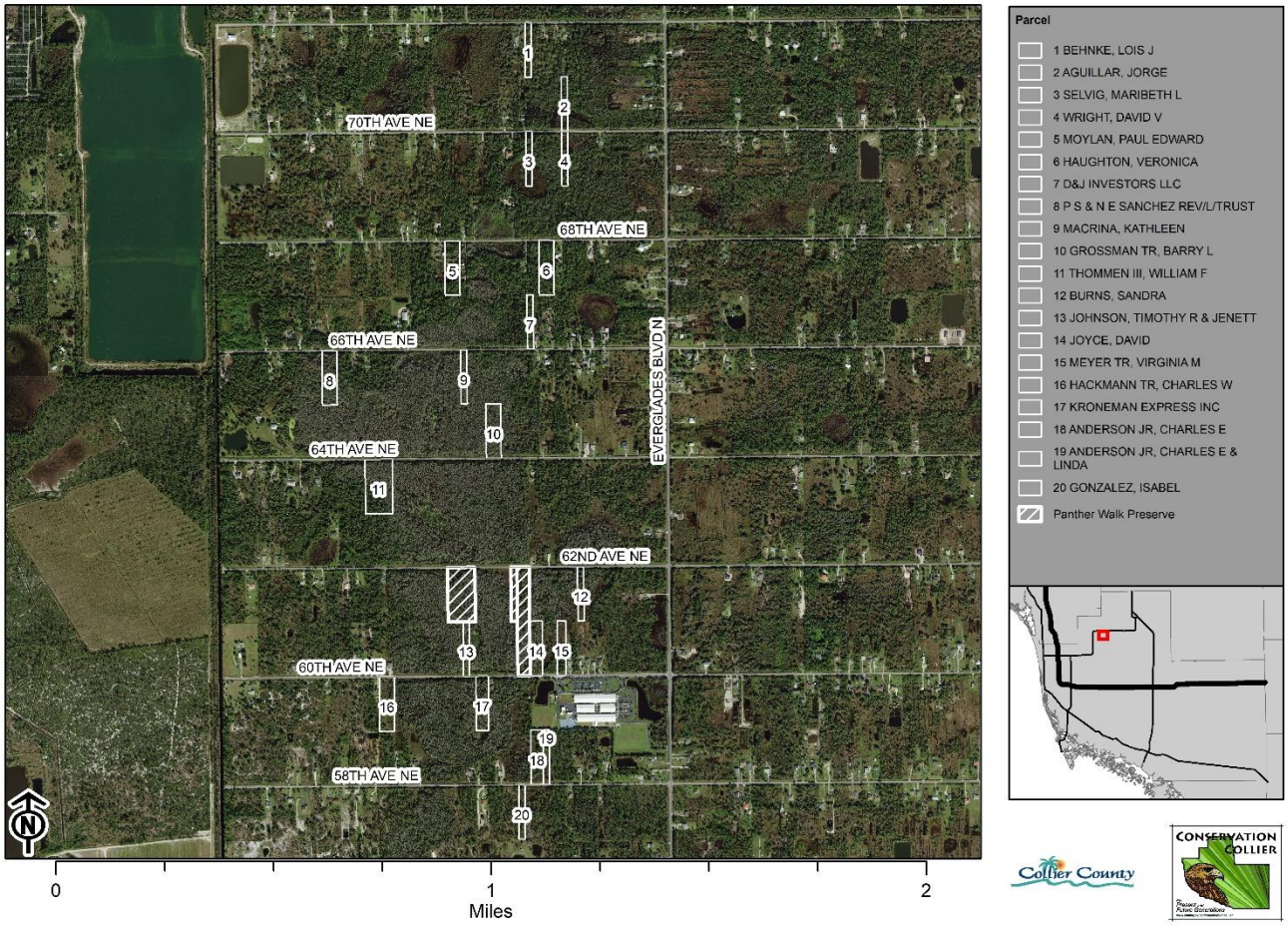
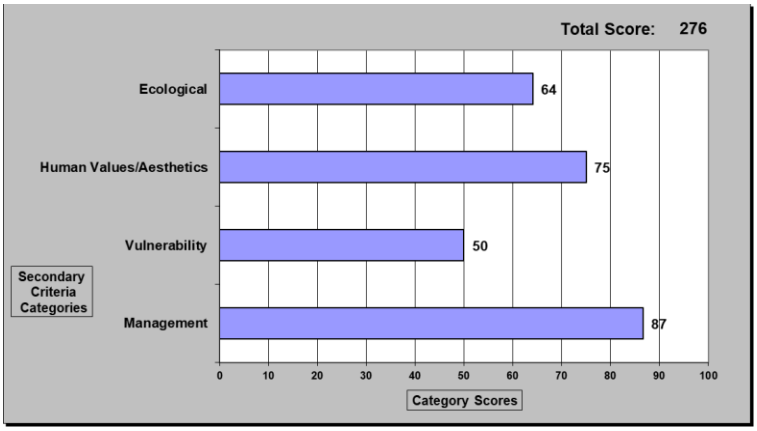
Conservation Collier
Initial Criteria Screening Report

Initial Criteria Screening Report - Panther Walk Preserve Area Parcels
2021 Aerial



Staff Report Date: 11/8/2021

See Table 2 for Owner Names and Folio Numbers



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I. Introduction

The Conservation Collier Program (Program) is an environmentally sensitive land acquisition and management program approved by the Collier County Board of County Commissioners (Board) in 2002 and by Collier County Voters in 2002 and 2006. The Program was active in acquisition between 2003 and 2011, under the terms of the referendum. Between 2011 and 2016, the Program was in management mode. In 2017, the Collier County Board re-authorized Conservation Collier to seek additional lands (2/14/17, Agenda Item 11B). On November 3, 2020, the Collier County electors approved the Conservation Collier Re-establishment referendum with a 76.5% majority.

This Initial Criteria Screening Report (ICSR) has been prepared for the Conservation Collier Program in its 10th acquisition cycle to meet requirements specified in the Conservation Collier Implementation Ordinance, 2002-63, as amended, and for purposes of the Conservation Collier Program. The sole purpose of this report is to provide objective data to demonstrate how properties meet the criteria defined by the ordinance.

The following sections characterize the property location and assessed value, elaborate on the initial and secondary screening criteria scoring, and describe potential funding sources, appropriate use, site improvements, and estimated management costs.

II. Summary of Property Information

Table 1: Summary of Property Information

Characteristic	Value	Comments
Name	See Table 2	
Folio Numbers	See Table 2	
Target Protection Area	NGGE	
Size	38.4 acres total	Parcels range in size from 1.14 to 5 acres
Section, Township, and Range	S30/31, T47, R28	
Zoning Category/TDRs	Estates	
FEMA Flood Map Category	AH	
Existing structures	None	
Adjoining properties and their Uses	Low density residential/undeveloped/elementary school	
Development Plans Submitted	None known	
Known Property Irregularities	None known	
Other County Dept Interest	Stormwater Management Planning	In addition to preservation for the existing wildlife in this area, these parcels are important for acquisition to support water attenuation and quality in the region. This Department has advised they do not have funding to acquire these parcels.

Figure 1: Location Overview

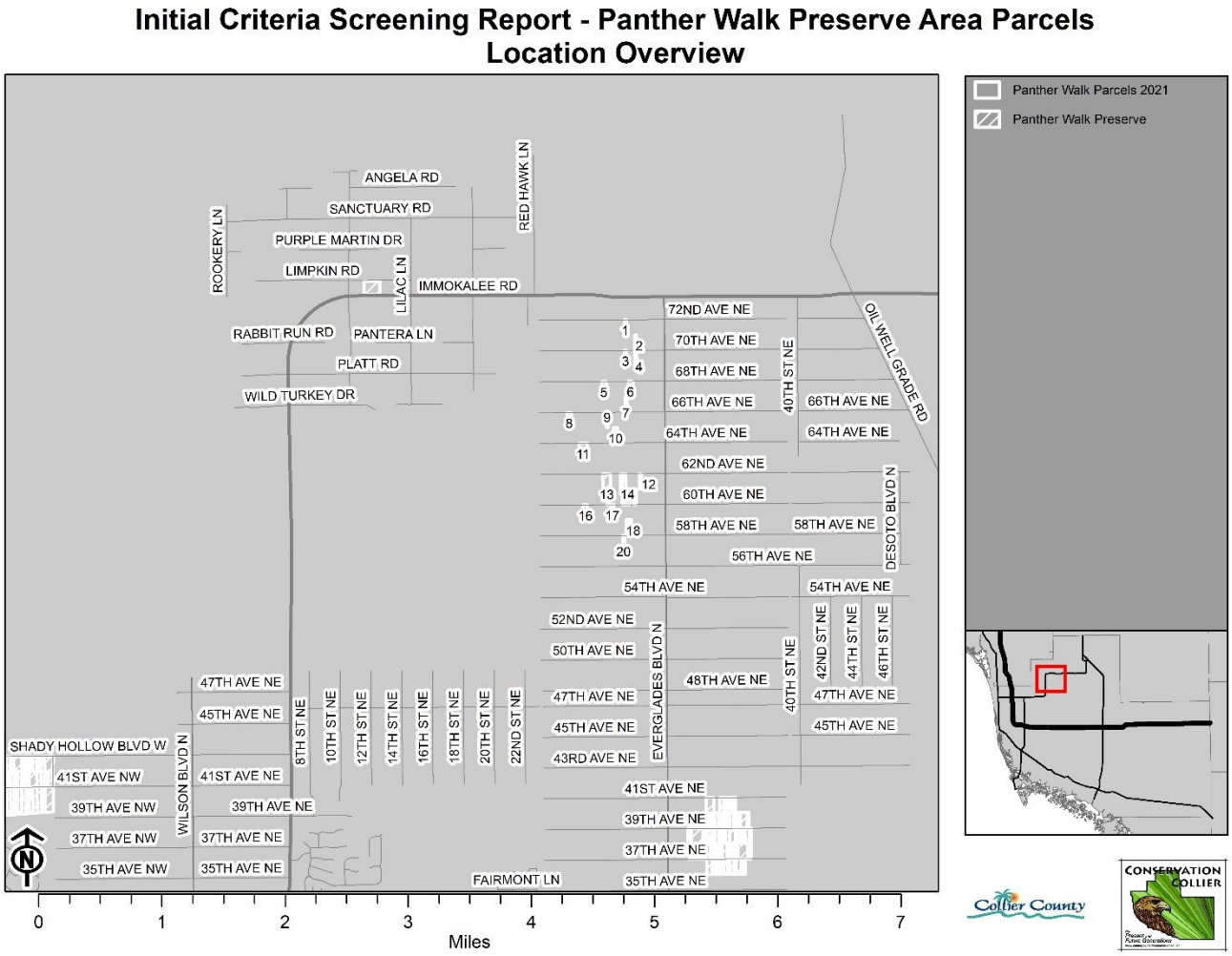


Figure 2: Location Overview Aerial with Surrounding Conservation Areas

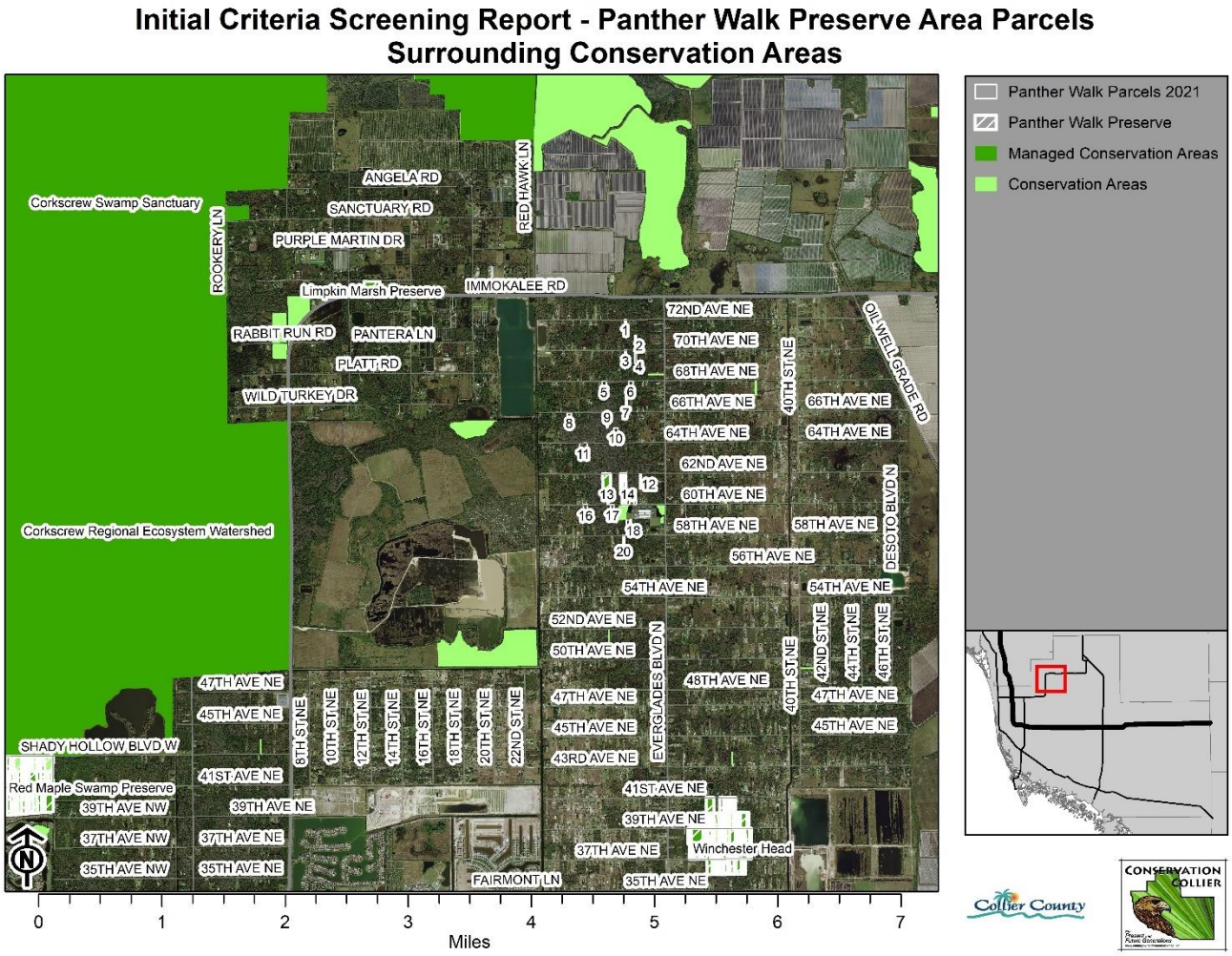


Figure 3: Close-up Aerials North

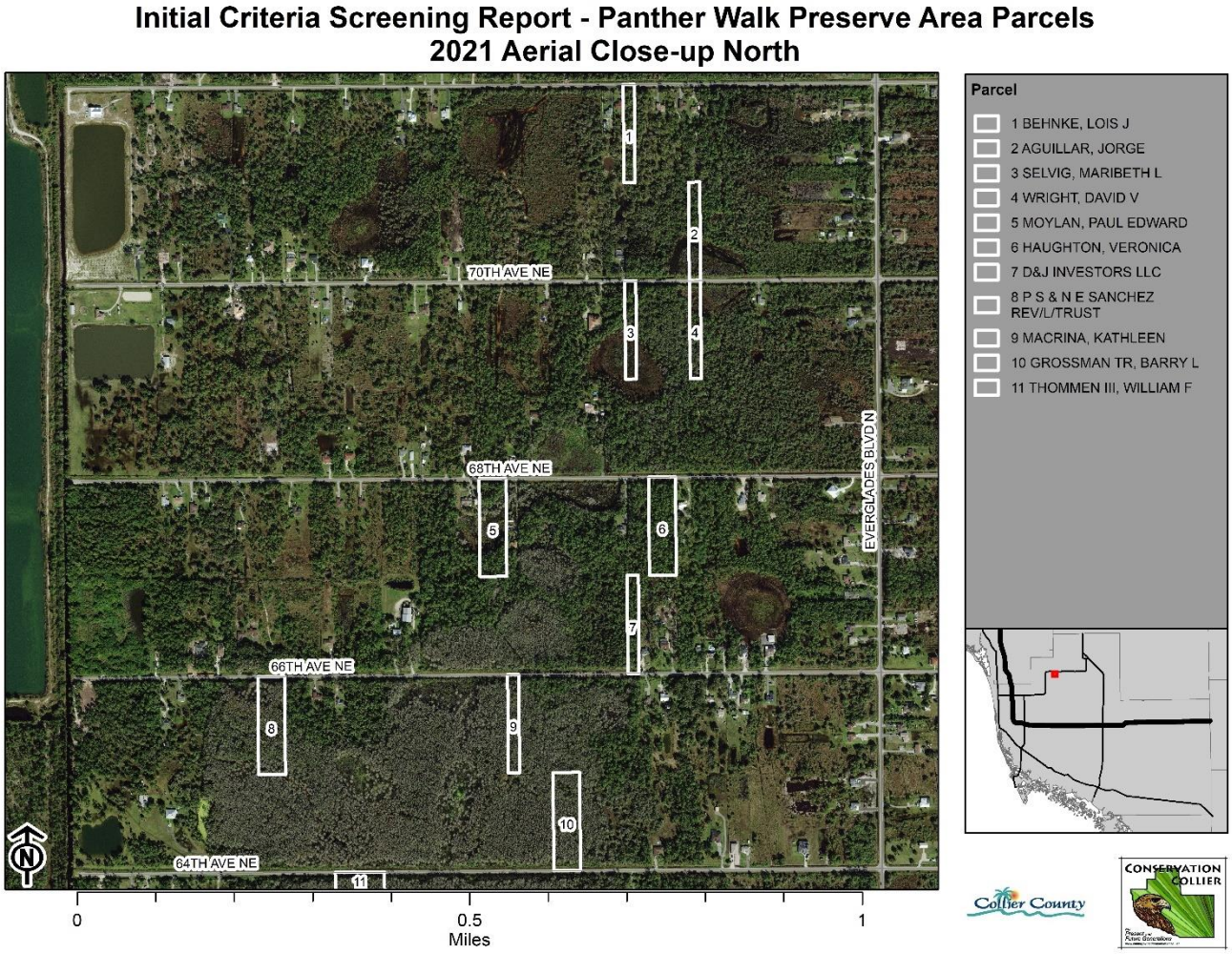
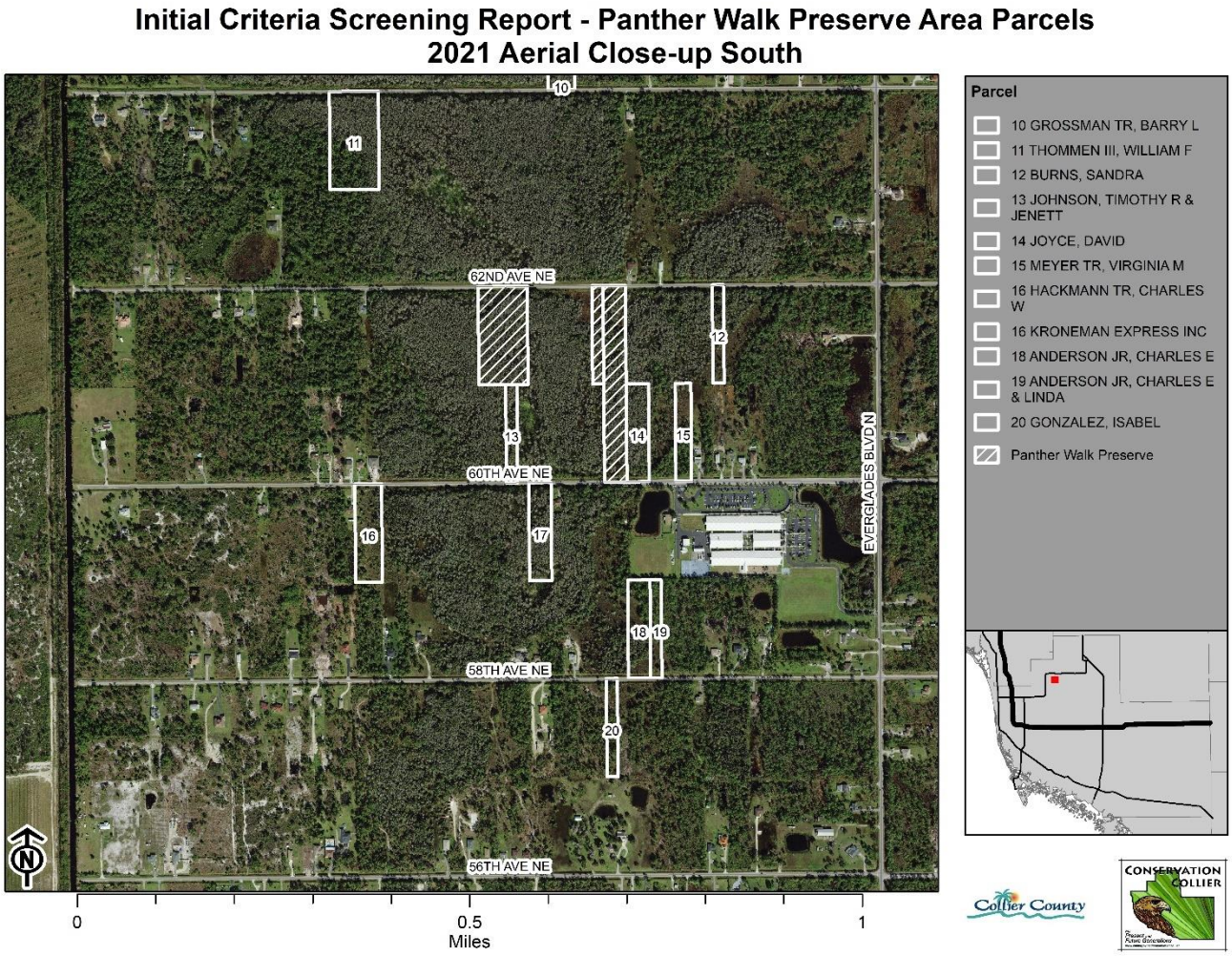


Figure 4: Close-up Aerials South



Summary of Assessed Value and Property Costs Estimates

The interest being appraised is fee simple "as is" for the purchase of the site(s). A value of the parcel was estimated using only one of the three traditional approaches to value, the sales comparison approach. Each is based on the principal of substitution that an informed purchaser would pay no more for the rights in acquiring a particular real property than the cost of acquiring, without undue delay, an equally desirable one. Three properties were selected for comparison, each with similar site characteristics, utility availability, zoning classification and road access. No inspection was made of the property or comparables used in this report and the Real Estate Services Department staff relied upon information solely provided by program staff. The valuation conclusions are limited only by the reported assumptions and conditions that no other known or unknown adverse conditions exist. Pursuant to the Conservation Collier Purchase Policy one appraisal will be required.

Table 2: Estimated Value

Property Owner	Folio	Acreage	Estimated Assessed Value*	Estimated Market Value**	Estimated Value Per Acre
1 BEHNKE, LOIS J	39150400000	1.14	$8,065	$33,000	$28,947
2 AGUILLAR, JORGE A	39151960002	1.14	$8,065	$33,000	$28,947
3 SELVIG, MARIBETH L	39150640006	1.14	$4,837	Donation	Donation
4 WRIGHT, DAVID V	39151800007	1.14	$4,837	$33,000	$28,947
5 MOYLAN, PAUL EDWARD	39147640006	2.73	$19,312	$68,250	$25,000
6 HAUGHTON, VERONICA	39150880002	2.73	$19,312	$68,250	$25,000
7 D&J INVESTORS LLC	39150960003	1.14	$8,065	$33,000	$28,947
8 P S & N E SANCHEZ REV/L/TRUST	39143120009	2.73	$19,312	$68,250	$25,000
9 MACRINA, KATHLEEN	39147320009	1.14	$8,065	$33,000	$28,947
10 GROSSMAN TR, BARRY L	38846120006	2.73	$13,460	$68,250	$25,000
11 THOMMEN III, WILLIAM F	38843200000	5	$24,652	$75,000	$15,000
12 BURNS, SANDRA	38848880001	1.14	$5,619	$33,000	$28,947
13 JOHNSON, TIMOTHY R & JENETT	38845560007	1.14	$5,619	$33,000	$28,947
14 JOYCE, DAVID	38848120004	2.27	$6,717	$56,750	$25,000
15 MEYER TR, VIRGINIA M	38848720006	1.59	$7,841	$33,000	$20,755
16 HACKMANN TR, CHARLES W	38843560009	2.73	$13,460	$68,250	$25,000
17 KRONEMAN EXPRESS INC	38846440003	2.27	$27,419	$56,750	$25,000
18 ANDERSON JR, CHARLES E	38848240007	2.27	$11,191	$56,750	$25,000
19 ANDERSON JR, CHARLES E & LINDA	38848280009	1.14	$5,619	$33,000	$28,947
20 GONZALEZ, ISABEL	38846840001	1.14	$5,619	$33,000	$28,947
	Sum	38.45	$227,086	$916,500	

* Assessed Value is obtained from the Property Appraiser's Website. The Assessed Value is based off the current use of the property.

**The Estimated Market Value for the Marco Island parcels was obtained from the Collier County Real Estate Services Department in October 2021. The increased value for the Agua Colina parcel is due to its' canal view/access.

Zoning, Growth Management and Conservation Overlays

Zoning, growth management and conservation overlays will affect the value of a parcel. The zoning and future land use designation is Estates (E).

Land Development Code section 2.03.01.B. describes the Estate District (E):

> The purpose and intent of the estates district (E) is to provide lands for low density residential development in a semi-rural to rural environment, with limited agricultural activities. In addition to low density residential development with limited agricultural activities, the E district is also designed to accommodate as conditional uses, development that provides services for and is compatible with the low density residential, semi-rural and rural character of the E district. The E district corresponds to and implements the estates land use designation on the future land use map of the Collier County GMP, although, in limited instances, it may occur outside of the estates land use designation. The maximum density permissible in the E district shall be consistent with and not exceed the density permissible or permitted under the estates district of the future land use element of the Collier County GMP as provided under the Golden Gate Master Plan.

III. Statements for Satisfying Initial Screening Criteria

The purpose of this section is to provide a closer look at how the property meets initial criteria. Conservation Collier Program staff conducted a site visit on [date]

Criteria 1: Native Habitats

Are any of the following unique and endangered plant communities found on the property? Order of preference as follows: Ord. 2002-63, Sec. 10 (1)(a) **NO**

i.	Hardwood hammocks	No
ii.	Xeric oak scrub	No
iii.	Coastal strand	No
iv.	Native beach	No
v.	Xeric pine	No
vi.	Riverine Oak	No
vii.	High marsh (saline)	No
viii.	Tidal freshwater marsh	No
ix.	Other native habitats	Yes

Vegetative Communities

Staff used two methods to determine native plant communities present: review of South Florida Water Management District (SFWMD) electronic databases for Department of Transportation's Florida Land Use, Cover and Forms (FLUCCS) (1994/1995) and field verification of same.

FLUCCS

The electronic database identified: 6210 - Cypress, 6216 – Cypress – Mixed Hardwoods, 6250 – Hydric Pine Flatwoods, 4110 – Pine Flatwoods, 4200 – Upland Hardwood Forests, 6410 – Freshwater Marshes, 6430 – Wet Prairies, 3210 – Palmetto Prairies, 3200 – Shrub and Brushland, 1180 – Residential, rural – one unit on 2 or more acres (Figure 6)

The following native plant communities were observed: Cypress strand forest, mixed wetland hardwood forest, oak/pine hammock, freshwater marshes, wet prairie, pine flatwoods.

Discrepancies between habitat predicted by the FLUCCS and habitat observed are primarily the result of hydrological alterations due to roads, swales, and abandoned firebreaks and citrus furrows.

Characterization of Plant Communities Present

Cypress strand forest: This habitat is dominated by mature cypress growing in deep water. The midstory is comprised of strangler fig and coastal plain willow. The understory is comprised of swamp fern, alligator flag, and other submerged and emergent vegetation. Numerous species of rare epiphytes are found is these forests. This habitat is found on parcels 8, 9, 10, 11, 13, and 17.

Cypress/mixed hardwood forests: This habitat is found along the margins of the cypress strand forest and freshwater marshes. The canopy is comprised of cypress, laurel oak, cabbage palm, and melaleuca. The midstory is comprised of myrsine, dahoon holly, wax myrtle, and Brazilian pepper. The understory can be sparse or dense and comprised of swamp fern, saw grass, and sedges. This habitat is found on parcels 3, 8, 9, 11, 12, 14, and 15.

Oak/Pine hammock: This habitat is dominated by laurel oak, slash pine, and cabbage palms. The midstory consists of myrsine and saw palmetto. The understory consists of ferns, muscadine, and greenbriers. This habitat is found on parcels 1, 2, 3, 4, 5, and 7.

Freshwater marsh: The deepest portions of these marshes are dominated by coastal plain willow with either pickerel weed or alligator flag. The shallower areas are comprised of lance leaf arrowhead and sedges which give way to grasses and ferns around the perimeter. Marshes can be found are parcels 2, 3, 4, 5, and 13.

Wet prairie: These transitional habitats are found between wetter areas such as cypress strands or marshes and drier areas such as hammocks and flatwoods. They dominated by grasses and sedges with a wide variety of small herbaceous species. Prairies are found on parcels 4, 12, 15, 16, 18, 19, and 20.

Pine flatwoods: This habitat is dominated by slash pines with little midstory. The understory is comprised of saw palmetto, rusty lyonia, and grasses. Flatwoods present show both hydric and mesic qualities within a single parcel. Flatwoods are found on parcels 6, 18, 19, and 20.

Statement for Satisfaction of Criteria

Although no single habitat type present on the parcels is especially rare in the county, they are remarkable in their condition compared to other developed areas. Aside from invasive plant infestations along the roadside swales, the interior of the parcels are diverse communities of mature native plants.

Criteria 2: Human Social Values

Does land offer significant human social values, such as equitable geographic distribution, appropriate access for nature-based recreation, and enhancement of the aesthetic setting of Collier County? Ord. 2002-63, Sec. 10 (1)(b) **YES**

Statement for Satisfaction of Criteria

These parcels would preserve green space in a rapidly developing area. To realize the full potential of these parcels, additional contiguous parcels will need to be acquired. A trail linking the parcels will greatly improve the recreational opportunities at the Panther Walk Preserve and will draw visitors from outside the immediate neighborhood. Unlike the current preserve, some of the drier parcels will be accessible for year-round recreation.

Criteria 3: Water Resources

Does the property offer opportunities for protection of water resource values, including aquifer recharge, water quality enhancement, protection of wetland dependent species habitat, and flood control? Ord. 2002-63, Sec. 10 (1)(c) **YES**

General Hydrologic Characteristics

These parcels fall within or are adjacent to the northern reaches of the Horsepen Strand. Strands are a type of forested swamp that form slow flowing, linear drainage channels across flatlands with high water tables. The Horsepen Strand begins at Immokalee Rd in the Northern Golden Gate Estates and flows south into the North Belle Meade area located north of I-75 (Figure 15)

Table 3: Wetland Dependent Plant Species Observed

Scientific Name (with prior name)	Common Names	Wetland Status
Osmunda regalis	Royal fern	OBL
Acrostichum danaeifolium	Giant leather fern	OBL
Annona glabra	Pond apple	OBL
Bidens alba	Spanish-needles	OBL
Cladium jamaicense	Sawgrass	OBL
Ilex cassine	Dahoon holly, Dahoon	OBL
Nymphaea odorata	American white waterlily	OBL
Persea palustris	Swamp Bay	OBL
Persicaria hydropiperoides (=Polygonum hydropiperoides)	Mild waterpepper; Swamp smartweed	OBL
Pontedaria cordata	Pickerel weed	OBL
Sagittaria graminea	Grassy arrowhead	OBL
Sagittaria lancifolia	Bulltongue arrowhead	OBL
Salix caroliniana	Coastal Plain willow	OBL
Taxodium distichum	Bald cypress	OBL
Thalia geniculata	Alligatorflag; Fireflag	OBL
Xyris fimbriata	Giant yelloweyed grass	OBL
Hymenachne amplexicaulis	West Indian marsh grass	OBL
Ludwigia peruviana	Peruvian primrosewillow	OBL
Acer rubrum	Red maple	FACW
Amphicarpum muhlenbergianum	Blue maidencane	FACW
Coreopsis leavenworthii	Leavenworth's tickseed	FACW
Hydrocotyle sp.	Marshpennywort	FACW
Quercus laurifolia	Laurel oak, Diamond oak	FACW
Rhexia mariana	Pale meadowbeauty, Maryland meadowbeauty	FACW
Rhynchospora colorata	Starrush whitetop	FACW
Solidago sempervirens	Seaside goldenrod	FACW
Telmatoblechnum serrulatum (=Blechnum serrulatum)	Swamp fern	FACW
Xyris jupicai	Richard's yelloweyed grass	FACW
Panicum repens	Torpedo grass	FACW
Andropogon glomeratus var. *pumilus*	Bushy bluestem	FAC
Ardisia escallanoides	Marl berry	FAC
Baccharis glomeruliflora	Saltbush	FAC
Erechtites hieraciifolius	Fireweed, American burnweed	FAC
Erigeron quercifolius	Southern-fleabane, Oakleaf fleabane	FAC

Eupatorium capillifolium	Dogfennel	FAC
Euthamia caroliniana	Slender flattop goldenrod	FAC
Ficus aurea	Strangler fig, Golden fig	FAC
Liatris sp.	Blazing star	FAC
Morella cerifera (=Myrica cerifera)	Wax myrtle, Southern bayberry	FAC
Myrsine cubana (=Rapanea punctata)	Myrsine, Colicwood	FAC
Psychotria nervosa	Shiny leafed wild coffee	FAC
Rubus trivialis	Dewberry	FAC
Sabal palmetto	Cabbage palm	FAC
Acacia auriculiformis	Earleaf acacia	FAC
Melaleuca quinquenervia	Punktree	FAC
Schinus terebinthifolia	Brazilian pepper	FAC
Nephrolepis sp.	Sword Fern	FAC

Wetland Status: OBL = Obligate, FACW = Facultative Wet, FAC = Facultative

Table 4: Wetland Dependent Wildlife Species Observed

Common Name	**Scientific Name**
North American river otter	*Lontra canadensis*
chicken turtle	*Deirochelys reticularia*
southern leopard frog	*Lithobates sphenocephalus*
little blue heron	*Egretta caerulea*
great blue heron	*Ardea herodias*
great egret	*Ardea alba*
green heron	*Butorides virescens*
American bittern	*Botaurus lentiginosus*
white ibis	*Eudocimus albus*
sandhill crane	*Antigone canadensis*
belted kingfisher	*Megaceryle alcyon*
anhinga	*Anhinga anhinga*
black-bellied whistling-ducks	*Dendrocygna autumnalis*

Other Hydrologic Indicators Observed

Standing water was present in every vegetative community except pine flatwoods.

Soils

Soils found on these parcels are nearly level and poorly to moderately drained. These soils have varying levels of suitability for agriculture that be improved with a good water-control system but have severe limitations for most urban uses. According to the Collier County Soil Survey the following soils are present. Chobee, Winder, and Gator soils can be found in marshes in the northern parcels. These soils are found in depressional areas and are ponded for six or more months per year under natural conditions. Riviera, Limestone Substratum - Copeland Fine Sand is found in the strand forest in the central parcels. This soil is typically found in cypress swamps and sloughs and has

a water table within 12 inches for three to six months a year. Malabar fine sand is found along the periphery of the strand in mixed wetland hardwood forests. This soil is typically found in sloughs and poorly defined drainage ways. Under natural conditions the seasonal high-water table is within a depth of 12 inches for 3-6 months per year. During periods of high rainfall, the soil is covered by slowly moving water for about a week. Wabasso fine sand is typically found in pine flatwoods but is found the oak/pine hammocks of the northern parcels. The presence of furrows and berms suggests that these parcels were once utilized as citrus groves which may explain the discrepancy between expected and present habitats. Under natural conditions, the seasonal high-water table is within a depth 6 to 18 inches for 1-6 months of the year. Immokalee fine sand is found in the pine flatwoods south of the strand. Under natural conditions, the seasonal high-water table is at a depth of 6 to 18 inches for 1 to 6 months during most years.

Aquifer Recharge Potential

Aquifer recharge map data was developed by Fairbank, P. and S. Hohner in 1995 and published as Mapping recharge (infiltration and leakage) throughout the South Florida Water Management District, Technical publication 95-20 (DRE # 327), South Florida Water Management District, West Palm Beach, Florida.

Table 5: Aquifer Recharge, Wellfield Protection, and FEMA Flood Zone Characteristics

Characteristic	**Value**	**Comment**
Precipitation Recharge/Discharge Areas - Floridan, Sandstone and Tamiami Aquifers	0–3 inches	Recharges the sandstone aquifer
Precipitation Recharge Areas - Surficial and Biscayne Aquifers	43-<56 inches	Recharges the surficial aquifer
Wellfield Protection Zone	N/A	These parcels do not fall within a wellfield protection zone. Water does flow southward through the strand into a well field protection zone approximately
FEMA Flood Zone	AH	Zone AH is an area subject to inundation by 1% annual chance shallow flooding with a constant water-surface elevation (usually areas of ponding) where average depths are between 1 and 3 feet.

Statement for Satisfaction of Criteria

These parcels protect water resources significantly. They provide recharge capacity for the Surficial Aquifer. Properties in this area are subject to frequent flooding. These parcels provide critical flood water attenuation as more land is cleared and filled for development. Wetland vegetation on these parcels slows down the flow of water and filters out nutrients and sediments before it reaches the canals which flow into the gulf. The parcels also provide high quality habitat for wetland dependent species, especially wading birds.

Criteria 4: Biological and Ecological Value

Does the property offer significant biological values, including biodiversity, listed species habitat, connectivity, restoration potential and ecological quality?

Ord. 2002-63, Sec. 10 (1)(d) **YES**

Listed Plant Species

The federal authority to protect land-based plant species is administered by the U.S. Fish and Wildlife Service (FWS) and published in 50 Code of Federal Regulations (CFR) 23. Lists of protected plants can be viewed on-line at https://www.fws.gov/endangered/. The Florida state lists of protected plants are administered and maintained by the Florida Department of Agriculture and Consumer Services (FDACS) via chapter 5B-40, Florida Administrative Code (F.A.C.) and can be found on their website.

Table 6: Observed Listed Plant Species

Common Name	Scientific Name	Status
Hand fern	*Cheiroglossa palmata*	SE
Stiff-leaved wild-pine, Cardinal airplant	*Tillandsia fasciculata*	SE
Fuzzy-wuzzy air plant	*Tillandsia pruinosa*	SE
Giant air plant	*Tillandsia utriculata*	SE
Reflexed wild-pine, Northern needleleaf	*Tillandsia balbisiana*	ST
Florida Butterfly Orchid	*Encyclia tampensia*	CE
Royal fern	*Osmunda regalis*	CE
Saw palmetto	*Serenoa repens*	CE

Status: SE=State Endangered, ST=State Threatened, CE= Commercially Exploited

Listed Wildlife Species

Federal wildlife species protection is administered by the FWS with specific authority published in 50 CFR 17. Lists of protected wildlife can be viewed on-line at: https://www.fws.gov/endangered/

FWC maintains the Florida state list of protected wildlife in accordance with Rules 68A-27.003, 68A-27.004, and 68A-27.005, respectively, of the Florida Administrative Code (F.A.C.). A list of protected Florida wildlife species can be viewed at: https://myfwc.com/wildlifehabitats/wildlife/.

Table 7: Observed Listed Wildlife Species

Species	Scientific Name	Status
little blue heron	*Egretta caerulea*	ST
Florida sandhill crane	*Antigone canadensis pratensis*	ST

Table 8: Potential Listed Wildlife Species

Common Name	Scientific Name	Status
Florida bonneted bat	*Eumops floridanus*	FE
Florida panther	*Puma concolor coryi*	FE
Everglade snail kite	*Rostrhamus sociabilis plumbeus*	FE
Wood stork	*Mycteria americana*	FT
Audubon's crested caracara	*Polyborus plancus audubonii*	FT
Mangrove fox squirrel	*Sciurus niger avicennia*	ST
Tricolored heron	*Egretta tricolor*	ST
Roseate spoonbill	*Platalea ajaja*	ST
American alligator	*Alligator mississippiensis*	FT (S/A)

Status: FE=Federally Endangered, FT=Federally Threatened, FT (S/A)=Federally Threatened due to Similarity of Appearance, SE=State Endangered, ST=State Threatened, CE= Commercially Exploited

Table 9: Non-Listed Wildlife Species Observed

Species	Scientific Name
nine-banded armadillo	*Dasypus novemcinctus*
eastern gray squirrel	*Sciurus carolinensis*
raccoon	*Procyon lotor*
North American river otter	*Lontra canadensis*
white-tailed deer	*Odocoileus virginianus*
black bear	*Ursus americanus*
cat	*Felis catus*
black racer	*Coluber constrictor*
chicken turtle	*Deirochelys reticularia*
southern leopard frog	*Lithobates sphenocephalus*
queen butterfly	*Danaus gilippus*
great blue heron	*Ardea herodias*
great egret	*Ardea alba*
green heron	*Butorides virescens*
American bittern	*Botaurus lentiginosus*
white ibis	*Eudocimus albus*
belted kingfisher	*Megaceryle alcyon*
anhinga	*Anhinga anhinga*
black-bellied whistling-ducks	*Dendrocygna autumnalis*
wild turkey	*Meleagris gallopavo*
red-shouldered hawk	*Buteo lineatus*
black vulture	*Coragyps atratus*
turkey vulture	*Cathartes aura*
American crow	*Corvus brachyrhynchos*
blue jay	*Cyanocitta cristata*
red-bellied woodpecker	*Melanerpes carolinus*
pileated woodpecker	*Dryocopus pileatus*
downy woodpecker	*Dryobates pubescens*
yellow-bellied sapsucker	*Sphyrapicus varius*
pine warbler	*Setophaga pinus*
northern parula	*Setophaga americana*
blue-gray gnat catcher	*Polioptila caerulea*
northern mockingbird	*Mimus polyglottos*
gray catbird	*Dumetella carolinensis*
mourning dove	*Zenaida macroura*
common ground dove	*Columbina passerina*
northern cardinal	*Cardinalis cardinalis*

white-eyed vireo	*Vireo griseus*
great crested flycatcher	*Myiarchus crinitus*
common grackle	*Quiscalus quiscula*

Bird Rookery

The nearest rookery is found on Audubon's Corkscrew Swamp Sanctuary located approximately five miles northwest.

Table 10. USFWS Consultation Areas

USFWS Species Consultation Area	Designation
Audubon's Crested Caracara	Yes
Everglade snail kite	Yes
Florida bonneted bat	Yes
Florida panther	Yes (Secondary Zone)

Statement for Satisfaction of Criteria

The biological value of these parcels is primarily the result of containing high integrity habitats ranging from upland pine flatwoods to deep cypress strand forests. These parcels were disturbed in the past but have had decades to mature into communities that are well adapted to their current environment. Invasive vegetation is largely restricted to roadside swales. Little restoration work is necessary for most parcels. Several species of listed epiphytic plants can be found within the cypress strand. These high-quality habitats provide the basis for a thriving food chain for both terrestrial and aquatic species from invertebrates to the largest predators. Black bear scat was found on several parcels and Florida panthers are well documented within the adjacent Panther Walk Preserve. Although not detected during the site visit, American alligators are known to utilize the strand. Numerous river otters were observed crossing the roads. These parcels provide habitat for several species of listed birds which have all been documented in the immediate area including wood storks, little blue herons, Florida sandhill cranes, Audubon's crested caracaras, and snail kites. Wetlands of varying depth provide foraging habitats nearly year-round.

Criteria 5: Enhancement of Current Conservation Lands

Does the property enhance and/or protect the environmental value of current conservation lands through function as a buffer, ecological link or habitat corridor? Ord. 2002-63, Sec. 10 (1)(e) **YES**

These properties enhance the adjacent Panther Walk Preserve and create the first steppingstones of a wildlife corridor that connects the Horsepen Strand and Golden Gate Estates neighborhood to the much larger Corkscrew Regional Ecosystem Watershed.

Is this property within the boundary of another agency's acquisition project?
No

If yes, will use of Conservation Collier funds leverage a significantly higher rank or funding priority for the parcel?
No

Statement for Satisfaction of Criteria

The low-density residential development pattern of the Northern Golden Gate Estates is compatible with the needs of many species. Wildlife currently thrives in the Estates because it can travel relatively uninhibited throughout the neighborhood and into the nearby Corkscrew Regional Ecosystem Watershed. A protected corridor is necessary to preserve wildlife's freedom of movement through this rapidly developing landscape. These parcels protect the highly diverse Horsepen Strand, expand the Panther Walk Preserve, and provide the backbone for a potential north-south corridor as well as necessary refugia for "urban" wildlife.

IV. Potential Uses and Recommended Site Improvements

Potential Uses

Potential Uses as Defined in Ordinance No. 2002-67, as amended by Ordinance No. 2007-65, section 5.9:

Table 11: Appropriate Uses

Activity	Appropriate	Comments
Hiking	Yes	Some parcels are dry enough to accommodate year-round hiking. If a contiguous corridor is achieved, an approximately two-mile trail may be created.
Photography	Yes	There are ample opportunities to photography wildlife as well as mature trees and rare plants
Birdwatching	Yes	The diversity of habitat provides excellent birdwatching
Kayaking/Canoeing	No	
Swimming	No	
Hunting	No	
Fishing	No	

Recommended Site Improvements

Once several contiguous parcels are acquired, a hiking trail should be installed.

Access

Each parcel is accessible via a paved road on either its northern or southern boundary.

V. Assessment of Management Needs and Costs

Management of this property will address the costs of exotic vegetation removal and control. The following assessment addresses both the initial and recurring costs of management. These are very preliminary estimates; Ordinance No. 2002-67, as amended by Ordinance No. 2007-65, requires a formal land management plan be developed for each property acquired by Conservation Collier.

Non-native Vegetation

Non-native, invasive species noted here are taken from the Florida Exotic Pest Plant Council's (FLEPPC) 2016 List of Invasive Plant Species (Category I and Category II). FLEPPC is an independent incorporated advisory council created to support the management of invasive exotic plants in Florida's natural areas by providing a forum for exchanging scientific, educational, and technical information. Its members come primarily from public educational institutions and governmental agencies. Annual lists of invasive plant species published by this organization are used widely in the state of Florida for regulatory purposes.

The current FLEPPC list (2019) can be viewed on-line at
http://bugwoodcloud.org/CDN/fleppc/plantlists/2019/2019_Plant_List_ABSOLUTE_FINAL.pdf

Category I plants are those which are altering native plant communities by displacing native species, changing community structures or ecological functions, or hybridizing with natives. This definition does not rely on the economic severity or geographic range of the problem, but on the documented ecological damage caused. Category II invasive exotics have increased in abundance or frequency but have not yet altered Florida plant communities to the extent shown by Category I species. These species may become Category I if ecological damage is demonstrated.

Table 12: Non-native Plant Species Observed

Common Name	Scientific Name	FLEPPC Status
Earleaf acacia	*Acacia auriculiformis*	I
West Indian marsh grass	*Hymenachne amplexicaulis*	I
Cogon grass	*Imperata cylindrica*	I
Peruvian primrosewillow	*Ludwigia peruviana*	I
Small-leaf climbing fern	*Lygodium microphyllum*	I
Guinea grass	*Megathyrsus maximus*	I
Punktree	*Melaleuca quinquenervia*	I
Torpedo grass	*Panicum repens*	I
Water lettuce	*Pistia stratiotes*	I
Water spangles	*Salvinia minima*	I
Brazilian pepper	*Schinus terebinthifolia*	I
Caesarweed	*Urena lobata*	I
Sour orange	*Citrus sp.*	

FLEPPC Codes: Category I = species has altered native plant communities; Category II = species with increasing abundance or frequency.

Invasive Vegetation Removal and Control

Invasive vegetation is primarily found along the roadside swales but is intermixed throughout some parcels. Infestation rates range from less than 5% to 30%. Invasive vegetation is interspersed in such a way that replanting is not necessary once removed. Brazilian pepper, melaleuca, and old-world climbing fern are the predominant species. Low infestation rates, low seed source, and ease of access should reduce management costs significantly.

Table 13: Invasive Vegetation Infestation Estimates

Parcel	% Invasive Infestation
1	<5
2	5-10
3	15
4	<5
5	5-10
6	15
7	15
8	<5
9	15
10	<5
11	25
12	30
13	<5
14	15
15	20
16	<5
17	20
18	15
19	15
20	<5

Public Parking

Visitors may park on the road shoulder in front of each parcel. A parking lot may become necessary once more properties are acquired, and a longer trail is established.

Public Access Trails

A seasonally accessible trail will be established once a contiguous stretch of parcels is acquired. Sections of the trail in pine flatwoods may be open year-round.

Security and General Maintenance

Parcels will have to be monitored for dumping and encroachment from neighbors. Once a trail is established, bollards will have to be installed to prevent trespass by ATV's. There are currently ATV trails that cut through or work along the boundary of parcels 2, 4, 8, 11, and 16. These may be included in a greater trail system once more parcels are acquired.

Table 14: Summary of Estimated Needs and Costs

Management Element	Initial Cost	Annual Recurring Cost	Comments
Invasive Vegetation	$11,550	$5,775	$300/acre initial, $150/acre maintenance
Parking Facility	TBD		May become necessary once more parcels are acquired
Trails	TBD		$1500/mile, potential for 2-mile trail once more parcels are acquired
Signs	$2,000		A sign will be needed to mark each parcel
Total	$13,550	$5,775	

VI. Acquisition Considerations

Staff would like to bring the following items to the attention of the Advisory Committee during the review of this property. The following are items that will be addressed in the Executive Summary to the Board of County Commissioners if this property moves forward for ranking.

Staff recommend purchasing all parcels regardless of their proximity to the Panther Walk Preserve. This will allow for maximum flexibility in creating a contiguous corridor in the future and preserve the high-quality habitats observed. Although the matrix of undeveloped and partially developed lots in the Estates is compatible with many species, protected pockets of high-quality habitat provide necessary refugia and foraging grounds to complete the more secretive portions of their lifecycles. Even if not directly connected to a wildlife corridor or preserve, these refugia allow species to persist in increasingly developed landscapes.

VII. Potential for Matching Funds

The primary partnering agencies for conservation acquisitions, and those identified in the ordinance are the Florida Communities Trust (FCT), and The Florida Forever Program. The following highlights potential for partnering funds, as communicated by agency staff:

Florida Communities Trust - Parks and Open Space Florida Forever grant program

The FCT Parks and Open Space Florida Forever grant program provides grant funds to local governments and nonprofit organizations to acquire conservation lands, urban open spaces, parks and greenways. Application for this program is typically made for pre-acquired sites up to two years from the time of acquisition. The Parks and Open Space Florida Forever grant program assists the Department of Environmental Protection in helping communities meet the challenges of growth, supporting viable community development and protecting natural resources and open space. The program receives 21 percent Florida Forever appropriation.

Florida Forever Program

Staff has been advised that the Florida Forever Program has limited funds and is concentrating on parcels already included on its ranked priority list. This parcel is not inside a Florida Forever priority project boundary. Additionally, the Conservation Collier Program has not been successful in partnering with the Florida Forever Program due to conflicting acquisition policies and issues regarding joint title between the programs.

Additional Funding Sources

Staff will apply for invasive exotic plant treatment funds from the FWC Invasive Plant Management Section once per year. If awarded, a State Contractor would be selected to complete the work.

VIII. Summary of Secondary Screening Criteria

Table 15: Secondary Criteria Scoring

Category	Subcategory	Scored Points	Possible Points
Ecological	**Total Score (Sum of 1a, 1b, 1c, 1d then divided by 4)**	**64**	**100**
	1a. Unique and Endangered Plant Communities	20	100
	1b. Significance for Water Resources	67	100
	1c. Resource Ecological/Biological Value	100	100
	1d. Protection and Enhancement of Current Conservation Lands	70	100
Human Values/Aesthetics	**Total Score (Obtained by dividing the subtotal by 3)**	**75**	**100**
	2a. Human Social Values/Aesthetics	225	300
Vulnerability to Development/Degradation	**Total Score (Sum of 3a)**	**50**	**100**
	3a. Zoning/Land Use Designation	50	100
Feasibility and Costs of Management	**Total Score (Sum of 4a, 4b, and 4c, then divided by 3)**	**87**	**100**
	4a. Hydrologic Management Needs	100	100
	4b. Exotics Management Needs	80	100
	4c. Land manageability	80	100
Total		**276**	**400**

Ecological

64/100

Habitats found on these parcels show remarkable integrity. These intact natural communities provide habitat for numerous species of listed plants and wildlife. Additionally, these parcels provide benefits to the surrounding area by holding, filtering, and absorbing water.

Human Values/Aesthetics

75/100

The mature habitats found on these parcels provide aesthetically pleasing areas to visit. Once a contiguous swath of parcels is acquired an up to two-mile hiking trail can be installed.

Vulnerability

50/100

This area is developing rapidly and the window to preserve a contiguous swath of parcels is closing. Areas previously deemed too wet to be desirable to develop are being built upon. The dry parcels in the north which form the bottleneck of a future corridor are especially at risk.

Management

87/100

Like the Panther Walk Preserve, these parcels will require minimal maintenance. Low invasive plant infestation on and around the parcels and easy access should keep yearly maintenance costs down.

Parcel Size

While parcel size was not scored, the ordinance advises that based on comparative size, the larger of similar parcels is preferred.

IX. Figures, Tables, and Photos

Scoring

Table 16: Secondary Scoring Criteria Form

1. Confirmation of Initial Screening Criteria (Ecological)			
1.A Unique and Endangered Plant Communities	**Possible points**	**Scored points**	**Comments**
Select the highest Score:			
1. Tropical Hardwood Hammock	90		
2. Xeric Oak Scrub	80		
3. Coastal Strand	70		
4. Native Beach	60		
5. Xeric Pine	50		
6. Riverine Oak	40		
7. High Marsh (Saline)	30		
8. Tidal Freshwater Marsh	20		
9. Other Native Habitats	10	10	FLUCCS 6210 - Cypress, 6216 – Cypress – Mixed Hardwoods, 6250 – Hydric Pine Flatwoods, 4110 – Pine Flatwoods, 4200 – Upland Hardwood Forests, 6410 – Freshwater Marshes, 6430 – Wet Prairies, 3210 – Palmetto Prairies, 3200 – Shrub and Brushland

10. Add additional 5 points for each additional Florida Natural Areas Inventory (FNAI) listed plant community found on the parcel	5 each	5	1311-Mesic flatwoods,
11. Add 5 additional points if plant community represents a unique feature, such as maturity of vegetation, outstanding example of plant community, etc.	5	5	Mature cypress strand forest
1.A. Total	***100***	***20***	
1.B Significance for Water Resources	**Possible points**	**Scored points**	**Comments**
1. Aquifer Recharge *(Select the Highest Score)* a. Parcel is within a wellfield protection zone b. Parcel is not in a wellfield protection zone but will contribute to aquifer recharge c. Parcel would contribute minimally to aquifer recharge d. Parcel will not contribute to aquifer recharge, eg., coastal location	 100 50 25 0	50	
2. Surface Water Quality *(Select the Highest Score)* a. Parcel is contiguous with and provides buffering for an Outstanding Florida Waterbody b. Parcel is contiguous with and provides buffering for a creek, river, lake or other surface water body c. Parcel is contiguous with and provides buffering for an identified flowway d. Wetlands exist on site e. Acquisition of parcel will not provide opportunities for surface water quality enhancement	 100 75 50 25 0	50	Horsepen Strand
3. Strategic to Floodplain Management *(Calculate for a and b; score c if applicable)* a. Depressional soils b. Slough Soils c. Parcel has known history of flooding and is likely to provide onsite water attenuation	 80 40 20	 80 20	
Subtotal	300	200	
1.B Total	***100***	**67**	*Obtained by dividing the subtotal by 3.*
1.C Resource Ecological/Biological Value	**Possible points**	**Scored points**	**Comments**
1. Biodiversity *(Select the Highest Score for a, b and c)* a. The parcel has 5 or more FLUCCS native plant communities b. The parcel has 3 or 4 FLUCCS native plant communities c. The parcel has 2 or or less FLUCCS native plant communities d. The parcel has 1 FLUCCS code native plant communities	 100 75 50 25	100	
2. Listed species a. Listed wildlife species are observed on the parcel	 80	 80	

b. Listed wildlife species have been documented on the parcel by wildlife professionals	70		
c. Habitat Richness score 5 categories	70		
d. Rookery found on the parcel	10		
e. Listed plant species observed on parcel - add additional 20 points	20	20	
3. Restoration Potential a. Parcel can be restored to high ecological function with minimal alteration	100	100	
b. Parcel can be restored to high ecological function but will require moderate work, including but not limited to removal of exotics and alterations in topography.	50		
c. Parcel will require major alterations to be restored to high ecological function.	15		
d. Conditions are such that parcel cannot be restored to high ecological function	0		*explain limiting conditions*
Subtotal	300	300	
1.C Total	***100***	**100**	*Divide the subtotal by 3*
1.D Protection and Enhancement of Current Conservation Lands	**Possible points**	**Scored points**	**Comments**
1. Proximity and Connectivity a. Property immediately contiguous with conservation land or conservation easement.	100		
b. Property not immediately contiguous, parcels in between it and the conservation land are undeveloped.	50	50	
c. Property not immediately contiguous, parcels in-between it and conservation land are developed	0		
d. If not contiguous and developed, add 20 points if an intact ecological link exists between the parcel and nearest conservation land	20	20	
1.D Total	***100***	70	
1. Ecological Total Score	**100**	**64**	*Sum of 1A, 1B, 1C, 1D then divided by 4*
2. Human Values/Aesthetics			
2.A Human Social Values/Aesthetics	**Possible points**	**Scored points**	**Comments**
1. Access *(Select the Highest Score)* a. Parcel has access from a paved road	100	100	
b. Parcel has access from an unpaved road	75		
c. Parcel has seasonal access only or unimproved access easement	50		

d. Parcel does not have physical or known legal access	0		
2. Recreational Potential *(Select the Highest Score)* a. Parcel offers multiple opportunities for natural resource-based recreation consistent with the goals of this program, including but not limited to, environmental education, hiking, nature photography, bird watching, kayaking, canoeing, swimming, hunting (based on size?) and fishing. b. Parcel offers only land-based opportunities for natural resource-based recreation consistent with the goals of this program, including but not limited to, environmental education, hiking, and nature photography. c. Parcel offers limited opportunities for natural-resource based recreation beyond simply accessing and walking on it d. Parcel does not offer opportunities for natural-resource based recreation	 100 75 50 0	 75	
3. Enhancement of Aesthetic Setting a. Percent of perimeter that can me seen by public. Score based on percentage of frontage of parcel on public thoroughfare b. Add up to 20 points if the site contains outstanding aesthetic characteristic(s), such as but not limited to water view, mature trees, native flowering plants, or archeological site	 80 20	 30 20	*Excellent condition mature cypress strand forest and pine flatwoods*
Subtotal	300	225	
2. Human Social Values/Aesthetics Total Score	**100**	**75**	*Obtained by dividing the subtotal by 3.*
3. Vulnerability to Development/Degradation			
3.A Zoning/Land Use Designation	**Possible points**	**Scored points**	**Comments**
1. Zoning allows for Single Family, Multifamily, industrial or commercial 2. Zoning allows for density of no greater than 1 unit per 5 acres 3. Zoning allows for agricultural use /density of no greater than 1 unit per 40 acres 4. Zoning favors stewardship or conservation	50 45 40 0	50	
5. If parcel has ST overlay, remove 20 points	-20		
6. Property has been rezoned and/or there is SDP approval 7. SFWMD and/or USACOE permit has been issued 8. A rezone or SDP application has been submitted 9. SFWMD and/or USACOE permit has been applied for	25 25 15 15		

3. Vulnerability Total Score	**100**	**50**	
4. Feasibility and Costs of Management			
4.A Hydrologic Management Needs	**Possible points**	**Scored points**	**Comments**
1. No hydrologic changes are necessary to sustain qualities of site in perpetuity	100	100	
2. Minimal hydrologic changes are required to restore function, such a cut in an existing berm	75		
3. Moderate hydrologic changes are required to restore function, such as removal of existing berms or minor re-grading that require use of machinery	50		
4. Significant hydrologic changes are required to restore function, such as re-grading of substantial portions of the site, placement of a berm, removal of a roadbed, culvert or the elevation of the water table by installing a physical structure and/or changes unlikely	0		
5.A Total	***100***	***100***	
4.B Exotics Management Needs	**Possible points**	**Scored points**	**Comments**
1. Exotic Plant Coverage			
a. No exotic plants present	100		
b. Exotic plants constitute less than 25% of plant cover	80	80	
c. Exotic plants constitute between 25% and 50% of plant cover	60		
d. Exotic plants constitute between 50% and 75% of plant cover	40		
e. Exotic plants constitute more than 75% of plant cover	20		
f. Exotic characteristics are such that extensive removal and maintenance effort and management will be needed (e.g., heavy infestation by air potato or downy rosemyrtle)	-20		
g. Adjacent lands contain substantial seed source and exotic removal is not presently required	-20		
5.B Total	***100***	***80***	
4.C Land Manageability	**Possible points**	**Scored points**	**Comments**
1. Parcel requires minimal maintenance and management, examples: cypress slough, parcel requiring prescribed fire where fuel loads are low and neighbor conflicts unlikely	80	80	
2. Parcel requires moderate maintenance and management, examples: parcel contains trails, parcel requires prescribed fire and circumstances do not favor burning	60		
3. Parcel requires substantial maintenance and management, examples: parcel contains structures that must be maintained, parcel requires management using machinery or chemical means which will be difficult or expensive to accomplish	40		

4. Add 20 points if the maintenance by another entity is likely 5. Subtract 10 points if chronic dumping or trespass issues exist	20 -10		
5.C Total	***100***	***80***	
4. Feasibility and Management Total Score	**100**	**87**	*Sum of 5A, 5B, 5C, then divided by 3*
Total Score	**400**	**276**	

Critical Lands and Waters Identification Maps (CLIP)

This report makes use of data layers from the Florida Natural Areas Inventory and University of Florida Critical Lands and Waters Identification Project (CLIP4). CLIP4 is a collection of spatial data that identify statewide priorities for a broad range of natural resources in Florida. It was developed through a collaborative effort between the Florida Areas Natural Inventory (FNAI), the University of Florida GeoPlan Center and Center for Landscape Conservation Planning, and the Florida Fish and Wildlife Conservation Commission (FWC). It is used in the Florida Forever Program to evaluate properties for acquisition. CLIP4 is organized into a set of core natural resource data layers which are representative of 5 resource categories: biodiversity, landscapes, surface water, groundwater and marine. The first 3 categories have also been combined into the Aggregated layer, which identifies 5 priority levels for natural resource conservation.

Figure 5. Biodiversity CLIP4 Map

This is the CLIP version 4.0 Biodiversity Resource Priorities model, which combines conservation priorities from the SHCA, Vertebrate Richness, FNAIHAB, and Priority Natural Communities Core Data layers. Grid Value 5 = Priority 1 (highest conservation priority), 4 = Priority 2, 3 = Priority 3, 2 = Priority 4, 1 = Priority 5 (lowest), and 0 = no resource value identified.

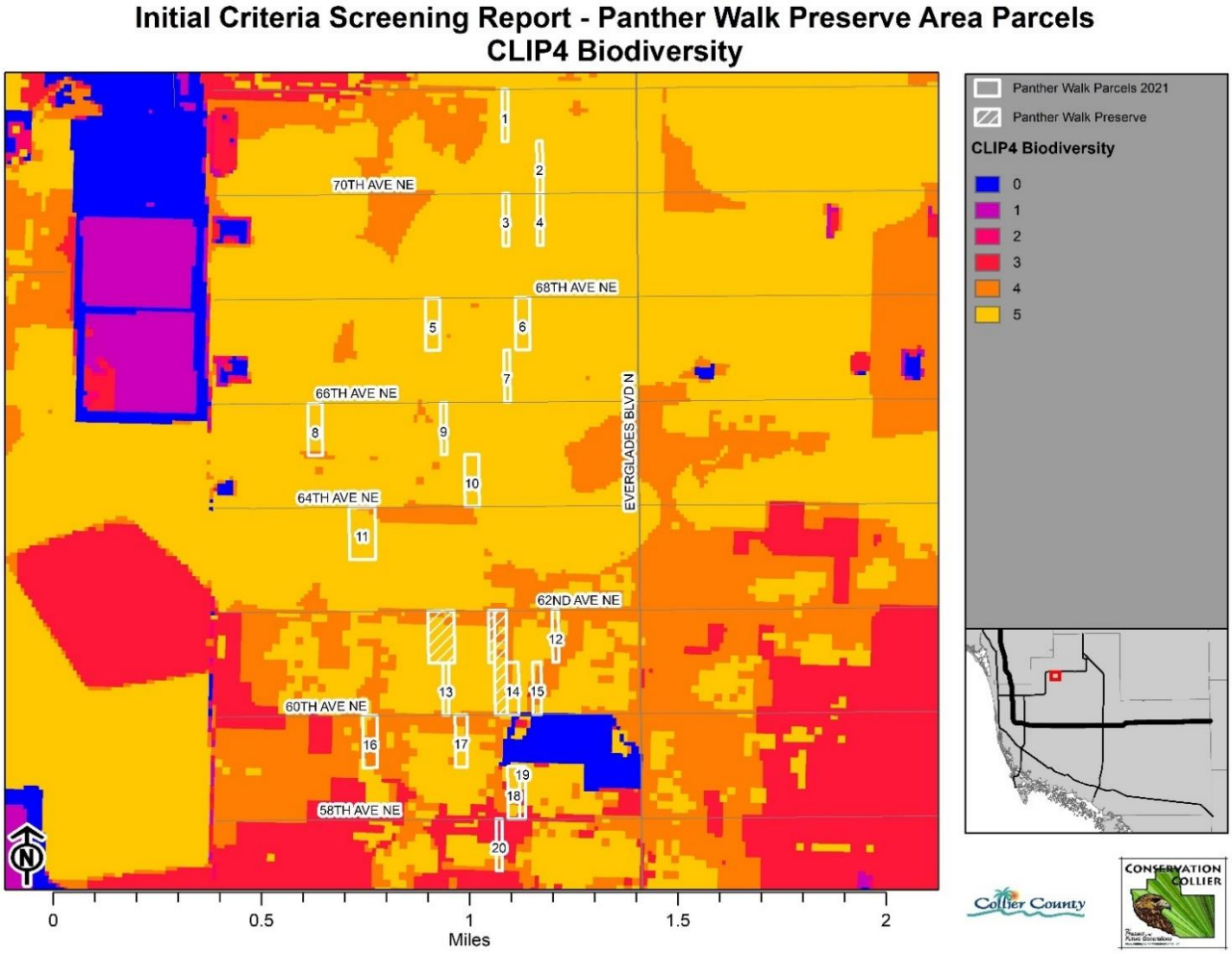
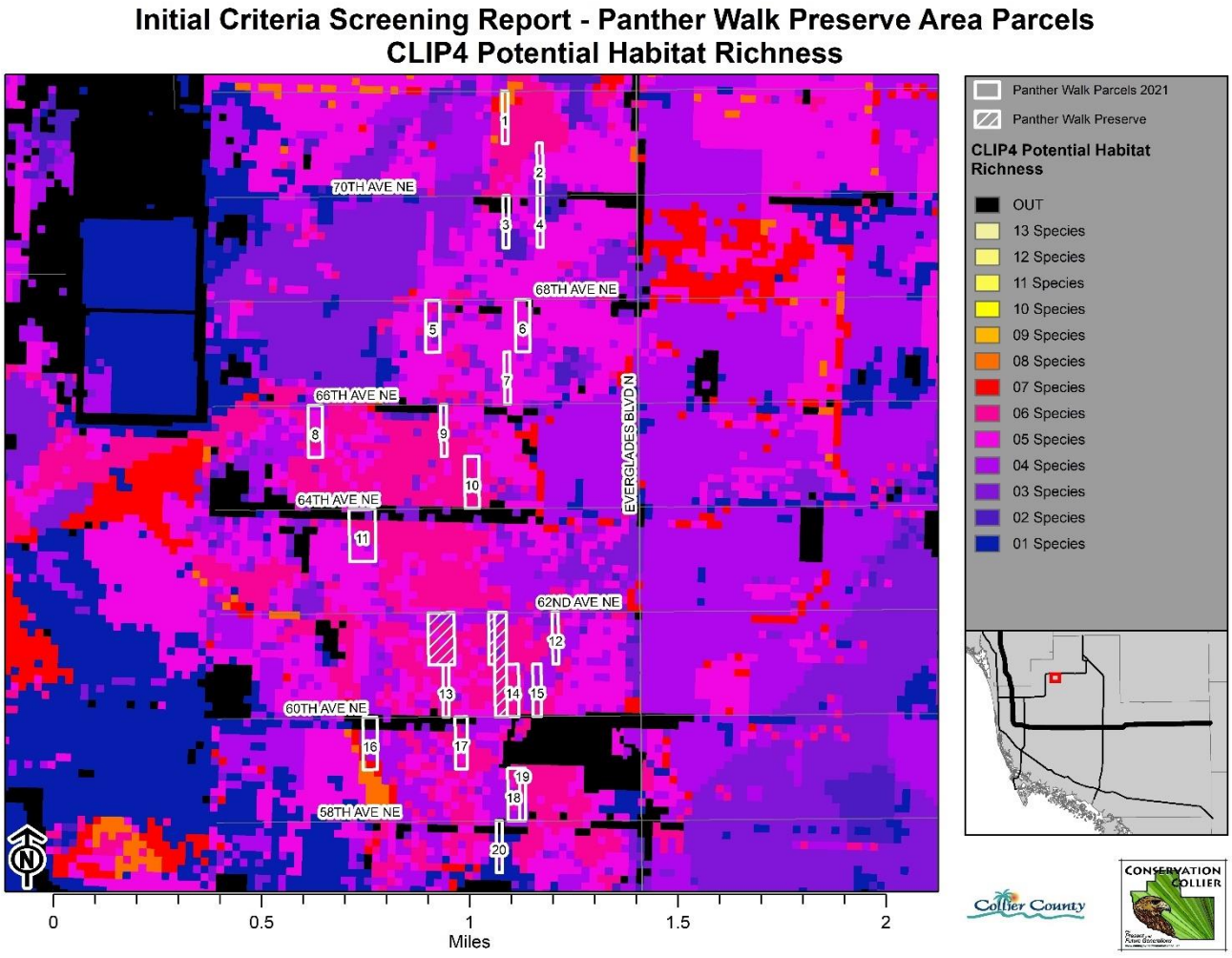


Figure 6. Potential Habitat Richness CLIP4 Map

This CLIP version 4.0 data layer is unchanged from CLIP v3.0. FWC Potential Habitat Richness. Because SHCAs do not address species richness, FWC also developed the potential habitat richness layer to identify areas of overlapping vertebrate species habitat. FWC created a statewide potential habitat model for each species included in their analysis. In some cases, only a portion of the potential habitat was ultimately designated as SHCA for each species. The Potential Habitat Richness layer includes the entire potential habitat model for each species and provides a count of the number of species habitat models occurring at each location. The highest number of focal species co-occurring at any location in the model is 13.



Vegetation and Habitat

Figure 7: Department of Environmental Protection and Water Management District Florida Land Use and Cover Classification System (FLUCCS)

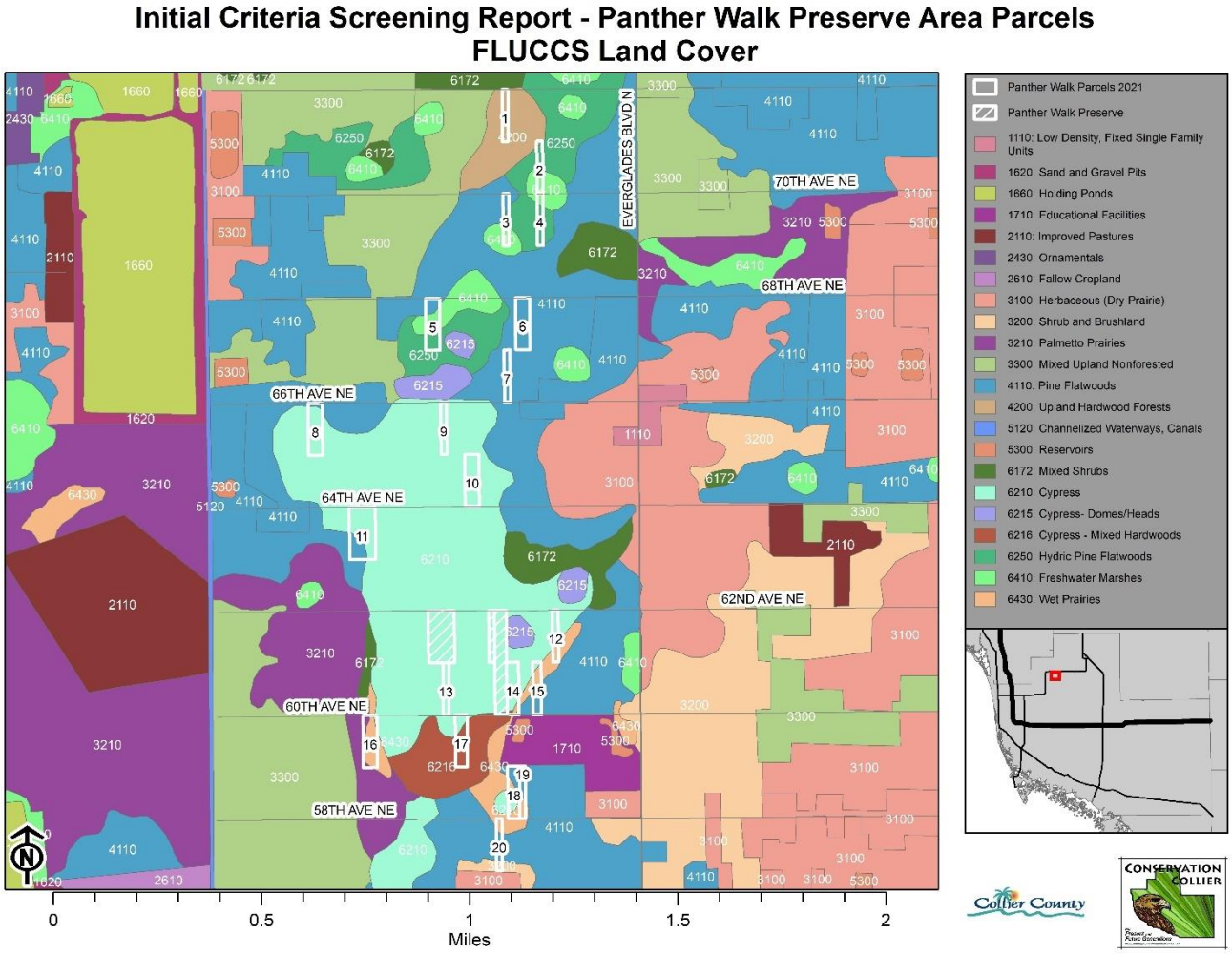
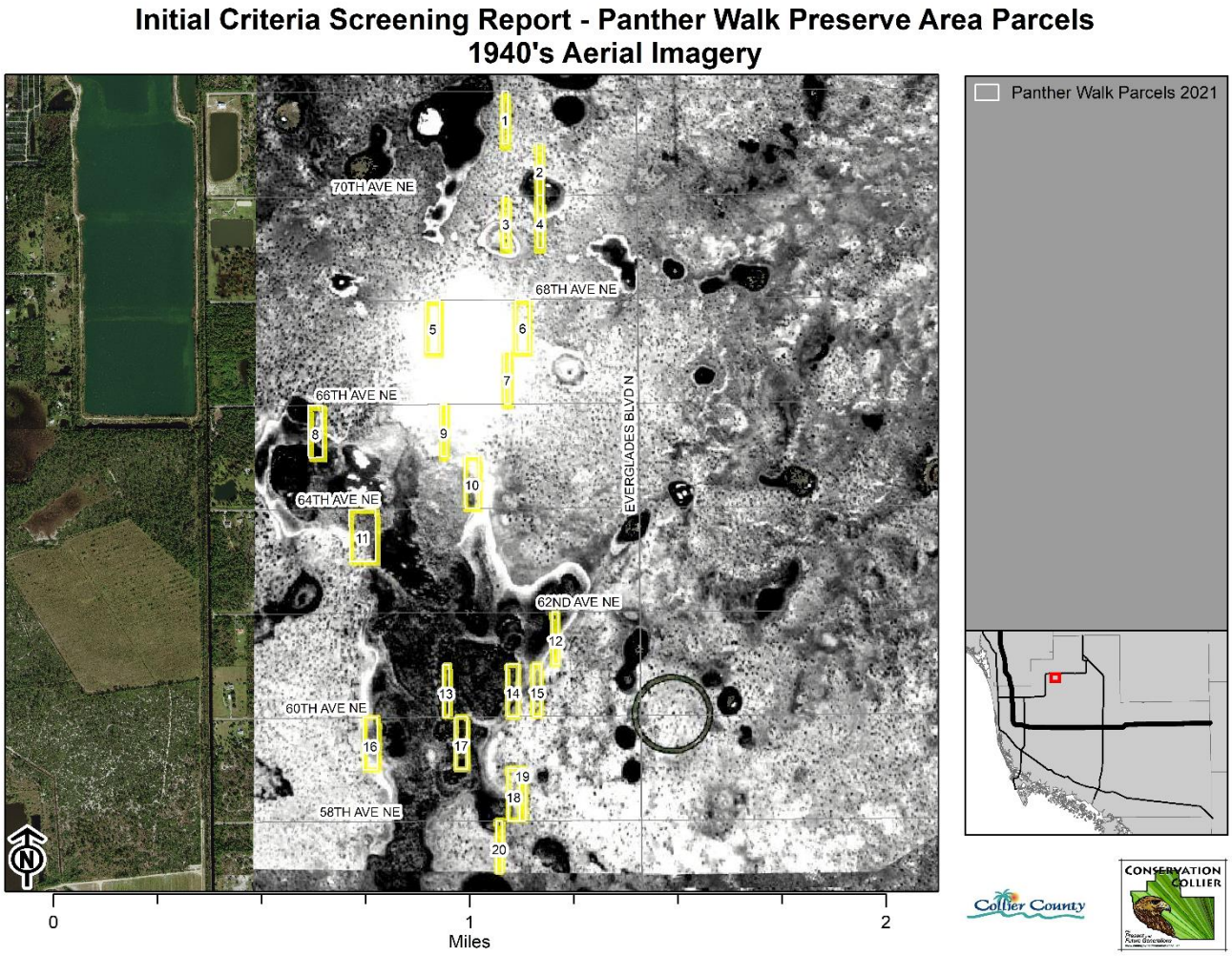


Figure 8: Historic Aerial Imagery



Photoset 1: Listed Plant Species

Left: Commercially exploited royal fern (*Osmunda regalis*) found on parcel 9

Center: Commercially exploited butterfly orchid (*Encyclia tampensis*) found on parcel 14

Right: State endangered cardinal air plant (*Tillandsia fasciculata*) found on parcel 4

Left: State endangered hand fern (*Cheiroglossa palmata*) found on parcel 9

Center: State endangered giant air plant (*Tillandsia utriculata*) found on parcel 10

Right: State endangered fuzzy-wuzzy air plants (*Tillandsia pruinosa*) found on parcel 10

Photoset 2: Invasive and Non-native Plant Species

Left: Old world climbing fern (*Lygodium microphyllum*) growing on parcel 9

Brazilian pepper (*Schinus terebinthifolius*) hedge growing on roadside swale on parcel 5. This is typical of the majority of parcels

Melaleuca (Melaleuca quinquinervia) growing on parcel 5

Photoset 3: Representative Habitat

Oak/pine hammock found on parcel 4

Oak/pine hammock found on parcel 7

Pine flatwood found on parcel 20

Unimpacted freshwater marsh found on parcel 3

Wet prairie situated between pine flatwood and mixed wetland hardwoods found on parcels 18 and 19

Cypress strand forest found on parcel 8

Table 17: Plant Species Observed During Site Visit

Scientific Name (with prior name)	Common Names	Native	State Status	Non-native	FLEPPC	Wetland Status	Parcels Presents
Cheiroglossa palmata	Hand fern	N	E				9
Tillandsia fasciculata	Stiff-leaved wild-pine, Cardinal airplant	N	E				2, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17
Tillandsia pruinosa	Fuzzy-wuzzy air plant	N	E				10, 11
Tillandsia utriculata	Giant air plant	N	E				10
Tillandsia balbisiana	Reflexed wild-pine, Northern needleleaf	N	T				1, 8, 9, 10, 11, 13, 14, 17
Encyclia tampensia	Florida Butterfly Orchid	N	CE				8, 11, 14, 17
Osmunda regalis	Royal fern	N	CE			OBL	9
Serenoa repens	Saw palmetto	N	CE				1, 3, 6, 7, 10, 20
Acer rubrum	Red maple	N				FACW	2, 14
Acrostichum danaeifolium	Giant leather fern	N				OBL	9
Ambrosia artemisiifolia	Common ragweed	N					7
Amphicarpum muhlenbergianum	Blue maidencane	N				FACW	1
Andropogon glomeratus var. *pumilus*	Bushy bluestem	N				FAC	2
Andropogon sp.	Bluestem	N					3, 4, 18, 19
Annona glabra	Pond apple	N				OBL	11
Ardisia escallanoides	Marl berry	N				FAC	8
Baccharis glomeruliflora	Saltbush	N				FAC	2, 6, 9, 10, 11, 13, 14, 17, 18, 19
Bidens alba	Spanish-needles	N				OBL	7
Callicarpa americana	American beautyberry	N					6, 7, 8, 15, 18, 19
Campyloneurum phyllitidis	Long strap fern	N					9

Cassytha filiformis	Lovevine, Devil's gut	N					7, 20
Cladium jamaicense	Sawgrass	N				OBL	9, 13, 17
Coreopsis leavenworthii	Leavenworth's tickseed	N				FACW	7, 9, 15
Elaphantopus elatus	Tall elephant's foot	N					2
Erechtites hieraciifolius	Fireweed, American burnweed	N				FAC	6
Erigeron quercifolius	Southern-fleabane, Oakleaf fleabane	N				FAC	4, 7, 8
Eupatorium capillifolium	Dogfennel	N				FAC	1, 3, 4, 6, 9, 11, 12, 15, 16, 18, 19, 20
Euthamia caroliniana	Slender flattop goldenrod	N				FAC	4
Ficus aurea	Strangler fig, Golden fig	N				FAC	2, 4, 5, 8, 9, 10, 11, 13, 14, 17
Hydrocotyle sp.	Marshpennywort	N				FACW	2, 4, 6, 7, 8, 10, 13, 14
Ilex cassine	Dahoon holly, Dahoon	N				OBL	1, 9, 14
Ilex glabra	Gall Berry	N					3, 15
Liatris sp.	Blazing star	N				FAC	7, 20
Lyonia ferruginea	Rusty lyonia	N					1, 2, 3, 15, 18, 19, 20
Macroptilium lathyroides	Phasey bean	N					7
Mikania scandens	Climbing hempweed, Climbing hempvine	N					1, 2, 5, 8, 9, 10, 11, 13, 16, 17
Morella cerifera (=Myrica cerifera)	Wax myrtle, Southern bayberry	N				FAC	1, 4, 5, 6, 8, 11, 12, 14, 15
Myrsine cubana (=Rapanea punctata)	Myrsine, Colicwood	N				FAC	1, 2, 6, 7, 8, 9, 11, 13, 14
Nekemias arborea (=Ampelopsis arborea)	Peppervine	N					10, 13, 17
Nymphaea odorata	American white waterlily	N				OBL	3

Parthenocissus quinquefolia	Virginia-creeper, Woodbine	N					1, 7, 14, 20
Persea palustris	Swamp Bay	N				OBL	8
Persicaria hydropiperoides (=Polygonum hydropiperoides)	Mild waterpepper; Swamp smartweed	N				OBL	1, 2, 11, 13, 17
Phlebodium aureum	Golden polypody	N					1, 2, 4, 6, 7, 8, 10, 13, 17, 18, 19
Phytolacca americana	Poke berry	N					14
Piloblephis rigida	Pennyroyal	N					3, 18, 19, 20
Pinus elliottii var. densa	South Florida slash pine	N					1, 2, 3, 4, 5, 6, 7, 11, 12, 14, 15, 16, 18, 19, 20
Pleopeltis michauxiana (=Polypodium polypodioides)	Resurrection fern	N					2, 10
Pontedaria cordata	Pickerel weed	N				OBL	2, 3, 4, 8, 11, 13, 14, 17
Psilotum nudum	Whisk fern	N					9, 10
Psychotria nervosa	Shiny leafed wild coffee	N				FAC	7, 8, 10, 13, 17
Pteridium aqulinum	Bracken fern	N					7
Quercus laurifolia	Laurel oak, Diamond oak	N				FACW	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 17, 18, 19, 20
Quercus virginiana	Virginia live oak	N					1, 2
Rhexia mariana	Pale meadowbeauty, Maryland meadowbeauty	N				FACW	1
Rhus copallinum	Winged sumac	N					6
Rhynchospora colorata	Starrush whitetop	N				FACW	6
Rubus trivialis	Dewberry	N				FAC	2,
Sabal palmetto	Cabbage palm	N				FAC	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 13, 14, 16, 17, 18, 19, 20
Saccharum giganteum	Sugarcane plumegrass	N					11
Sagittaria graminea	Grassy arrowhead	N				OBL	6, 7, 9, 10, 14, 16, 17, 20

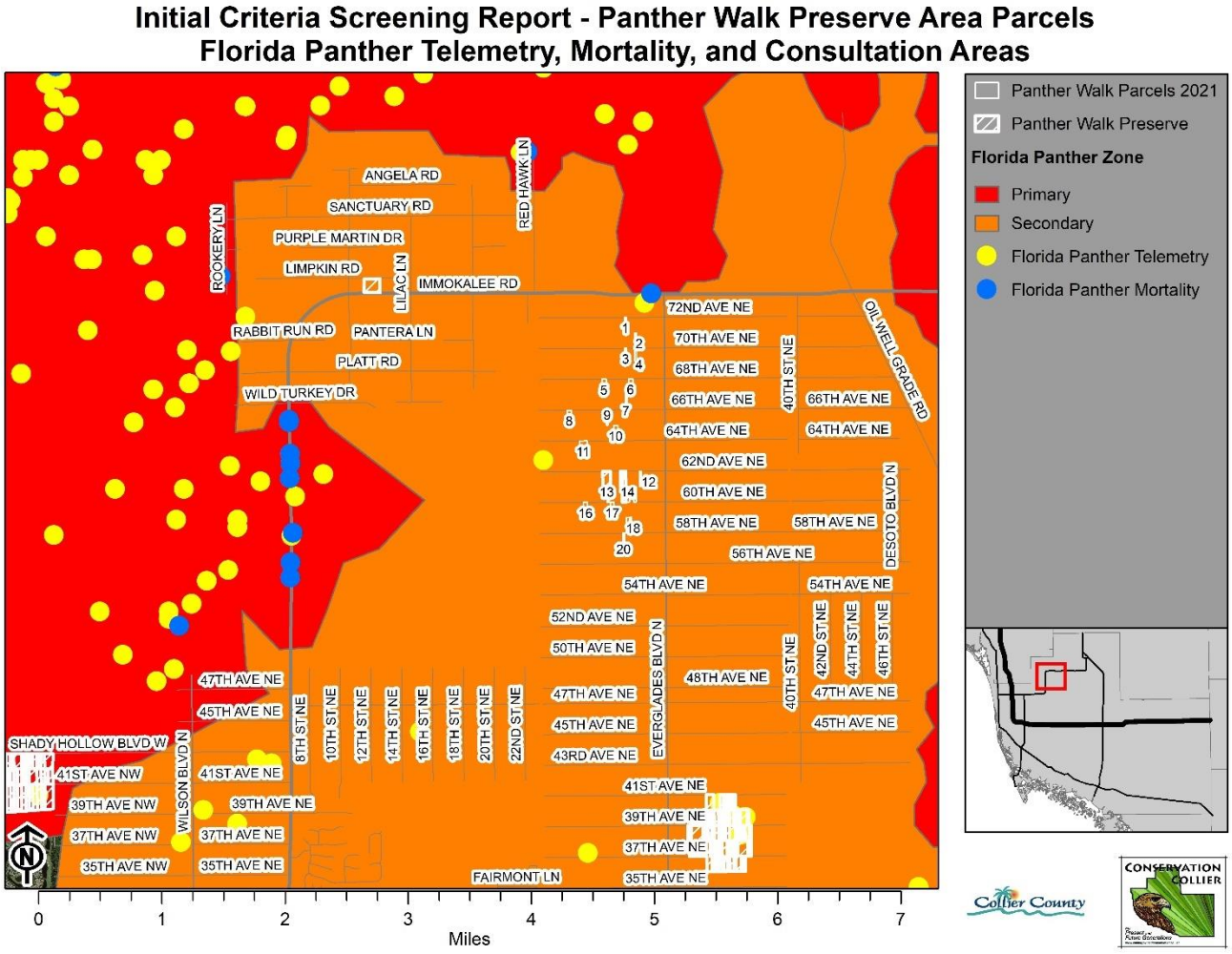
Sagittaria lancifolia	Bulltongue arrowhead	N				OBL	2, 3, 4, 17
Salix caroliniana	Coastal Plain willow	N				OBL	2, 3, 4, 9, 10, 13, 14, 17
Smilax sp.	Greenbrier	N					1, 2, 3, 5, 10, 11, 20
Solidago sempervirens	Seaside goldenrod	N				FACW	3, 11, 15
Taxodium distichum	Bald cypress	N				OBL	2, 5, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20
Telmatoblechnum serrulatum (=Blechnum serrulatum)	Swamp fern	N				FACW	1, 2, 3, 7, 8, 11, 12, 13, 14, 15, 17, 18, 19, 20
Thalia geniculata	Alligatorflag; Fireflag	N				OBL	2, 5, 8, 10, 11, 12, 13, 14, 15, 17
Tillandsia recurvata	Ball-moss	N					1
Tillandsia setacea	Thin-leaved wild-pine, Southern needleleaf	N					1, 9, 10, 13
Tillandsia usneoides	Spanish-moss	N					1
Toxicodendron radicans	Eastern poison-ivy	N					1, 2, 5, 6, 7
Utricularia foliosa	Leafy bladderwort	N					2, 13, 17
Vaccinium myrsinites	Shiny blueberry	N					1, 3, 6
Vitis rotundifolia	Muscadine grape	N					1, 2, 3, 4, 6, 7, 12, 15, 16, 18, 19, 20
Vittaria lineata	Shoestring fern	N					1, 4, 7, 8, 10, 11
Xyris fimbriata	Giant yelloweyed grass	N				OBL	2
Xyris jupicai	Richard's yelloweyed grass	N				FACW	4, 7
Acacia auriculiformis	Earleaf acacia			√	I	FAC	8, 15, 18, 19
Hymenachne amplexicaulis	West Indian marsh grass			√	I	OBL	2, 11
Imperata cylindrica	Cogon grass			√	I		14
Ludwigia peruviana	Peruvian primrosewillow			√	I	OBL	2, 5, 9, 10, 13, 17
Lygodium microphyllum	Small-leaf climbing fern			√	I		1, 2, 9, 10, 12, 14, 15
Megathyrsus maximus	Guinea grass			√	I		15

Melaleuca quinquenervia	Punktree			√	I	FAC	1, 2, 3, 4, 10, 14, 16, 18, 19
Panicum repens	Torpedo grass			√	I	FACW	1
Pistia stratiotes	Water lettuce			√	I		13
Salvinia minima	Water spangles			√	I		17
Schinus terebinthifolia	Brazilian pepper			√	I	FAC	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 14, 16, 17, 18, 19, 20
Urena lobata	Caesarweed			√	I		5, 7, 8, 11, 13
Citrus sp.	Sour orange			√			8
Nephrolepis sp.	Sword Fern					FAC	1, 8

State Status: E=Endangered, T=Threatened, CE= Commercially Exploited
FLEPPC Codes: Category I = species has altered native plant communities; Category II = species with increasing abundance or frequency.
Wetland Status: OBL = Obligate, FACW = Facultative Wet, FAC = Facultative

Wildlife

Figure 9: Wildlife Telemetry



Photoset 4: Wildlife and Wildlife Indicators

Left: White-tailed deer (*Odocoileus virginianus*) buck scrape found on parcel 15

Center: Nine-banded armadillo (*Dasypus novemcinctus*) burrow found on parcel 1

Right: Yellow-bellied sapsucker (Sphyrapicus varius) foraging sign found on parcel 11

Left: Florida black bear (*Ursus americanus floridanus*) scat found on parcel 4

Center: River otter (*Lontra canadensis*) scat found on parcel 10

Right: Chicken turtle (*Deirocheylis reticularia*) found crossing 66th Ave NE into parcel 7

Soils, Elevation, and Hydrology

Figure 10: Soil Survey of Collier County

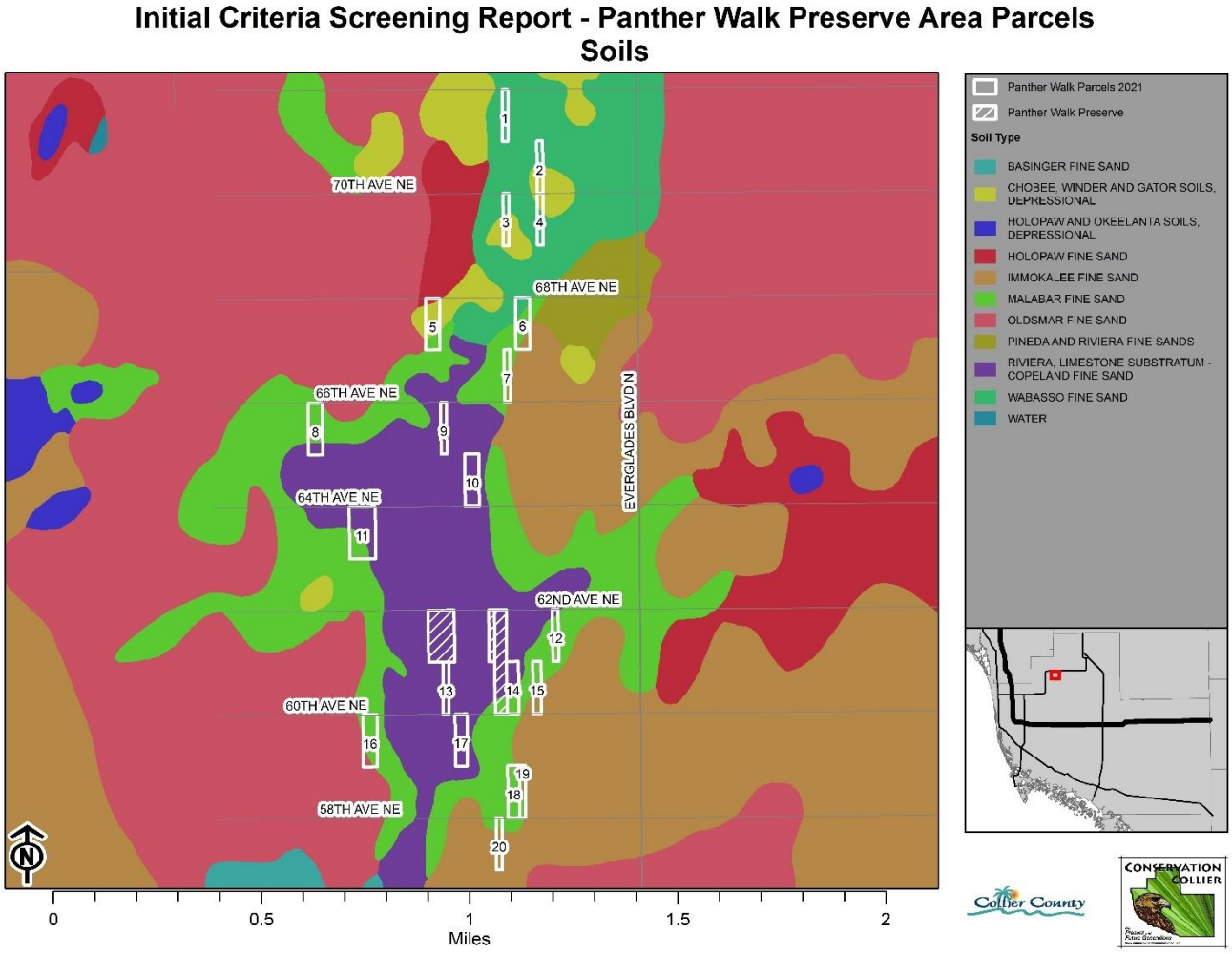


Figure 11: Light Detection and Ranging Surface Elevation Map (LIDAR)

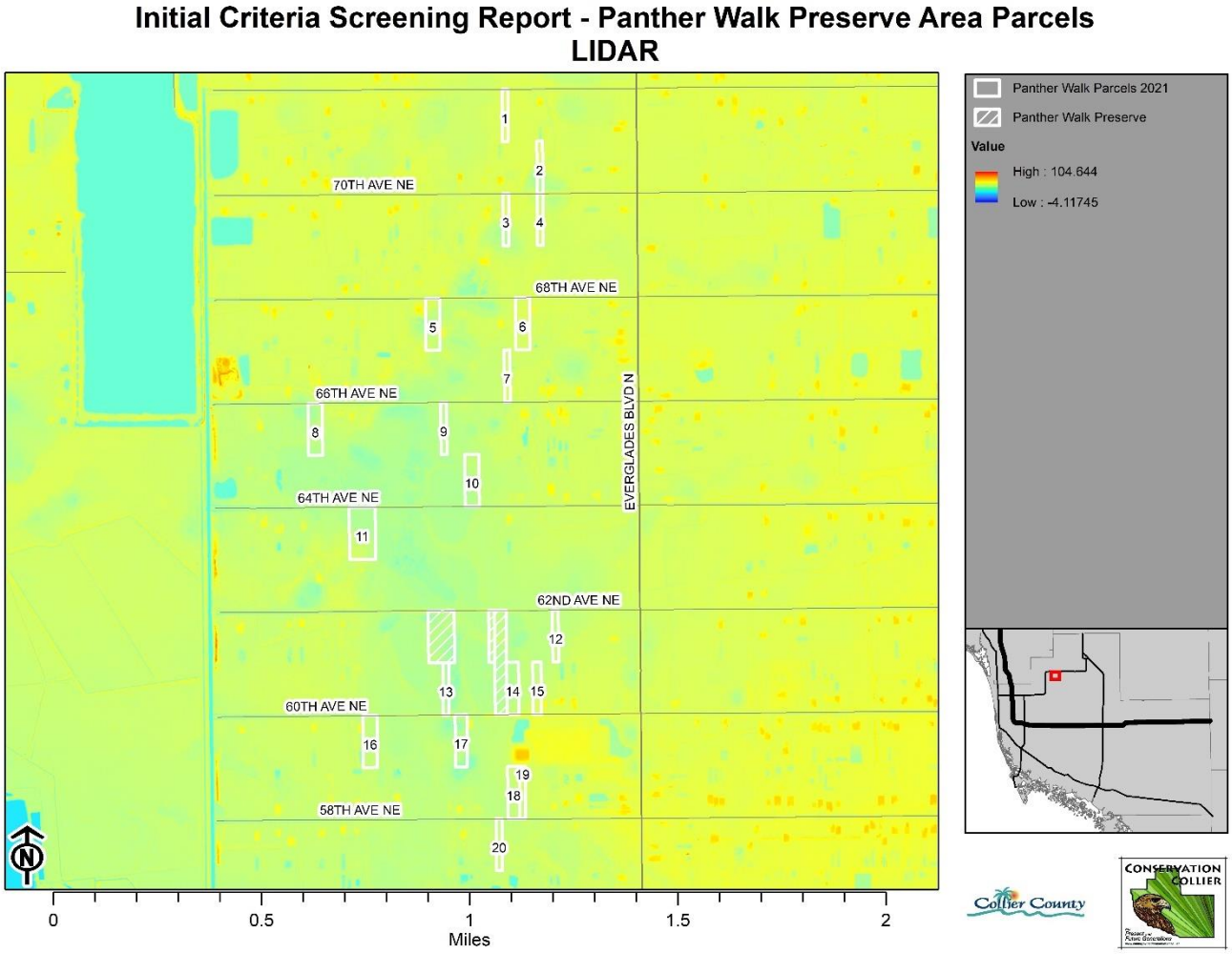
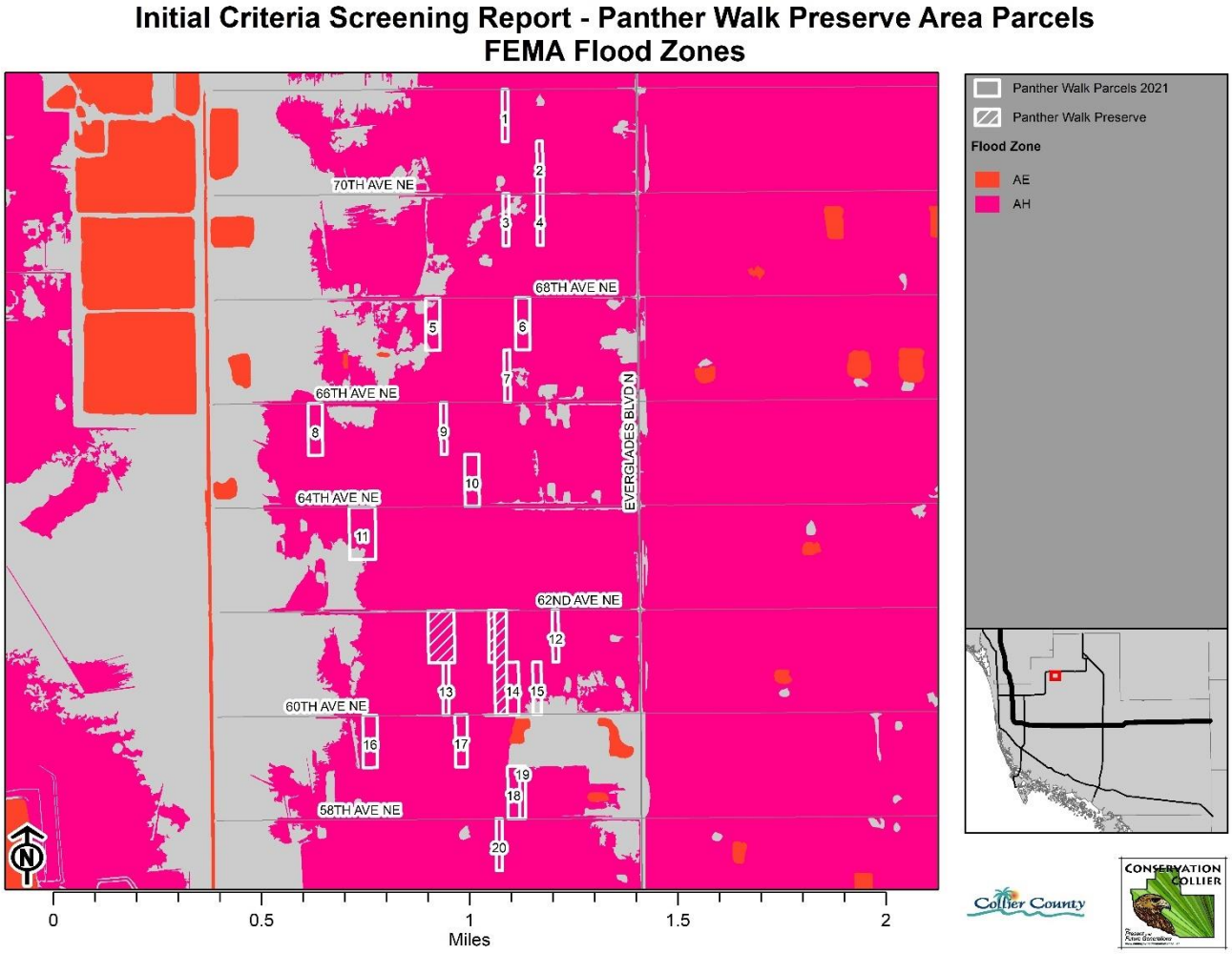


Figure 12: FEMA Flood Zones

Data was extracted from the 2011 FEMA DFIRM to provide only the remaining regulated areas; the adjusted Special Flood Hazard Area. Excluded areas were removed from the original DFIRM map including Federal Lands and FEMA Approved Mass LOMAs, MREMs and PREMs. Incorporated areas, Lake Trafford and coastal waters excluded from the Physical County Boundary were also excluded.



Photoset 5: Hydrologic indicators

Wetlands plants growing at the margin of cypress strand forest and marsh on parcel 13

Zoning

Figure 13: Collier County Growth Management Department Zoning Overlay

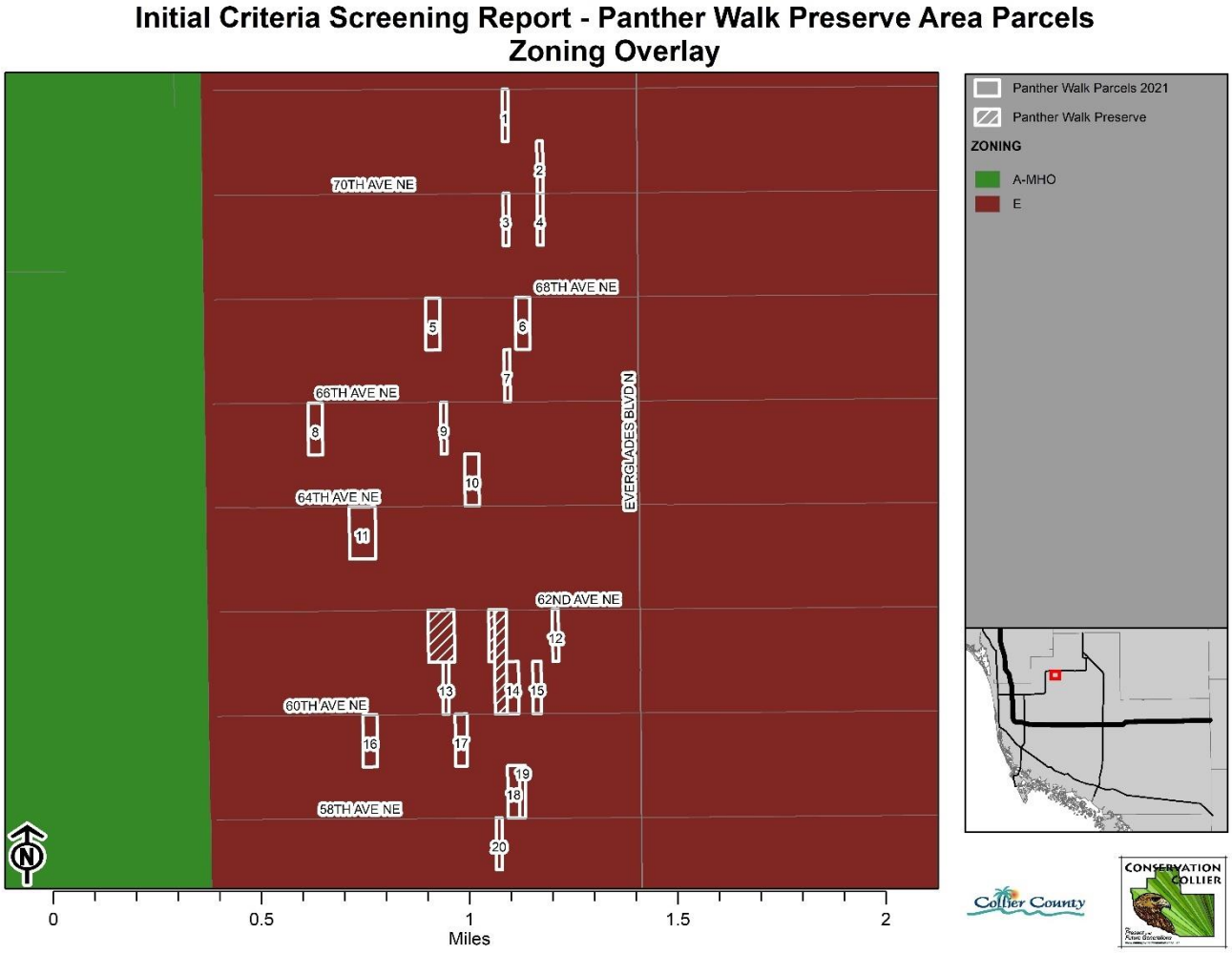
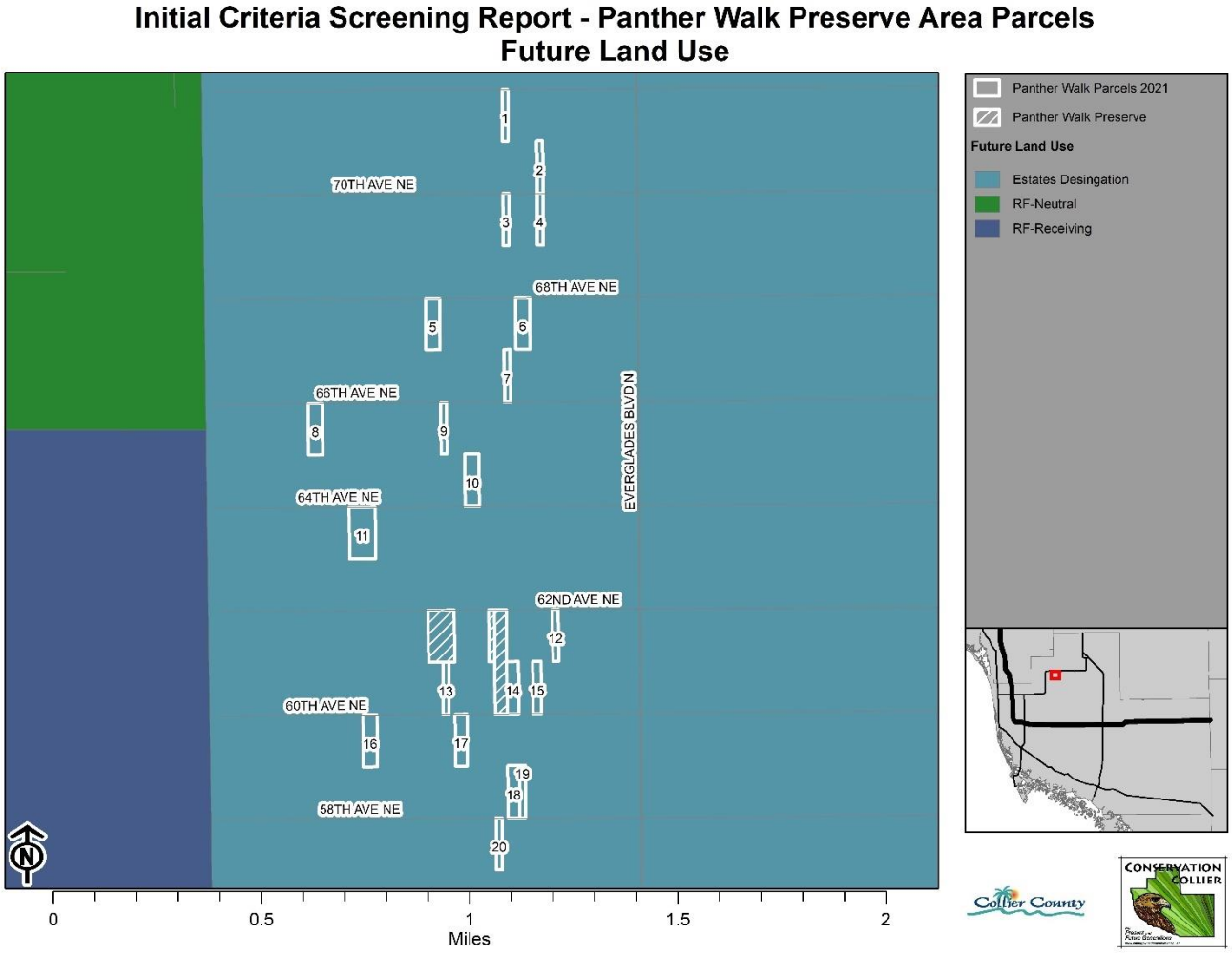


Figure 14: Collier County Growth Management Department Comprehensive Planning Division Future Land Use Overlay



Management

Photoset 6: Management Considerations

ATV trail along boundary of parcel 4 with juvenile white ibis (*Eudocimus albus*)

Wide ATV trail that encircles marsh on parcels 2 and 4

New home being built directly in cypress strand forest near parcel 11 on 64th Ave NE. New construction displaces water and influences the surrounding hydrology.

New home being built in pine flatwoods near parcel 20 on 58th Ave NE

Additional Figures, Tables, and Photos

Photoset 7: Additional Photos

Left: Florida sandhill cranes flying over parcel 1

Center: Raccoon tracks

Right: Wild turkey scrape

Figure 15: Location Map of the Horsepen Strand Conservation Area