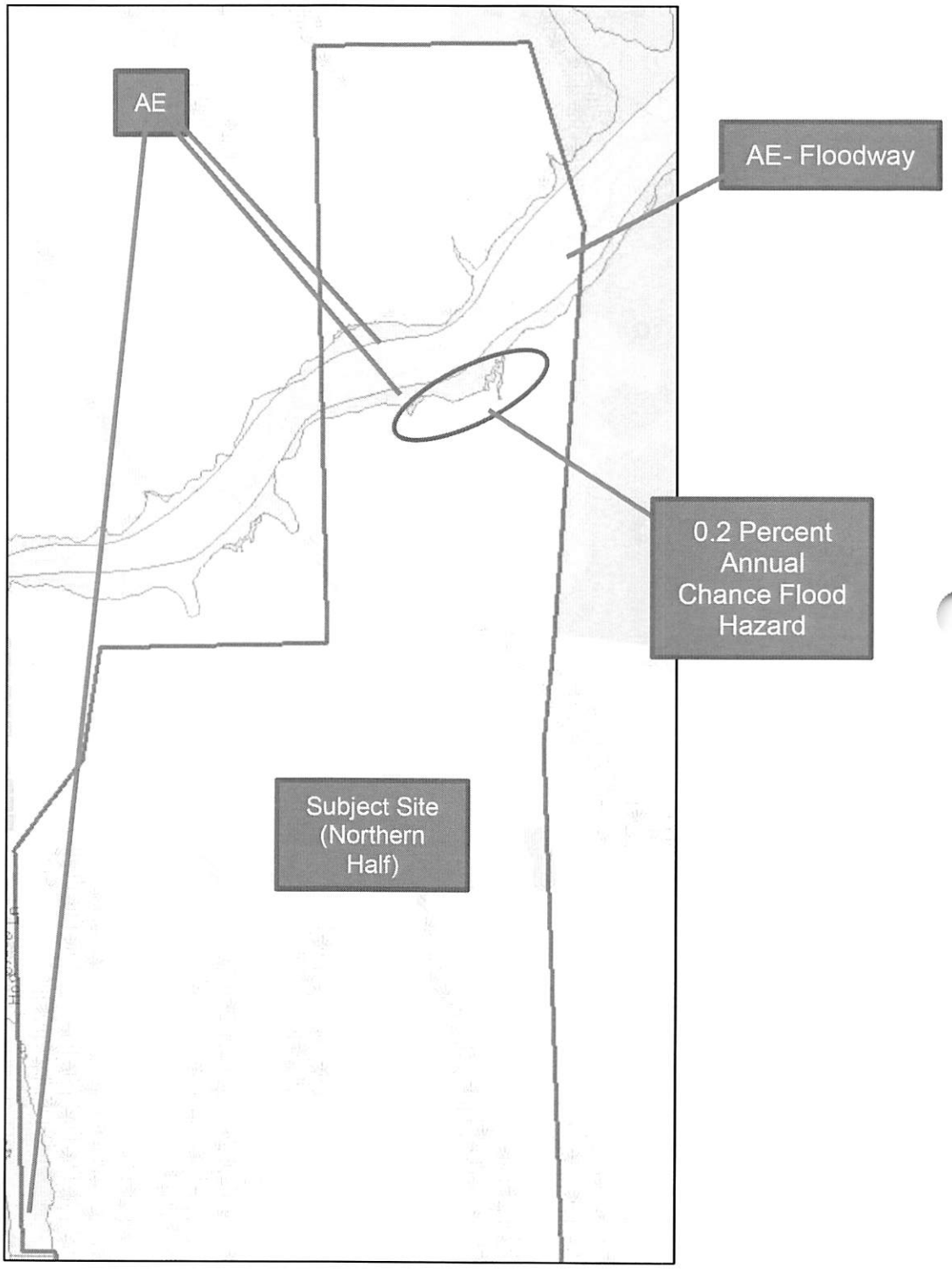
ATTACHMENT D

Wetlands Map:



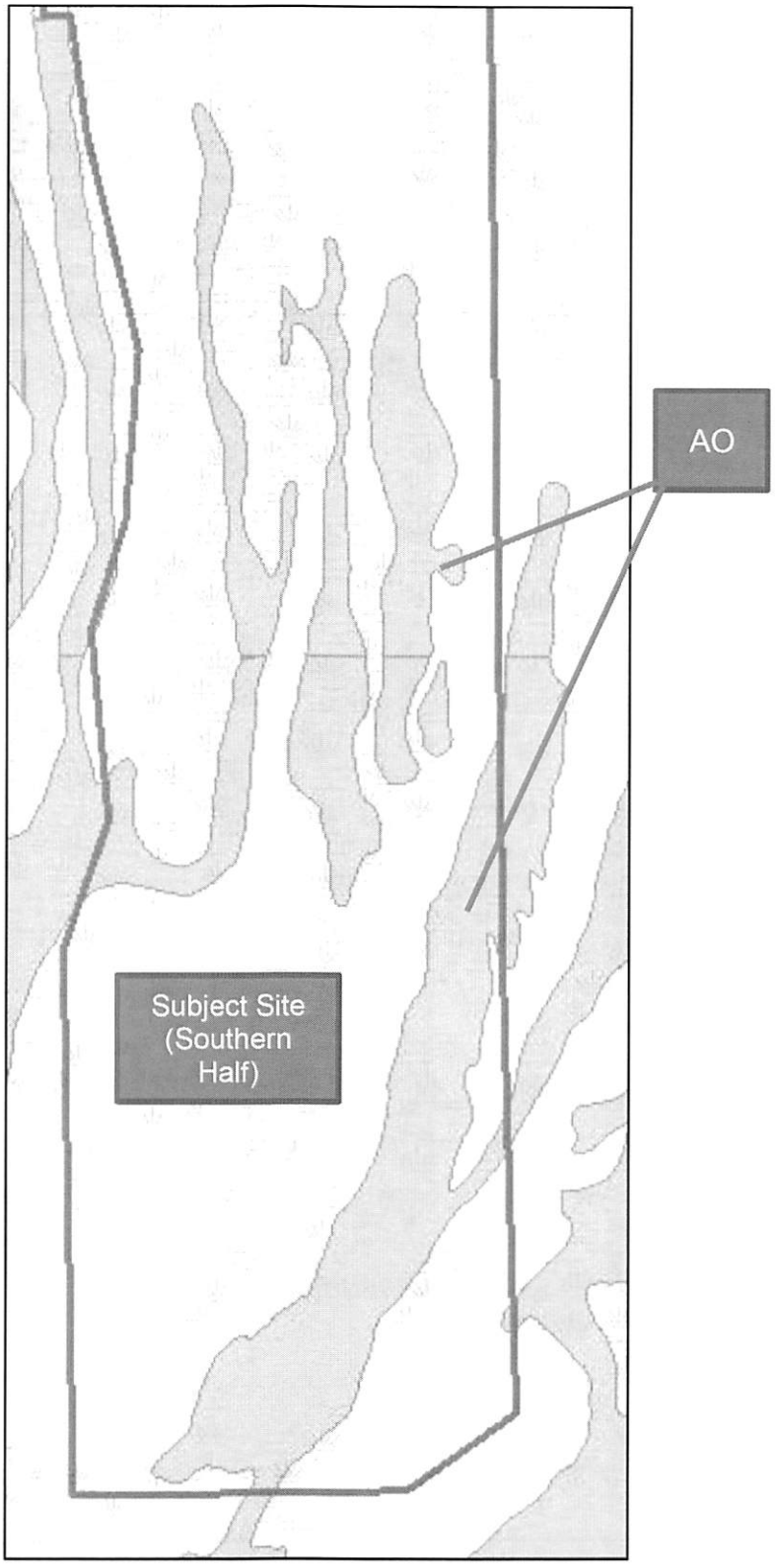
ATTACHMENT E

Flood Zone Map:



ATTACHMENT E (cont)

Flood Zone Map:



ATTACHMENT F

Land Use Amendment Application:

APPLICATION FOR LARGE-SCALE LAND USE AMENDMENT TO THE FUTURE LAND USE MAP SERIES - 2030 COMPREHENSIVE PLAN

Date Submitted:	12-20-2018	Date Staff Report is Available to Public:	07-12-2019
Land Use Transmittal Ordinance #:	2019-425	Planning Commission's LPA Public Hearing:	07-18-2019
JPDD Application #:	L-5349-18A	1st City Council Public Hearing:	07-23-2019
Assigned Planner:	Krista Fogarty	LUZ Committee's Public Hearing:	08-06-2019
		2nd City Council Public Hearing:	08-13-2019

GENERAL INFORMATION ON APPLICANT & OWNER

Applicant Information:
PAUL HARDEN
LAW OFFICE OF PAUL M. HARDEN
501 RIVERSIDE AVENUE, SUITE 901
JACKSONVILLE, FL 32202
Ph: 9043965731
Fax: 9043995461
Email: PAUL_HARDEN@BELLSOUTH.NET

Owner Information:
JED DAVIS
ESTUARY, LLC
4310 PABLO OAKS COURT
JACKSONVILLE, FL 32224

DESCRIPTION OF PROPERTY

Acreage: 2,512.23

Real Estate #(s): A portion of 167747 0000; 167748 0000; A portion of 167755 0010; A portion of 167757 0000; 167762 0010; A portion of 167763 0010; A portion of 167778 0310; 167875 1000; A portion of 167876 0000;

Planning District: 3

Council District: 11

Development Area: SUBURBAN AND RURAL AREAS

Between Streets/Major Features:
PHILIPS HWY and J TURNER BUTLER BLVD

General Location:
ON THE EAST SIDE OF I-295, NORTH OF 9B AND SOUTH OF J TURNER BUTLER BLVD

Address:
0 J TURNER BUTLER BLVD
0 PHILIPS HWY
0 HAMPTON RIDGE BLVD S

LAND USE AMENDMENT REQUEST INFORMATION

Current Utilization of Property: VACANT LAND

Current Land Use Category/Categories and Acreage:

AGR-I	107.80
AGR-II	1,633.45
AGR-III	770.98

Requested Land Use Category: LDR

Surrounding Land Use Categories: AGR-I,AGR-II,AGR-III,AGR-IV

Applicant's Justification for Land Use Amendment:

TO DEVELOP THE PROPERTY WITH LOW-DENSITY RESIDNETIAL USES

UTILITIES

Potable Water: JEA

Sanitary Sewer JEA

COMPANION REZONING REQUEST INFORMATION

Current Zoning District(s) and Acreage:

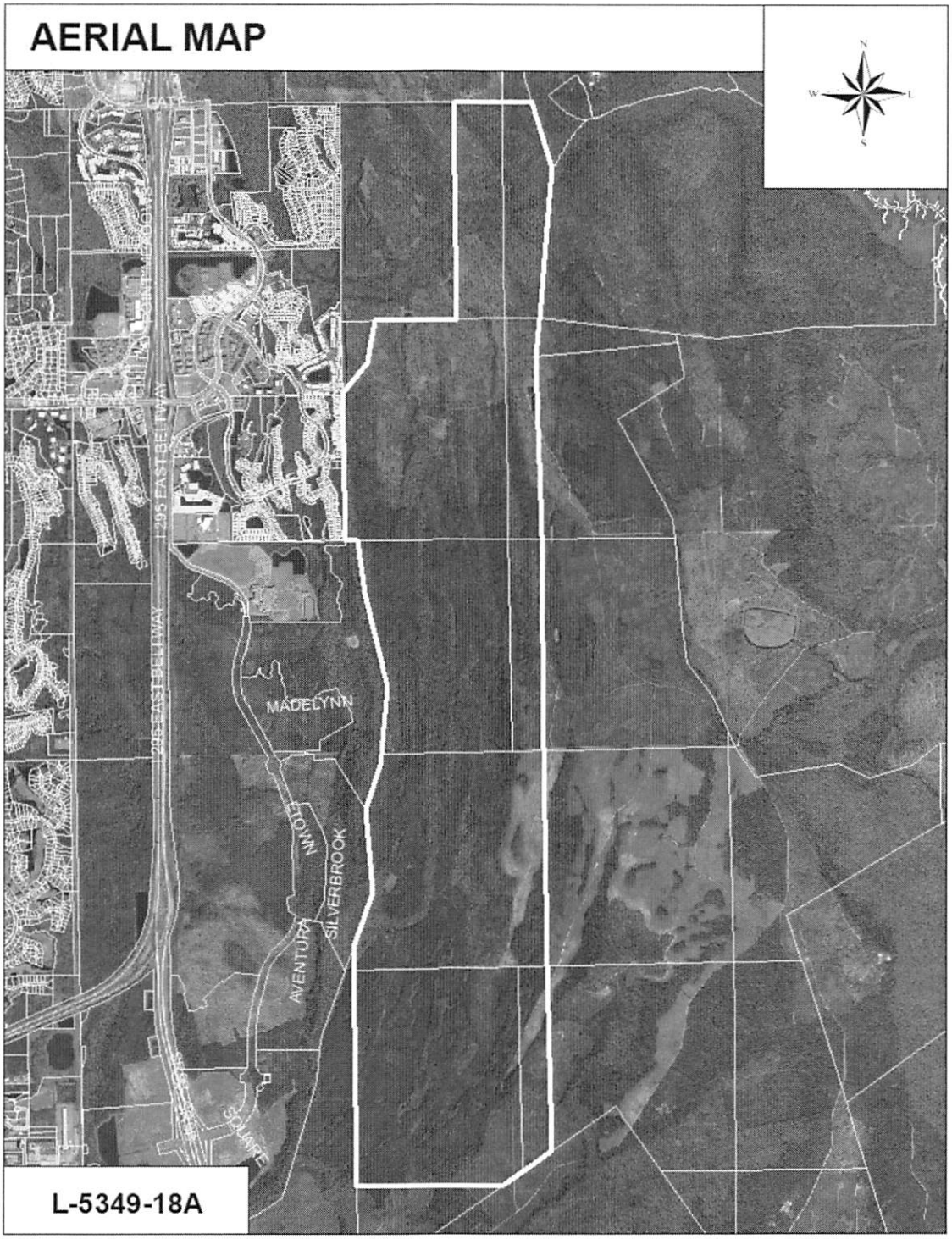
AGR	2,512.23

Requested Zoning District: RR-Acre

Additional information is available at 904-255-7888 or on the web at http://maps.coj.net/luzap/

ATTACHMENT G

Aerial Map:



ATTACHMENT H

Preliminary Wetland Assessment and Listed Wildlife Assessment

see following pages

LG² ENVIRONMENTAL SOLUTIONS, INC.

Solutions-Based Thinking

10475 Fortune Parkway, Suite 201 | Jacksonville, FL 32256 | Telephone 904-288-8631 | www.lg2es.com

December 4, 2018

Mr. Mikey White
4314 Pablo Oaks Ct
Jacksonville, FL 32224

Via Email: Mwhite@parcgroup.net

Re: Preliminary Wetland Assessment and Listed Wildlife Assessment
Northwest Davis Lands
Duval County, Florida
LG²ES Project Number 2018-260

Dear Mr. White:

Pursuant to your request, LG² Environmental Solutions, Inc. (LG²ES) has conducted a listed wildlife species and habitat assessment of the above-referenced property. The purpose of the assessment was to determine the potential presence and extent of wildlife species listed by the Florida Fish and Wildlife Conservation Commission (FWC) and U.S. Fish and Wildlife Service (USFWS). Additionally, on-site habitat types, including jurisdictional wetlands, were examined and their extents preliminarily mapped. Attached please find a report of our findings.

The User of this report is encouraged to review the entire report to gain a full understanding of the assessment results. Should you have any comments or questions regarding this report, please do not hesitate to contact us. We appreciate the opportunity to provide you professional environmental services.

Sincerely,

LG² Environmental Solutions, Inc.

Kristina Witter
Project Manager

Attachment 1 – Listed Wildlife and Habitat Assessment Report

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Preliminary Wetland Assessment and Listed Wildlife Assessment Report

Northwest Davis Lands
Duval County, Florida

LG²ES Project Number
2018-260

Prepared for:

Mr. Mikey White
4314 Pablo Oaks Ct
Jacksonville, FL 32224

Prepared by:

LG² Environmental Solutions, Inc.
10475 Fortune Parkway, Suite 201
Jacksonville, Florida 32256
(904) 363-1686
www.lg2es.com

December 4, 2018

TABLE OF CONTENTS

1.0 INTRODUCTION

During November 5 through 12, 2018 LG^2 Environmental Solutions, Inc. (LG^{2}ES) conducted a preliminary wetland assessment and listed wildlife and habitat assessment of the subject property in Duval County, Florida. The purpose of the assessment was to determine the potential presence and extent of wildlife species, and their associated habitats, listed as endangered, threatened or Species of Special Concern (SSC) by the Florida Fish and Wildlife Conservation Commission (FWC) and U.S. Fish and Wildlife Service (USFWS). Additionally, the presence and extent of jurisdictional wetlands was preliminarily assessed.

2.0 METHODOLOGY

Prior to the site assessment, aerial orthophoto satellite images, United States Geological Survey (USGS) topographic maps, and U.S. Department of Agriculture (USDA) soil survey maps were reviewed to determine potential habitat and associated wildlife species on-site. The *Soil Survey of Duval County* (USDA-NRCS 1987) was reviewed to help evaluate suitable habitat for sensitive species depending on substrate requirements (USDA 1987). Wildlife databases including the *Florida Fish and Wildlife Conservation Commission Bald Eagle Nest Locator* (FWC 2018), the *Florida Natural Areas Inventory Biodiversity Matrix* (FNAI 2018), and the *USFWS Information for Planning and Consultation* (IPaC) endangered species resource list were accessed prior to site assessment to determine potential for sensitive wildlife species and their suitable habitats. Additionally, the U.S. Army Corps of Engineers (USACE) Jacksonville District USFWS *Wood Stork Programmatic Key* (USFWS 2008) and *Eastern Indigo Snake Programmatic Effect Determination Key* (USFWS 2013) were referenced to assist in determination of presence and potential impacts to these species.

During the site assessment, meandering pedestrian transects were conducted within each vegetative community. Within each transect, LG^{2}ES collected data such as plant species, wildlife species, weather conditions, time assessment commenced and terminated, and anthropogenic activity. Vegetative communities were identified according to the *Florida Land Cover Classification System* (FLCCS) (FWC 2014). These methods are consistent with recognized FWC survey guidelines for a general wildlife assessment.

3.0 DATABASE REVIEW OF SITE CONDITIONS

3.1 USDA Soil Survey

The *Soil Survey of Duval County* (USDA-NRCS 1987) indicates that nine soil types are defined on the property. The soil types are listed below and depicted on the attached Figure 3.

Evergreen-Wesconnett, Complex, Depressional (22) – This soil series is described as very poorly drained soils with a parent material of organic material over sandy marine deposits. The water table is usually 0 inches from the surface. Slopes range from 0 to 2 percent. These soils typically support Slash Pine Swamp Forests, Cypress, and Cypress/Hardwood swamps.

Hurricane and Ridgewood Soils (24) – This soil series is described as poorly drained soils with a parent material of sandy marine deposits. The water table is usually 24 to 42 inches from the surface. Slopes range from 0 to 5 percent. This soil type supports Sandhills and Dry Flatwoods communities.

Kershaw Fine Sand (25) – This soil series is described as excessively drained soils with a parent material of sandy marine deposits. The water table is usually more than 80 inches from the surface. Slopes range from 2 to 8 percent. This soil type supports Sandhills and Dry Flatwoods communities.

Leon Fine Sand (32) – This soil series is described as poorly drained soils with a parent material of sandy marine deposits. The water table is usually 60 to 18 inches from the surface. Slopes range from 0 to 2 percent. This soil type supports Dry Flatwoods communities as well as the Cypress community type.

Lynn Haven Fine Sand (35) – This soil series is described as poorly drained soils and with a parent material of sandy marine deposits. The water table is usually 0 to 6 inches from the surface. Slopes range from 0 to 2 percent. This soil type supports Dry Flatwoods communities.

Ortega Fine Sand (46) – This soil series is described as moderately well drained soils with a parent material of eolian or sandy marine deposits. The water table is usually 42

to 72 inches from the surface. Slopes range from 0 to 5 percent. This soil type supports Sandhills and Dry Flatwoods communities.

Pamlico Muck, Depressional (49) – This soil series is described as very poorly drained soils with a parent material of herbaceous organic material over sandy marine deposits. The water table is usually 0 inches from the surface. Slopes range from 0 to 1 percent. These soils typically support Slash Pine Swamp Forests and Cypress/Hardwood swamps.

Pamlico Muck, Frequently Flooded (50) – This soil series is described as very poorly drained soils with a parent material of herbaceous organic material over sandy marine deposits. The water table is usually 0 to 6 inches from the surface. Slopes range from 0 to 2 percent. This soil type supports Cypress/Hardwood Swamps found in the Pablo Creek system.

Rutlege Mucky Fine Sand, Frequently Flooded (62) – This soil series is described as very poorly drained soils with a parent material of sandy marine deposits and/or fluviomarine deposits. The water table is usually 0 to 6 inches from the surface. Slopes range from 0 to 2 percent. This soil type supports Cypress/Hardwood Swamps found in the Pablo Creek system.

Water (99) – Man made open water body created by damming the downstream flow of a natural wetland system.

4.0 SITE VISIT SUMMARY

In pursuit of this assessment, LG^{2}ES biologists conducted a site visit to record the habitat and their associated wildlife species on-site, with emphasis on the presence of listed wildlife species, their associated habitats, and jurisdictional wetlands. The observed vegetative communities are described in Section 4.1. The weather conditions during the site visit were reported as cloudy to occasionally sunny skies with an average high temperature of 80 degrees Fahrenheit (°F) and winds up to 10 miles per hour (mph). These conditions, considering the time of day, the season, and the scope of the inspection, may have influenced the wildlife species observed. The presence of specific wildlife species was determined visually, audibly, or by evidence of tracks, scat, nests,

burrows, and/or dens. General wildlife species observed were recorded and are described in Section 4.2.

4.1 Observed Vegetative Communities

During the site assessment, LG²ES biologists conducted a series of meandering pedestrian transects throughout the subject property to categorize the on-site vegetative communities in accordance with FLCCS criteria. The location of natural resource issues of concern, and occurrences, were recorded using hand-held global positioning system (GPS) unit for later use in generating report graphics and recommendations. The attached Figure 4 provides a FLCCS map for reference. The following is a brief description of the habitat communities observed.

Uplands

Sandhill (FLCCS 1240) - This upland system showed signs of frequent fire and was characterized by a xeric, deep sand substrate, an open canopy of longleaf pine (*Pinus palustris*), including old-growth, flat-topped trees, interspersed with turkey oak (*Quercus cerris*) and an understory characterized by wiregrass (*Aristida stricta*) and saw palmetto *(Serenoa repens)* but also containing of a high diversity of other graminoid and forb plant species.

Dry Flatwoods (FLCCS 1310) – This non-hydric vegetative community showed signs of fire and was characterized by an open pine canopy of longleaf and slash pine (*Pinus elliottii*). Subcanopy and understory layers dominated by turkey oak, live oak *(Quercus virginiana, Q. geminata),* rusty lyonia *(Lyonia ferruginea),* gallberry *(Ilex glabra),* saw palmetto, blueberries *(Vaccinium arboreum, V. myrsinites, V. stamineum)* were observed over a patchy groundcover dominated by wiregrass, bracken fern *(Pteridium aquilinum),* dwarf live oak *(Quercus minima) and* broomsedge *(Andropogon virginicus).*

Mesic Flatwoods (FLCCS 1311) – This vegetative community was characterized by mesic, sandy soils with an open longleaf and/or slash pine canopy and a layer of low shrubs and herbs including saw palmetto, gallberry, dwarf live oak, wiregrass.

Coniferous Plantations (FLCCS 183332) – This classification is applied to all pine plantations of various ages that were artificially generated by planting seedling stock or seeds, usually along mechanically created bed rows. The groundcover was predominantly saw palmetto, goldenrod (*Solidago* sp.), grape vine (Vitis rotundifolia),

bracken fern and broomsedge. This community type likely contained areas of wetlands where slash pines were planted through shallow flatwoods depression and hydric flatwoods wetland communities. Identification and mapping of these subtle wetlands within the coniferous plantation was beyond the scope of this preliminary assessment and would require a jurisdictional wetland delineation.

Bare Soil/ Clear Cut (FLCCS 1880) – This xeric community type was represented by areas that were devoid of trees and contained exposed soils as the result of recent timber cutting operations.

Wetlands

Slash Pine Swamp Forest (FLCCS 2224) - This forest type was represented by domed, depressional swamps and strands dominated by slash pine and pond cypress *(Taxodium ascendens)* with black tupelo *(Nyssa sylvatica),* loblolly bay *(Gordonia lasianthus),* and swamp bay *(Persea palustris)* as well as Sphagnum moss, dahoon holly *(Ilex cassine),* sweet gallberry (*Ilex coriacea),* saw palmetto, blackstem chain fern *(Woodwardia virginica)* and cinnamon fern (*Osmundastrum cinnamomeum*).

Cypress/Hardwood Swamps (FLCCS 2241) - This community was represented by a mix of cypress *(Taxodium ascendens, A. distichum)* and hardwood species where neither was dominant and included black tupelo (*Nyssa sylvatica*), loblolly bay, sweet bay *(Magnolia virginiana)* and slash pine.

Cypress (FLCCS 2211) - This community was observed in one area on the northern portion of the property and was dominated entirely by cypress with little to no understory vegetation and a seemingly perpetually wet substrate.

Clearcut Wetland (FLCCS 2440) – These are wetlands where potentially merchantable trees, possibly containing cypress and mixed hardwoods, have been removed.

Wet Coniferous Plantation (FLCCS 2450) – This forest type is comprised of planted slash pine in hydric soils.

4.2 Wildlife

During the site reconnaissance, LG²ES biologists conducted meandering pedestrian transects and stationary observations to survey the onsite habitat types, with emphasis on those areas with vegetative assemblages and hydrology and/or soils potentially indicative for the presence of listed wildlife species identified in the desktop review. The scope of this effort was a presence/absence survey for listed wildlife species and the supporting habitats identified for each species. Formal, species-specific, surveys were not within the scope of this site assessment, but can be conducted to satisfy any future permitting requirements needed to quantify the onsite listed wildlife species population parameters. Observations of wildlife were made visually, audibly, or by evidence of tracks, scat, nests, burrows, and/or dens. Observed wildlife and potentially-occurring listed species are detailed in the following sections. The wildlife species observed during the site assessment are listed in Table 1.

Table 1
Observed Wildlife Species

Common Name	Taxonomic Name	Observation	*Listing Status
Gopher tortoise	*Gopherus polyphemus*	Burrow	ST
Red-cockaded woodpecker	*Leuconotopicus borealis*	Flight, Sighted, Calls	FE
Red-headed woodpecker	*Melanerpes erythrocephalus*	Flight, Calls	None
Pine warbler	*Setophaga pinus*	Visual	None
Gray Catbird	*Dumetella carolinensis*	Calls	None
Carolina chickadee	*Poecile carolinensis*	Calls	None
Tufted titmouse	*Baeolophus bicolor*	Calls	None
Downy woodpecker	*Picoides pubescens*	Visual	None
Red-winged blackbird	*Agelaius phoeniceus*	Visual	None
Eastern towhee	*Pipilo erythrophthalmus*	Calls	None
Northern cardinal	*Cardinalis cardinalis*	Calls	None
Northern bobwhite quail	*Colinus virginianus*	Visual, Calls	None
Nuthatch	*Sitta sp.*	Calls	None
Black vulture	*Coragyps atratus*	Flight	None
Queen butterfly	*Danaus gilippus*	Visual	None
Red-shouldered hawk	*Buteo lineatus*	Flight, Calls	None
Florida hog	*Sus scrofa*	Visual, Foraging Impacts	Invasive
Cooter turtle	*Pseudemys sp.*	Basking	None
Southern black racer	*Coluber constrictor priapus*	Visual	None

*Federally-designated endangered (FE); Federally-designated threatened (FT); Federally-designated threatened species due to similarity of appearance [FT(S/A)]; State designated threatened (ST); State Species of Special Concern (SSC); Federally protected under the Bald and Golden Eagle Protection Act (BGEPA)

4.2.1 Sensitive Species and Supporting Habitats

Sensitive species are those species deemed Federally Endangered (FE), State of Florida Threatened (ST) and Federally Threatened (FT), or Species of Special Concern (SSC) by the FWC and/or USFWS. Prior to the site reconnaissance, online databases including, but not limited to, the FNAI biodiversity matrix, FWC Bald eagle nest data, and USFWS IPaC resource list, were reviewed for known occurrences of listed species and potential suitable habitats within the subject property.

The FNAI biodiversity matrix listed zero "documented", three "likely" and four "potential" rare, threatened, or endangered (RTE) wildlife species expected to inhabit the area. A search of the USFWS IPaC resource list yields four additional RTE species with the potential to occur in the area. The RTE wildlife species referenced in these reports are presented in Table 2. State and federally listed wildlife species that occurred, or could potentially occur, within the subject property are discussed in more detail below. Species listed in these reports but occurring exclusively in marine environments, such as manatees and sea turtles, are not included in this discussion because no waterbodies with the capacity to sustain these animals were observed onsite. A copy of the FNAI Biodiversity Matrix and USFWS IPaC reports are included in the appendices.

Table 2
FNAI Biodiversity Matrix Listed Wildlife Species

Result	Common Name	Taxonomic Name	Observed on-site	*Listing Status
Likely	Wood Stork	*Mycteria americana*	No	FT
Likely	Black Creek Crayfish	*Procambarus pictus*	No	ST
Likely	Red-cockaded Woodpecker	*Picoides borealis*	Yes	FE
Potential	Florida Black Bear	*Ursus americanus floridanus*	No	De-listed
Potential	Florida Burrowing Owl	*Athene cunicularia floridana*	No	ST
Potential	Gopher Tortoise	*Gopherus polyphemus*	Yes	ST
Potential	Eastern Indigo Snake	*Drymarchon couperi*	No	ST & FT

USFWS IPAC Endangered Species List

Result	Common Name	Taxonomic Name	Observed on-site	*Listing Status
Potential	Anastasia Island Beach Mouse	*Peromyscus polionotus phasma*	No	FE
Potential	Piping Plover	*Charadrius melodus*	No	FT
Potential	Red knot	*Calidris canutus rufa*	No	FT

Potential	Frosted Flatwoods Salamander	*Ambystoma cingulatum*	No	FT

*Federally-designated endangered (FE); Federally-designated threatened (FT); Federally-designated threatened species due to similarity of appearance [FT(S/A)]; State designated threatened (ST); State Species of Special Concern (SSC); Federally protected under the Bald and Golden Eagle Protection Act (BGEPA)

Wood Stork

The wood stork is listed as Threatened by the federal Endangered Species Act (ESA) and as federally-designated Threatened by Florida's Endangered and Threatened Species Rule (Chapter 68A-27.0031, Florida Administrative Code). These large wading birds reach up to 45-inches in length with a long, heavy curved bill and long legs. This species is identified by the scaly appearance of their head due to its lack of feathers. The adults are voiceless. According to the USFWS, wood storks prefer to forage in ponds and marshes with little or no canopy but have been observed in forested wetlands with canopies of less than 20 percent (%). Suitable foraging habitat (SFH) for wood storks includes, but is not limited to, freshwater marshes, cypress depressions, swamp sloughs, tidal creeks and pools, and seasonally-flooded ditches.

For counties in Northeast Florida, the USFWS designated a 13-mile core foraging area (CFA) buffer around active nesting wood stork colonies to protect wood stork SFH. The subject property is located within the designated CFA and within 2.5-miles of the nearest wood stork nesting colony (Dee Dot Ranch Site, Figure 5). This property contained cypress depressions, and open pools that could be considered wood stork SFH. The USFWS Wood Stork Programmatic Key was used to identify any potential impacts to wood storks and whether further consultation with USFWS would be required. Per the Key, projects impacting less than 0.5-acres of wood stork SFH will result in a "Not Likely to Adversely Impact" (NLAI) determination. If USACE permitting is required for this project, further coordination with USACE may require additional documentation to determine the status of wood stork SFH within the subject property.

Black Creek Crayfish

The Black Creek crayfish is protected as a State-designated Threatened species by Florida's Endangered and Threatened Species Rule (Chapter 68A-27.0031, Florida Administrative Code). This medium sized crayfish grows to 3-inches in length and has a distinctive pattern of yellowish to white spots and stripes on a dark brown to black carapace, and a rust-colored abdomen with dark cross-bands. In the wild, its unique color pattern readily distinguishes this species from all other Florida crayfishes. They inhabit small, tannic stained, swift sandy-bottomed streams and headwaters flowing

through or from swampy terrain, where they can be found taking refuge under tree roots and in vegetation (Franz 1994). This species can be found in St. Johns, Duval, Clay, and Putnam counties in Florida.

Although no black creek crayfish were observed during this assessment, numerous non-specific crayfish "chimneys" were observed at the banks of the Pablo Creek, which bisects the northernmost portion of this property. This flowing, sandy-bottomed, tannic creek system contains suitable habitat in which the black creek crayfish could occur. If project permit application proposes wetland impacts, it is possible that the St. John's River Water Management District (SJRWMD) will require additional surveys to document the presence/absence of the black creek crayfish within the subject property (typically January through September for gravid females and young). Per the FWC-approved Species Conservation and Permitting Guidelines, specific protection measures may need to be implemented before and during construction activities and/or monetary mitigation contributions may be required for impacts to suitable potential habitat.

Red-cockaded Woodpecker

The red-cockaded woodpecker (RCW) is listed as Endangered by the federal ESA and as federally-designated Endangered by Florida's Endangered and Threatened Species Rule (Chapter 68A-27.0031, Florida Administrative Code). The RCW is a black and white bird that can reach lengths of 9-inches. RCWs have a large white patch located on their cheek, a black head and neck, a white belly, and a barred black and white back. The cockade, which is only found on the male and rarely visible when not in-hand, consists of a small patch of red feathers at the temples. RCWs prefer mature pine forests, especially those containing longleaf pine (*Pinus palustris*). This is the only species of woodpecker to create nesting and roosting cavities in live pine trees.

The northern portion of the property (an estimated 500-acres) contained highly suitable RCW foraging habitat as well as numerous old-growth and flat-top longleaf pines, suitable for nesting cavity excavation. During this assessment, multiple individual RCWs were observed foraging on the property. While conducting general meandering surveys, an RCW subject matter expert identified two cavity roosting trees within the property boundary provided by the client (see Figure 6). One additional cavity tree was located just off-site. Species specific surveys would be required to determine if additional cavity trees exist within the property boundaries. It is reasonable to assume multiple family groups of RCWs inhabit the subject property and surrounding lands.

As this species is considered critically endangered, any development at the subject property that will impact this area of habitat will be considered to have an adverse effect on this species. USFWS consultation will be required prior to permitting for any proposed development activities to determine the level of restrictions or mitigation measures that must be implemented.

Florida Black Bear

The Florida black bear was recently de-listed in the State of Florida due to growth in numbers but maintains a high-profile status in the state with regard to conservation and protection. Although primarily black, the muzzle may be tan or nearly black, and some Florida black bears have blonde or white "blazes" on their chests. Black bears are extremely adaptable and show a great variation in habitat types, though they are primarily found in forested areas with thick ground vegetation and an abundance of fruits, nuts, and vegetation. They grow to 2 to 3-feet high and 4 to 7-feet long with males weighing and average of 150 to 300 pounds.

No evidence of black bear foraging was observed on the subject property; however, black bears are known to occur in the area and have been observed on surrounding lands. Bears have large home ranges, averaging 10 square miles for females and up to 60 square miles for males. Therefore, it is likely black bears would occur on the landscape; however, is unlikely that they regularly utilize this habitat for foraging as there is a lack of fruit and nut bearing plants and little evidence of small mammals as a food source. There is also a low potential for denning behavior on the property as there was little to no habitat that could sustain hibernation dens. Any development at the subject property is not likely to adversely affect this species.

Florida Burrowing Owl

The Florida burrowing owl is classified as State Threatened by the FWC and the birds as well as their eggs are also protected by the federal Migratory Bird Treaty Act. This small bird of prey averages just 9-inches in height with long legs, bright yellow eyes and a white chin. Burrowing owls live in open, treeless areas and spend most of their time on the ground where their sandy-colored plumage provides camouflage. Burrowing owls inhabit open native prairies and cleared areas that offer short groundcover including cleared forests and agricultural fields. They prefer dry, upland areas with soft sands where they exploit the borrows created by other animals for nesting. For this reason, are often associated with areas that have a high density of gopher tortoises.

The subject property does contain gopher tortoise burrows in upland sandhill habitat; however, the density of trees and groundcover in those areas is too great to support a population of burrowing owls. No burrowing owls or evidence of their nesting was observed during the assessment and it is unlikely that any development on this property will adversely affect this species.

Gopher Tortoise

The gopher tortoise is classified as a state-Threatened species and is protected by Florida's Endangered and Threatened Species Rule (Chapter 68A-27.0031, Florida Administrative Code). The gopher tortoise is a moderate-sized, terrestrial turtle averaging 9 to 11-inches in length. The species is identified by its stumpy, elephantine hind feet and flattened, shovel-like forelimbs adapted for digging. The shell is oblong and generally tan, brown, or gray in coloration. They prefer upland habitats with open canopy and well drained soils.

During this assessment, multiple active gopher tortoise burrows were observed throughout the subject property (see Figure 6) while conducting meandering surveys. For any proposed impacts to the species, FWC regulations require a 100% coverage gopher tortoise burrow survey and subsequent relocation efforts be performed by an authorized gopher tortoise agent. Any development of the subject property within occupied tortoise habitat, upon implementation of FWC approved tortoise relocation and/or management requirements, is not likely to adversely affect this species.

Eastern Indigo Snake

The eastern indigo snake is listed as Threatened by the ESA and as Federally-designated Threatened by Florida's Endangered and Threatened Species Rule (Chapter 68A-27.0031, Florida Administrative Code). This non-venomous snake is bluish-black in color and can reach lengths of 8-feet. Eastern indigo snakes inhabit a mosaic of habitats including sandhills, pine flatwoods, hardwood forests, moist hammocks, and areas that surround cypress swamps. In high xeric habitats, eastern indigo snakes are associated with gopher tortoise whose burrows provide shelter from winter cold and summer heat. In central and coastal Florida, eastern indigos are mainly found in high sandy ridges. Their current range extends throughout the state of Florida and southern Georgia.

The eastern indigo snake was not observed during the onsite reconnaissance. The subject property contained suitable habitat which could sustain eastern indigo snakes as

well as numerous gopher tortoise burrows which could provide shelter. It is possible that the eastern indigo snake occurs on this property. The USFWS Eastern Indigo Snake Programmatic Key was used to identify potential impacts to eastern indigo snakes and whether further consultation with USFWS would be required. Per the Key, projects impacting less than 25-acres of suitable eastern indigo snake habitat, as described above, will result in a NLAI determination.

If USACE permitting is required for this project, consultation between USACE and USFWS may require; additional surveys to document the presence/absence of eastern indigo snakes within the subject property, specific protection measures to be implemented before and during construction activities which may include excavation and monitoring of gopher tortoise burrows, and/or monetary mitigation contributions for impacts to suitable eastern indigo snake habitats.

Anastasia Island Beach Mouse

The Anastasia Island beach mouse is classified as endangered by the federal ESA and is protected under Florida's Endangered and Threatened Species Rule (Chapter 68A-27.0031, Florida Administrative Code). They are a subspecies of the small old-field mouse that can reach a length of 5.5-inches. This species of beach mouse has a yellowish-brown to gray-pink dorsal (back) color, with a white belly. The tail of the Anastasia Island beach mouse is usually white with a white nose and white spots/blemishes over both eyes.

No Anastasia Island beach mice were observed during this assessment and it is unlikely they would occur as no suitable habitat was observed within the subject property. Additionally, the Anastasia Island beach mouse is currently known to be restricted to sand dunes on Anastasia Island, Florida.

Piping Plover

The piping plover is listed as Threatened by the federal ESA and as federally-designated Threatened by Florida's Endangered and Threatened Species Rule (Chapter 68A-27.0031, Florida Administrative Code). As small, stocky, sandy-colored birds, piping plovers resemble sandpipers. Adult plovers have yellow-orange legs, a black band across the forehead from eye to eye, and a black ring around the base of the neck. Piping plovers do not breed in Florida but do winter in the southeastern U.S., including Florida.

They are generally found along wide, flat, open, sandy beaches with very little grass or other vegetation.

The subject property did not contain suitable piping plover habitat. No piping plovers were observed during the site assessment and it is unlikely that any proposed development at the subject property would adversely affect this species.

Red Knot

The red knot is listed as Threatened by the Federal ESA and as federally-designated Threatened by Florida's Endangered and Threatened Species Rule (Chapter 68A-27.0031, Florida Administrative Code). The red knot is a type of sandpiper reaching 11-inches in length and possessing pale gray wings and rumps with a white chest and face This shorebird is easily identified during the spring when it exhibits rusty-red chest plumage. Red knots do not breed in Florida but do winter in the southeastern U.S., including Florida. They are generally found along coastal marine and estuarine habitats with large areas of exposed intertidal sediments.

The subject property did not contain suitable red knot habitat. No red knots were observed during the site visit. Any development at the subject property is not likely to adversely affect this species.

Frosted Flatwoods Salamander

The frosted flatwoods salamander is protected as a Threatened species by the Federal ESA and as a Federally-designated Threatened species by Florida's Endangered and Threatened Species Rule (Chapter 68A-27.0031, Florida Administrative Code). It is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. The flatwoods salamander reaches a length of up to 5-inches and ranges in color from silvery gray to black, with the back heavily mottled with a variable gray cross-band pattern. The underside is plain gray with faint creamy blotches. Flatwoods salamanders are endemic to the lower Gulf and Atlantic coastal plains where they occur in fire-dependent longleaf pine-wiregrass flatwoods and savannas with scattered wetlands. Breeding sites are typically shallow, ephemeral cypress and/or swamp tupelo ponds.

No salamanders were observed during this assessment; however, the subject property contains potentially suitable habitat, especially near the northern extent of the property.

It is possible that flatwoods salamanders occur onsite but additional species-specific surveys conducted for adults in fall (October through December) and for larvae in early spring (January through March) would be required to confirm presence or absence. If USACE permitting is required for a future project within the subject property, then consultation between USACE and USFWS may require the applicant to document presence/absence of this species within the subject property. Presence of this species would require specific protection measures to be implemented before and during construction activities and/or monetary mitigation contributions for impacts to suitable frosted flatwood salamander habitats.

Bald Eagle (*Haliaeetus leuchocephalus*)

The bald eagle is no longer protected under the ESA; however, it is still afforded protection under the Bald and Gold Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA). In addition to the federal law, the state of Florida protects eagles under the State Eagle Rule (Chapter 68A-16.002, Florida Administrative Code). The bald eagle is a large-bodied raptor. Bald eagles typically nest in forested areas adjacent to large bodies of water, staying away from heavily developed areas when possible. Bald eagles are tolerant of human activity when feeding, and may congregate around fish processing plants, dumps, and below dams where fish concentrate. For perching, bald eagles prefer tall, mature coniferous or deciduous trees that afford a wide view of the surroundings.

No eagles or their nests were observed on the property during the site reconnaissance. An FWC eagle nest locator database search was performed to further search for documented bald eagle nests within the proximity of the property. The search results identified one eagle nest (#DU004; See appendix D) within four miles of a central point on the subject property. It was last surveyed in 2013 and its last known activity was in 2003. The FWC eagle nest database documents known nests surveyed through April 2017 to within 0.1-miles. If an eagle's nest is established onsite in the future, current FWC, FWS and/or County protection protocols will need to be followed. The proposed project is not likely to adversely affect this species.

5.0 CONCLUSION & SUMMARY

During the wildlife survey, LG^{2}ES biologists conducted meandering pedestrian transects, road cruising surveys, and stationary observation posts throughout each on-site habitat

type to observe the potential presence of listed wildlife species. The upland and wetland habitat communities found on-site are considered common in the landscape of Duval County and northeast Florida, with the exception of the sandhill habitat community.

During this on-site wildlife assessment, LG²ES documented evidence of state threatened gopher tortoises. A gopher tortoise relocation permit would be required by the state FWC prior to any land disturbing activities, beyond the current land use of silviculture, within occupied gopher tortoise habitat. Additionally, LG²ES documented the presence of federally listed endangered red-cockaded woodpeckers and cavity trees. As such, LG²ES recommends a 100% coverage species-specific survey of the suitable RCW habitat within the northern Sandhill habitat. The survey should be conducted by trained biologists and a follow-up consultation is recommended to discuss future land use options, including the possibility of voluntary participation in the FWC Safe Harbor Program. Permits would likely be required for any large-scale land use change from the current usage (silviculture) to development or other activities involving clearing and grading or excavation of the property.

If a USACE and/or SJRWMD permit is required for the project, USFWS and/or FWC may be notified and allowed to comment on listed species with the potential to occur on site. During this comment period, additional information may be requested from the applicant to document whether the project proposes to impact any potentially occurring listed wildlife species. This request for additional information may take the form of informal correspondence or formal consultation. The species that may trigger a request for additional information include the red-cockaded woodpecker, eastern indigo snake, black creek crayfish, frosted flatwoods salamander and/or the wood stork. If no USACE and/or SJRWMD/Florida Department of Environmental Protection (FDEP) permit is required for land use activities with potential to disturb listed species habitat, then USFWS and/or FWC consultations regarding listed wildlife species will be at the discretion of the property owner.

6.0 REFERENCES

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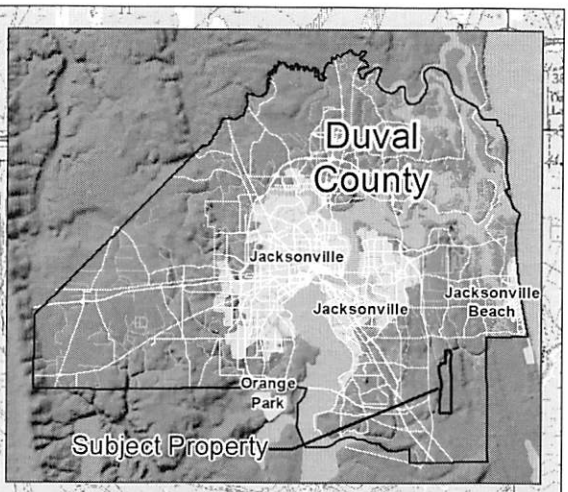
Army Corps of Engineers, Jacksonville District (USACE) & U.S. Fish & Wildlife Service, Jacksonville Ecological Services Field Office (USFWS) September 2013. Wood Stork Key for Central and North Peninsular Florida.
Accessed online at:
https://www.fws.gov/northflorida/WoodStorks/Documents/20080900_JAXESO_WOST_Key.pdf

APPENDIX A

Figures 1-7



Subject Property

USGS Quadrangle
Palm Valley

Township 3 South
Range 28 East
Sections 21, 22, 27, 28, 33, 34

Township 4 South
Range 28 East
Sections 3, 4, 9, 10

N
W E
S

1 inch = 4,000 feet

0 4,000 8,000
Feet

Figure 1

Topographic Site Location
Northwest Davis Lands
Jacksonville, Duval County, Florida

2018-260 November 20, 2018

LG² ENVIRONMENTAL SOLUTIONS, INC.
10475 Fortune Parkway, Suite 201
Jacksonville, Florida 32256
(904) 363-1686

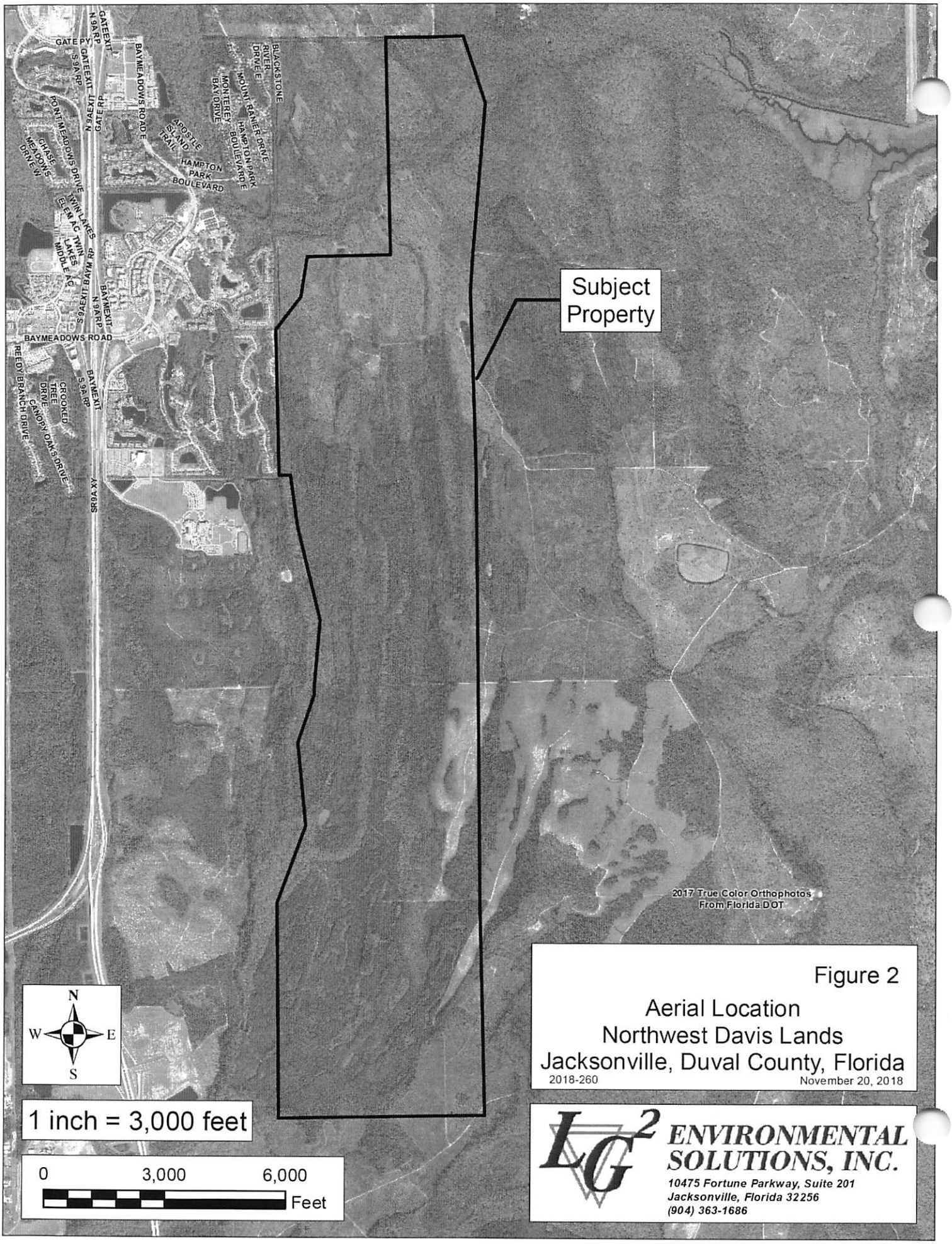


Figure 2

Aerial Location
Northwest Davis Lands
Jacksonville, Duval County, Florida

2018-260

November 20, 2018

LG² ENVIRONMENTAL SOLUTIONS, INC.
10475 Fortune Parkway, Suite 201
Jacksonville, Florida 32256
(904) 363-1686

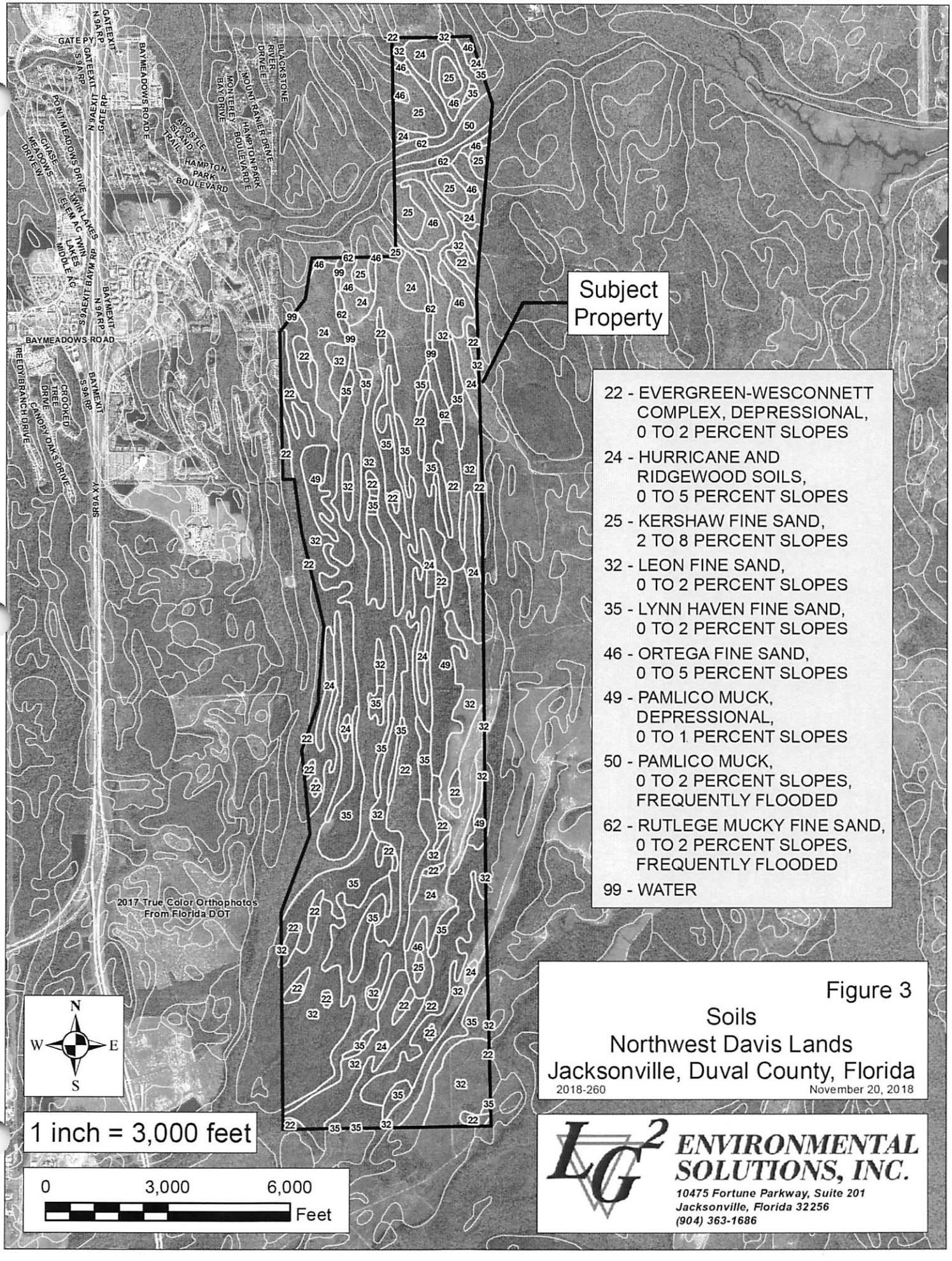


Figure 3

Soils

Northwest Davis Lands

Jacksonville, Duval County, Florida

2018-260

November 20, 2018

LG² ENVIRONMENTAL SOLUTIONS, INC.
10475 Fortune Parkway, Suite 201
Jacksonville, Florida 32256
(904) 363-1686

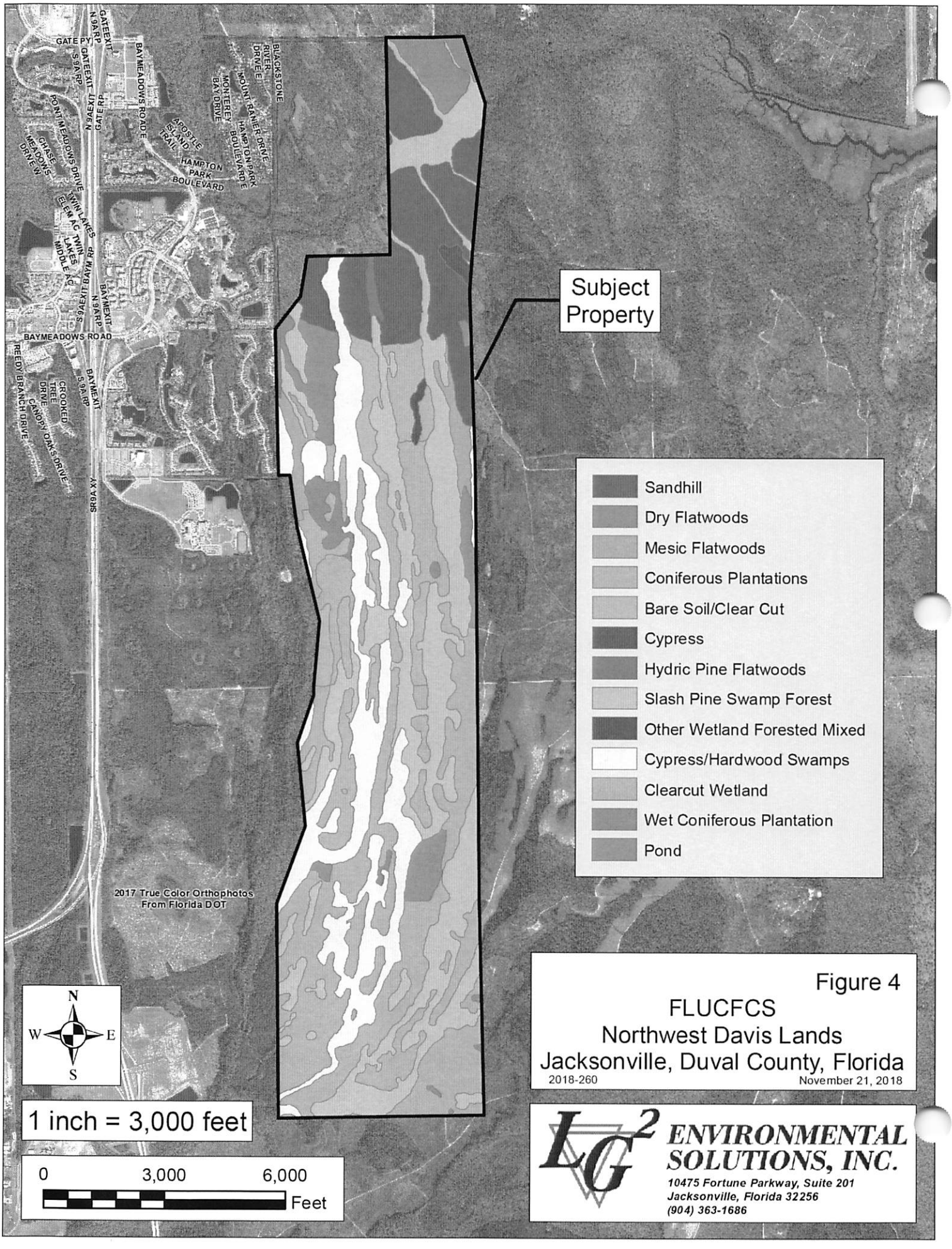


Figure 4

FLUCFCS

Northwest Davis Lands

Jacksonville, Duval County, Florida

2018-260

November 21, 2018

LG² ENVIRONMENTAL SOLUTIONS, INC.
10475 Fortune Parkway, Suite 201
Jacksonville, Florida 32256
(904) 363-1686

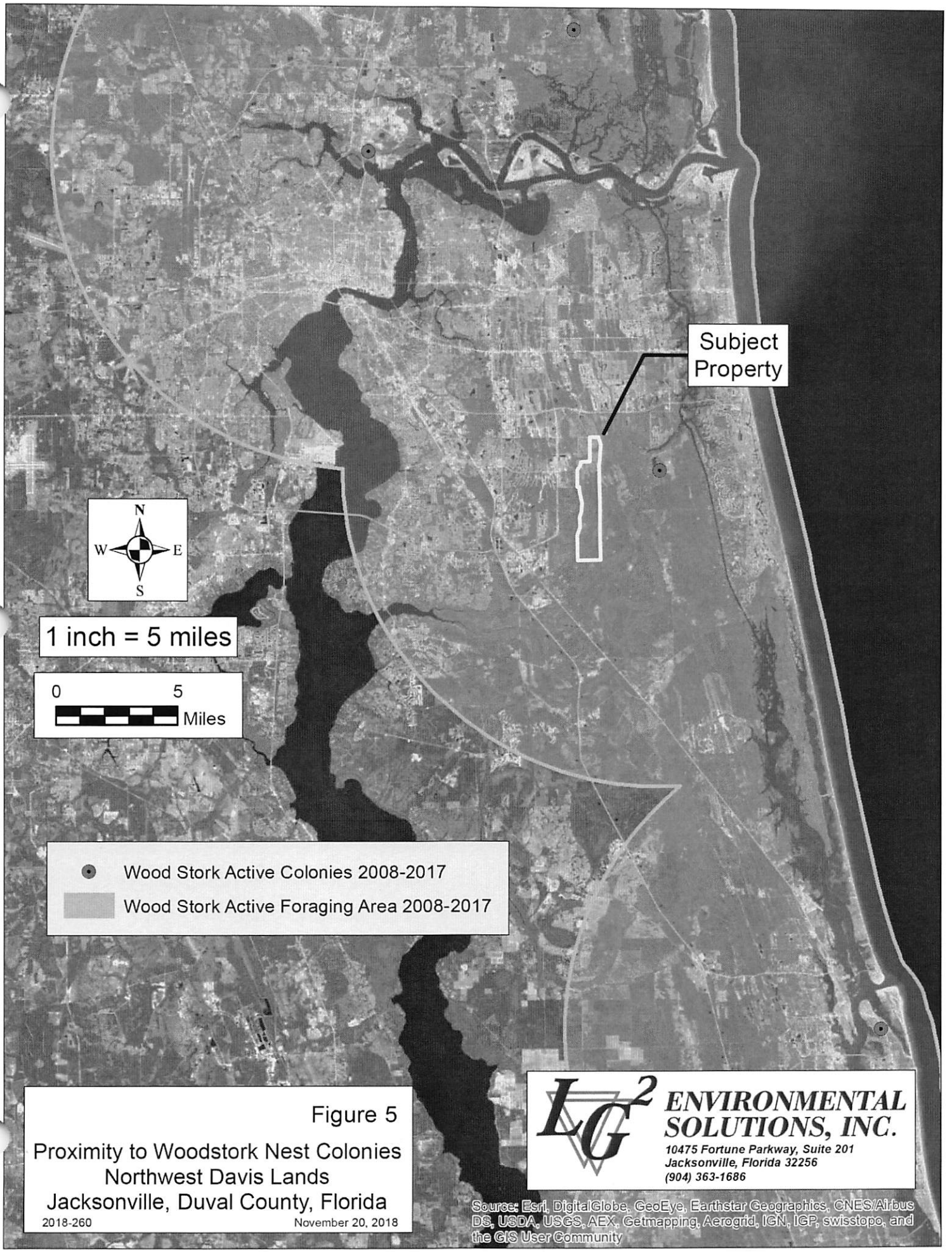


Figure 5

Proximity to Woodstork Nest Colonies
Northwest Davis Lands
Jacksonville, Duval County, Florida

2018-260 November 20, 2018

LG² ENVIRONMENTAL SOLUTIONS, INC.
10475 Fortune Parkway, Suite 201
Jacksonville, Florida 32256
(904) 363-1686

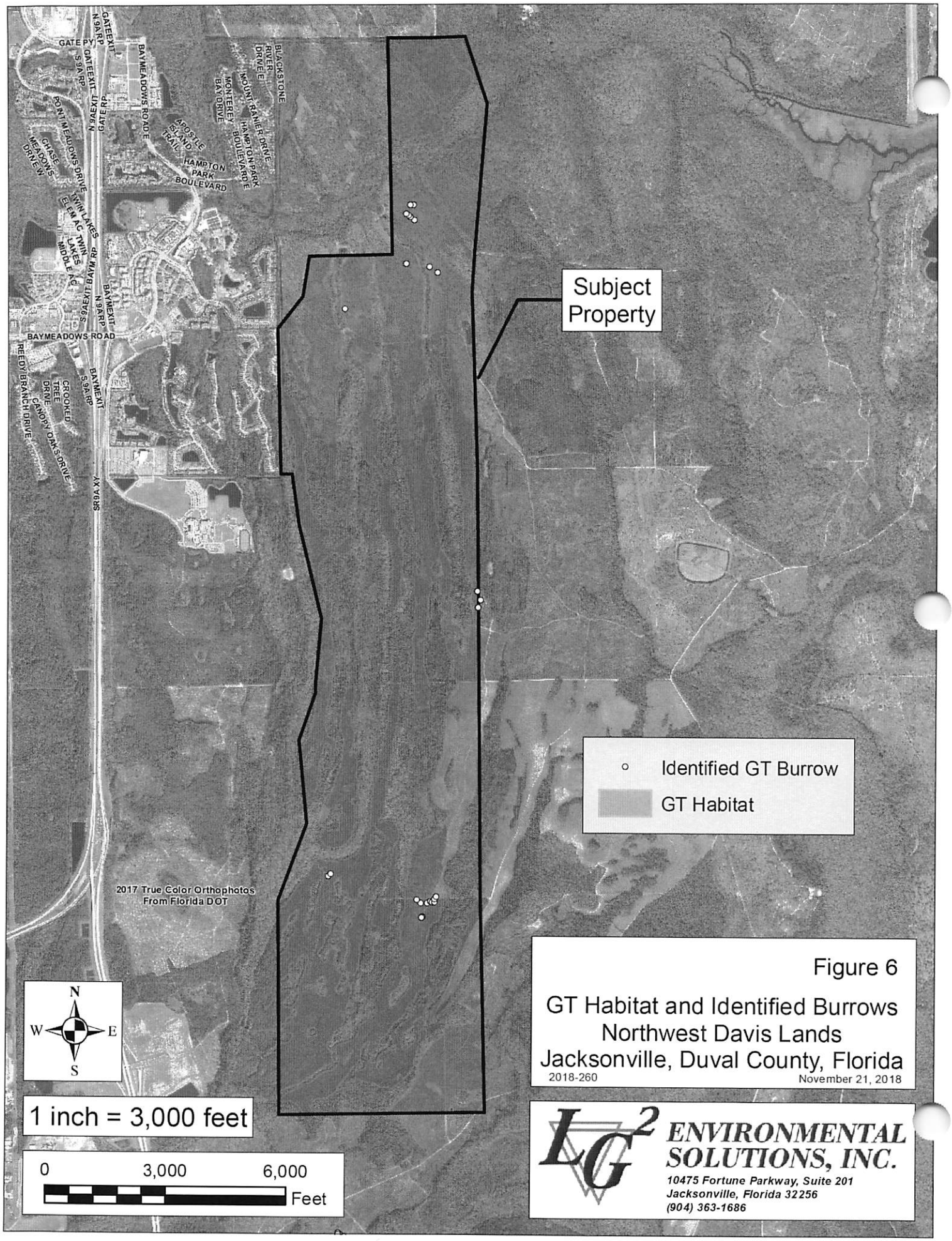


Figure 6

GT Habitat and Identified Burrows
Northwest Davis Lands
Jacksonville, Duval County, Florida

2018-260

November 21, 2018

LG² ENVIRONMENTAL SOLUTIONS, INC.
10475 Fortune Parkway, Suite 201
Jacksonville, Florida 32256
(904) 363-1686

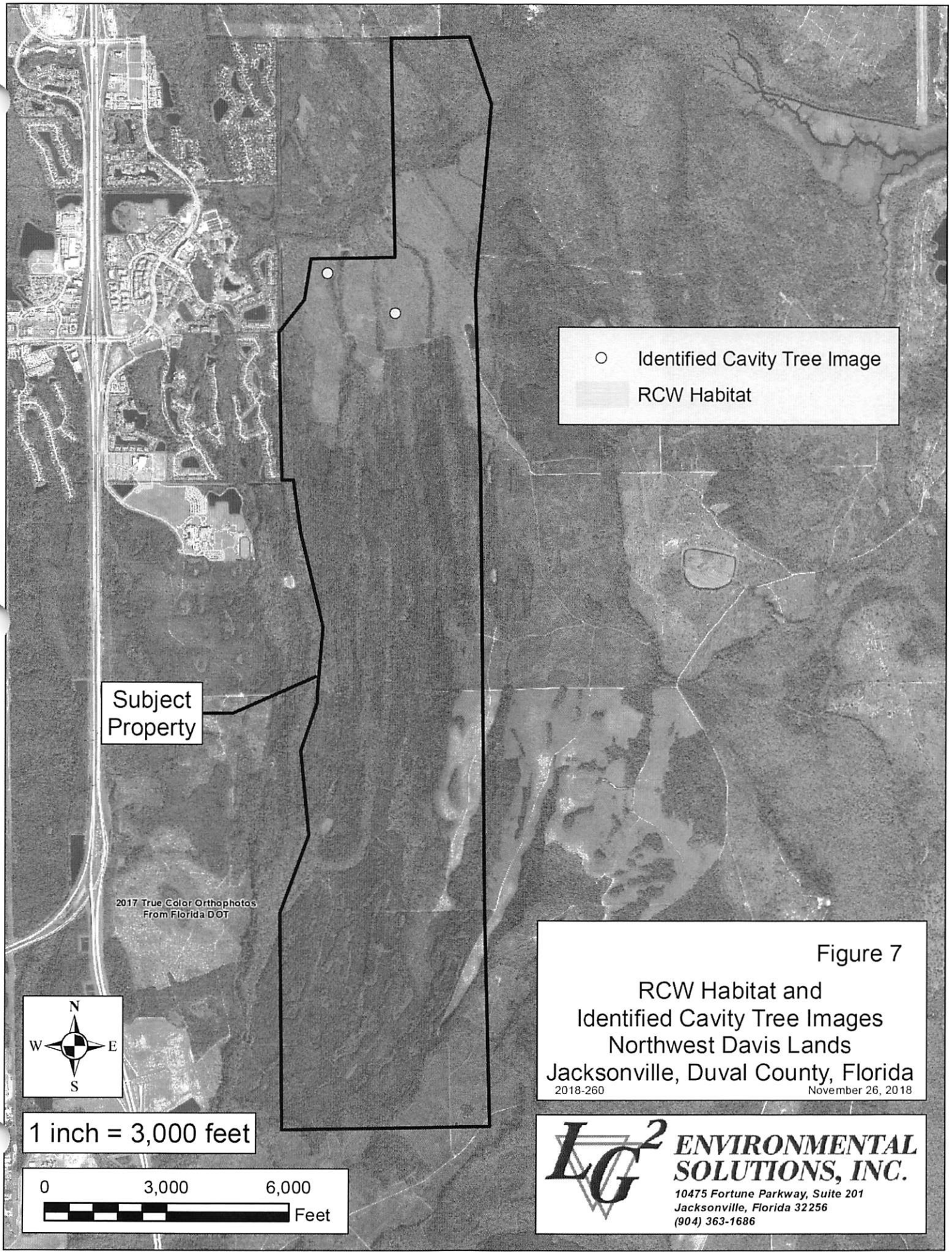


Figure 7

RCW Habitat and
Identified Cavity Tree Images
Northwest Davis Lands
Jacksonville, Duval County, Florida

2018-260 November 26, 2018

LG² ENVIRONMENTAL SOLUTIONS, INC.
10475 Fortune Parkway, Suite 201
Jacksonville, Florida 32256
(904) 363-1686

APPENDIX B

FNAI Biodiversity Matrix Report

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 10/31/2018

(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 10 Matrix Units: 43785 , 43786 , 43787 , 43788 , 43789 , 43790 , 44157 , 44158 , 44159 , 44160

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: 43785

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

3 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	LT	FT
Procambarus pictus Black Creek Crayfish	G2	S2	N	SSC

Matrix Unit ID: 43786

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

4 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	LT	FT
Procambarus pictus Black Creek Crayfish	G2	S2	N	SSC
Sandhill	G3	S2	N	N

Matrix Unit ID: 43787

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
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	LT	FT

Matrix Unit ID: 43788

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

4 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	LT	FT
Picoides borealis Red-cockaded Woodpecker	G3	S2	LE	FE
Sandhill	G3	S2	N	N

Matrix Unit ID: 43789

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

4 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	LT	FT
Picoides borealis Red-cockaded Woodpecker	G3	S2	LE	FE
Sandhill	G3	S2	N	N

Matrix Unit ID: 43790

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

4 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	LT	FT
Picoides borealis Red-cockaded Woodpecker	G3	S2	LE	FE
Sandhill	G3	S2	N	N

Matrix Unit ID: 44157

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

3 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	LT	FT
Procambarus pictus Black Creek Crayfish	G2	S2	N	SSC

Matrix Unit ID: 44158

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

4 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	LT	FT
Procambarus pictus Black Creek Crayfish	G2	S2	N	SSC
Sandhill	G3	S2	N	N

Matrix Unit ID: 44159

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

3 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	LT	FT
Sandhill	G3	S2	N	N

Matrix Unit ID: 44160

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

4 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	LT	FT
Picoides borealis Red-cockaded Woodpecker	G3	S2	LE	FE
Sandhill	G3	S2	N	N

Matrix Unit IDs: 43785 , 43786 , 43787 , 43788 , 43789 , 43790 , 44157 , 44158 , 44159 , 44160

24 **Potential** Elements Common to Any of the 10 Matrix Units

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Arnoglossum diversifolium Variable-leaved Indian-plantain	G2	S2	N	T
Asclepias viridula Southern Milkweed	G2	S2	N	T
Asplenium heteroresiliens Wagner's Spleenwort	GNA	S1	N	N
Athene cunicularia floridana Florida Burrowing Owl	G4T3	S3	N	SSC
Balduina atropurpurea Purple Honeycomb-head	G2	S1	N	E
Calydorea coelestina Bartram's Ixia	G2G3	S2S3	N	E
Corynorhinus rafinesquii Rafinesque's Big-eared Bat	G3G4	S2	N	N
Ctenium floridanum Florida Toothache Grass	G2	S2	N	E
Drymarchon couperi Eastern Indigo Snake	G3	S3	LT	FT
Gopherus polyphemus Gopher Tortoise	G3	S3	C	ST
Heterodon simus Southern Hognose Snake	G2	S2	N	N
Litsea aestivalis Pondspice	G3?	S2	N	E
Lythrum curtissii Curtiss' Loosestrife	G1	S1	N	E
Matelea floridana Florida Spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae Pygmy Pipes	G1Q	S1	N	E
Nemastylis floridana Celestial Lily	G2	S2	N	E
Neovison vison lutensis Atlantic Salt Marsh Mink	G5T3	S3	N	N
Notophthalmus perstriatus Striped Newt	G2G3	S2	C	N
Pycnanthemum floridanum Florida Mountain-mint	G3	S3	N	T
Rhynchospora thornei Thorne's Beaksedge	G3	S1S2	N	N
Rudbeckia nitida St. John's Blackeyed Susan	G3	S2	N	E
Salix floridana	G2	S2	N	E

Florida Willow				
Ursus americanus floridanus Florida Black Bear	G5T2	S2	N	N
Verbesina heterophylla Variable-leaf Crownbeard	G2	S2	N	E

Disclaimer

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

Unofficial Report

These results are considered unofficial. FNAI offers a Standard Data Request option for those needing certifiable data.

APPENDIX C

USFWS IPaC Endangered Species 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

Duval County, Florida

Local office

North Florida Ecological Services Field Office

(904) 731-3336
(904) 731-3045

7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517

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.
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:

Mammals

NAME	STATUS

West Indian Manatee Trichechus manatus — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
Marine mammal
https://ecos.fws.gov/ecp/species/4469

Birds

NAME — STATUS

Piping Plover Charadrius melodus — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6039

Red Knot Calidris canutus rufa — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/1864

Red-cockaded Woodpecker Picoides borealis — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7614

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

Reptiles

NAME — STATUS

Eastern Indigo Snake Drymarchon corais couperi — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/646

Green Sea Turtle Chelonia mydas — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6199

Hawksbill Sea Turtle Eretmochelys imbricata — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/3656

Leatherback Sea Turtle Dermochelys coriacea — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/1493

NAME	STATUS
Loggerhead Sea Turtle Caretta caretta There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/1110	Threatened

Amphibians

NAME	STATUS
Frosted Flatwoods Salamander Ambystoma cingulatum There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4981	Threatened

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 http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.p

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	Breeds Apr 1 to Aug 31
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
Clapper Rail Rallus crepitans This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 10 to Oct 31
Common Ground-dove Columbina passerina exigua This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Feb 1 to Dec 31

Prairie Warbler Dendroica discolor — Breeds May 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Prothonotary Warbler Protonotaria citrea — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-headed Woodpecker Melanerpes erythrocephalus — Breeds May 10 to Sep 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Rusty Blackbird Euphagus carolinus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Swallow-tailed Kite Elanoides forficatus — Breeds Mar 10 to Jun 30
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8938

Wood Thrush Hylocichla mustelina — Breeds May 10 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

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.

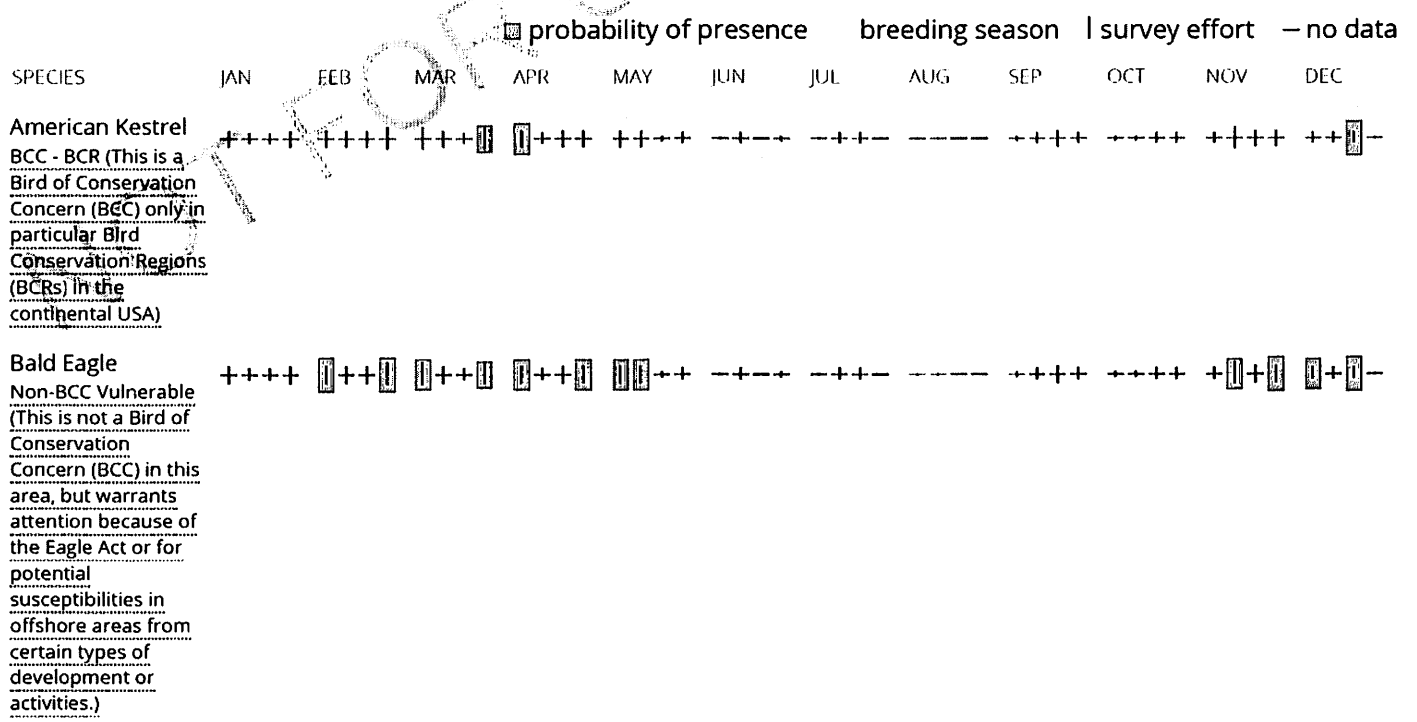
Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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.



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

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

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

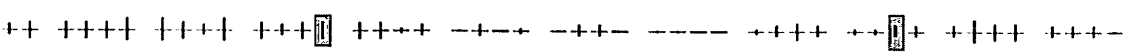
Prothonotary Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

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

Rusty Blackbird
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.)

Wood Thrush
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 and/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 E-bird Explore Data 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.

APPENDIX D

FWC Eagle Nest Locator Report

Eagle Nest Locator

Welcome to the Florida Fish and Wildlife Conservation Commission Bald Eagle Nest Locator. The search features below may be used to locate FWC documented bald eagle nesting territories and to view their locations in map and spreadsheet form.

New Survey Protocol: In 2008 the statewide bald eagle nesting territory survey protocol changed. Here is the map showing what counties are being surveyed during the 2015-2016 breeding season. The protocol change reduces annual statewide survey effort and increases the amount of information gained from the nests that are visited during the survey season. Nest productivity is now determined for a sub-sample of the nests that are surveyed annually. Nest activity and productivity information are critical to determining if the goals and objectives of the Bald Eagle Management Plan are being met.

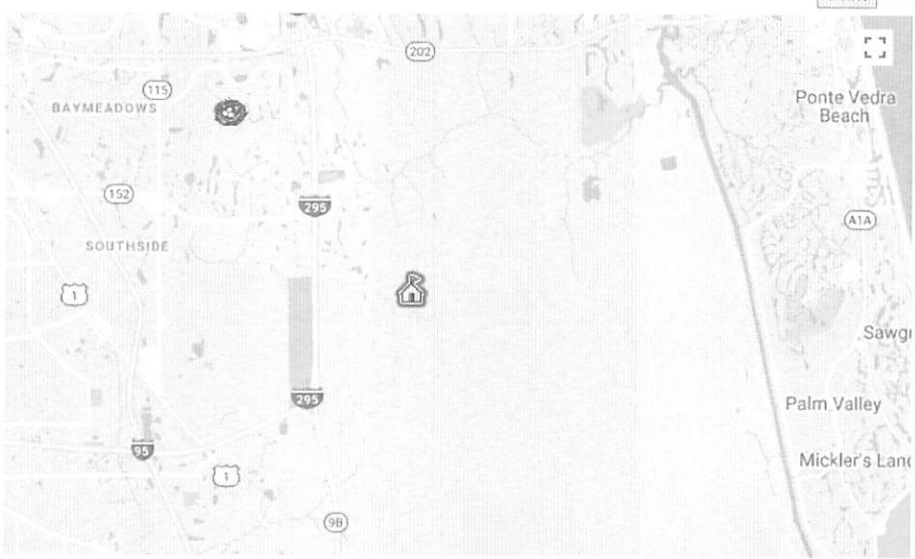
Attention: The information contained within this database is current through the 2016-2017 nesting season; nests were surveyed by FWC from November 2016 to April 2017. Accuracy of the nest locations is estimated to be within 0.1 miles of the true location. Not all eagle nests in Florida have been documented by FWC. Non-documented nests receive the same level of protections as FWC documented nests.

Locate Nests By:

Nested Search | Modify Search | New Search

Nest Map:
1 nest was found that meet the search criteria.

Print



Bald Eagle Nest Data Search Results:

Results per page: 20

	Nest ID	County	Latitude	Longitude	Known Active	Last Survey	Distance
View History	DU004	Duval	30 14.12	81 32.08	2003	2013	3.79

Print Export

Page 1 of 1

Please direct any questions, comments, or suggestions about this page to BaldEagle@MyFWC.com. To learn more about eagles in Florida please visit the FWC bald eagle website.