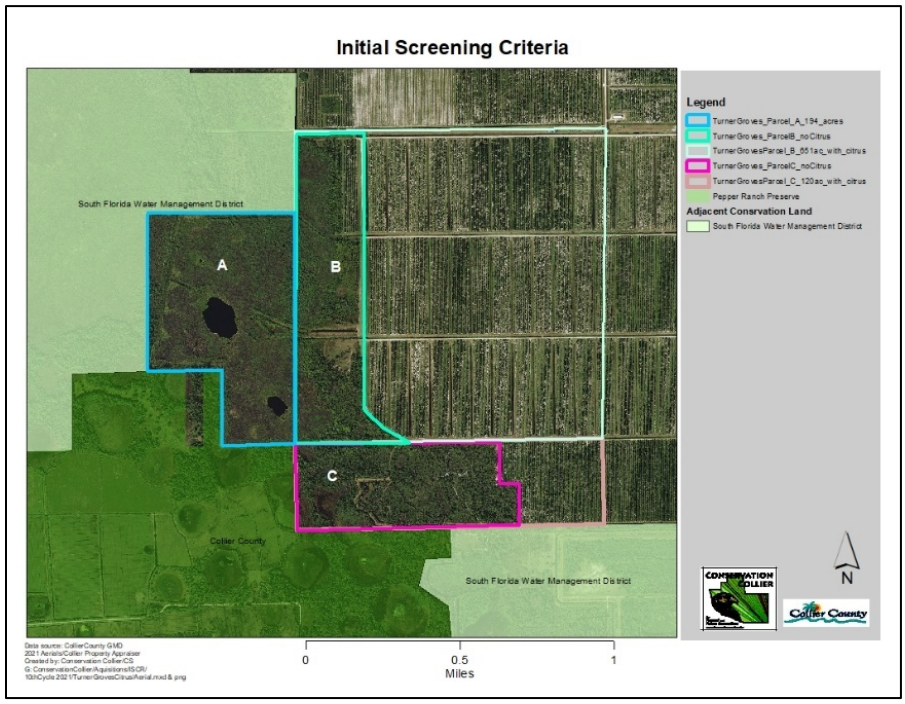
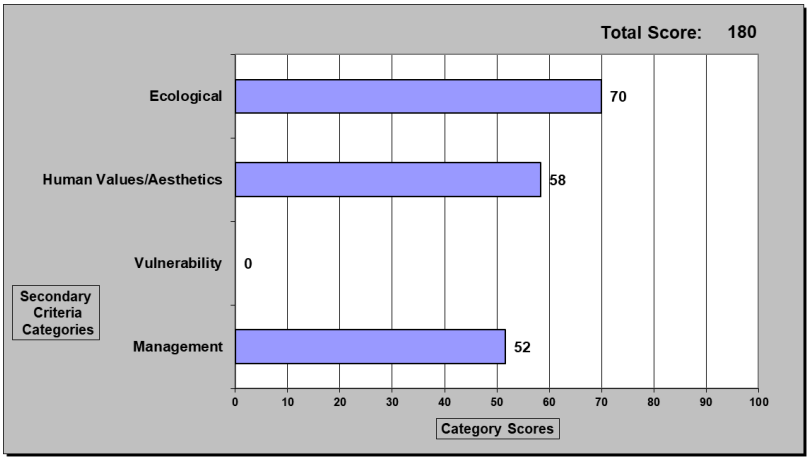
Conservation Collier
Initial Criteria Screening Report



Owner's Name: Turner Groves Citrus L.P.

Folio Number(s): 3 parcels-Approximately 455.3 acres (excluding citrus fields) Parcel A- 00052320000 (200 acres), Parcel B 00052480005 (132.5 acres portion), and Parcel C-Folio #-00052800009 (122.8 acre portion)

Staff Report Date: November 2021



Contents

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 reauthorized 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	Turner Groves Citrus L.P.	
Folio Numbers	Parcel A 00052320000, Parcel B 00052480005 (portion) Parcel C 00052800009 (portion)	3 parcels excluding the citrus fields, the parcels will need to be divided up to exclude these areas if acquired
Target Protection Area	RLSA	Water Retention Area (WRA) mostly; small portions of Flowway Stewardship Area (FSA) and Habitat Stewardship Area (HSA)
Size	Approximately 455.3 acres Parcel A-200 Parcel B-132.5 Parcel C-122.8	Exact acreage will have to be determined by a survey when the parcels are divided up to exclude the citrus areas
Section, Township, and Range	Parcel A- S 22, T 46, R 28 Parcel B- S 23, T 46, R 28 Parcel C- S 26, T 46, R 28	
Zoning Category/TDRs	A-MHO-RLSAO Agricultural-Mobile home overlay with Rural Land Stewardship Area overlay	The property is within the RLSA boundaries. There are currently no active preservation retention requirements being satisfied by this property. Owners request that the potential credits will either need to be reflected in the appraised value, or they will need to be excluded from the sale. Please note, the Real Estate section has advised that it is not practice of Collier County to compensate sellers for credits. Also, per the Zoning Department, if Conservation Collier acquires the land, any potential credits on the property would be retired.

Characteristic	Value	Comments
FEMA Flood Map Category	AH and AE	AH=subject to periodic inundation AE=subject to periodic ponding 1-3 ft Over half of the properties are zoned AH. Areas around the two lakes on Parcel A are zoned AE
Existing structures	none	There are several berms and drainage ditches leading into the natural areas. There are no buildings within the natural areas, the only structures within the natural areas are related to drainage and access.
Adjoining properties and their Uses	North and East- active citrus farming South and West- SFWMD conservation land SW- Pepper Ranch Preserve	South Florida Water Management District (SFWMD) managed Corkscrew Regional Ecosystem Watershed (CREW) Lands
Development Plans Submitted	none	Owners intend to protect right to develop “Open” area (currently citrus) to the North and East under the RLSA program
Known Property Irregularities	Raised berms exist along parcel boundaries and along drainage ditches and canals	Several berms and ditches exist, the wetlands are a receiving body for the drainage outfall from the adjacent citrus grove. This drainage conveyance is permitted and cannot be eliminated.
Other County Dept Interest	Departments notified	No interest received

Figure 1: Location Overview

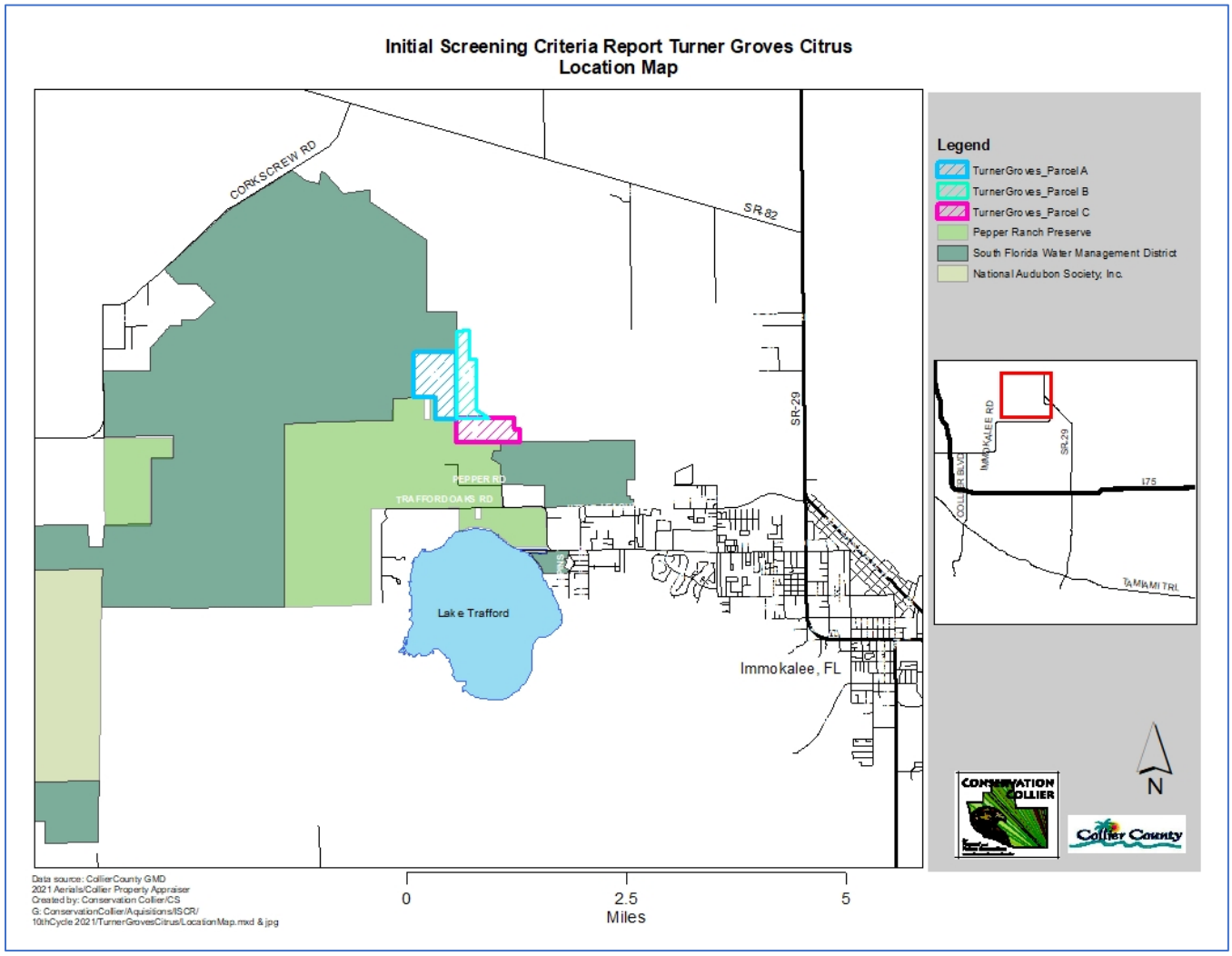


Figure 2: Location Overview Aerial with Surrounding Conservation Areas

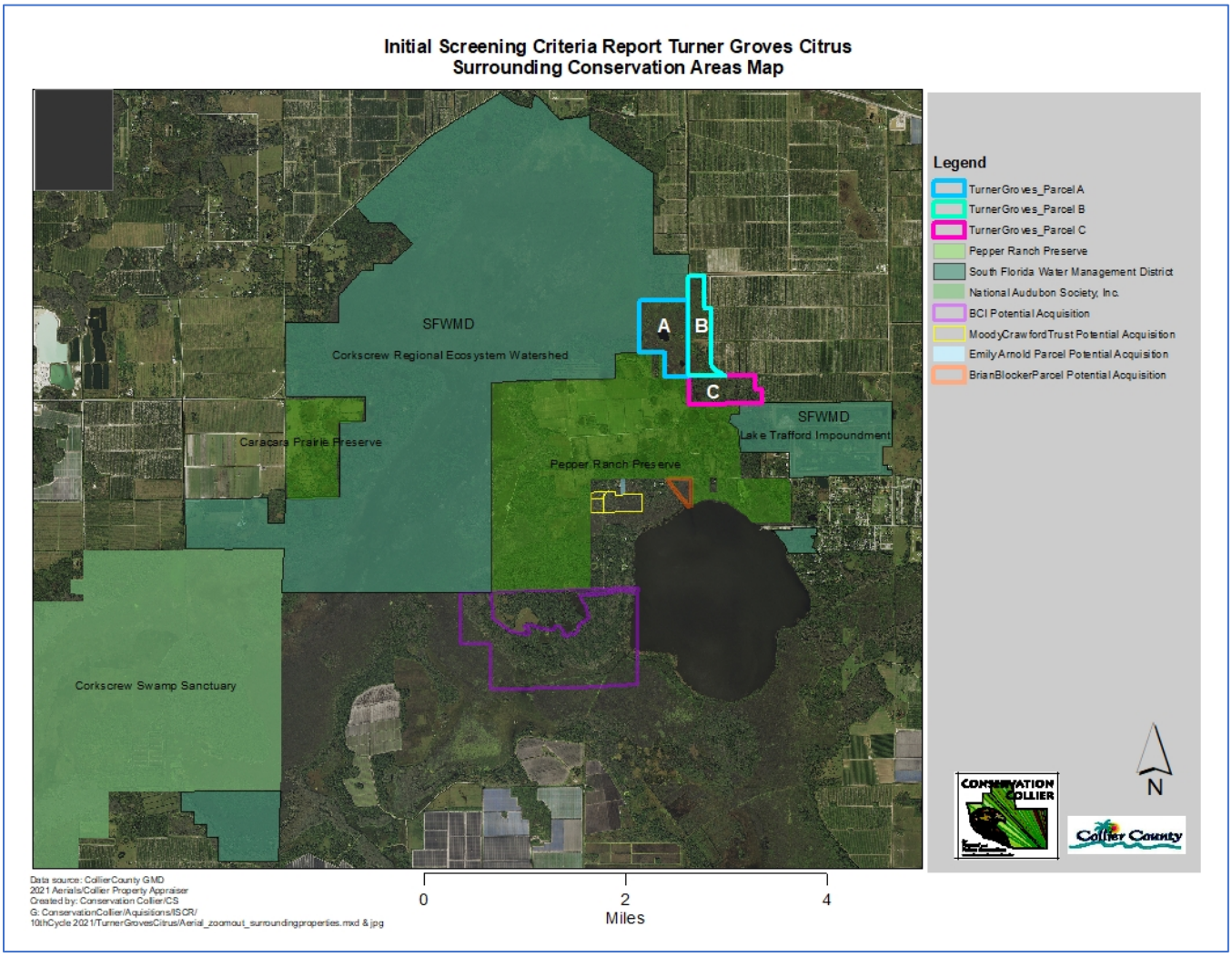
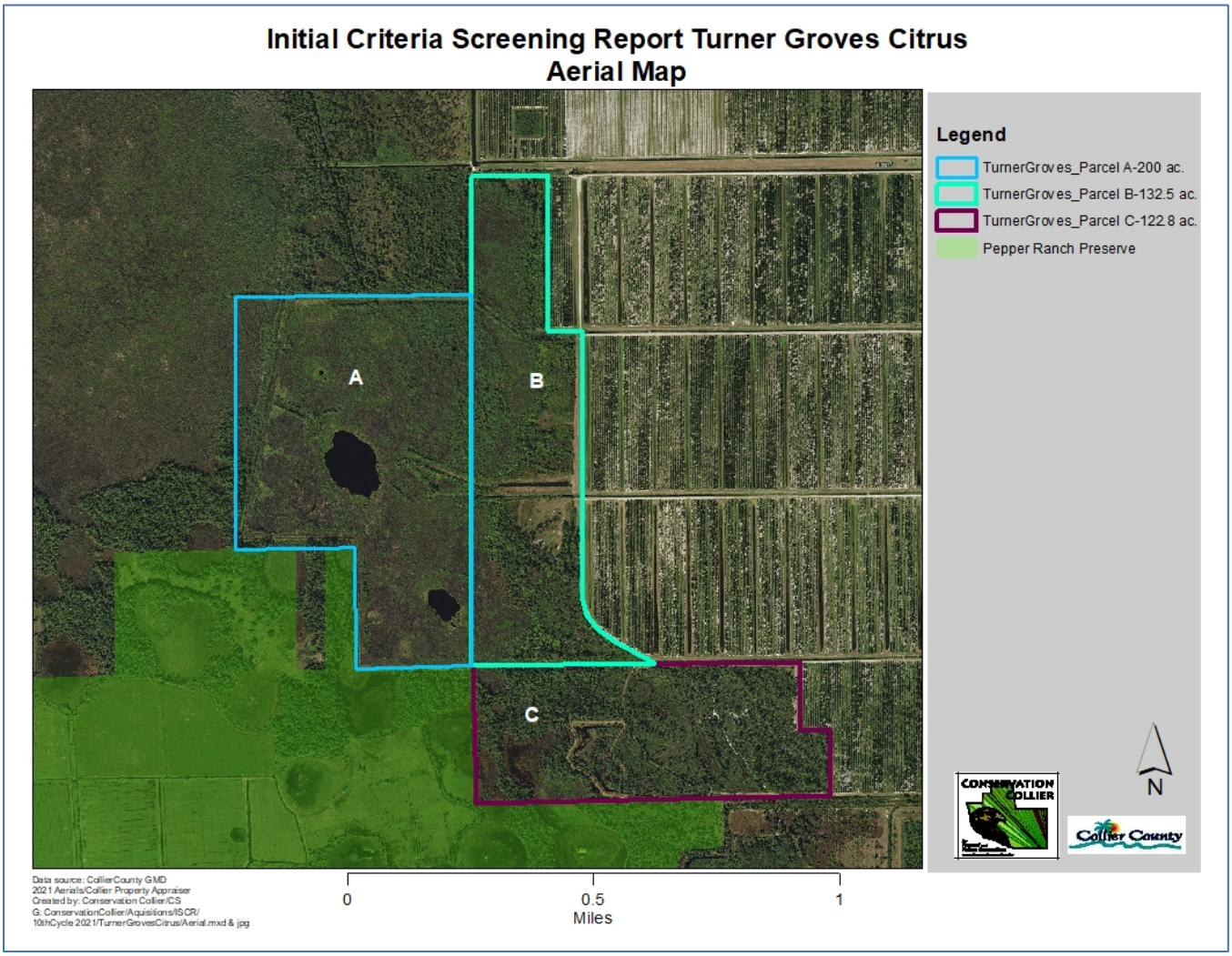


Figure 3: Location Close-up Aerial



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, two appraisals are required.

Assessed & Estimated Value

Property owner	Folio	Acreage	Estimated Value**
Turner Groves Citrus LTD	00052320000 (Parcel A)	200	
	00052480005 portion (Parcel B)	132.5	
	00052800009 portion (Parcel C)	122.8	
	Total	**455.3 acres**	**$2,277,000**

Vacant land acreage the range of value in this market area is between $5,000 to $6,000 per acre.

* Assessed Values were not included because the property owner is excluding the citrus areas from the potential sale and offering the County the remaining portions of parcel B and C.

The Estimated Market Value for **$2,277,000 was obtained from the Collier County Real Estate Services Department.

The initial valuation is greater than $500,000, 2 independent Real Estate Appraisers will value the subject property and the average of the 2 appraisal reports will determine the actual value of the property.

Zoning, Growth Management and Conservation Overlays

Zoning, growth management and conservation overlays will affect the value of a parcel. This parcel is zoned Agricultural with a mobile home overlay. It is within an established growth management overlay known as the Rural Lands Stewardship Area (see Figure 19). The property owner has not established a Stewardship Sending area (SSA) over the properties.

Within the RLSA, there are various Stewardship Designations including: 500 Foot Restoration Area, Flowway Stewardship Area (FSA), Habitat Stewardship Area (HSA), Water Retention Area (WRA). The majority of parcels A & B are **Water Retention Areas** being used to water the agricultural fields owned by the seller. A Water Retention Area is defined in Land Development Code section 4.08.01.WW. as "Privately owned lands delineated on the RLSA Overlay Map, that have been permitted by the SFWMD to function as agricultural water retention areas and that provide surface water quality and other natural resource value." The WRA could become an SSA if the owner chose to apply for such designation. As part of an SSA designation, credits could be obtained toward development credits in the "Open" areas.

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 October 26, 2021.

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)

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:

Parcel A.
6410-Freshwater Marsh
5200-Natural Lakes and ponds
6440-Emergent Aquatic Vegetation
6172-Mixed Scrub, shrub wetland
6250-Hydric Pine Flatwoods

Parcel B.
3100-Herbaceous (Dry Prairie)
4110-Pine Flatwoods
6410-Freshwater Marsh
6172-Mixed Scrub, Shrub wetland

Parcel C.
6410-Freshwater Marsh
4110- Pine Flatwoods
6250-Hydric Pine Flatwoods
6172-Mixed Scrub, Shrub wetland

The following native plant communities were observed:

Parcel A.
6410-Freshwater Marsh
5200-Natural Lakes and ponds
6440-Emergent Aquatic Vegetation
6172-Mixed Scrub, shrub wetland

Parcel B.
3100-Herbaceous (Dry Prairie)
4110-Pine Flatwoods
6410-Freshwater Marsh
6172-Mixed Scrub, Shrub wetland

Parcel C.
6410-Freshwater Marsh
4110-Pine Flatwoods (Mesic)
1312-Scrubby Flatwoods
6250-Hydric Pine Flatwoods
6172-Mixed Scrub, Shrub wetland

Characterization of Plant Communities Present

FLUCCS	Ground cover	Midstory	Canopy
4110 Pine Flatwoods	grasses, St. John's-wort bachelor button beautyberry goldenrod musky mint tickseed	wax myrtle bay saltbush myrsine shining sumac. Saw palmetto	slash pine cabbage palm
1312-Scrubby Flatwoods	wiregrass, blazing star, rusty lyonia, Florida paintbrush	sand live oak, saw palmetto	Slash pine
6250 Hydric Pine Flatwood	grasses, forbs	saw palmetto	slash pine
6172 Mixed scrub, shrub wetland	ferns	wax myrtle	willow
6410 Freshwater marsh	duckpotato, pickerelweed climbing aster sedges	wax myrtle	pond apple
6440- Emergent Aquatic Vegetation	none	cattails, willow	none
5200-Lakes and ponds	submergent vegetation	none	none
3100 Herbaceous (Dry Prairie)	grasses, St. John's wort, goldenrod	none	none

Statement for Satisfaction of Criteria

These data indicate that native plant communities do exist on the parcels. At least eight (8) distinct types of vegetation communities were observed, along with many transitional areas containing a mix of vegetation types. Some plant communities were viewed from a distance due to deep water levels and difficulty of access, including most of parcel A, and parts of the freshwater marsh on parcel B.

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 are directly adjacent to the 2,512-acre Pepper Ranch Preserve which provides multiple opportunities for passive public recreation. These parcels would greatly increase the size of the preserve if acquired. This area can be accessed during dry season for nature-based recreation. The parcels are not visible from any public roadway or trail, so they do not enhance the aesthetic setting of the County.

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 % Hydric vs non-hydric

According to the soils GIS layer approximately 62% of the properties have hydric soils. There are several ditches and culverts that were installed to drain the water off of the adjacent citrus crops onto the properties under consideration. This is permitted under the South Florida Water Management district and would continue if we purchased the land.

Table 3: Wetland Dependent Plant Species Observed

Common Name	Scientific Name	Wetland Status
alligator flag	*Thalia spp.*	OBL
blue maidencane	*Amphicarpum muhlenbergianum*	FACW
bushy blue stem	*Andropogon glomeratus*	FACW
buttonbush	*Cephalanthus occidentalis*	OBL
cabbage palm	*Sabal palmetto*	FAC
Carolina redroot	*Lachnanthes caroliana*	OBL
cattails	*Typha spp.*	OBL
coinwort	*Centella asiatica*	FACW
dahoon holly	*Ilex cassine*	OBL
duck potato	*Saggitaria latifolia*	OBL
Jointed spikerush	*Eleocharis interstincta*	OBL
laurel oak	*Quercus laurifolia*	FACW
leather fern	*Acrostichum spp.*	OBL
marsh pink	*Sabatia stellaris*	OBL

musky mint	*Hyptis alata*	FAC
myrsine	*Myrsine guianensis*	FAC
pickerelweed	*Pontederia cordata*	OBL
camphorweed	*Pluchea spp.*	FACW
pond apple	*Annona glabra*	OBL
red maple	*Acer rubrum*	FACW
redroot	*Lachnanthes caroliana*	OBL
royal fern	*Osmunda regalis var. spectabilis*	OBL
sawgrass	*Cladium jamaicense*	OBL
smart weed	*Polygonum sp.*	OBL
St. John's wort	*Hypericum spp.*	FACW
swamp bay	*Persea palustris*	OBL
swamp fern	*Blechnum serrulatum*	FACW
wax myrtle	*Myrica cerifera*	FAC
white top sedge	*Rhynchospora colorata*	FACW
willow	*Salix spp.*	OBL

Table 4: Wetland Dependent Wildlife Species Observed

Common Name	Scientific Name	State Status	Federal Status
Great blue heron	*Ardea herodias*	-	-
Limpkin	*Aramus guarauna*	-	-

Other Hydrologic Indicators Observed

none

Soils

Soils data is based on the Soil Survey of Collier County Area, Florida (USDA/NRCS, 1990). Soil numbers correspond to those mapped in the survey. Ten different soil types were mapped on these properties. See Figure 11 map for soil type locations.

	Soil Type	Characteristics
22	Chobee, Winder and Gator Soils, Depressional	Found in depressions and marshes. Consists of pickerelweed, maidencane, rushes, fireflag, sawgrass, Florida willow, and a few cypress trees.
7	Immokalee Fine Sand	Poorly Drained soils. Flatwoods. South Florida slash pine, saw palmetto, wax myrtle, chalky bluestem, creeping bluestem, and pineland threeawn.
3	Malabar Fine Sand	This nearly level, poorly drained soil is in sloughs and poorly defined drainageways. consists of scattered areas of South Florida slash pine, cypress, cabbage palm, saw palmetto, wax myrtle, pineland threeawn, and chalky bluestem.
8	Myakka Fine Sand	This nearly level, poorly drained soil is on flatwoods. The natural vegetation consists mostly of South Floridaslash pine, saw palmetto, wax myrtle, chalky bluestem, creeping bluestem, and pineland threeawn.

28	Pineda and Riviera Fine Sands	These nearly level, poorly drained soils are in sloughs and poorly defined drainageways. The natural vegetation consists of scattered areas of slash pine, cypress, cabbage palm, saw palmetto, wax myrtle, sand cordgrass, gulf muhly, panicums, chalky bluestem, blue maidencane, sedges, and rushes.
15	Pomella Fine Sand	This nearly level, moderately well drained soil is on low ridges on flatwoods. consists mostly of oak, South Florida slash pine, saw palmetto, cactus, chalky bluestem, creeping bluestem, and pineland threeawn.
18	Riviera fine sand, Limestone Substratum – Copleand FS Slough	This nearly level, poorly drained soil is in sloughs and broad, poorly defined drainageways. consists of scattered areas of South Florida slash pine, cypress, cabbage palm, wax myrtle, sand cordgrass, gulf muhly, blue maidencane, South Florida bluestem, and chalky bluestem.
37	Tuscawilla Fine Sand – Upland	This nearly level, poorly drained soil is in flatwoods and in hammocks. Consists of oaks, cabbage palm,red maple, red bay, South Florida slash pine, wax myrtle, maidencane, and chalky bluestem.
29	Wabasso Fine Sand	This nearly level, poorly drained soil is on flatwoods. Consists mostly of South Florida slash pine, cabbage palm, saw palmetto, wax myrtle, chalky bluestem, and pineland threeawn
43	Winder, Riviera, Limestone Substratum and Chobee FS, Depressional	Consists of level, very poorly drained soils in freshwater marshes. The natural vegetation consists of sawgrass, maidencane, pickerelweed, fire flag, and Florida willow.

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. These properties were mapped as having a moderate Surficial recharge capacity and a Lower Tamiami recharge capacity.

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

Characteristic	Value	Comment
Lower Tamiami Recharge Capacity	"7 to <14" & "6 to <9" annually	Low to moderate
Surficial Aquifer Recharge Capacity	"43 to < 56" & "31 to < 43" annually	moderate
Wellfield Protection Zone	n/a	n/a
FEMA Flood Zone	AH and AE	AE=subject to periodic ponding 1-3 ft AH=subject to periodic inundation

Statement for Satisfaction of Criteria

Acquisition of these properties would offer increased opportunities for protection of water resource values, including recharge of the surficial aquifer and protection of wetland dependent species habitat. The map layers indicate that 63% of the properties contain wetland soils. They would provide habitat for wetland dependent species most of the year. A primary benefit to preserving the offered lands in an undeveloped state would be

additional protection of the adjacent conservation areas including the Pepper Ranch Preserve and the Corkscrew swamp and marsh complex. The Corkscrew swamp and marsh complex provide recharge for the Lower Tamiami aquifer, a source of drinking water for many County and private wells east of County Road 951. Acquisition of these parcels would add to the protection of the quality of this water source by increasing the buffering of the Corkscrew slough from development and non-point source pollution. The property provides natural flood protection.

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

Two listed plant species were observed the day of the site visit. 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	State Status	Federal Status
Royal fern	*Osmunda regalis var. spectabilis*	State Commercially exploited	n/a
Cardinal airplant	*Tillandsia fasciculata*	State Endangered	n/a

Listed Wildlife Species

Two listed wildlife species were observed during the site visit. However, scat and tracks were also found indicating the presence of the Florida Panther. 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

Common Name	**Scientific Name**	**State Status**	**Federal Status**
Gopher Tortoise	*Gopherus polyphemus*	Threatened	-
Southeastern American kestrel	*Falco sparverius paulus*	Threatened	-

Table 8: Potential Listed Wildlife Species

Common Name	Scientific Name	Conservation Status
American alligator	*Alligator mississippiensis*	FT (S/A)
Audubon's crested caracara	*Haematopus palliatus*	FT
Florida panther	*Puma concolor coryi*	FE
Little blue heron	*Egretta caerulea*	ST
Roseate spoonbill	*Platalea ajaja*	ST
Tricolored heron	*Egretta tricolor*	ST
Everglade snail kite	*Rostrhamus sociabilis plumbeus*	FE
Wood stork	*Mycteria americana*	FT

Table 9: Non-Listed Wildlife Species Observed

Common Name	Scientific Name
Belted kingfisher	*Megaceryle alcyon*
Black vulture	*Coragyps atratus*
Common yellowthroat	*Geothlypis trichas*
Great blue heron	*Ardea herodias*
Gray catbird	*Dumetella carolinensis*
Limpkin	*Aramus guarauna*
Northern mockingbird	*Mimus polyglottos*
Red-bellied woodpecker	*Melanerpes carolinus*
Red-shouldered hawk	*Buteo lineatus*
Turkey vulture	*Cathartes aura*
Woodcock	*Scolopax minor*
Black bear (scat)	*Ursus americanus*
Wild hog (tracks and wallows)	*Sus scrofa*
Racoon (tracks)	*Procyon lotor*
Cicada	*Cicada spp.*
Eastern lubber grasshopper	*Romalea guttata*
Cloudless sulphur butterfly	*Phoebis sennae*
White peacock butterfly	*Anartia jatrophae*
Green treefrog	*Hyla cinerea*

Bird Rookery

None observed on the property

Table 10: USFWS Consultation Areas

USFWS Species Consultation Area	Designation
Audubon's Crested Caracara	Included
Everglade snail kite	Included
Florida bonneted bat	Included
Florida panther	Included- Priority 1 habitat

Statement for Satisfaction of Criteria

This parcel would provide significant biological values, listed species habitat, restoration potential and moderate to high ecological quality. We can assume that the same important wildlife species documented on the adjacent Pepper Ranch also utilize this property including the endangered Florida Panther, snail kite, wood stork, and black bear and multiple bird species. The properties are within the USFWS Florida Panther Priority 1 habitat. They are also included in the USFWS Caracara, Snail Kite and FL Bonneted Bat Consultation Areas. There is restoration potential for forested areas impacted by invasive exotic plants. This parcel is also adjacent to significant County, State, and private conservation lands.

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**

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?

Statement for Satisfaction of Criteria

The parcel is adjacent to and would contribute to an important wildlife corridor through the Pepper Ranch Preserve and other state-owned conservation land. Preservation and restoration of this parcel would add to the conservation land buffer protecting the Corkscrew Regional Ecosystem Watershed (CREW). This consists of over 60,000 acres of South Florida Water Management District lands. The CREW Marsh wetlands are also an ecological link and corridor into the Corkscrew Swamp Sanctuary, Camp Keais Strand and other conservation lands to the south. Acquisition of these parcels would remove the exotic plant seed source adjacent to existing conservation lands and would improve habitat and water quality within this ecologically valuable system.

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	There are existing trails on the properties and the berms could be utilized for access and viewing.
Photography	Yes	
Birdwatching	Yes	The diversity of native plant communities could provide excellent bird watching
Kayaking/Canoeing	No	Open water access not accessible
Swimming	No	Not appropriate due to alligator population in lakes
Hunting	Yes	There is potential the Pepper Ranch Preserve hunt boundaries could be expanded to offer regulated hunting opportunities on these parcels.
Fishing	No	Open water access not accessible

Recommended Site Improvements

There is a shooting range stand that will need to be removed from the eastern boundary line of parcel C. There is a minimal amount of debris that will also need to be removed from Parcels B and C before purchase.

Access

The parcels can be directly accessed through the Pepper Ranch Preserve during dry season by use of existing berms surrounding the properties. During wet season, access may need to be obtained for management though some type of access easement or agreement to access the property through the citrus groves off of Lamb Road and State Road 82. A gate can be added to the Pepper Ranch Preserve northeast corner fence line to directly access parcel C.

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) 2019 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
Brazilian pepper	*Schinus terebinthifolia*	I
Caesar's weed	*Urena lobata*	I
Cogongrass	*Imperata cylindrica*	I
Creeping oxeye	*Sphagneticola trilobata*	II
Cuban bulrush	*Cyperus blepharoleptos*	NL
Guinea grass	*Urochola maxima*	II
Lantana	*Lantana camara*	I
Melaleuca	*Melaleuca quinenervia*	I
Mission grass	*Cenchrus polystachios*	II

Old world climbing fern	*Lygodium microphyllum*	I
Para grass	*Urochloa mutica*	I
Peruvian primrose-willow	*Ludwigia peruviana*	I
natal grass	*Melinis repens*	I
smut grass	*Sporobolus indicus*	I
Sword fern	*Nephrolepis spp.*	I
Water hyacinth	*Eichhornia crassipes*	I
Water lettuce	*Pistia stratiotes*	I
woman's tongue	*Albizia lebbeck*	I
Wrights nutrush	*Scleria lacustris*	I

Invasive Vegetation Removal and Control

The invasive exotic plant infestation varies depending on the parcel. Staff were not able survey the entire property due to the vastness of the marshes and due to high water levels.

Parcel A has scattered lygodium patches throughout the wetland area and a few small patches of Wright's nutrush were found. The 2 acres of raised berms that surround the property on the north, west and south are completely covered in thick guinea grass, cogon grass, Caesar's weed, and mission grass, will be hard to control. There is also a raised berm in the eastern center of the parcel with the same type of infestation. The diches off these berms are also infested with Cuban bulrush and paragrass and other invasive exotics. Overall, the infestation is estimated at 25-30%.

Based on the actual cost for initial exotic removal on similar projects, costs for the initial removal and treatment over the 200 acres is estimated to be $60,000 or $300 per acre (this is a high estimate). Estimated costs for follow-up maintenance, done anywhere from bi-annually to annually are based on actual costs for follow-up exotic maintenance at the Pepper Ranch Preserve and are estimated to be between $30,000-$40,000 per event.

Parcel B has the heaviest infestation of invasive exotics. The raised berms that surround the property on the northwest and south are completely covered with thick guinea grass, cogon grass, Caesar's weed, and/or mission grass that will be hard to control. The parcel is also heavily infested with old-world climbing fern in the upland areas and is scattered in patches throughout the marshes. Costs per acre will be very high in these areas and would be less in the freshwater marshes. Based on the actual cost for initial exotic removal on similar projects, costs over the 132.5 acres are estimated to be $70,400.00 the first year. Follow-up treatments would be needed at least twice per year due to the high levels of infestation. Costs are estimated at a total of $44,000 per event for 2-3 years. Costs and frequency of treatment would decrease once control has been achieved. Overall, the infestation on this parcel is estimated at 75-80%.

Parcel C- had the least amount of invasive exotics of the three parcels. The raised berms that surround the property on the NW property line, that run thought the western center of the property are covered in thick guinea grass, cogon grass, Caesar's weed, mission grass and/or smutgrass. The pine flatwood areas have small patches of scattered lygodium throughout. The scrubby flatwoods area on the east side is the best condition of all, minimal exotics were found. The 5-acre marsh on the western side of the property is completely infested with Wright's nutrush. The total infestation of this parcel is estimated at 25-30%.

Based on the actual cost for initial exotic removal on similar projects, costs for the initial removal over the 122.8 acres is estimated to be $36,840 or $300 per acre. Estimated costs for follow-up maintenance, done anywhere from bi-annually to annually are estimated at a total of $24,560 per event at $200 per acre.

In total for all 3 parcels, the initial treatment cost is estimated at $167,240 and follow-up maintenance is estimated at $152,560. These costs would decrease over time as the soil seed bank is depleted. Additionally, areas would be maintained on a rotating basis, reducing actual annual maintenance outlays, but reducing treatment for each section from annually to bi-annually. Prices would be reduced as well due to economy of scale by including them in the annual Pepper Ranch Preserve phased treatment areas.

Staff would also seek grant funding from the Florida Invasive Plant Management Section of the Florida Wildlife Conservation Commission to assist with treatment costs.

Public Parking

A visitor center with public parking already exists on the Pepper Ranch Preserve as well as several other public parking areas throughout the preserve. No additional parking areas would be needed.

Public Access Trails

The adjacent Pepper Ranch Preserve has over 10 miles of trails nearby that are representative of the same types of habitat. Trails already exist on parcel C which would be the most desirable parcel for public access. Expansion of hunting zones may be allowed in the future on these parcels.

Security and General Maintenance

Signs will be posted to indicate that is preserve land along the eastern boundaries. The need for additional fencing has not been evaluated but appears unnecessary. We will also work with the Collier County Sherriff's office and FWC Law Enforcement to address issues of concern such as poaching or illegal berry picking.

Parcel C is fenced along the southern boundary along the Pepper Ranch Preserve. A gate could be added to allow staff to access the property during dry season for management.

Table 13: Summary of Estimated Needs and Costs

Management Element	Initial Cost	Annual Recurring Cost	Comments
Invasive Vegetation	**$167,240**	**$152,560**	Estimated cost, initial treatment will be the most expensive, follow-up maintenance on an annual or bi-annual basis. Parcel 2 will need at least 2 follow up treatments scheduled in the year following the initial treatment. Berms will also need to be treated bi-annually.
Parking Facility	n/a	n/a	Not needed
Trails	n/a	n/a	Not needed trails already exist on Parcel C and could double as firebreaks
Fencing	$700		Gate along southern fence line
Debris Removal	$500		Minimal debris found, would request removal before purchase
Signs	$500		Conservation Collier Preserve Signs
Other	t.b.d		
Total	$168,940	$152,560	

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 does not affect the scoring. The following are items that will be addressed in the Executive Summary to the Board of County Commissioners (Board) if this property moves forward for ranking.

Survey Required. The property owners are excluding the citrus fields in Parcel B and C in their application. New GIS shapefiles have been created as a reference to calculate the acreage of natural areas the Program is evaluating in this report and which are being considered for purchase. If the Board approves the purchase of these properties, parcel B and C would need to be parceled out to exclude the citrus fields. A survey will need to be conducted to properly delineate the new property boundaries.

Access Easements. Proper access easements to the properties need to be included in the sale. Access from the east will only be used for management purposes and not for public access.

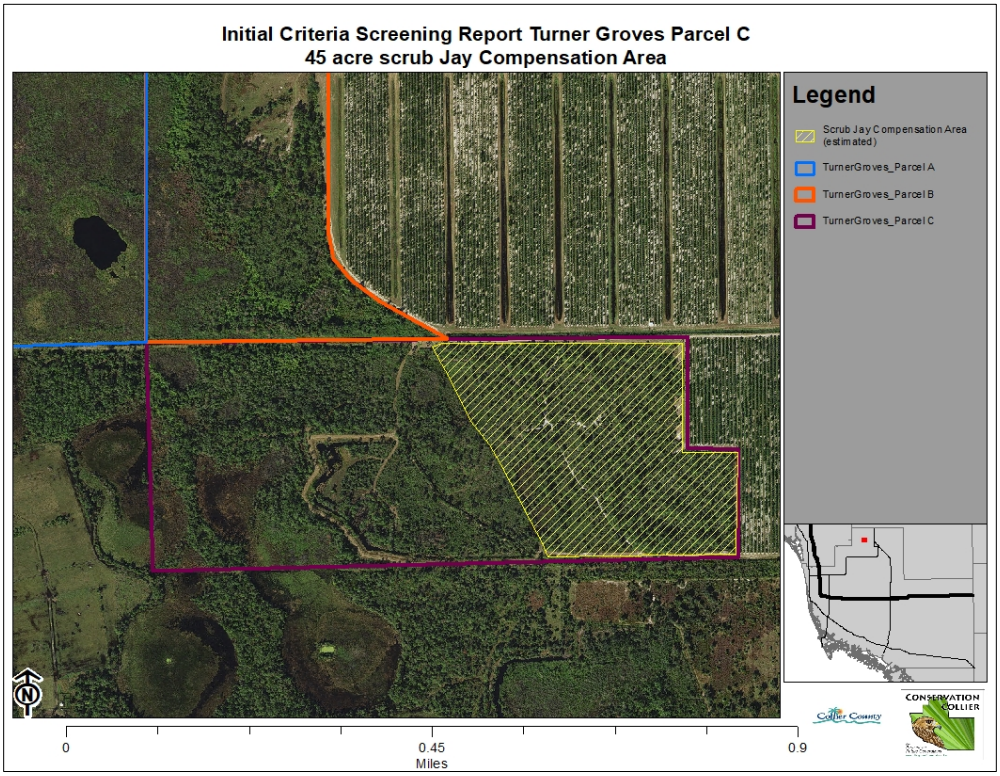
Water Retention Areas. These parcels are also in the Rural Lands Stewardship Area boundary. The majority of parcels A and B are designated as Water Retention Areas (WRA). The owner has not opted in the RLSA as of yet to designate the WRA as an SSA. However, the owners request that the potential value of credits will either need to be reflected in the appraised value, or they will need to be excluded from the sale. The owners have also advised that they intend to protect their rights to develop the open area (currently citrus) to the north and east under the RLSA program. The Collier County Real Estate Services has advised that valuation of the properties cannot compensate for credits they could potentially obtain. If the County purchases the property, the credits would be retired.

Portions of the properties are bermed and ditched, and the wetlands are a receiving body for the drainage outfall from the adjacent citrus grove. *This drainage conveyance is permitted and cannot be eliminated as long as the current agricultural use continues on the land.* There is a cap on the amount of discharge that enters the reservoir which is established by the permit. There is a pump that can be used in the event of a storm or heavy rain event that would discharge into a canal west into the CREW lands. If the owner develops or changes the type of use of the "open area" citrus fields, the discharge rate can be modified or eliminated. The berms could potentially be removed as part of the development plan. This would restore the hydrology in the area.

Scrub Jay mitigation area. Parcel C was the least disturbed of the 3 parcels. It contains mesic pine flatwoods and has a large population of gopher tortoises utilizing it. The eastern 45 acres of this parcel contains high quality scrubby flatwoods and was delineated as a Scrub Jay compensation area by the South Florida Water Management District in 1990 (See Figure 4). It was set aside as a permit condition for increasing the size of the citrus area. The property owners were required to develop a management plan and to manage it perpetually. It may be possible for the property owners to donate this portion of the land and the County would take over management. If not, the County would only be considering acquiring the remaining adjacent 77.8 acres of this parcel. This parcel is the most accessible and is directly adjacent to the Pepper Ranch Preserve.

Shooting range. There is a small wooden stand along the eastern boundary of Parcel C that is being used for target practice that we would request to be removed or relocated before purchase. There are also a few minor piles of debris on Parcel B in the open area that we would need to be removed as well (old culverts, tanks, and scrap metal). Staff would request that specific soil testing is performed by the owner to address any lead that may exist in the shooting range area.

Figure 4. Estimated location of the 45 Acre Scrub Jay Compensation Area



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. This project area would most likely be combined with other Pepper Ranch Preserve Project areas that have been funded in the past.

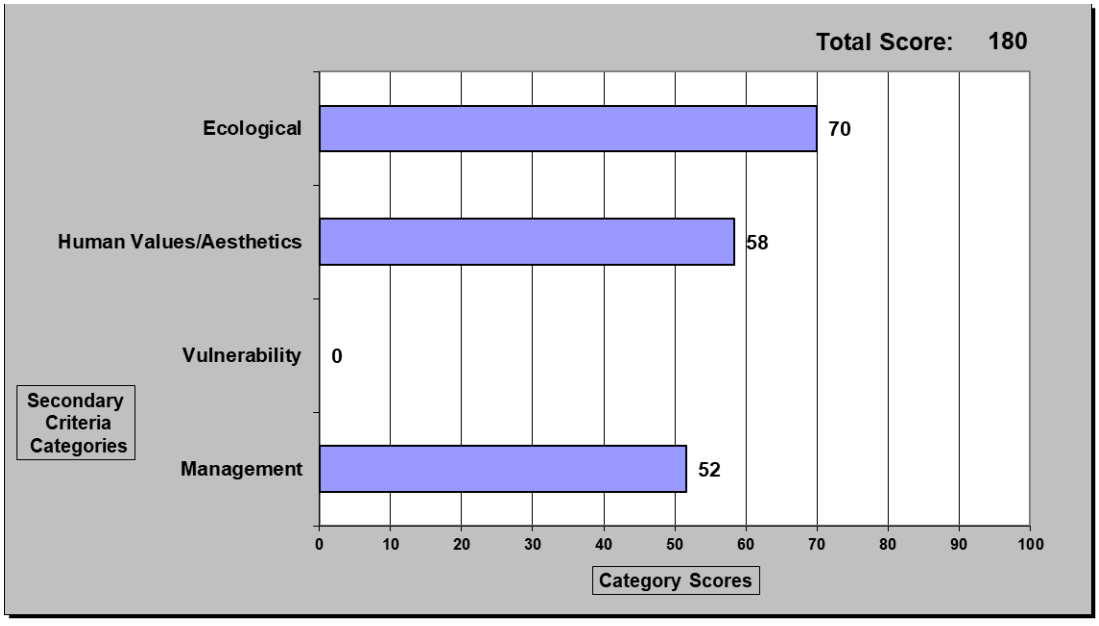
VIII. Summary of Secondary Screening Criteria

Staff has scored the property on the Secondary Criteria Screening Form and attached the form as Table 16. A total score of 218 out of a possible 400 was achieved. The chart below shows a breakdown of the specific components of the score.

Table 14: Secondary Criteria Scoring Summary

Category	Subcategory	Scored Points	Possible Points
Ecological	**Total Score (Sum of 1a, 1b, 1c, 1d then divided by 4)**	**70**	**100**
	1a. Unique and Endangered Plant Communities	30	100
	1b. Significance for Water Resources	67	100
	1c. Resource Ecological/Biological Value	83	100
	1d. Protection and Enhancement of Current Conservation Lands	100	100
Human Values/Aesthetics	**Total Score (Obtained by dividing the subtotal by 3)**	**58**	**100**
	2a. Human Social Values/Aesthetics	175	300
Vulnerability to Development/Degradation	**Total Score (Sum of 3a)**	**0**	**100**
	3a. Zoning/Land Use Designation	0	100
Feasibility and Costs of Management	**Total Score (Sum of 4a, 4b, and 4c, then divided by 3)**	**52**	**100**
	4a. Hydrologic Management Needs	75	100
	4b. Exotics Management Needs	0	100
	4c. Land manageability	80	100
Total		**180**	**400**

Figure 5: Secondary Screening Criteria Screening chart



Ecological

70/100

The properties scored high in this category for several reasons. They have a wide variety of native plant communities, even though none are the preferred habitats described in the ordinance. Acquisition of these parcels would protect water resources by buffering the Corkscrew marsh area and Lake Trafford. Moderate aquifer recharge is mapped for the Lower Tamiami aquifer, supplying drinking water for many private and municipal wells east of CR 951. Many listed and non-listed species of wildlife have been documented on the parcel. Wetlands exist on site. Ecological quality is high, though marred by significant exotic plant presence, primarily, but not limited to, lygodium, cogon grass, and guinea grass. Connectivity exists with other conservation lands.

Human Values/Aesthetics

58/100

The property can be accessed through the Pepper Ranch Preserve and are directly adjacent to Parcel A and C. There are unpaved roads that lead you through the citrus groves to Parcels B and C. The citrus groves can be accessed off of State Road 82. A legal access easement would need to be obtained upon purchase. However, access would mainly be used for management purposes and not public access. The public could access the properties via the Pepper Ranch Preserve.

Vulnerability

0/100

The scoring only takes into consideration the Zoning and Land Use Designation. The parcel is zoned Agricultural-Mobile home overlay and Rural Land Habitat Stewardship Area (A-MHO-RLSAO). The Agricultural Mobile home overlay allows for 1 unit per 5 acres. Citrus farming is a permitted use on Parcel B and C, the citrus areas are excluded from the sale.

The majority of parcels A & B are **Water Retention Areas** being used to water the agricultural fields owned by the seller. The WRA is a Stewardship area as part of the RLSA that could become an SSA if the owner chose to apply for such designation. As part of an SSA designation, credits could be obtained toward development credits in the "Open" areas.

Properties could be protected from development if the property owner obtains RLSA credits off of the property to compensate for future land use changes or development. Parcel A is 100% wetlands and in total, 63% of the properties contain hydric soils. On parcel C, 45 acres is set aside as a scrub jay area as a permit condition by the South Florida Water Management. Owners are required to manage this area in perpetuity.

Management

52/100

A moderate score was achieved for management due to several reasons. A higher score for hydrologic changes required was leveled off by the significant level of exotic plant infestation. There is a heavy lygodium infestation on parcel B, and heavy invasive grasses on all berms and open areas on all parcels that will take years to get under control. No structures exist that would need maintenance. The parcels would require prescribed fire and neighbor conflicts would not be an issue.

Parcel Size

While parcel size was not scored, the ordinance advises that based on comparative size, the larger of similar parcels is preferred. This would be a very significant addition of acreage to the Pepper Ranch Preserve.

IX. Figures, Tables, and Photos

Scoring

Table 15: Secondary Scoring Criteria Form

Property Name: Turner Groves			**Folio Numbers:**
			Parcel A 00052320000,
			Parcel B 00052480005 (portion)
Geographical Distribution (Target Protection Area):			Parcel C 00052800009 (portion)
Pepper Ranch Preserve- RLSA (designation Varies)			
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	Freshwater Marsh, Lakes and Ponds, Emergent Aquatic Vegetation, Mixed Scrub, shrub wetland, Herbaceous(dry prarie), Mesic Flatwoods, Scrubby Flatwoods, Hydric Pine Flatwoods
10. Add additional 5 points for each additional Florida Natural Areas Inventory (FNAI) listed plant community found on the parcel	5 each	15	FNAI Mesic flatwoods G4/S4, Scrubby Flatwoods G2/S2, Wet Flatwoods G4/S4
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	Scrubby Flatwoods is an outstanding example of a plant community on Parcel C
1.A. Total	***100***	***30***	
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	100		
b. Parcel is not in a wellfield protection zone but will contribute to aquifer recharge	50	50	Lower Tamiami Recharge Capacity "7 to <14" & "6 to <9" annually, Surficial Aquifer Recharge Capacity "43 to < 56" & "31 to < 43" annually
c. Parcel would contribute minimally to aquifer recharge	25		
d. Parcel will not contribute to aquifer recharge, eg., coastal location	0		
2. Surface Water Quality *(Select the Highest Score)*			
a. Parcel is contiguous with and provides buffering for an Outstanding Florida Waterbody	100		
b. Parcel is contiguous with and provides buffering for a creek, river, lake or other surface water body	75		
c. Parcel is contiguous with and provides buffering for an identified flowway	50	50	Flowway to west - see RLSA overlay map
d. Wetlands exist on site	25		
e. Acquisition of parcel will not provide opportunities for surface water quality enhancement	0		
3. Strategic to Floodplain Management *(Calculate for a and b; score c if applicable)*			
a. Depressional soils	80	80	soils are 63% hydric
b. Slough Soils	40		
c. Parcel has known history of flooding and is likely to provide onsite water attenuation	20	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	100	100	FLUCCS 6410 Freshwater Marsh, 5200 lakes and Ponds, 6440 Emergent Aquatic Vegetation, 6172 Mixed Scrub, shrub wetland, 3100 Herbaceous(dry prarie), 4110 Pine Flatwoods, 1312 Scrubby Flatwoods,6250 Hydric Pine Flatwoods
b. The parcel has 3 or 4 FLUCCS native plant communities	75		
c. The parcel has 2 or or less FLUCCS native plant communities	50		
d. The parcel has 1 FLUCCS code native plant communities	25		
2. Listed species			
a. Listed wildlife species are observed on the parcel	80	80	*gopher tortoise, panther scat and tracks*
b. Listed wildlife species have been documented on the parcel by wil	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	*Tillandsia faciculata*
3. Restoration Potential			
a. Parcel can be restored to high ecological function with minimal alteration	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	50	Significant infestations of Lygodium, Cogon Grass, and Guinea Grass
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		
Subtotal	300	250	
1.C Total	***100***	**83**	*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	100	Pepper Ranch Preserve and SFWMD Conservation Lands
b. Property not immediately contiguous, parcels in between it and the conservation land are undeveloped.	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		
1.D Total	***100***	100	
1. Ecological Total Score	**100**	**70**	*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		
b. Parcel has access from an unpaved road	75	75	access available through the citrus groves or through the Pepper Ranch Preserve trails
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.	100	100	
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.	75		
c. Parcel offers limited opportunities for natural-resource based recreation beyond simply accessing and walking on it	50		
d. Parcel does not offer opportunities for natural-resource based recreation	0		
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	80	0	
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	20		
Subtotal	300	175	
2. Human Social Values/Aesthetics Total Score	**100**	**58**	*Obtained by dividing the subtotal by 3.*

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		
2. Minimal hydrologic changes are required to restore function, such a cut in an existing berm	75	75	Several berms and ditches exist, and wetlands are a receiving body for the drainage outfall from the adjacent citrus grove. This drainage conveyance is permitted and cannot be eliminated.
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 hydologic changes are required to restore function, such as re-grading of substantial portions of the site, placement of a berm, removal of a road bed, culvert or the elevation of the water table by installing a physical structure and/or changes unlikley	0		
5.A Total	***100***	***75***	
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		
c. Exotic plants constitute between 25% and 50% of plant cover	60		
d. Exotic plants constitute between 50% and 75% of plant cover	40	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 rosemytle)	-20	-20	Heavy lygodium infestation on parcel B and heavy invasive grasses on all berms and open areas on all parcels that will take years to get under control
g. Adjacent lands contain substantial seed source and exotic removal is not presently required	-20	-20	
5.B Total	***100***	***0***	
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	Minimal maintenance required beyond exotics control
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 mainenance by another entity is likely	20		
5. Subtract 10 points if chronic dumping or trespass issues exist	-10		
5.C Total	***100***	***80***	
4. Feasibility and Management Total Score	**100**	**52**	*Sum of 5A, 5B, 5C, then divided by 3*
Total Score	**400**	**180**	

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 6. 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. The majority of these parcels scored at a 5.

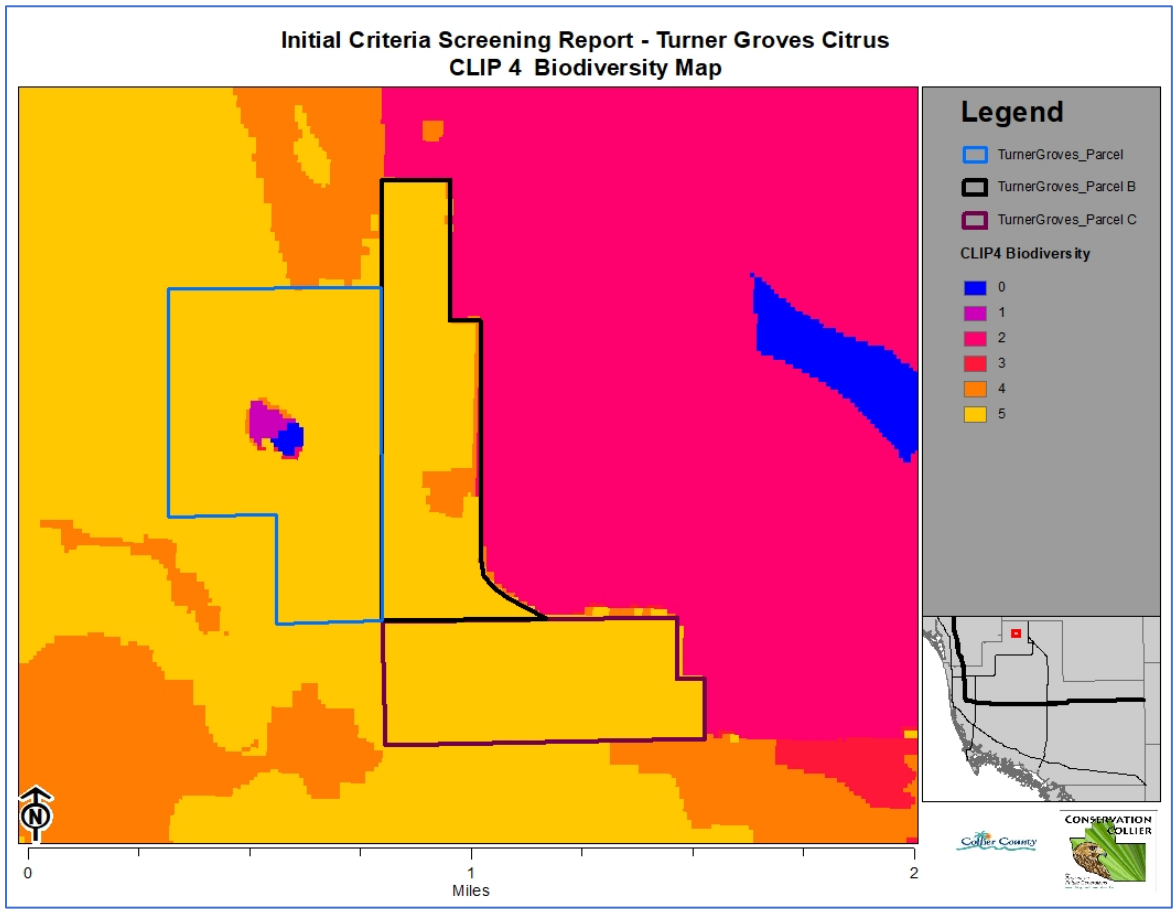
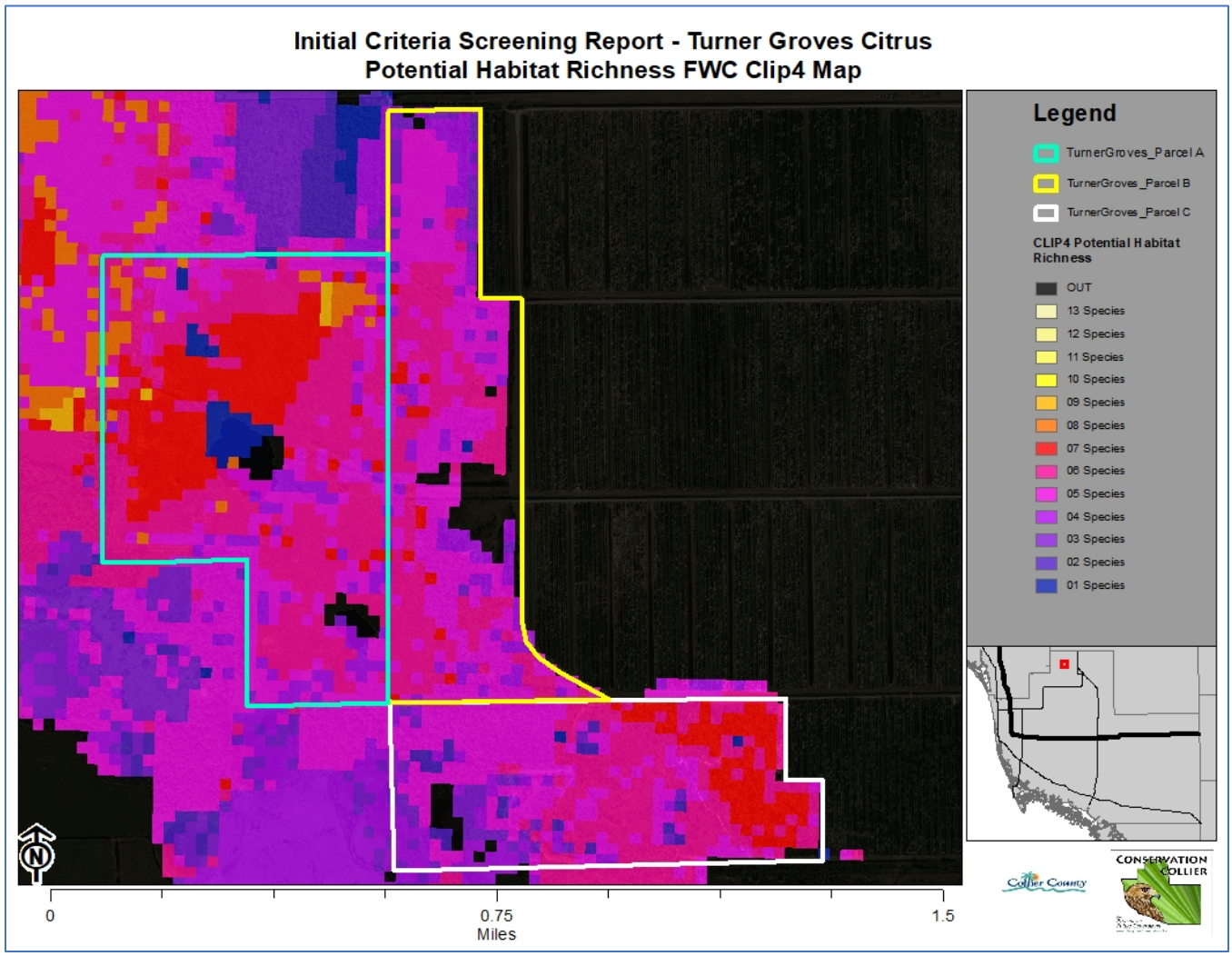


Figure 7. Potential Habitat Richness CLIP4 Map

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

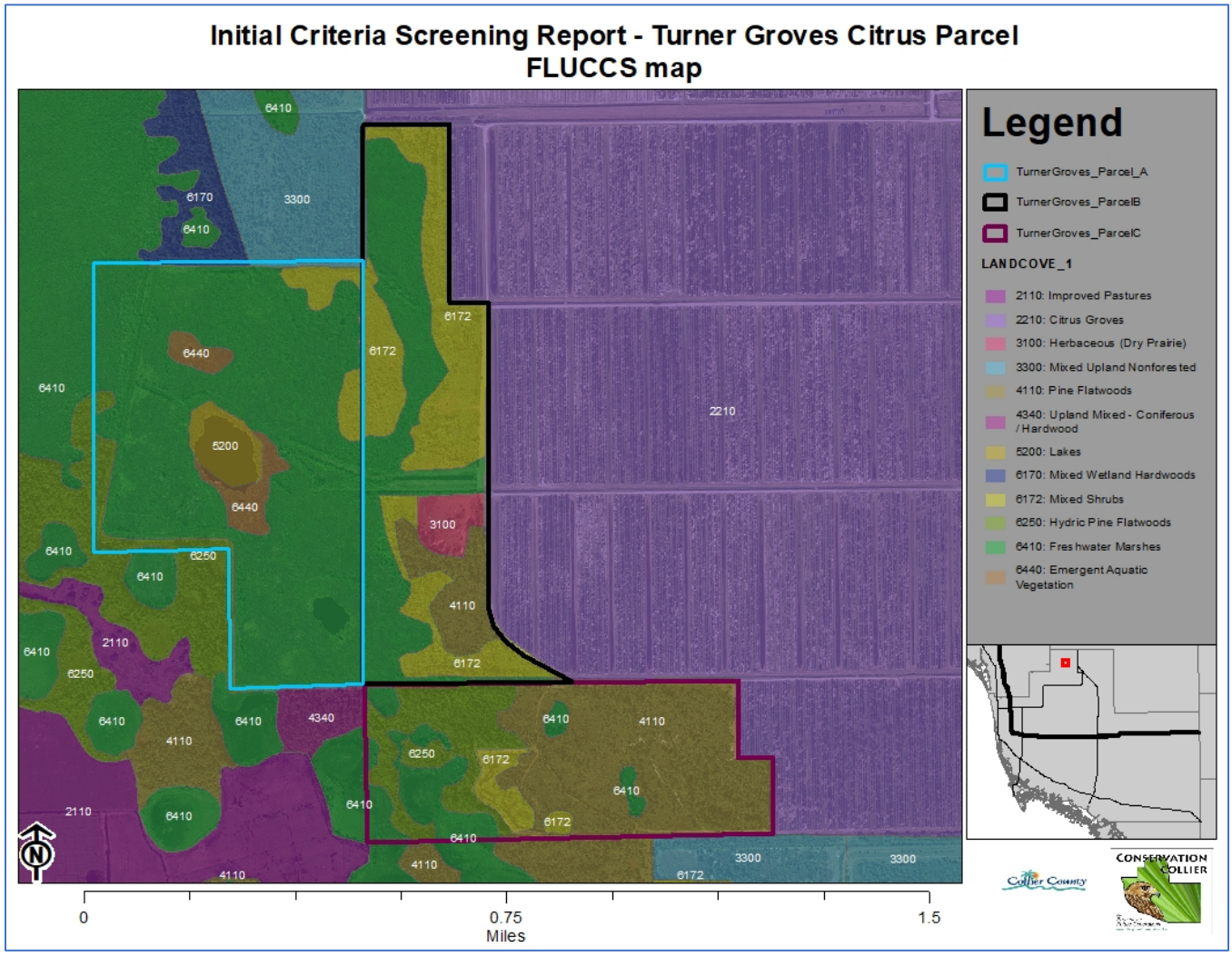


Figure 9. Cooperative Land Cover Map

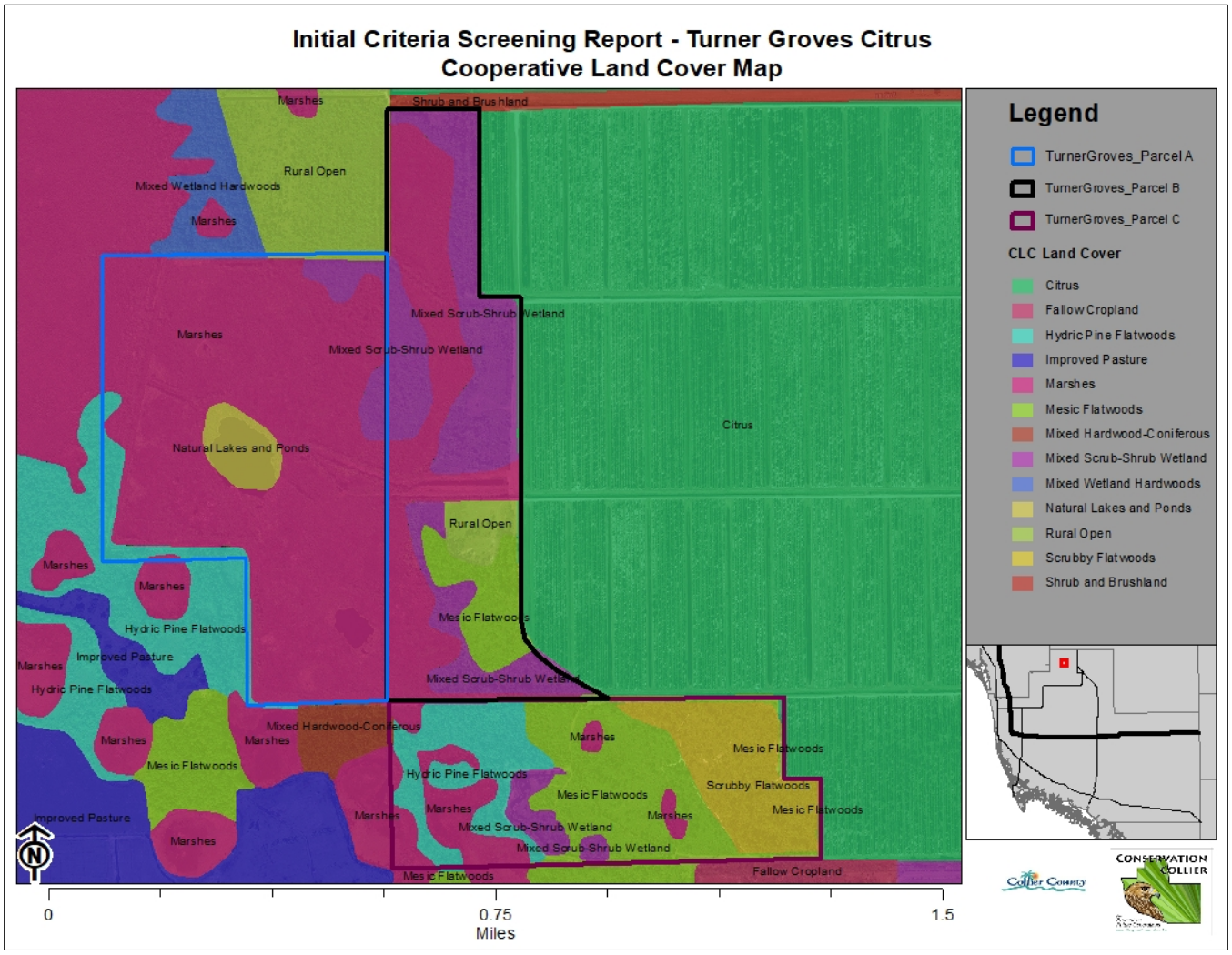
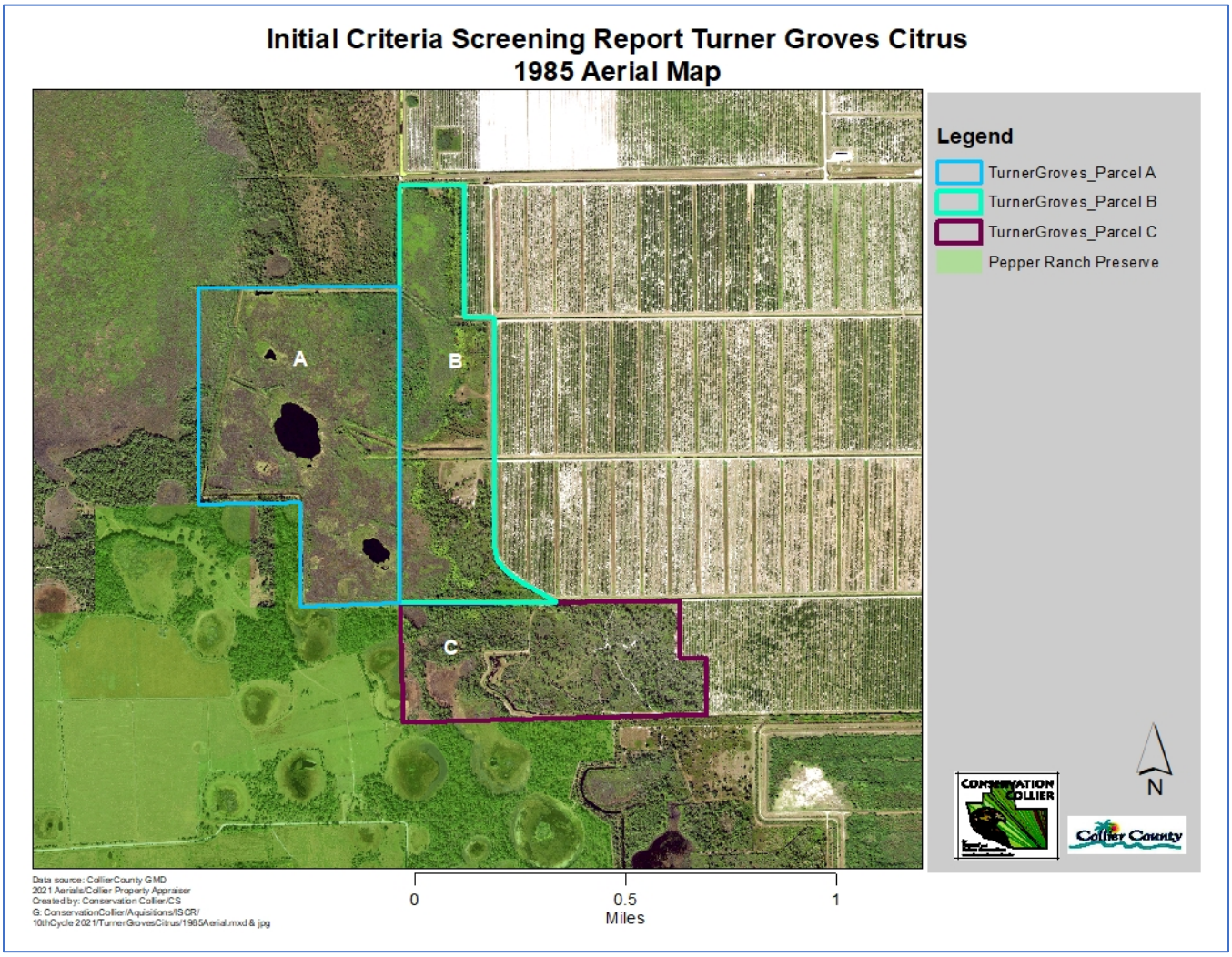


Figure 10: Historic Aerial Imagery



Photoset 1: Listed Plant Species

Royal Fern Found on Parcel C.

Photoset 2: Invasive and Non-native Plant Species

Cogan Grass Infestation on Parcel C

Old world Climbing Fern Infestation on Parcel B

Wright's nutrush infestation in marsh on parcel C

Cogongrass infestation on the raised berm on the border of Pepper Ranch Preserve and Parcel A.

Photoset 3: Representative Habitat

Pine Flatwoods on Parcel B

Willow Marsh on west side of Parcel A

Mesic Flatwoods on Parcel C

Scrubby Flatwoods on Parcel C

Freshwater Marsh on Parcel B

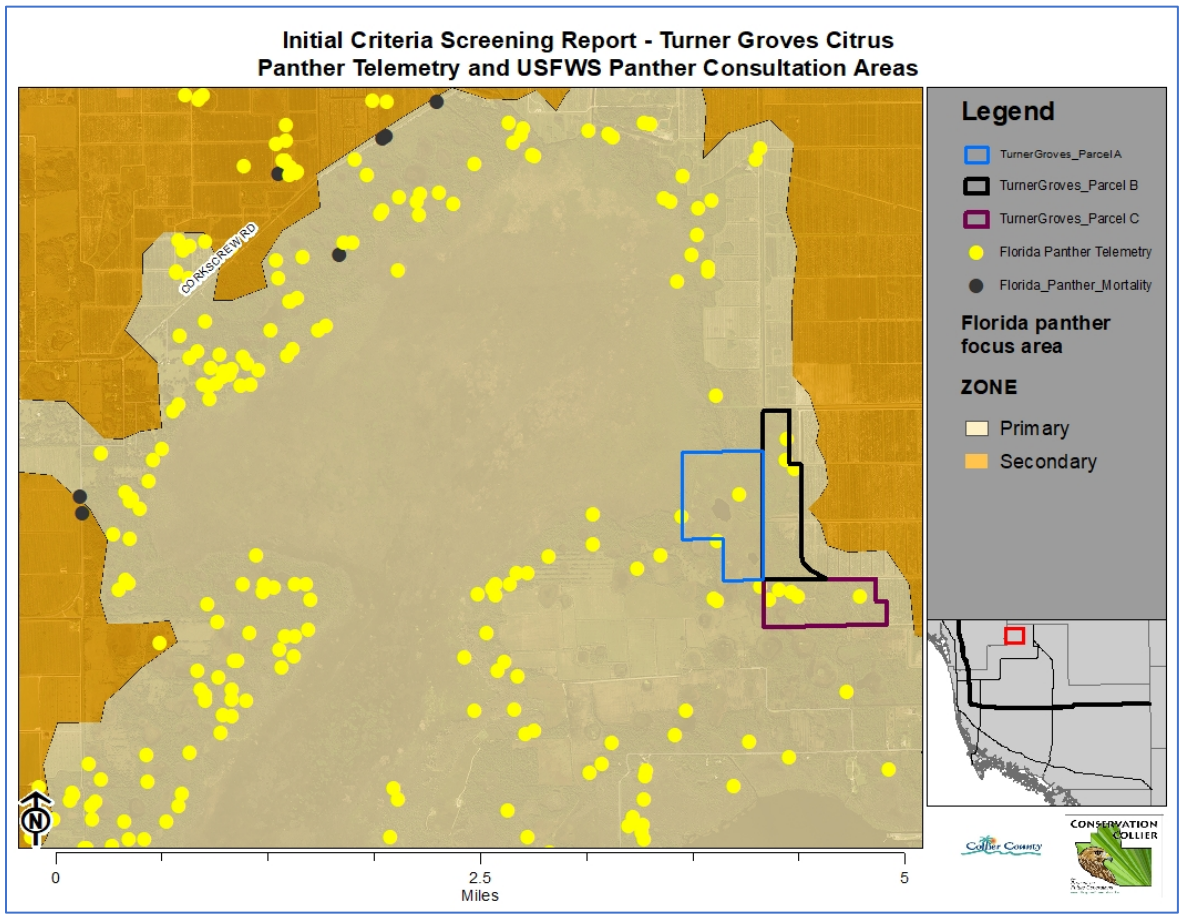
Goldenrod growing in the herbaceous dry prairie

Table 17: Plant Species Observed During Site Visit

Common Name	Scientific Name	State Status	Federal Status	Wetland Status	FLEPPC Status
air potato	*Dioscorea bulbifera*				I
alligator flag	*Thalia spp.*			OBL	
beauty berry	*Callicarpa americana*				
beggar's tick	*Bidens alba*				
blackroot	*Pterocaulon pycnostachyum*				
Blazing Star	*Lyatris spicata*				
blue maidencane	*Amphicarpum muhlenbergianum*			FACW	
braken fern	*Pteridium aquilinum*				
Brazilian pepper	*Schinus terebinthifolia*				I
bushy blue stem	*Andropogon glomeratus*			FACW	
cabbage palm	*Sabal palmetto*			FAC	
Caesar's weed	*Urena lobata*				I
cardinal airplant	*Tillandsia fasciculata*	State Endangered	n/a		
cattails	*Typha spp.*			OBL	
climbing hempvine	*Mikania scandens*				
cogongrass	*Imperata cylindrica*				I
coinwort	*Centella asiatica*			FACW	
creeping oxeye	*Sphagneticola trilobata*				II
dahoon holly	*Ilex cassine*			OBL	
duck potato	*Saggitaria latifolia*			OBL	
Florida paintbrush	*Carphephorus corymbosus*				
golden polypody fern	*Phlebodium aureum*				
goldenrod	*Solidago sempervirens*				
green brier	*Smilax sp.*				
guineagrass	*Urochola maxima*				II
hog plum	*Ximenia americana*				
jointed spikerush	*Eleocharis interstincta*			OBL	
lantana	*Lantana camara*				I
laurel oak	*Quercus Laurifolia*			FACW	
leather fern	*Acrostichum spp.*	State Threatened	n/a	OBL	
live Oak	*Quercus lvirginiana*				
melaleuca	*Melaleuca quinenervia*				
mission grass	*Cenchrus polystachios*				II
musky mint	*Hyptis alata*			FAC	
myrsine	*Myrsine guianensis*			FAC	
myrtle oak	*Quercus myrtifolia*				
old world climbing fern	*Lygodium microphyllum*				I
paragrass	*Urochloa mutica*				I
pennyroyal	*Piloblephis rigida*				
peppervine	*Nekemias arborea*				
Peruvian primrose-willow	*Ludwigia peruviana*				I
pickerelweed	*Pontederia cordata*			OBL	
pond apple	*Annona glabra*			OBL	
red maple	*Acer rubrum*			FACW	
red root	*Lachnanthes caroliana*			OBL	
resurrection fern	*Pleopeltis polypodioides*				
rose natal grass	*Melinis repens*				I
royal fern	*Osmunda regalis var. spectabilis*	State Commercially exploited	n/a	OBL	
rusty lyonia	*Lyonia fruticosa*				
salt bush	*Baccharus sp.*				
saw palmetto	*Serenoa repens*				
sawgrass	*Cladium jamaicense*			OBL	
shiny blueberry	*Vaccinium myrsinites*				
shoestring fern	*Vittaria lineata*				
slash pine	*Pinus elliottii*				
smart weed	*Polygonum sp.*			OBL	
smutgrass	*Sporobolus indicus*				I
Southeastern sunflower	*Heliantus agrestis*				
southern needleleaf airplant	*Tillandsia setacea*				
St. Johnswort	*Hypericum spp.*			FACW	
swamp bay	*Persea palustris*			OBL	
swamp fern	*Blechnum serrulatum*			FACW	
Sword fern	*Nephrolepis spp.*				I
virginia creeper	*Parthenocissus quinquefolia*				
water hyacinth	*Eichhornia crassipes*				I
water lettuce	*Pistia stratiotes*				I
wax myrtle	*Myrica cerifera*			FAC	
white top sedge	*Rhynchospora colorata*			FACW	
willow	*Salix spp.*			OBL	
woman's tongue	*Albizia lebbeck*				I
Woodwardia fern	*Woodwardia fimbriata*				
Wright's nutrush	*Scleria lacustris*				I

Wildlife

Figure 11: Wildlife Telemetry



Photoset 4: Wildlife and Wildlife Indicators

Black Bear Scat

FL Panther track

FL Panther Scat

Gopher Tortoise and burrow (bottom and top left) found on Parcel C

Black Vulture on Snag on Parcel B (top right)

Soils, Elevation, and Hydrology

Figure 12: Soil Survey of Collier County

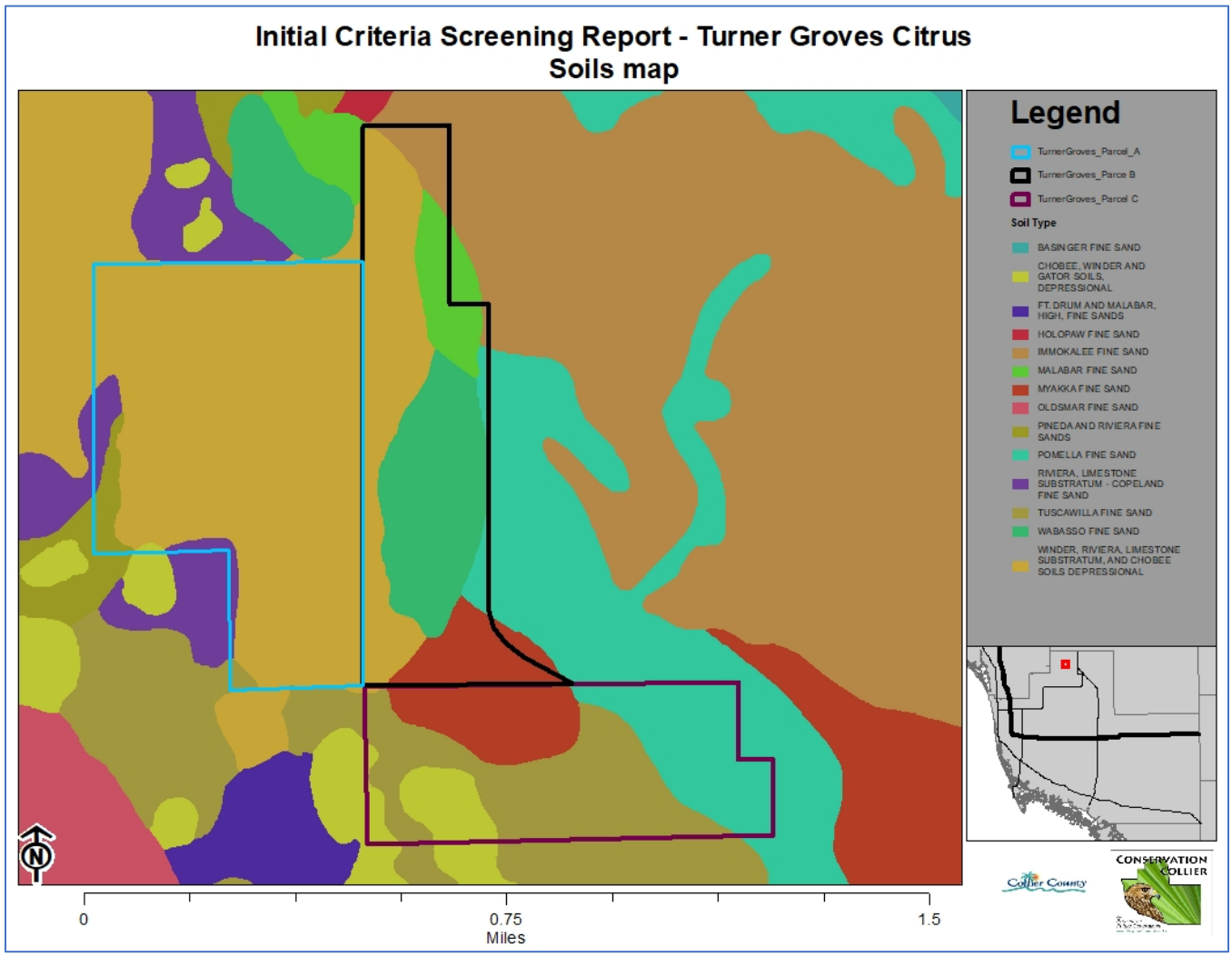


Figure 13: Light Detection and Ranging Surface Elevation Map (LIDAR)

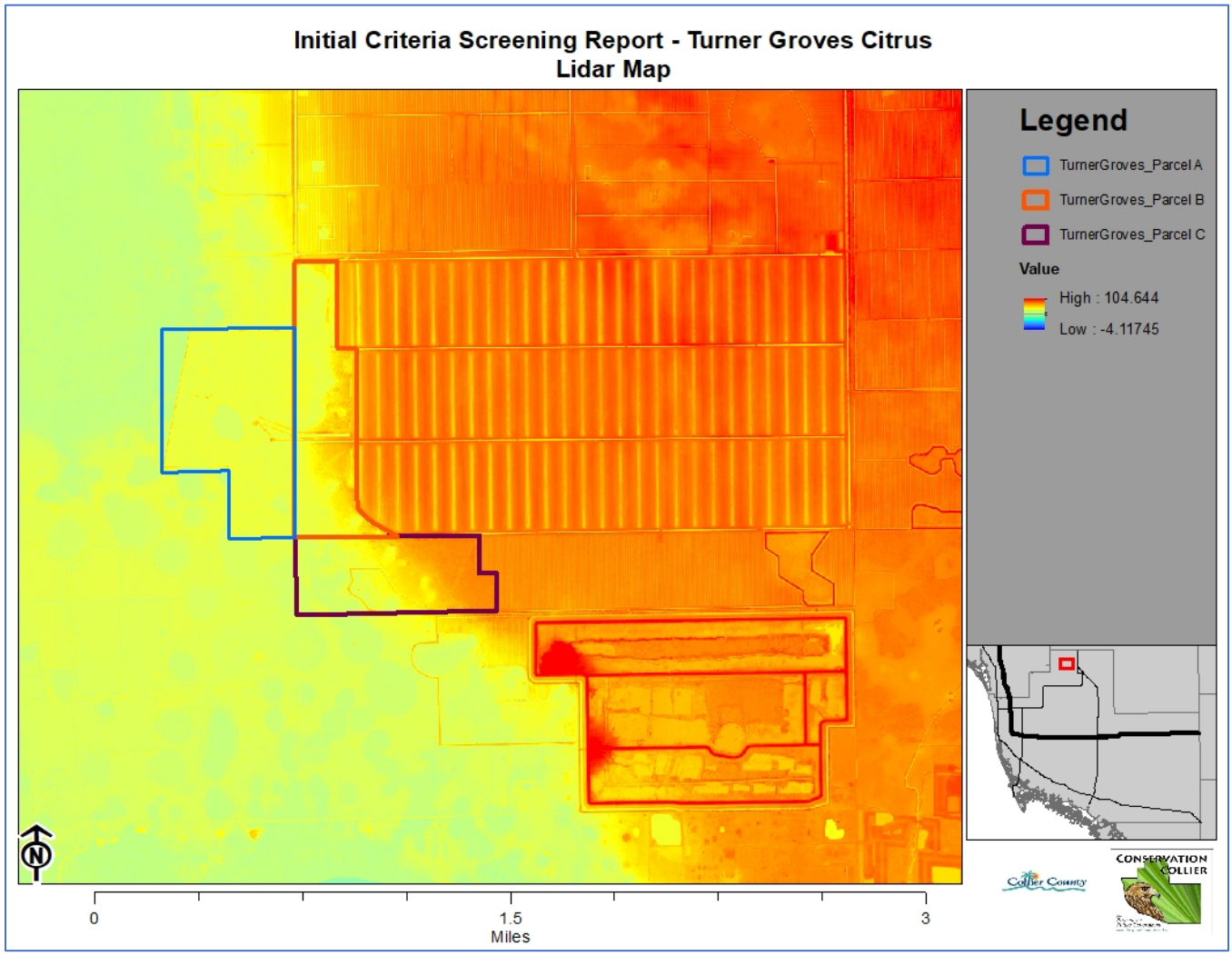


Figure 14: Wellfield Protection Zones

Collier County Wellfield Protection Zones as referenced in the Land Development Code updated in 2010 by Pollution Control and Prevention Department Staff. The public water supply wellfields, identified in section 3.06.06 and permitted by the SFWMD for potable water to withdraw a minimum of 100,000 average gallons per day (GPD), are identified as protected wellfields, around which specific land use and activity (regulated development) shall be regulated under this section.

These properties are not in a wellfield zone- no map needed.

Figure 15: Precipitation Recharge/Discharge Areas - Floridan, Sandstone and Tamiami Aquifers

The maps delineate average yearly rates of precipitation recharge or leakage, depending on the type of aquifer system(s) portrayed, as well as excess precipitation estimates (i.e. rainfall minus actual evapotranspiration losses) for each planning region. Approximately 95% of the properties contribute "7 to <14" and 5% at "6 to <9" annually.

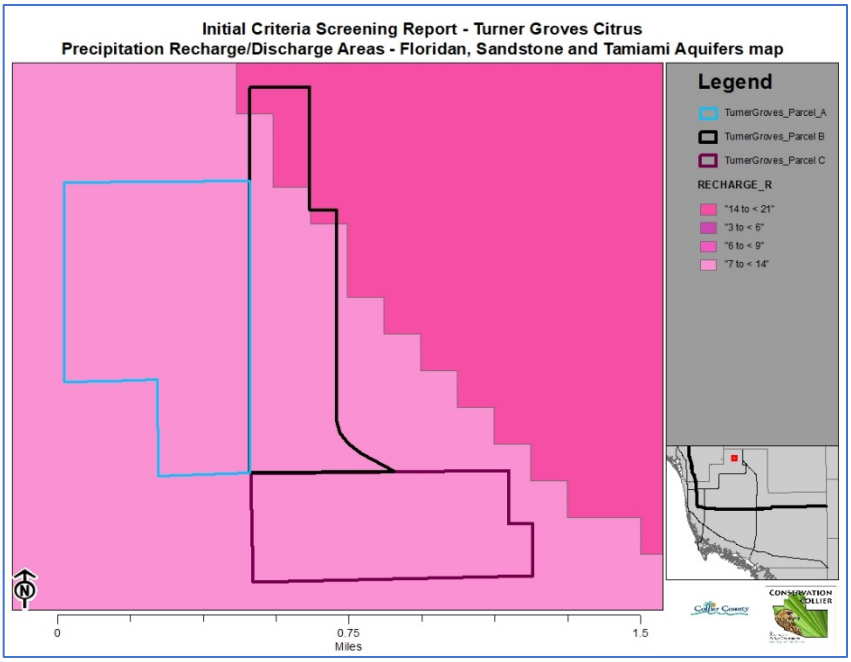


Figure 16: Precipitation Recharge Areas - Surficial and Biscayne Aquifers

The maps delineate average yearly rates of precipitation recharge or leakage, depending on the type of aquifer system(s) portrayed, as well as excess precipitation estimates (i.e. rainfall minus actual evapotranspiration losses) for each planning region. Approximately 95% of the properties contribute moderately to the aquifer at "43 to < 56" and 5% at "31 to < 43" annually.

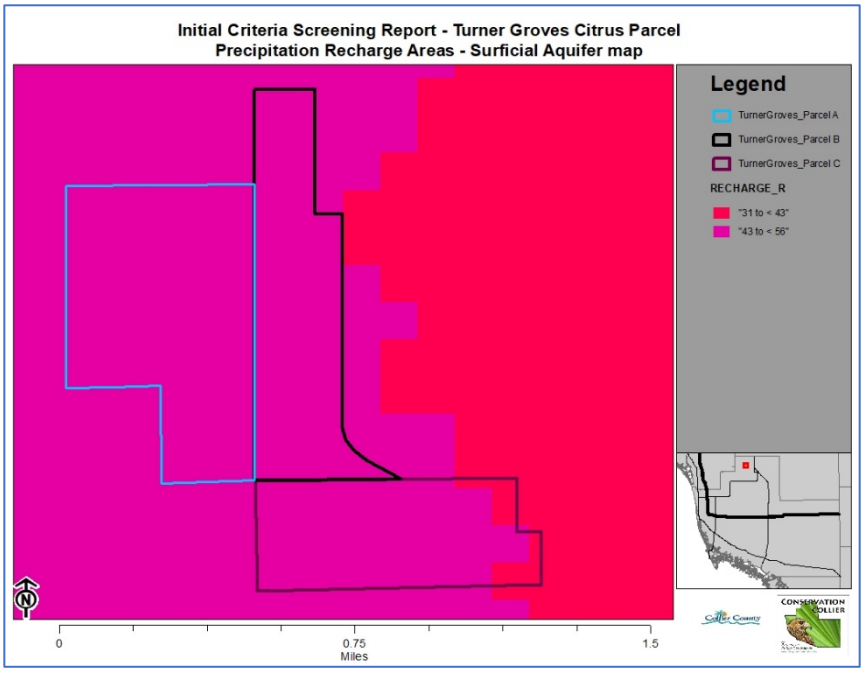
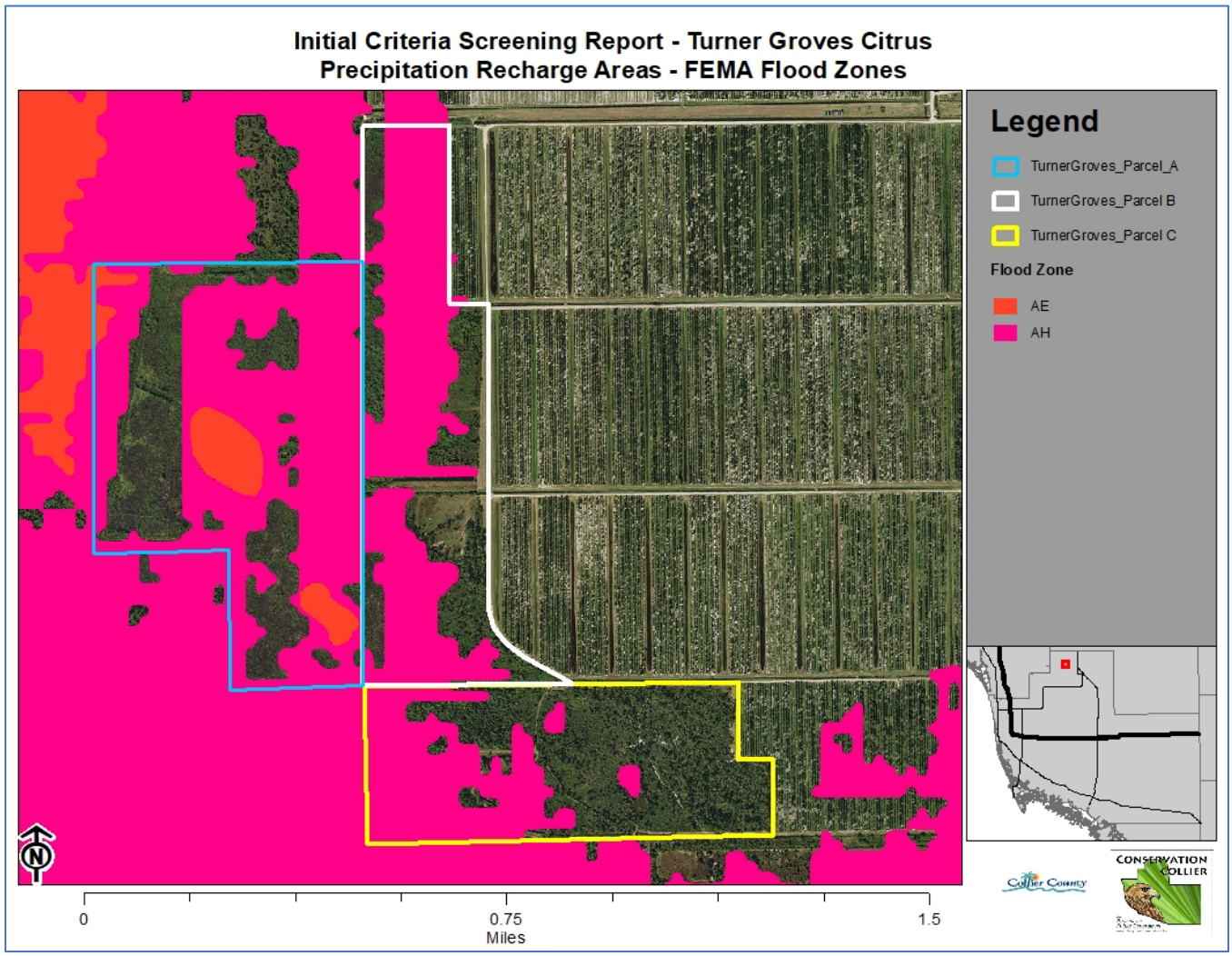


Figure 17: FEMA Flood Zones

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.



Zoning

Figure 18: Collier County Growth Management Department Zoning Overlay

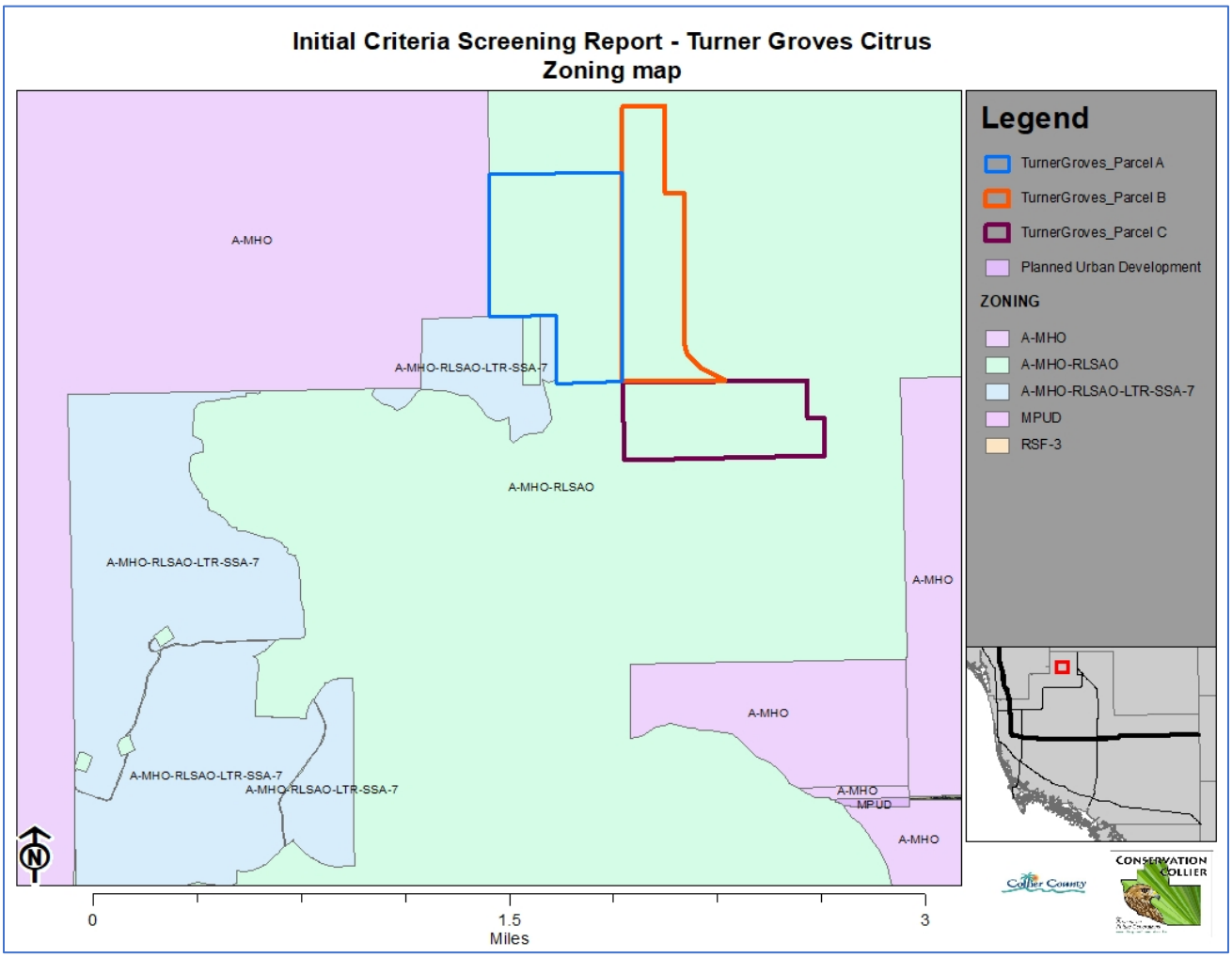


Figure 19: Collier County Growth Management Department Comprehensive Planning Division Future Land Use Overlay

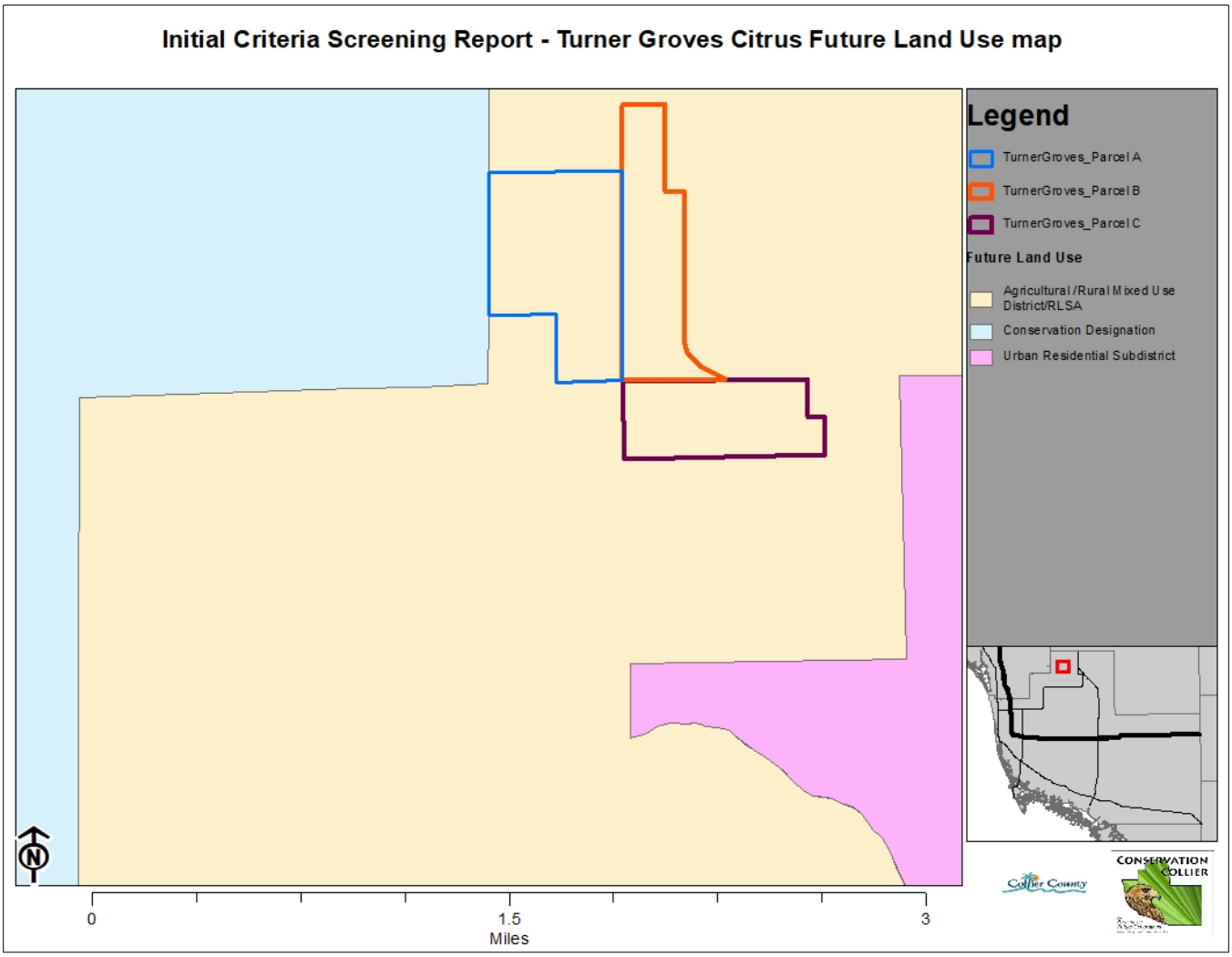
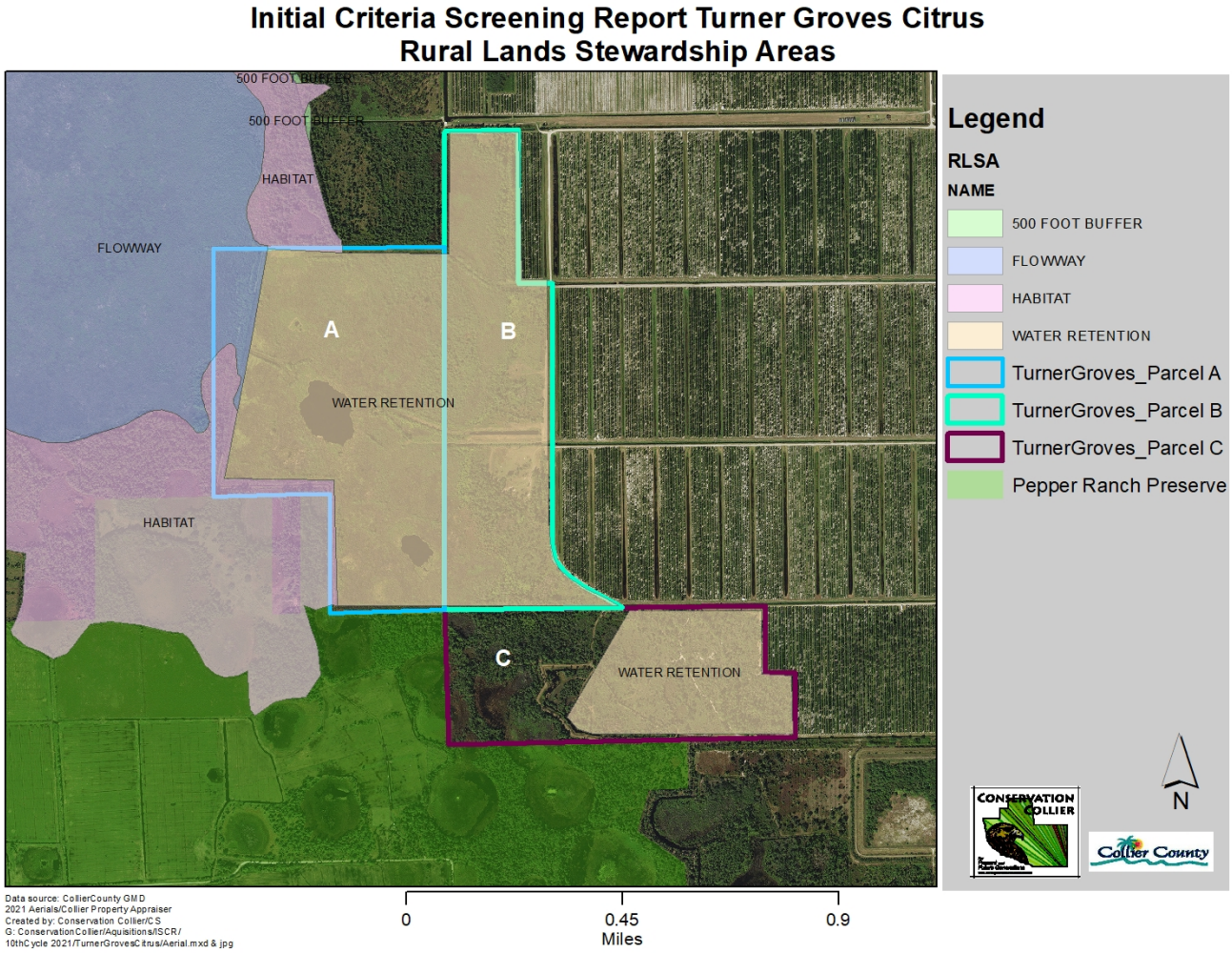


Figure 20. Rural Land Stewardship Overlay



Management

Photoset 5: Management Considerations

Minor debris will need to be removed

Minor debris will need to be removed

Shooting range appears to be on the eastern boundary of Parcel C

Additional Figures, Tables, and Photos

Photoset 6: Additional Photos

Access road in from the Citrus Groves. Along eastern boundaries of property.