

City of Palm Coast Analysis Overview:

The South Old Kings Road Development of Regional Impact (DRI) project area annexed into the City of Palm Coast in 2009. In the next year, City Council approved Ordinance 2010-08 that adopted site specific policies in conjunction with a Future Land Use Amendment for the area. These policies were proposed by the Applicant with input from City staff and Flagler Audubon; the intent was and continues to serve to guide innovative approaches to ensure quality development that works in harmony with natural and cultural resources. Over the course of the years, the Applicant has worked diligently on creating a Conceptual Master Plan that strives to meet these standards. As required in numerous policies, additional assessments, studies and surveys have been conducted to further define the condition of onsite resources. Pursuant to the Master Plan Development Plan Development Agreement process, this analysis serves to address outstanding policy conditions while providing background information on the planning efforts applied to date.

Background to South Old Kings Road Planning Area Comprehensive Plan Policies:

On July 21, 2010, City Council approved Ordinance 2010-08 (LU-MAJ-09-01) that adopted site-specific policies in conjunction with Future Land Use Map Amendment for the project area. As noted in staff's analysis associated with the agenda item, the "The Planning Area is in a unique location that has both environmentally and culturally significant resources as well as including parcels that are conducive for economic development due to their proximity to the airport. Environmentally, portions of the Planning Area are located within the headwaters of Bulow Creek and is identified as part of the Flagler County Blueway Project, managed by the Florida Department of Environmental Protection (FDEP). The Flagler County Blueway Project is listed in the Florida Forever land acquisition program as Group A priority acquisition. The Group A list are projects with the highest priority for acquisition under the Florida Forever Program."

Staff's analysis continues to note the following.

"Environmental/Cultural Resource Analysis

The proposed FLUM amendment will elevate the current level of development potential, which will affect the existing ecology of the planning area. As noted in the applicant's environmental assessment, the planning area. As noted in the applicant's environmental assessment, the planning area consists of ten different vegetative communities, which dually serve as habitat for listed and common wildlife species. Staff's analysis from the preliminary data provided by the applicant as well as state and local acquisition strategies, additional vegetative communities may be present onsite that warrant a "Conservation" land use beyond what the applicant is proposing.

To address staff's concern that additional information is needed to identify additional areas that may be appropriate for preservation, the applicant has proposed text policies that will require additional studies prior to any development order, or rezoning approval. Staff generally supports these policies and recommends additional changes and additions to the policies proposed by the applicant. Staff's proposed policies seek to address the protection of environmentally and culturally significant resources as appropriate based on quality, impacts to the adjacent conservation and open spaces areas, as well as the current policies of the Comprehensive Plan."

Note that the following applicable policies to this discussion involved input from Flagler Audubon Society and the set of policies with proposed came from both the applicant and the Audubon Society. The complete attachment of all policies have been attached to this assessment. The policies are realized in Chapter 1 of the Comprehensive Plan through Objective 1.1.9 – South Old Kings Road Planning Area. A consistency crosswalk table has been attached that provides a snapshot analysis of all twenty-one planning area policies. See attached Table 3. As noted, the MPD agreement is not consistent with Policy 1.1.9.3 when considering resources proposed for protection. The following section provides supporting information to staff’s determination while considering past assessments, project review materials, and the “Sandhill Assessment” conducted by Carter Environmental Services dated August 15, 2019.

Policy 1.1.9.3 – To promote onsite ecological enhancements, biodiversity, and ensure appropriate lands east of Old Kings Road designated as Greenbelt are protected in perpetuity, preservation areas shall include: (1) unique habitat (unique topographical reliefs, hardwood hammocks, xeric or sandhill communities), (2) historical and cultural resources, and (3) wetlands that serve the ecological function of Bulow Creek. The Master Planned Development (MPD) process shall be utilized to facilitate this requirement.

Staff Research and Analysis:

As required by policy 1.1.9.5, the project area has been assessed in great detail since the original Land Use Change Amendment (LUCA) in 2010; onsite natural resources have been evaluated further (Table 1). Dually, the Master Concept Plan has been routinely revisited to adjust to such findings and other project considerations.

Policy 1.1.9.5 - To ensure that valuable natural resources are protected, no development order or rezoning requests shall be adopted for that portion of the Area lying East of Old Kings Road until (1) a survey identifying gopher tortoise, scrub jay, jurisdictional wetlands, and other natural resources is completed for that portion of the Area lying east of Old Kings Road; (2) a cultural resource field survey and assessment report is prepared for that portion of the Area lying east of Old Kings Road; and (3) a tree survey is completed assessing lands lying east of the Conservation lands for that portion of the Area lying east of Old Kings Road.

2010	2019
Sand Pine (FLUCFCS 413) +/- 89 acres	Sand Pine (FLUCFCS 413) +/- 84.46 acres
Mixed Pine (FLUCFCS 415) +/- 82 acres	Mixed Pine (FLUCFCS 415) +/- 57.09 acres
Temperate Hardwood (FLUCFCS 413) +/-37 acres	Temperate Hardwood (FLUCFCS 413) +/- 66.11 acres
Pine Plantation (FLUCFCS 441) +/- 330 acres	Pine Plantation (FLUCFCS 441) +/- 328.74 acres
Wet Pine Plantation (FLUCFCS 441w) +/- 28 acres	Wet Pine Plantation (FLUCFCS 441w) +/- 16.24 acres
Wetland Hardwood Forest (FLUCFCS 610) +/- 85 acres	Wetland Hardwood Forest (FLUCFCS 610) +/- 71.43 acres
Cypress (FLUCFCS 621) +/- 74 acres	Cypress (FLUCFCS 621) +/- 88.78 acres
Cypress-Cabbage Palm (FLUCFCS 624) +/- 34 acres	Existing Conservation Easement - Cypress (FLUCFCS 621) +/- 16.56 acres
Vegetated Non-Forested (FLUCFCS 640) +/- 5 acres	Cypress-Cabbage Palm (FLUCFCS 624) +/- 14.96 acres
Burrow Areas (FLUCFCS 742) +/- 30 acres	Vegetated Non-Forested (FLUCFCS 640) +/- 4.65 acres
	Burrow Areas (FLUCFCS 742) +/- 30.38 acres
	Ditch (FLUCFCS 510) +/- 4.77 acres
	Coquina Stockpile Area (FLUCFCS 730) +/- 11.15 acres

Table 1. Comparison of 2010 (Ordinance 2010-08) vs. 2019 vegetative community determinations (2019 Sandhill Assessment completed by Carter Environmental Services, Inc.)

At the time of the LUCA, Natural Resource Consultants (NRC) submitted an Environmental Assessment – Eastern Property Development and Protection Plan in support of the following change of designations and extent.

	Land Use Designation(s)	# of Acres
Adopted FLUM:	Mixed Use	603
	Greenbelt	71
	Conservation	122
Flagler County FLUM:	Agriculture & Timberlands	643
	Conservation	154

Table 2: Ordinance 2010-08 Land Use Conversion Summary

Site visits were conducted that included regulatory staff and City staff to inspect areas proposed for amendment as noted below (May 25, 2010 NRC EA Assessment).

"The result of this work was the discovery and delineation of an upland sandhill ridge adjacent to the Bulow Creek headwaters wetland system east of Old Kings Road. This sandhill ridge and adjacent wetlands (123 acres in size) can be considered unique, and thus environmentally sensitive."... "With the discovery of this environmentally sensitive area (sandhill ridge and adjacent wetlands), 123 acres has been removed from this eastern portion of the site for the purposes of the FLUM amendment. The revised acreage for the FLUM amendment is 671 acres, of this 230 acres of the applicant ownership lies east of Old Kings Road. No environmentally sensitive uplands remain within the area east of Old Kings Road."... "The surrounding landscape has elevations ranging from +10 to +25 (NGVD 1929). Adding to the significance of this sandhill range and two prehistoric archaeological sites (as noted on the Division of Historical Resources Florida Master Site File Map, a midden and burial mound. This is further evidence that this area has had significance in the landscape for hundreds of years. The combination of this upland ridge and adjacent wetland provide numerous benefits to wildlife downstream and provides a unique habitat that is not commonly found in this part of Florida. The wetlands are contiguous with Graham Swamp and eventually lead to Bulow Creek providing direct access to a large corridor allowing wildlife to move north and south."

The result of these findings were applied to a portion of the adopted Greenbelt designation and encompassed approximately 2.69 acres of the sand ridge measuring approximately 25.0 acres in total area. As noted in the above-referenced exert, “no environmentally sensitive uplands remain within the area east of Old Kings Road”; however, the referenced “sandhill ridge” extends beyond the previously identified area. See Figure 1. Old Kings Ridge Protection Plan.

Over the course of the project review process, City staff provided feedback and comments on the potential of additional unique resources occupying the site. See Table 4. The Applicant has routinely denied that the referenced “ridge” is unique; however, the August 15, 2019 Carter Environmental Assessment notes that "The 17.38 acres of sandhill located within the project area is a unique habitat to Flagler County, however, the size of the habitat limits its function in the landscape."

In the following section, staff evaluated the habitat needs for species that occupy the site and/or may be recruited to the area with the application of land management to improve habitat values.

Value of the Ridge, Sandhill and Scrub Communities:

The Florida Fish and Wildlife Conservation Commission (FWC) has published the [2019 Florida's State Wildlife Action Plan \(WAP\)](#). As noted on the FWC website, "the Plan is a comprehensive, statewide plan for conserving the state's wildlife and vital natural areas for future generations. It outlines native wildlife and habitats in need, why they are in need and, most importantly, conservation actions for protecting them."

The [WAP](#) highlights these communities as "High Pine and Scrub" with Sandhill and Scrub communities defined as:

"Sandhill in Florida only occurs in the north and central areas with deep, sandy substrate, typically on rolling hills, hence the name of "sandhill." It is a xeric community dominated by scattered longleaf pine with a midstory of oaks, most commonly turkey oak, and an herbaceous understory, dominated by wiregrass. "The herbaceous groundcover is very diverse and provides food for a large number of species found in this habitat. Sandhill is generally the same statewide with only slight differences in vegetation between northwest and peninsular Florida (the southern extent of its range)."

"Scrub habitats are restricted to Florida and are found mainly in the central peninsula on upland dune relics of deep, sandy substrate, through coastal scrub occurs on the dune systems of the state's coastlines (FNAI 2010). Several types of scrub are recognized (oak scrub, rosemary scrub, sand pine scrub, and coastal scrub). All are xeric, occupying well-drained sandy soils with open to dense shrubs with or without pine canopy. Vegetation varies, hence the different types of scrub, but midstory shrub component is typically a variety of evergreen shrubby oaks and/or Florida rosemary (Myers and Ewel 1990). If there is a canopy component it is usually sand pine."

According to the Florida Natural Areas Inventory (FNAI) Community Guide (FNAI 2010), the communities are imperiled and vulnerable.

"Sandhill (G3/S2) – upland with deep sand substrate; xeric; Panhandle to central peninsula; frequent fire (1-3 years); savanna of widely spaced longleaf pine and/or turkey oak with wiregrass understory."

"Scrub (G2/S2) – upland with deep sand substrate; xeric; statewide except extreme southern peninsula and Keys, mainly coastal in Panhandle; occasional or rare fire (usually 5-20 years); open or dense shrubs with or without pine canopy; sand pine and/or scrub oaks and/or Florida rosemary."

Both of these communities are vulnerable to numerous threats including land conversion, habitat fragmentation, and fire suppression that could create heavy fuel loads. The area between Old Kings Road to the Bulow Creek tributary wetlands is a combination of sandhill to a scrub community coinciding with the ridge. Scrub is a community unique to Florida and can be argued to support biodiversity within the resource range of xeric habitat; many species including invertebrates are known to be restricted to scrub with others only needed xeric conditions. Timbering activities that removed sand pine from the property encouraged the natural recruitment of plants that align with the descriptions provided above and were observed during a March 2018 site visit conducted by City staff and Ryan Carter, project environmental consultant. After the visit, City staff developed and released a proposal to avoid sand ridge impacts while transferring density and uses to other tracts. No response was received.

The ridge and the supporting scrub community are also a reminder of the historical retreat of ocean waters; the ridge is a relic beach dune and served as a supporting resource to early inhabitants along Flagler County's unique history. See attached Map H Archaeological Site Location Map.

SPECIES, HABITAT NEEDS AND CONSERVATION STRATEGIES:

In the August 15, 2019 Carter Environmental Services (CES) "Sandhill Assessment", attention was given to the amount of habitat to remain (17.38 acres) in a post-development scenario being limited and not sufficient to support a viable population of the following species. However, staff further notes the project area east of Old Kings Road is comprised of xeric conditions when combined with land management would be suitable habitat. Staff evaluated each referenced species and details of the findings are below.

Gopher Tortoise (*Gopherus polyphemus*) In May 2013, the Applicant provided a 2nd DRI Sufficiency response. At that time, five active gopher tortoise burrows were observed on the east side of Old Kings Road, and an onsite recipient site was actively being managed.

"The onsite gopher tortoise recipient site has been thinned to a basal area of 30, mimicking natural conditions. This area will be managed using prescribed fire, mechanical treatments, and/or chemical treatments on a 3 to 5 year disturbance cycle. Wetland 1 and its associated upland buffers will provide a visual barrier from prescribed burning activities, and smoke management practices will be utilized to keep smoke out of all smoke sensitive areas. In addition, a brief description of the mandatory prescribed burning to take place will be included in the covenants and restrictions for the parcel."

Gopher tortoise burrows provide habitat for over 360 commensal species including the endangered Eastern indigo snake, Florida pine snake, gopher frog, gopher tortoise burrow fly and many others. Some of these species rely solely on gopher tortoise burrows for habitat. The habitat needs for gopher tortoise are minimal, but the species and commensals can flourish in managed sandhill and scrub communities. Based on staff research, the ridge and contiguous lands could qualify as either a short-term recipient site or a long-term recipient site. Either designation would be able to receive permitted relocations and would be paid to allow the gopher tortoises to come to their site. The long-term recipient site would need a minimum of 40 acres of habitat while the short-term site would need a minimum of 25 acres.

Eastern indigo snake (*Drymarchon couperi*) This species requires a variety of habitat ranging from pine/scrubby flatwoods to the edges of freshwater marshes. Eastern indigo snakes use gopher tortoise burrows to lay their eggs and for a cool place to regulate their temperature. These snakes need between 40 to 200 acres of varying habitat to complete their annual cycle.

Florida pine snake (*Pituophis melanoleucus mugitus*) The supporting habitats can be found in upland pine forests, sandhills, scrubby flatwoods, and oak scrub. The sandhill and its surrounding conservation area would provide ample habitat for the pine snake who also uses gopher tortoise burrows as sanctuaries.

Florida Scrub-Jay (*Aphelocoma coerulescens*) These birds are endemic to Florida and require sandy, scrubby habitat. The species is listed as a threatened species due principally to habitat loss from development and agriculture and habitat degradation from fire exclusion. Scrub-jays usually have a permanent territory of 22 to 24 acres, which the sandhill provides. Currently scrub-jays do not inhabit

Flagler County; however, translocation is a targeted conservation approach by the US Fish and Wildlife Service (USFWS) and Florida Fish and Wildlife Conservation Commission (FWC) to other areas to reduce risks to populations. USFWS has released "[Draft Revised Recovery Plan for the Florida Scrub-Jay \(*Aphelocoma coerulescens*\) February, 2019](#)" and companion "Focal Landscapes" that could support scrub jay. See attached Maps of the Seven (7) Focal Landscapes Identified. The project area has been targeted in the plan with a goal of "maintaining and improving connectivity to facilitate dispersal among local populations within their respective genetic unit." The plan identifies "landscapes within genetic units that still have potential networks of connected habitat patches capable of supporting large Florida Scrub-Jay populations. "These areas, referred to as 'focal landscapes.'" This conservation approach is consistent to the City's position of protecting scrub habitat to protect the future potential of species occupation.

Summary of Findings:

Consistency with the Comprehensive Plan "The Planning Area is in a unique location that has both environmentally and culturally significant resources as well as including parcels that are conducive for economic development due to their proximity to the airport. Environmentally, portions of the Planning Area are located within the headwaters of Bulow Creek and is identified as part of the Flagler County Blueway Project, managed by the Florida Department of Environmental Protection (FDEP)." As part of a Land Use Amendment Ordinance 2010-08, site-specific policies were adopted to ensure the protection of unique cultural, historical and natural resources.

City staff inventoried all 21 Comprehensive Plan Policies that are specific to the project area. Table 3. With the exception of Policy 1.1.9.3, the remaining policies are consistent and will be implemented through the draft Master Plan Development Agreement.

Policy 1.1.9.3 – To promote onsite ecological enhancements, biodiversity, and ensure appropriate lands east of Old Kings Road designated as Greenbelt are protected in perpetuity, preservation areas shall include: (1) unique habitat (unique topographical reliefs, hardwood hammocks, xeric or sandhill communities), (2) historical and cultural resources, and (3) wetlands that serve the ecological function of Bulow Creek. The Master Planned Development (MPD) process shall be utilized to facilitate this requirement.

The outstanding element that remains deficient is the preservation of (1) unique habitat (unique topographical reliefs, hardwood hammocks, xeric or sandhill communities). Significant strides have been taken by the Applicant to protect and enhance the Bulow Creek tributary wetlands and contiguous uplands. Through long-term land management activities, wetland resources will be enhanced in function and will contribute to offsetting wetland impact in the project area. As noted in May 2010 assessment, a portion of the ridge in conjunction with these efforts would be a huge natural and cultural asset.

"The combination of this upland ridge and adjacent wetland provide numerous benefits to wildlife downstream and provides a unique habitat that is not commonly found in this part of Florida."

In response to City staff's request to further evaluate the sandhill ridge, Carter Environmental Services (CES) provided an analysis dated August 15, 2019. The summary of findings are detailed below.

*“Based on the criteria established by Policy 1.1.9.3 and the comments and concerns expressed by city staff, the preservation of the sandhill in its entirety is not justifiable. The ridge in and of itself **does not** increase biodiversity, create a unique habitat, preserve cultural resources, improve water quality, or protect area from coastal flooding.”*

What is failed to be recognized by this conclusion is the compounding strategy behind the policy, to ensure protection and enhancement of unique resources. As noted in the CES report, “the sandhill ridge is a “unique habitat to Flagler County.” As noted above, the merits of the resource was acknowledged in previous studies also provided by CES. City staff findings and research partially contained herein further reinforces the need to protect unique topographic reliefs, xeric and sandhill communities. The significance not only rests with the uniqueness to the County but also to the State of Florida. Based on a site inspection conducted in 2018, the ridge is supporting a scrub community that is only found in Florida and in rapid decline. Consistent with community descriptions, the topography and overall formation is a relic dune that reflects where seas once inundated the land. The ridge along with Bulow Creek was a magnet to inhabitation with prehistoric sites documented, which speaks to the value beyond habitat for endangered and threatened species. See Table 3. As detailed in staff findings, the ridge along with surrounding lands do have the potential of supporting viable populations. The argument that 17.38 acres comprised in the ridge in a post-development scenario is not sufficient can be countered with looking at all resources east of Old Kings Road. As detailed in the “Species, Habitat Needs and Conservation Strategies” section, scrub and sandhill communities measuring 40 acres or more of managed area will support viable populations and align with larger conservation strategies of endangered / threatened species.

Conclusions and Recommendations:

After a thorough review of assessments, staff retains its position that consistency with Policy 1.1.9.3 has not been achieved. The ridge and contiguous lands should be protected and managed in perpetuity to ensure that cultural, historical and natural resources are retained and honor the uniqueness it brings to the County. After the 2018 inspection, staff started the dialogue with the project representatives to target solutions to offset the removal of the resources from the development footprint. It included the exchange of recreation tracts to transfer or develop elsewhere within the project area. No response was received.

Staff recommends the further evaluation of the potential mitigating options that includes, but not limited to the exchange proposal (attached), gopher tortoise recipient site, fostering long-term scrub-jay habitat, and retaining the coinciding lands associated with historical resources for the benefit of future residents through passive recreation and preservation.

Table 3 Comprehensive Plan Consistency Crosswalk

Policy ID	Policy Narrative	Focused Topic	Status to Date	Consistent with Comprehensive Plan (Yes/No)	Staff Comments
1.1.9.1	Development in the Area shall not exceed 2,500 residential dwelling units and 2,500,000 square feet of commercial or industrial use.	Density	Draft MPD Exhibit C: "Land Use Conversion Table - No conversion from non-residential to residential may occur that increases residential units greater than 2,500 and 2,500,00 square feet of non-residential."	Y	
1.1.9.2	To promote compact and contiguous development and to discourage urban sprawl, the Area shall be designated Mixed Use, Greenbelt, and Conservation on the City's FLUM Map.	FLUM	Ordinance 2010-08 amended the Future Land Use Designations. At time of adoption, the Planning Area consisted of 643 acres of Agriculture & Timberlands and 154 acres of Conservation (Flagler County designation). The changes was approximately 678 acres of land from Agriculture & Timberlands, and Conservation (Flagler County designation) to Mixed Use (City of Palm Coast designation) and approximately 119 acres of Conservation (Flagler County designation) to Conservation (City of Palm Coast designation). The 119 acres of Conservation is primarily composed of wetlands, a floodplain, and Special Flood Hazard Area on the eastside of Old Kings Road and two pockets of high quality wetlands on the westside of Old Kings Road.	Y	
1.1.9.3	To promote onsite ecological enhancements, biodiversity, and ensure appropriate lands east of Old Kings Road designated as Greenbelt are protected in perpetuity, preservation areas shall include: (1) unique habitat (unique topographical reliefs, hardwood hammocks, xeric or sandhill communities), (2) historical and cultural resources, and (3) wetlands that serve the ecological function of Bulow Creek. The Master Planned Development (MPD) process shall be utilized to facilitate this requirement.	Wetlands	Draft MPD Section 13(f): The applicant shall preserve up to 299.73 acres, designated as Environmental on the Preliminary Master Plan (Exhibit B). " During project permitting, and prior to development activities, A Greenway Management Plan, or its functional equivalent, shall be in place,"	Y	The referenced wetland and upland preservation serves the project as wetland mitigation for the future impact of approximately 56.19 acres of wetlands located within the property. The enhancements will improve the ecological function of the Bulow watershed and dually address restorations of past coquina mining activities. Per SJRWMD CON-035-134750-1 56.19 acres of wetland impacts proposed; 161.9 acres wetland and 138.3 uplands proposed for mitigation
			Carter Environmental Assessment 08-15-19: "As part of the permitting process with the St. Johns River Water Management District (SJRWMD), CES worked with the property owner to establish a suitable mitigation plan that incorporates the preservation of over 287 acres (33.5% of site) including the enhancement of 98.8 acres of both upland and wetland communities (Figure 2). "Development activities were concentrated within areas of pine plantation and sand pine, avoiding habitats with greater habitat and biodiversity."	Y	
		Cultural Historical	Carter Environmental Assessment 08-15-19: "A 2.69 acre remnant burial mound exists on the site and is located at the southern end of the sandhill community type. This area has been looted and no evidence of the mound remains, however 100% of this area will be left undisturbed and is to be left under conservation easement."	Y	
			Dana St. Claire Assessment February 2013: "Prehistoric site - 8FL37. Davis (1986) noted that the site was 'located on a high sand ridge (on same ridge as 8FL001) just south of Good Hope Cemetery or Old Kings Road. Shovel tests were dug over the entire length of the ridge. The midden is spotty and hard to find. It appears to be only about 10 centimeters below the surface. Small pockets of coquina shells were found in the extreme southern portion of the ridge; Douglass excavated 8FL001 at this southern tip of the ridge."	Y	
			Dana St. Claire Assessment February 2013: "It is the opinion of Heritage Services that site 8FL155, as represented by the .2-mile road corridor, meets the eligibility requirements for listing on the National Register of Historic Places. Preservation is strongly recommended." - Old Dixie Highway"	Y	The remains of Old Dixie Highway appear to be outside the development extent according to the Preliminary Master Plan and coincide with conservation area of uplands and wetlands.
Draft MPD Section 28: "...the Kings Road Mound site, an area with no archaeological significance, is located in Tract "E16". Nonetheless, the Developer will not disturb the area in any way."... "The Developer shall submit a Historic Resource Management Plan for the area proposed to be preserved through the Environmental parcel designation shown on the Preliminary Master Plan. Regardless, the Developer's construction personnel shall be notified by the Developer, through posted advisories and other methods, of the potential for artifact discovery and to report and discoveries to the Construction Project Manager."	Y	The remains of Old Dixie Highway appear to be outside the development extent according to the Preliminary Master Plan and coincide with conservation area of uplands and wetlands. Of the identified cultural and historic resources, 8FL155 (.2-mile road corridor) meets the eligibility requirements for listing on the National Register of Historic Places. Casey Hammock, 8FL920 is located within the proposed preservation areas. Preservation is strongly recommended.			
Dana St. Claire Assessment February 2013: "Quarry House - 8FL921 While it is likely the structure is indeed an enclosure used for hunting purposes, and while it is probable the structure is recent based on the presence of the adjacent and contemporary coquina quarry, it remains possible that the site dates to a much earlier time and was used for an entirely different purpose. For this reason, additional archaeological testing, specialized structural analysis and historical research are recommended to determine if 8FL921 is eligible for inclusion on the National Register of Historic Places. "	N	This site appears to be in the development footprint. It will need to be addressed with MPD or technical site plan restrictions. See reference to PC-01 DRI First Sufficiency Response.			

Table 3 Comprehensive Plan Consistency Crosswalk

Policy ID	Policy Narrative	Focused Topic	Status to Date	Consistent with Comprehensive Plan (Yes/No)	Staff Comments
1.1.9.3	To promote onsite ecological enhancements, biodiversity, and ensure appropriate lands east of Old Kings Road designated as Greenbelt are protected in perpetuity, preservation areas shall include: (1) unique habitat (unique topographical reliefs, hardwood hammocks, xeric or sandhill communities), (2) historical and cultural resources, and (3) wetlands that serve the ecological function of Bulow Creek. The Master Planned Development (MPD) process shall be utilized to facilitate this requirement.	Cultural Historical	Dana St. Claire Assessment February 2013: "While all cultural materials collected at the site were found during surface investigations, and while focused subsurface testing across the site produced no artifacts, Casey Hammock clearly retains intact cultural deposition with the potential to contribute to a better understanding of the prehistoric settlement model of Flagler County, particularly in regard to interior occupation." "It is the opinion of Heritage Services that 8FL920 is potentially eligible for inclusion on the National Register of Historic Places and site preservation is recommended."	Y	The remains of Old Dixie Highway appear to be outside the development extent according to the Preliminary Master Plan and coincide with conservation area of uplands and wetlands. Of the identified cultural and historic resources, 8FL155 (.2-mile road corridor) meets the eligibility requirements for listing on the National Register of Historic Places. Casey Hammock, 8FL920 is located within the proposed preservation areas. Preservation is strongly recommended.
			DRI First Sufficiency 02-25-15 (PC-01): "All sites recommended for preservation are located within Preservation, Environmental or Recreational zoning in the MDP. The applicant will advance and increase awareness of the four cultural resource sites, 8FL001 The Kings Road Mound, 8FL155 The Old Dixie Highway, 8FL 920 Cassey Hammock, 8FL921 - Quarry House, by installing a commemorative sign that includes a map of the four sites and provides cultural/historical significance caption for each."	N	Need to include this in MPD Agreement. Further Note PC-90 response, "The remnant of Old Dixie Highway is situated within the upland preservation area, and will be avoided by the development."
		Sandhill	Carter Environmental Assessment 08-15-19: "Development activities were concentrated within areas of pine plantation and sand pine, avoiding habitats with greater habitat and biodiversity."	N	
			Carter Environmental Assessment 08-15-19: "The post development landscape will include the preservation of 9 of the original 12 habitat types, including the preservation of 2.69 acres of the sandhill community (15%)."	Y	
			Carter Environmental Assessment 08-15-19: "The 17.38 acres of sandhill located within the project area is a unique habitat to Flagler County, however, the size of the habitat limits its function in the landscape." ... "17.38 acres will not support a minimum viable population for any of the species mentioned." (Florida scrub-jay, eastern indigo snake, gopher tortoise, and Florida pine snake)	N	
			Carter Environmental Assessment 08-15-19: "While the sandhill is a unique feature, the preservation of the entire sandhill will not provide sufficient habitat..."	N	
			DRI First Sufficiency 02-25-15 (Section 5.7 of Mitigation Plan): "A burn plan will be established including regular burns on three to five year intervals to maintain quality species composition throughout the areas."	Y	
			Carter Environmental Assessment 08-15-19: "Sandhill is a fire dependent community type and is far less productive in settings which do not experience disturbance."..."In absence of disturbance, the sandhill will succumb to oak (Quercus spp.) and/or sand pine (Pinus clausa) encroachment,.... preservation of a fire dependent but fire suppressed natural community could create heavy fuel loads that are hazardous to nearby structures."	N	Management of the sandhill community is noted, and staff agrees that maintenance along with monitoring are required companions to preservation of xeric communities. As noted in Section 5.2 of the Lyonia Preserve Management Plan (LPMP), a combination of prescribed fire and/or mechanical techniques are applied. Mechanical applications include timber harvest, roller chopping, strip chopping, root raking and mowing are included among the proposed mechanical techniques. Section 5.2.3 of the LPMP notes that prescription fire were a challenge and occurs within a 10 to 20 year interval. https://www.volusia.org/core/fileparse.php/4196/urlt/Lyonia-Mgt-Plan-Phase-II.pdf
			Carter Environmental FLUM Assessment January 14, 2010: "The result of this work was the discovery and delineation of an upland sandhill ridge adjacent to the Bulow Creek headwaters wetland system east of Old Kings Road. This sandhill ridge and adjacent wetlands (123 acres in size) can be considered unique, and thus environmentally sensitive."... "With the discovery of this environmentally sensitive area (sandhill ridge and adjacent wetlands), 123 acres has been removed from this eastern portion of the site for the purposes of the FLUM amendment. The revised acreage for the FLUM amendment is 671 acres, of this 230 acres of the applicant ownership lies east of Old Kings Road. No environmentally sensitive uplands remains within the area east of Old Kings Road."..."The surrounding landscape has elevations ranging from +10 to +25 (NGVD 1929). Adding to the significance of this sandhill range and two prehistoric archaeological sites (as noted on the Division of Historical Resources Florida Master Site File Map, a midden and burial mound. This is further evidence that this area has had significance in the landscape for hundreds of years. The combination of this upland ridge and adjacent wetland provide numerous benefits to wildlife downstream and provides a unique habitat that is not commonly found in this part of Florida. The wetlands are contiguous with Graham Swamp and eventually lead to Bulow Creek providing direct access to a large corridor allowing wildlife to move north and south."	Y	Within the FLUM change, it appears that approximately 8.2 acres of sandhill ridge was incorporated into the Greenbelt designation; however, it is currently not protected. The value was clearly detailed in the 2010 analysis.
			Hardwood Hammocks	1st DRI Sufficiency (PC-15): "Parcel E-15 is our largest concentration of specimen and historic trees."	Y
		1st DRI Sufficiency (Map F.a): Temperate Hardwood (FLUCFCS 425) +/- 66.11 acres exist onsite.		Y	Temperate Hardwood Community type exists onsite primarily within the E15, E14 and E1 development parcels. According to August 15, 2019 Carter Assessment 11.05 acres associated with E15 is going to be preserved which was a passive recreation site on Map H.

Table 3 Comprehensive Plan Consistency Crosswalk

Policy ID	Policy Narrative	Focused Topic	Status to Date	Consistent with Comprehensive Plan (Yes/No)	Staff Comments
1.1.9.4	The Area shall be developed as Mixed Use in such a fashion that shortens vehicular trip lengths, promotes internal trip capture and provides employment opportunities for residents living with the Area.	Mixed Use	Draft MPD Exhibit B: Master Development Plan provided.	Y	
1.1.9.5	To ensure that valuable natural resources are protected, no development order or rezoning requests shall be adopted for that portion of the Area lying East of Old Kings Road until (1) a survey identifying gopher tortoise, scrub jay, jurisdictional wetlands, and other natural resources is completed for that portion of the Area lying east of Old Kings Road; (2) a cultural resource field survey and assessment report is prepared for that portion of the Area lying east of Old Kings Road; and (3) a tree survey is completed assessing lands lying east of the Conservation lands for that portion of the Area lying east of Old Kings Road.	Gopher tortoise	Draft MPD Section 13: "A wildlife survey was performed on the Property on December 9-11, 2013... The gopher tortoise, listed as Threatened by the State of Florida, was observed during the survey." "No other State or Federally listed animals or plant species that are known to occur in Flagler County were observed during the Wildlife Survey."	Y	
		Gopher tortoise	Draft MPD Section 13(e): "No construction shall commence within areas of the Property which are occupied by gopher tortoise permit(s) from the FFWCC and complies with applicable permit conditions. Moreover, a 100% gopher tortoise survey shall be conducted prior to any clearing or development activities within each tract, excluding existing silviculture activities."	Y	
		Scrub Jay	Draft MPD Section 13(e): "The Developer shall comply with the requirements of City's Comprehensive Plan regarding wildlife species classified as endangered, threatened, or a species of special concern."	Y	
		Scrub Jay	May 2013 Preapplication Conference: Florida Scrub-jay (aphelocoma coerulescens) A large area of the portion of the property east of Old Kings Road has the potential to be suitable habitat for the Florida Scrub-jay, a state- and federally-listed Threatened species. FNAI has listed the existence of Scrub-jays as "potential" due to the presence of sand pine communities, which are listed as habitat for scrub-jays. Upon further coordination with FWS staff regarding the likelihood of scrub-jays on the site, it is unlikely that they would require surveys to determine if scrub-jay populations truly exist. Per Ms. Paula Sisson of FWS, there are "no records of any scrub-jays in Flagler (County) in the last ten years but there were all coastal birds. They have since abandoned those areas." Additionally, none have been observed by CES biologists during an site visits.	Y	Scrub jay do not currently exist in the project area; however, the expansion of sandhill and scrub habitats may provide a lily pad community if habitat needs change to expand the species.
		Bear	Draft MPD Section 21(d): "Bear Smart Community principles shall be integrated into design and operations."	Y	
		Wetlands	Draft MPD Section 14(g): Prior to commencement of clearing, earth movement and construction or other development within any jurisdictional wetlands, the wetland boundaries shall be approved by SJRWMD and ACOE, as applicable Development activities, may only occur in jurisdictional wetlands after the Developer, its successors or assigns, obtains required permits from the SJRWMD or ACOE, as applicable.	Y	The wetland boundaries were reviewed through the Conceptual Site Plan application (4-035-134750-1) permit. The boundaries will be further evaluated as the project progresses through the platting and site plan processes.
		Tree Survey	Draft MPD Section 13(g): Prior to obtaining Preliminary Plat Approval or Site Plan Approval on a given tract or parcel, the Owner shall (i) comply with Section 10.04, LDC; and submit an acceptable tree survey for that tract or parcel to the City with the scope of such being agreed to by the parties or their designees.	Y	Temperate Hardwood Community type exists onsite primarily within the E15, E14 and E1 development parcels. According to August 15, 2019 Carter Assessment 11.05 acres associated with E15 is going to be preserved which was a passive recreation site on Map H.
1.1.9.6	Prior to any development the property owners shall request a binding letter from the Florida Department of Economic Opportunity (FDEO) at the City's request to determine whether the development must undergo development of regional impact review.	FDEO	No longer applicable	Y	
1.1.9.7	No development order or rezoning request shall be adopted for any of the property in the Area until a Conceptual Master Plan for the Area is completed.	Conceptual Master Plan	Draft MPD Exhibit B: Master Development Plan provided.	Y	
1.1.9.8	In an effort to protect that portion of the Area lying East of Old Kings Road, low to medium density development shall be required.	Density	Draft MPD Exhibit B: Master Development Plan provided that low and medium residential, commercial, preservation, passive and active recreation is proposed.	Y	
1.1.9.9	Gopher Tortoise, commensal species, and associated habitats shall be preserved as per Florida Fish and Wildlife Conservation Commission (FWC) guidelines.	Gopher Tortoise	See above.	Y	

Table 3 Comprehensive Plan Consistency Crosswalk

Policy ID	Policy Narrative	Focused Topic	Status to Date	Consistent with Comprehensive Plan (Yes/No)	Staff Comments
1.1.9.10	Cultural and historic resources shall be referred to the Division of Historical Resources, State Historic Preservation Office (SHPO) for their recommendations to preserve the cultural and historic resource in the Planning Area.	DHR	August 2013 SHPO letter: "Based on the information provided, it is the opinion of this office that the proposed undertaking is not likely to have an effect on historic properties, provided that the applicant makes contingency plans in the case of fortuitous finds or unexpected discoveries during ground disturbing activities with the project area. If prehistoric or historic artifacts,....., the permitted project shall cease all activities involving subsurface disturbance in the immediate vicinity of the discovery. The applicant shall contact the Florida Department of State... Project activities shall not resume without verbal and/or written authorization."	Y	See 1.1.9.3
1.1.9.11	For property located east of Old Kings Road, development standards for the Planning Area shall include design practices and standards to protect environmental and cultural resources. Such standards may include but not be limited to: clustering, Florida Green Building Coalition, Low-Impact Development (LID), and Conservation Subdivision Design.	LID	Draft MPD Section 24. Low Impact Development Practices	Y	
1.1.9.12	To sustain hammock communities, areas within the site with the greatest concentration of specimen and historic trees, shall be considered in the design process to minimize impacts and removal of the trees through avoidance of such areas. If this is not physically possible, other techniques and development practices identified in the City's Land Development Code, including green development may be utilized to reduce impacts.	Tree Survey	Draft MPD Section 13(g): Prior to obtaining Preliminary Plat Approval or Site Plan Approval on a given tract or parcel, the Owner shall (i) comply with Section 10.04, LDC; and submit an acceptable tree survey for that tract or parcel to the City with the scope of such being agreed to by the parties or their designees.	Y	Temperate Hardwood Community type exists onsite primarily within the E15, E14 and E1 development parcels. According to August 15, 2019 Carter Assessment 11.05 acres associated with E15 is going to be preserved which was a passive recreation site on Map H.
1.1.9.13	Road crossing designed to minimize the impact to natural and cultural resources shall be permitted in areas designated as Conservation on the City's FLUM.	Road crossing over FLUM	Draft MPD Section 15(f): The Property encompasses a regulatory floodway associated with Bulow Creek, an Outstanding Florida Waterway. According to the Preliminary Master Plan, the entire extent of the system is comprised within proposed conservation area. As part of the requirements of subsection 15(f), this should be reaffirmed prior to Final Plat submittal of the first phase. No direct impacts shall take place within the associated regulatory floodway or within the associated undisturbed 50-foot buffer. In the event a connecting pedestrian pathway is proposed, the improvement shall consist of a span bridge to ensure that debris or hazards do not adversely affect the floodway maintenance schedule shall be required to ensure that any debris or other hazards adversely affecting the floodway are timely removed. Moreover, the Developer shall grant the City a maintenance easement over the floodway."	Y	Crossings will not affect conservation areas.
1.1.9.14	Road crossing in Conservation areas, special flood hazard areas, and wildlife corridors shall be designed to avoid compromising the functions and quality of the environmental resources. Such designs may include but not be limited to grade separations and wildlife crossings.	Conservation areas crossings	Draft MPD Section 15(f): Above	Y	
1.1.9.15	Any development plan in the Planning Area shall take into consideration the potential extension of Citation Parkway as a potential east-west connector in the City of Palm Coast and as a parallel facility to State Road 100.	Citation Extension	Section 22c includes a condition to reserve necessary right of way for Citation Parkway Extension		
1.1.9.16	Development of transportation network in the Planning Area shall include an overall pedestrian/bicycle facility system to facilitate alternative mode of transportation within and into the Planning Area.	Trails	See Policy 1.1.9.17 and Section 26(b) of MPD.	Y	
1.1.9.17	Recognizing the acquisition by Flagler County through the Environmentally Sensitive Lands (ESL) program of adjacent lands to the south, additional planning shall include facilitating and design for public access and connectivity to these lands.	Access and connectivity to ESL lands	In 2013, Flagler County acquired parcel 38-12-31-0000-00020-0030, a 4.230 acre parcel that extends east of Old Kings Road to adjacent County conservation lands. It provides management access for County staff. Additional connectivity from the Planning Area to recreational lands are noted in Section 26. Recreation and Open Space that will facilitate the convenience of 43.12 acres of land to serve as a Community Park site to the City of Palm Coast, which is contiguous with offsite connections to ESL lands. Further, the proposed MPD requires the construction of a multi-purpose trail system connecting commercial areas with residential areas and recreational amenities within the Property and to adjacent sidewalks and trails.	Y	
1.1.9.18	The City shall coordinate with land acquisition entities and public agencies to acquire environmentally and culturally significant lands in the Planning Area east of Old Kings Road.	ESL Acquisition	In May 2009, the Flagler County Board of County Commissioners authorized acquisition of Sweetbottom Plantation, approximately 97.0 acres within the Blueway project area and in immediate vicinity to the Planning Area. Through the County's Environmentally Sensitive Lands program, the acquisition expanded the conservation lands beyond 1000 acres and facilitated water access to Bulow Creek. The project area has not been placed on the real estate market since policy adoption.	Y	The subject property is not for sale, which inhibits the pursuit of appraisals along with applying to the County ESL program. However, the LAC Committee is considering the acquisition of a portion of the Iroquois property (south of the project area) to expand access and offsite conservation lands.
1.1.9.19	In the event that the Owner places conservation easements over any wetlands within the Area, the City may at its own expense and at its sole discretion, change the comprehensive plan designation of said wetland to a FLUM designation of Conservation. Such lands may be required to be dedicated to a public entity.	Wetland CE	At this time, staff is only aware of 16.56 acres of cypress community currently in conservation easement.	Y	Through subdivision and site planning processes, the limits of the preservation lands will be further refined and conservation easements recorded. This policy will be applied as the project matures.
1.1.9.20	Development of the Planning Area identified as Economic Development Area #3 in the Airport Area Master Plan shall consider the recommendations of the Airport Area Master Plan in order to ensure the long-term development of the Flagler County Airport.	Airport Area Master Plan	Incentives provided by the Airport Area Master Plan are incorporated in the LDC. These incentives may be implemented and reviewed during the development plan approval process (incentives may include greater height and/or FAR, reduced parking requirements).	Y	
1.1.9.21	Prior to any development in the South Old Kings Road Planning Area, the developer will coordinate with the School District to have a binding commitment that ensures adequate school capacity is available to accommodate the impacts of new development, as appropriate any capital improvement needed to increase school capacity will be included in the Capital Improvements Schedule.	School District	Section 27 outlines negotiated terms between school district and developer to mitigate impacts or school facilities		

Option 1

Staff has reviewed Tracts E1, E2, & E5 and the potential impact of protecting the Sand Ridge within these tracts. As provided in the table below, protecting the Sand Ridge at the 24' elevation will result in the protection of 5.03 acres in Tract E1, 10.57 acres in Tract E2, and 9.8 acres in Tract E5, for a total of 25+/- acres.

Based on the allowable densities within the proposed DRI this translates to a total of 173 dwelling units that may be transferred or developed elsewhere within the developable areas of the DRI.

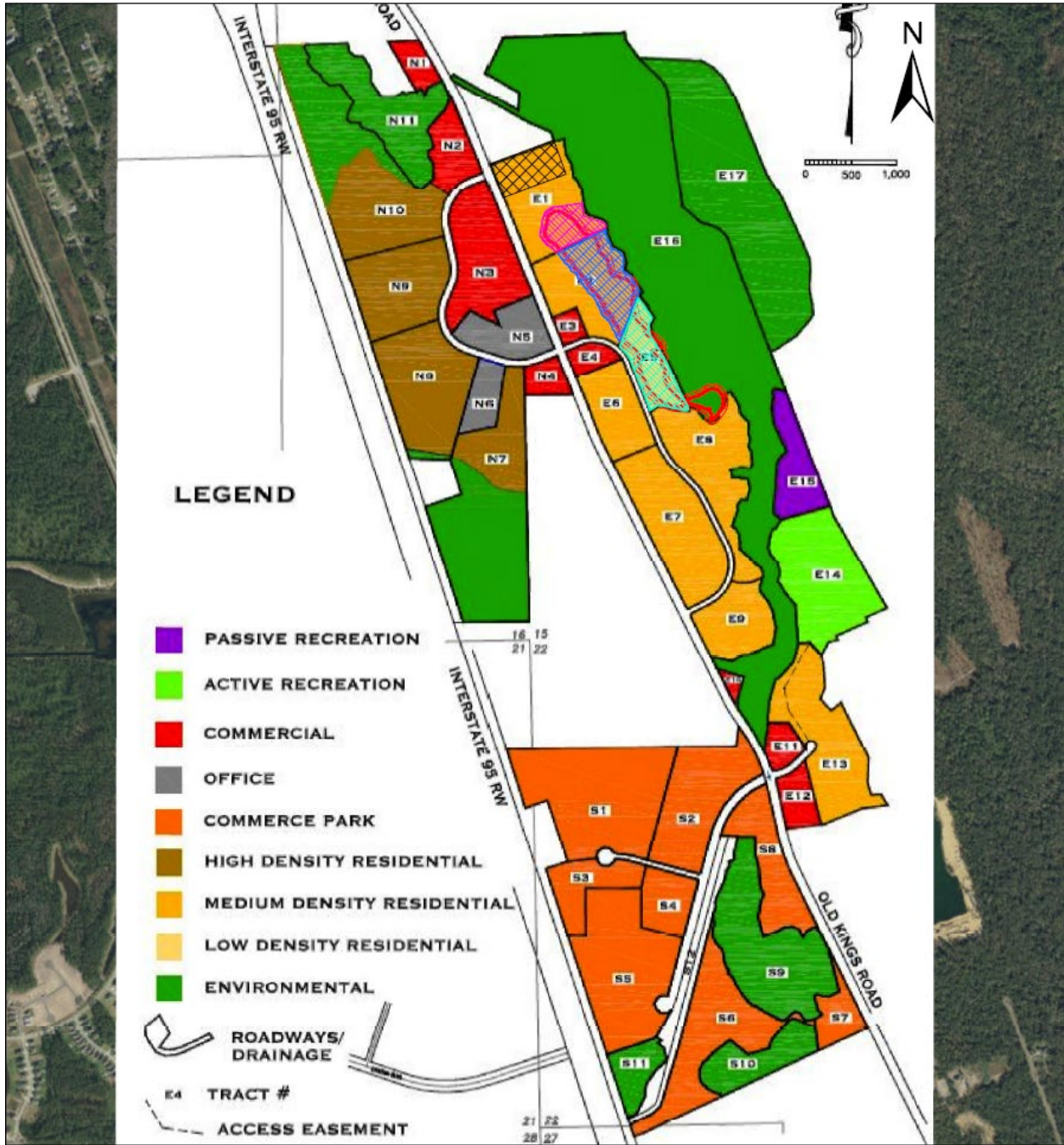
Tract #	Land Use	Max Density/acre	Acreage	Potential # of units	Acreage to Sand Ridge	Potential # of	Remainder (Acres)	Remainder
						units within Sand Ridge Protection		Potential # of units
E1	Medium Density	8	21.33	170.64	5.03	40.24	16.3	130.4
E2	Medium Density	8	20.13	161.04	10.57	84.56	9.56	76.48
E5	Low Density	5	9.8	49	9.8	49	0	0
TOTAL			51.26	380.68	25.4	173.8	25.86	206.88
E14	Active Recreation		26.95					
E15	Passive Recreation		16.17					

As part of the exchange, the City will support the expansion of allowable uses in Tract E13 into adjacent Tract E14. This expansion will be of an acreage of equal amount to the proposed protection areas in Tracts E1, E2, and E5.

Option 2

Based on the map below, the protecting the Sand Ridge at the 24' elevation will result in 25.4 acres of protection area (5.03 acres in Tract E1, 10.57 acres in Tract E2, and 8.42 acres in Tract E5). In exchange staff proposes to expand Tract E13 (identified for Medium Density) into the adjacent Tract E14 (identified for Active Recreation) in an amount equal to the Sand Ridge protection area.

Old Kings Ridge Protection Plan



50ft_Buffer_24ft



24ft_Boundary



Property to be sold



E1 Sandridge ~ 5.03 Acres



E2 Sandridge ~ 10.57 Acres



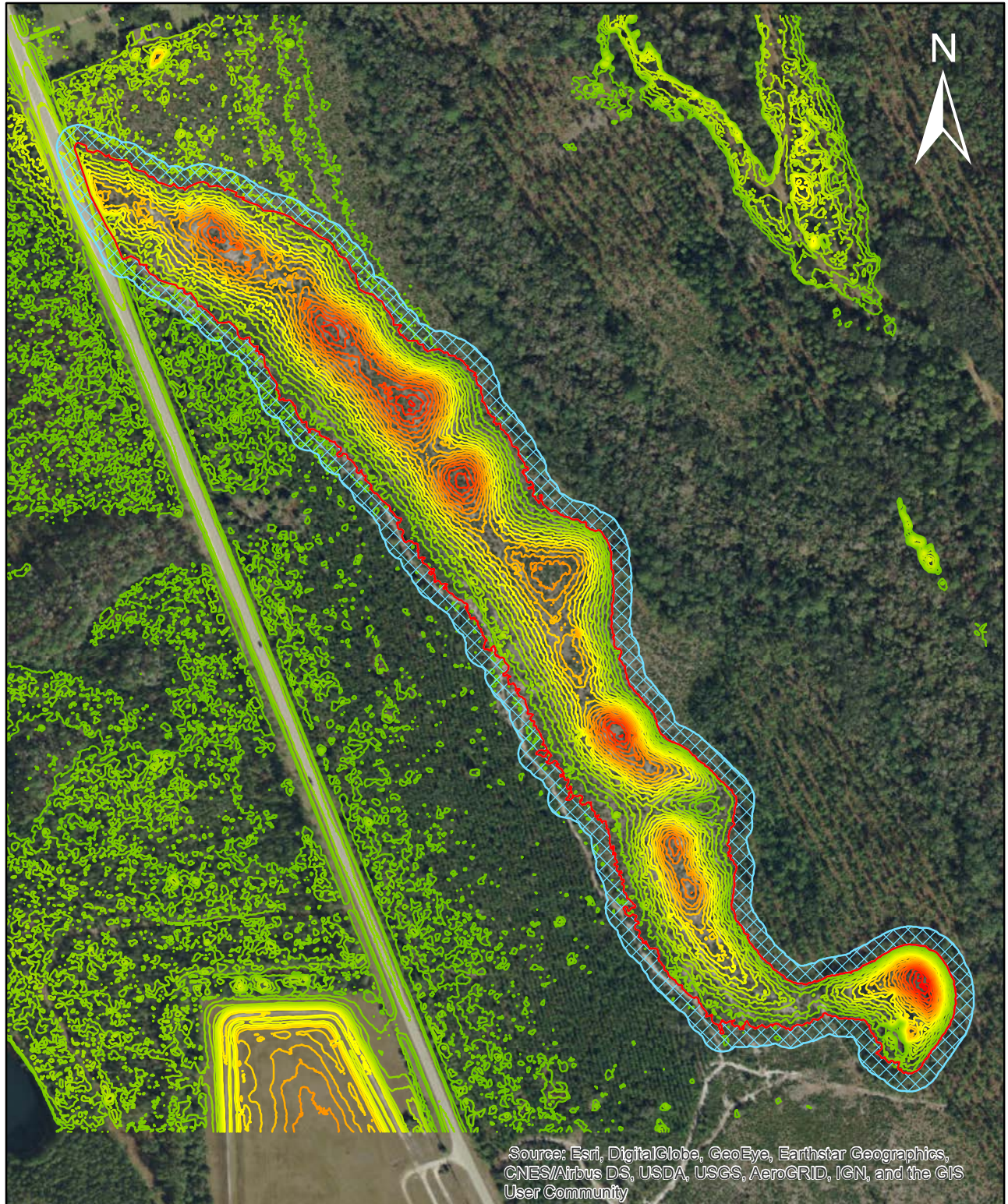
E5 Sandridge ~ 8.42 Acres

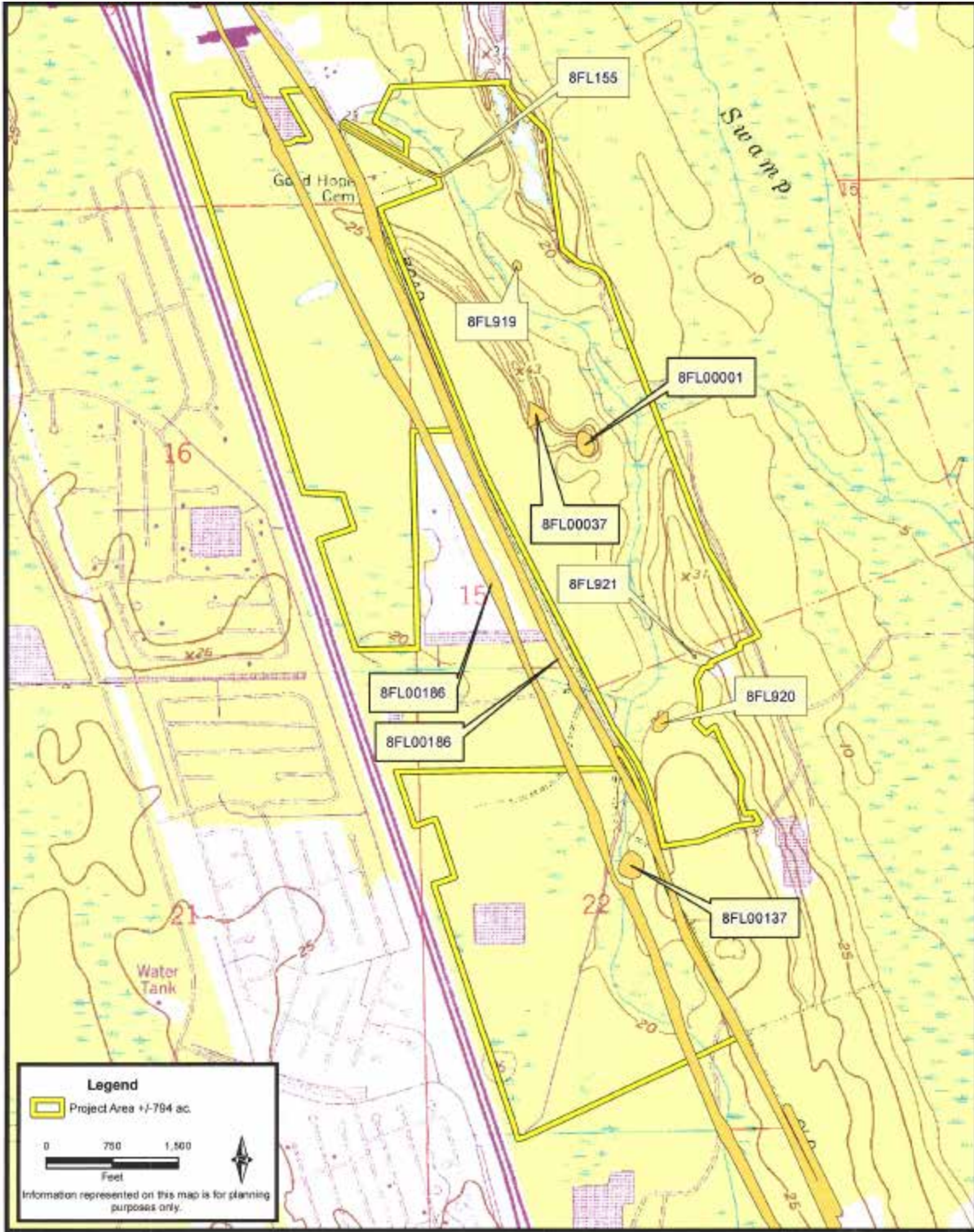


0 0.1 0.2 0.4 Miles



Old Kings Ridge Protection Plan





Archaeological Site Location Map
Bulow Creek LC DRI
 Flagler County, Florida

Project: 5.08024.04
 Date: March 2013
 MAP 'H'

Maps of the Seven (7) Focal Landscapes Identified in the 2019 Draft Florida Scrub jay Recovery Plan Amendment

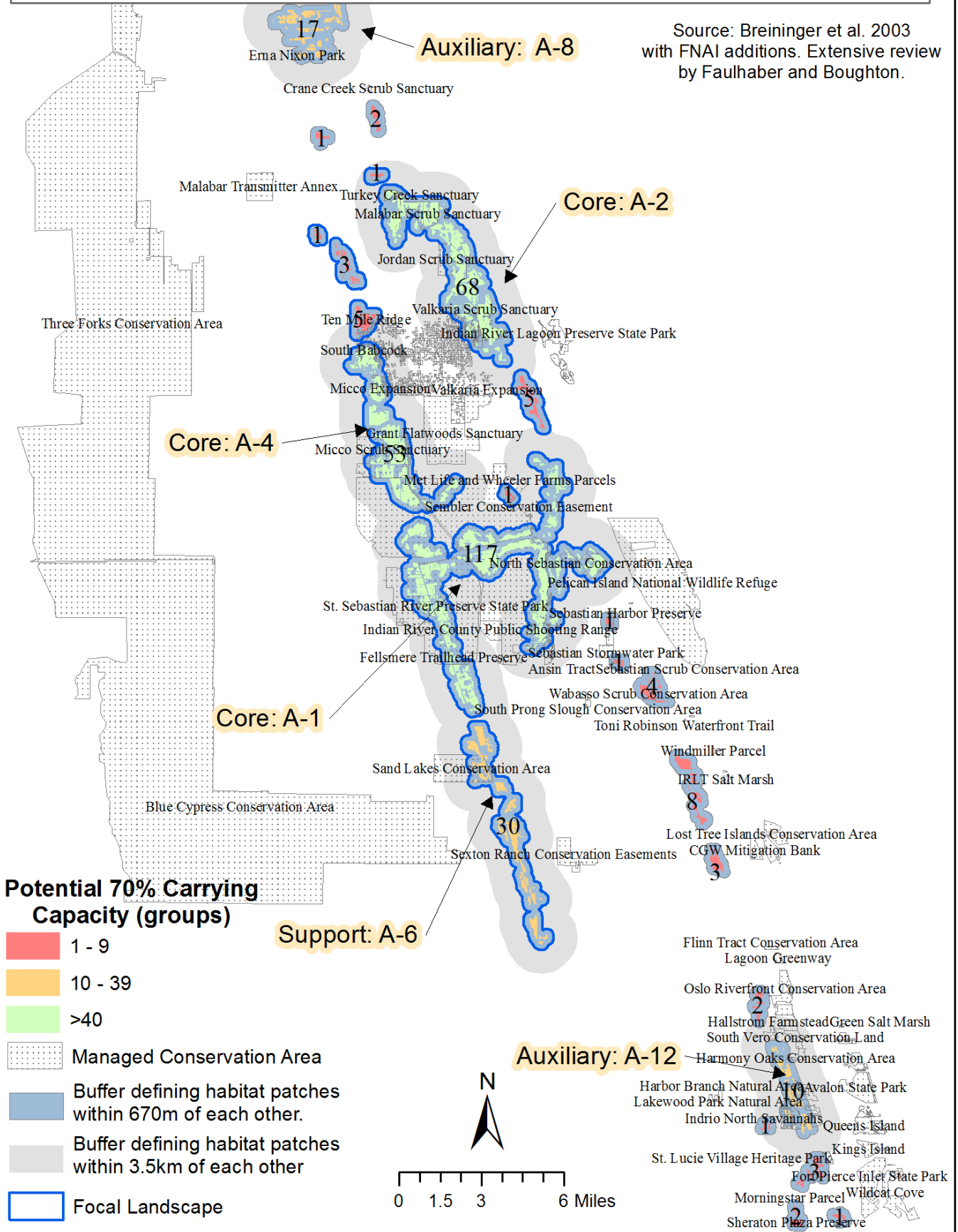
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Criterion 1: Each of the seven (7) focal landscapes (East Coastal, North Central, Northeast Coastal, Lake Wales Ridge North, Lake Wales Ridge South, Southwest Inland, and Southeast Coastal)...

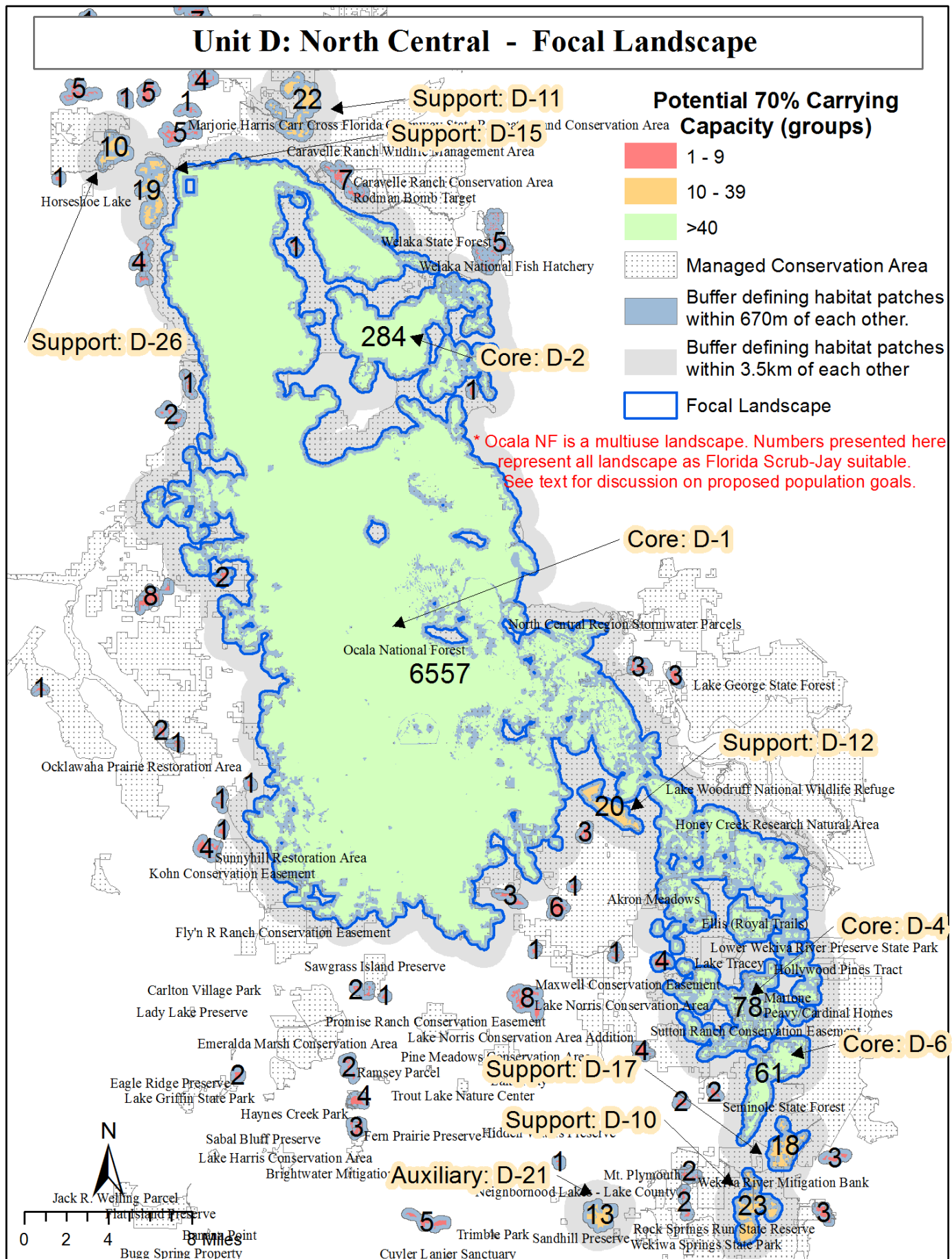
Unit A: East Coastal Genetic Unit - South Focal Landscape

Source: Breininger et al. 2003 with FNAI additions. Extensive review by Faulhaber and Boughton.

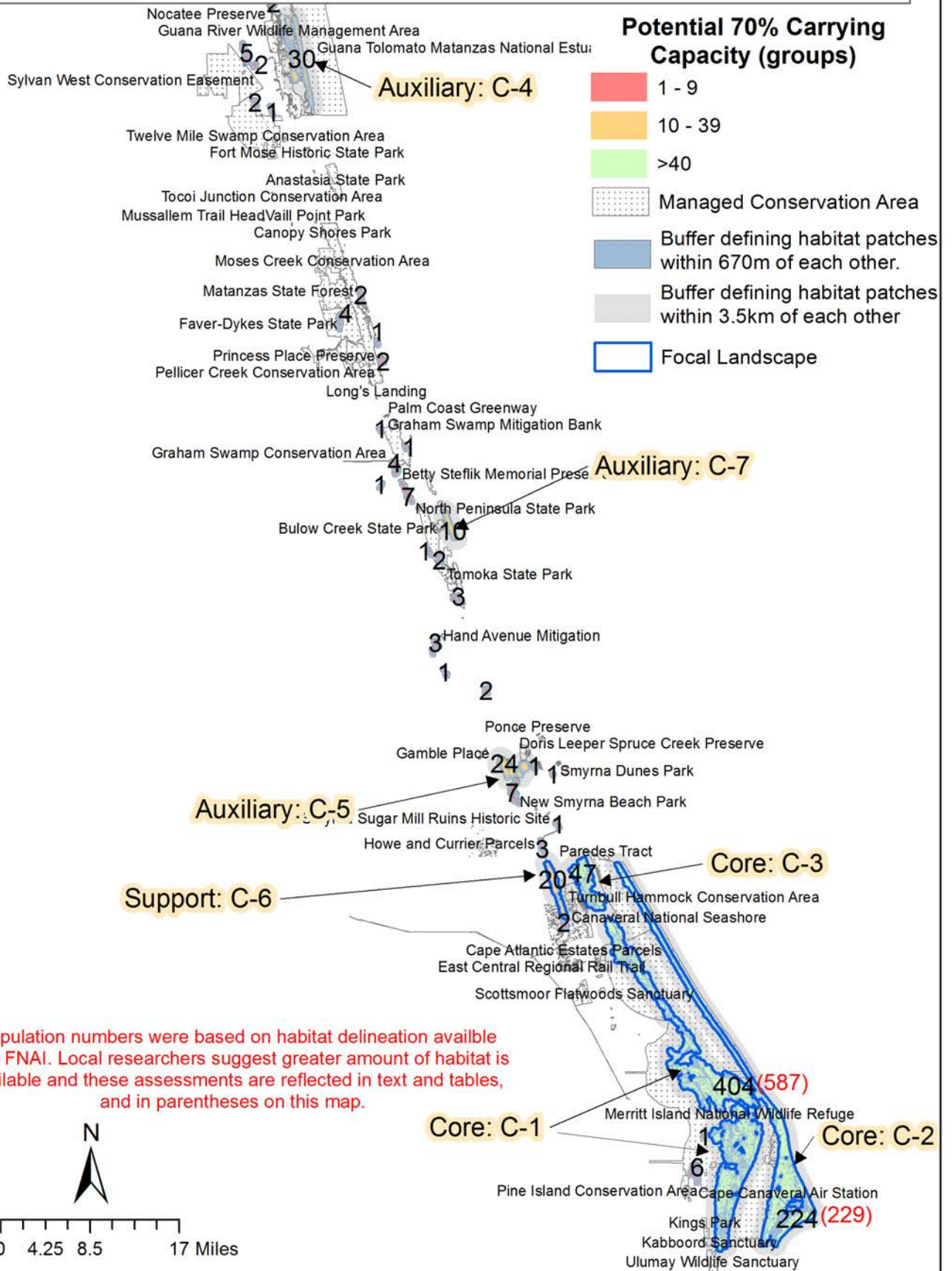


Potential 70% Carrying Capacity (groups)

- 1 - 9
- 10 - 39
- >40
- Managed Conservation Area
- Buffer defining habitat patches within 670m of each other.
- Buffer defining habitat patches within 3.5km of each other
- Focal Landscape



Unit C: Northeast Coastal Genetic Unit- Focal Landscape



Unit B: Lake Wales Ridge Genetic Unit - North Focal Landscape

