

# **Brewer's Landing Preserve Interim Management Plan**



**Collier County, FL  
Conservation Collier Program**

**June 2024 – June 2026**

**Prepared by: Collier County Conservation Collier Staff**

# Conservation Collier Brewer’s Landing Preserve Interim Land Management Plan

## Table of Contents

Land Management Plan Executive Summary .....	4
Parcel Description .....	6
1. Location.....	6
1.1. Description.....	6
Figure 1.1.1. Overview map of Brewer’s Landing Preserve and surrounding conservation areas .....	7
Figure 1.1.2. 2022 Aerial close-up.....	8
2. Physiography.....	9
2.1. Description.....	9
Figure 2.1.1. Topographical Map (LIDAR) .....	10
Figure 2.1.2. Aquifer Map (CLIP4 Aquifer Priority Map and Wellfield Protection Zones) .	11
Figure 2.1.3. Hydric Soils Map (Collier County Soils Survey).....	12
3. Historical Land Use .....	13
3.1. Description.....	13
Photoset 3.1.1. Historical Aerial Imagery .....	13
4. Adjacent Land Use .....	15
4.1. Description.....	15
5. Acquisition and Expansion.....	15
5.1. Acquisition Description.....	15
5.2. Potential Preserve Expansion .....	15
Management.....	15
6. Vegetation Management.....	15
6.1. Current Vegetative Community Conditions.....	15
Figure 6.1.1. Cooperative Land Cover Classification Map .....	17
Table 6.1.2. Threatened and Endangered Plant Species Table.....	18
6.1.3. Vegetation Management Concerns.....	18
6.2. Desired Future Conditions.....	18
6.3. Management Tools .....	18
6.3.1. Invasive Plant Removal .....	18
6.3.2. Native Plant Restoration .....	18
6.3.3. Hydrological Restoration.....	18
6.4. Partnership Opportunities.....	19

Conservation Collier Brewer’s Landing Preserve Interim Land Management Plan

7. Wildlife Management ..... 19

    7.1. Current Wildlife Community Conditions ..... 19

        Table 7.1.1. Observed Wildlife Species Table ..... **Error! Bookmark not defined.**

        Table 7.1.2. Potential Threatened and Endangered Species Table ..... 19

    7.1.2. Wildlife Management Concerns ..... 19

    7.2. Desired Future Conditions..... 20

    7.3. Management Tools ..... 20

        7.3.1. Habitat Improvements..... 20

        7.3.2. Connectivity ..... 20

        Figure 7.3.2. – Florida Panther Telemetry Locations ..... 21

        7.3.4. Monitoring..... 22

    7.4. Partnership Opportunities..... 22

8. Recreation Management ..... 22

    8.1. Current Recreational Opportunity Conditions ..... 22

        Figure 8.1.1. – CREW Bird Rookery Swamp Trail ..... 23

9. Preserve Safety and Security Management..... 24

    9.1. Current/Predicted Human Conflict Conditions ..... 24

    9.2. Desired Future Conditions..... 24

    9.3. Management Tools ..... 24

        9.3.1. Site Security Improvements ..... 24

    9.4. Partnership Opportunities..... 24

10. Additional Resource Use Management..... 24

    10.1. Current Additional Resource Use Conditions ..... 24

11. Budget..... 24

    Table 11.1. Projected Expenditures Table ..... 24

12. Appendix..... 25

    Table 12.1. Legal Description ..... 25

    12.2. Public Meeting Comments and Staff Responses ..... 25

## Land Management Plan Executive Summary

**Lead Agency:** Conservation Collier, Development Review Division, Growth Management Community Development Department, Collier County

**Properties included in this Plan:** The Brewer's Landing Preserve lands consist of 4 parcels located within Section 10, Township 48, and Range 27 in Collier County, Florida. Full legal descriptions are provided in the appendix (Table 12.2).

**Total Acreage:** 14.78

**Management Responsibilities:** Collier County Conservation Collier program staff

**Designated Land Use:** Conservation

**Unique Features:** Brewer's Landing Preserve is an excellent example of cypress and mixed scrub-shrub wetland forest plant communities and contains many mature pop ash and cypress trees and provides an important stopover location for migrating birds.

**Desired Future Conditions:**

**Vegetation:** A preserve with high quality cypress/mixed scrub-shrub wetland forest and less than 10% infestation of non-native species.

**Wildlife:** A preserve with the appropriate vegetative communities, resource use, and connectivity to support wildlife species native to that habitat.

**Recreation:** This preserve is not compatible with public recreation.

**Preserve Safety and Security:** A preserve free of littering, dumping, illicit activities, neighbor disturbances, unauthorized vehicles, and after-hours trespass.

**Public Involvement**

As part of the Interim Land Management Plan drafting process, a public meeting will be held in \*\*\*\* 2024, to gather input from members of the public and preserve stakeholders.

## **Introduction**

The 14.78-acre preserve was approved for acquisition by the Board of County Commissioners (BCC) on September 26, 2023. The Brewer's Landing Preserve is a nature preserve located in the North Golden Gate Estates (NGGE) Unit 53. It is largely comprised of mixed scrub-shrub and cypress wetlands as identified by the Cooperative Land Cover Classification System. The preserve is designated as resource protection and will remain closed to the public, as it supports one of the larger swallow-tailed kite roosts in Collier County. The County holds fee simple title. The Conservation Collier Program manages this parcel under authority granted by the Conservation Collier Ordinance 2002-63, as amended (available from [www.municode.com](http://www.municode.com)). Management activities allowed are those necessary to preserve and maintain this environmentally sensitive land for the benefit of present and future generations.

## **Conservation Collier: Land Acquisition Program and Management Authority**

The Conservation Collier program was originally approved by voters in November 2002 and subsequently confirmed in the November 2006 and 2020 ballot referendums. Both voter-approved referendums enable the program to acquire environmentally sensitive lands within Collier County, Florida (Ordinance 2002-63, as amended). Properties must support at least two of the following qualities to qualify for consideration: rare habitat, aquifer recharge, flood control, water quality protection, and listed species habitat. The BCC appointed the Conservation Collier Land Acquisition Advisory Committee (CCLAAC) to consider any selected or nominated properties that an owner has indicated a willingness to sell. The committee recommends property purchases for final approval by the BCC.

Lands acquired with Conservation Collier funds are titled to "COLLIER COUNTY, a political subdivision of the State of Florida, by and through its Conservation Collier program." The BCC established the Conservation Collier Program to implement the program and to manage acquired lands. As such, Conservation Collier holds management authority for the Brewer's Landing Preserve.

## **Purpose and Scope of Plan**

The purpose of the interim management plan is to provide long term management direction for the Brewer's Landing Preserve by identifying the desired future conditions of each element and the appropriate tools to achieve these conditions. This plan seeks to balance the various facets of natural resource conservation (listed species protection, habitat restoration, and invasive species management). This plan is divided into sections that include an introduction, parcel description, management element conditions, objectives, potential tools, and a projected budget.

## **Parcel Description**

### **1. Location**

#### **1.1. Description**

The Preserve is in the North Golden Gates Estates Unit 53 area of Collier County, FL in Section 8, Township 48, and Range 27. The Preserve is situated east of CREW Bird Rookery Swamp, along Wilson Blvd. N. (Figure 1.1.1). The Preserve is comprised of 4 parcels totaling 14.78 acres (Table 12.1). The preserve is bisected by the Corkscrew Canal.

# Conservation Collier Brewer's Landing Preserve Interim Land Management Plan

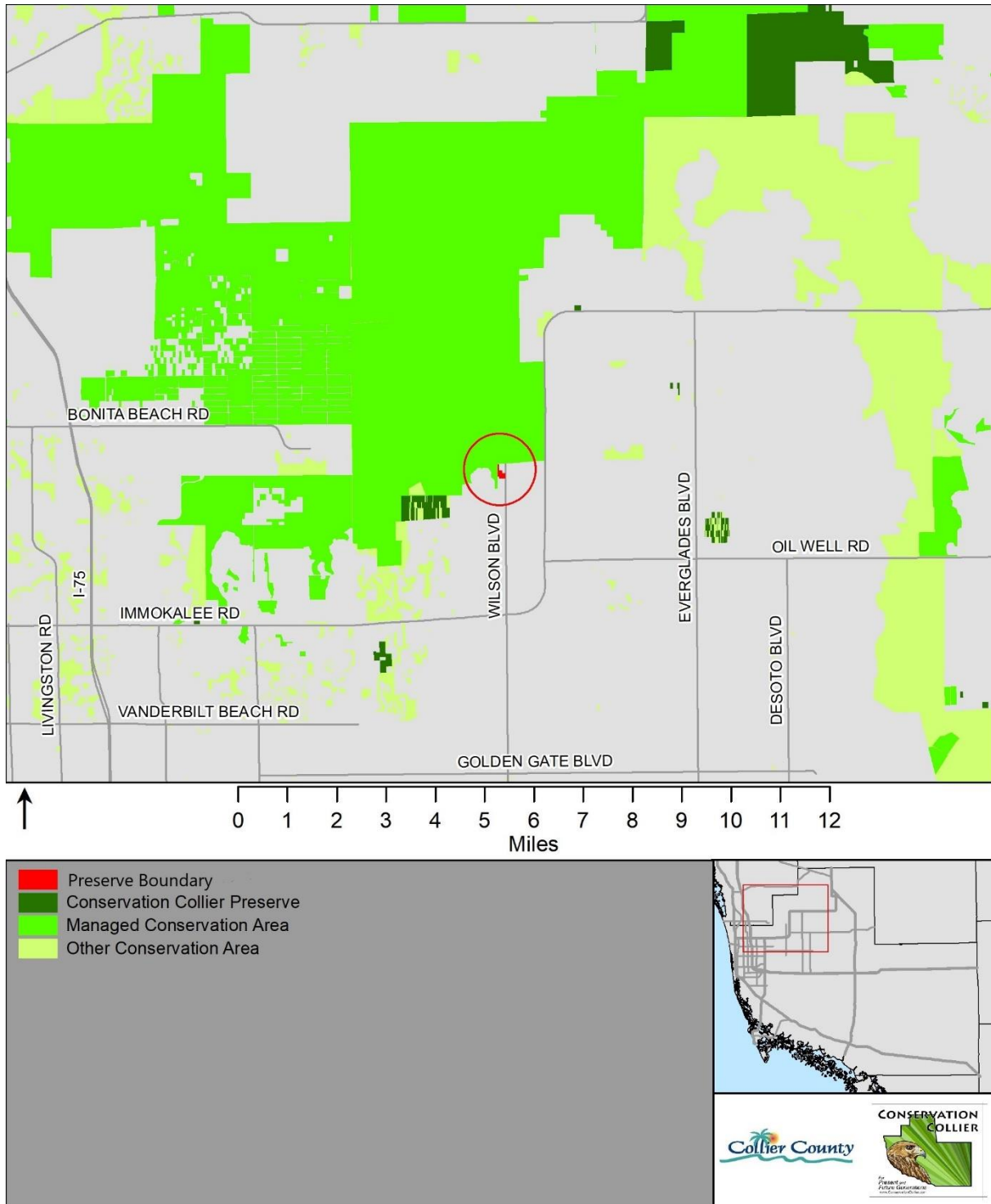


Figure 1.1.1. Overview map of **Brewer's Landing Preserve** and surrounding conservation areas

Conservation Collier Brewer's Landing Preserve Interim Land Management Plan



Figure 1.1.2. 2022 Aerial close-up



## **2. Physiography**

### **2.1. Description**

#### **LIDAR and Surface Waters**

A Light Detection and Ranging (LIDAR) map provides information about the elevation of the Earth's surface. The topographical map of the Preserve (Figure 2.1.1) indicates surface features of lower elevation in deepening shades of blue. The preserve is an example of mixed scrub-shrub and cypress forest wetland plant communities where most, if not all, of the preserve experiences surface water ponding at some point during the year.

#### **Aquifer Recharge Potential**

The preserve is within a Priority 6 CLIP4 Aquifer Recharge designation and is not within a wellfield protection zone as designated by Collier County Utilities Golden Gate Wellfield (Figure 2.1.2). The preserve protects portions of the surficial aquifer that are sensitive to contamination.

#### **Soils**

There are two hydric soil types mapped within the preserve (Figure 2.1.3). Hydric soil present consists of holopaw and copeland depressional fine sands. A hydric soil is formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994).

Conservation Collier Brewer's Landing Preserve Interim Land Management Plan

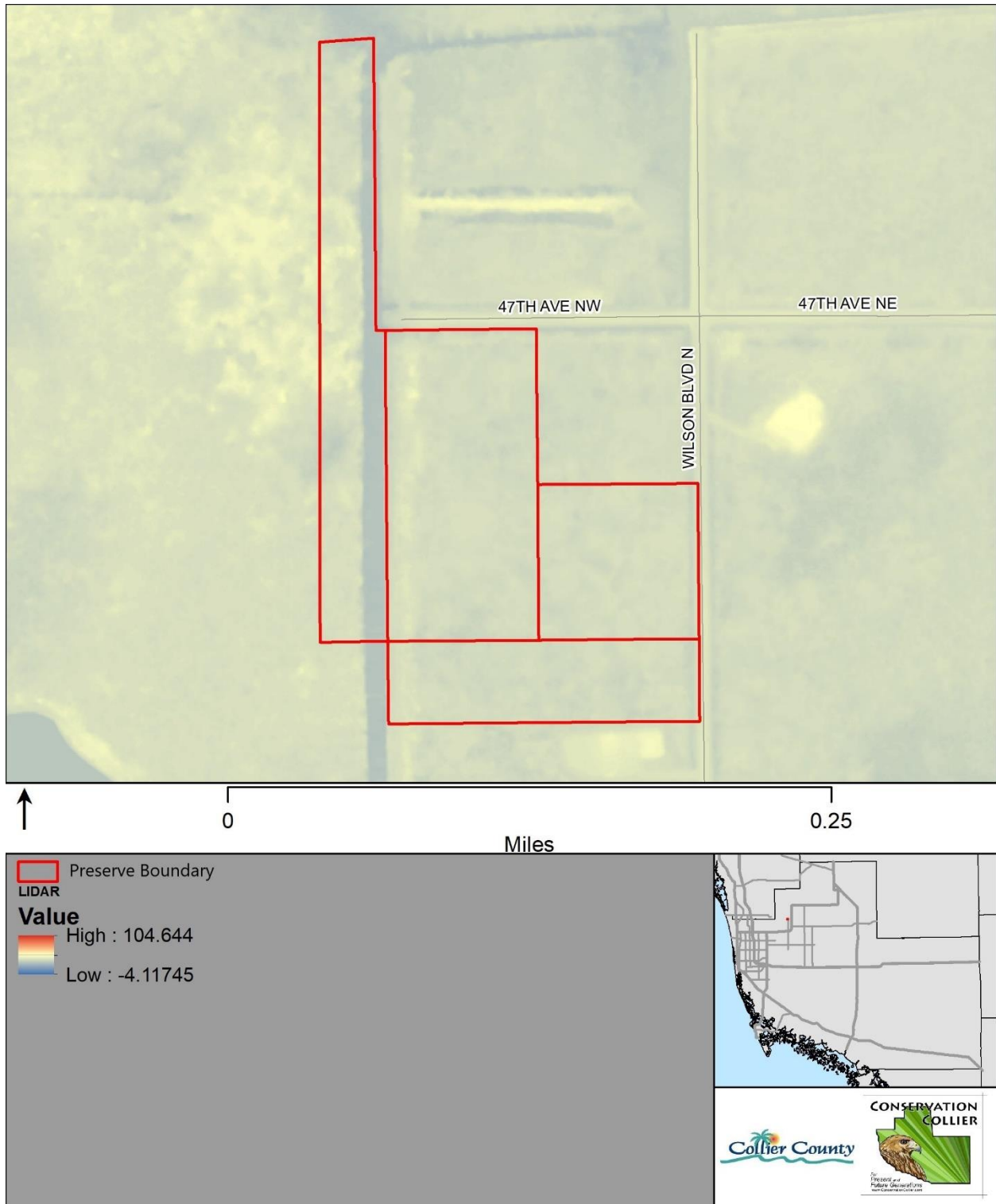


Figure 2.1.1. Topographical Map (LIDAR)

Conservation Collier Brewer's Landing Preserve Interim Land Management Plan

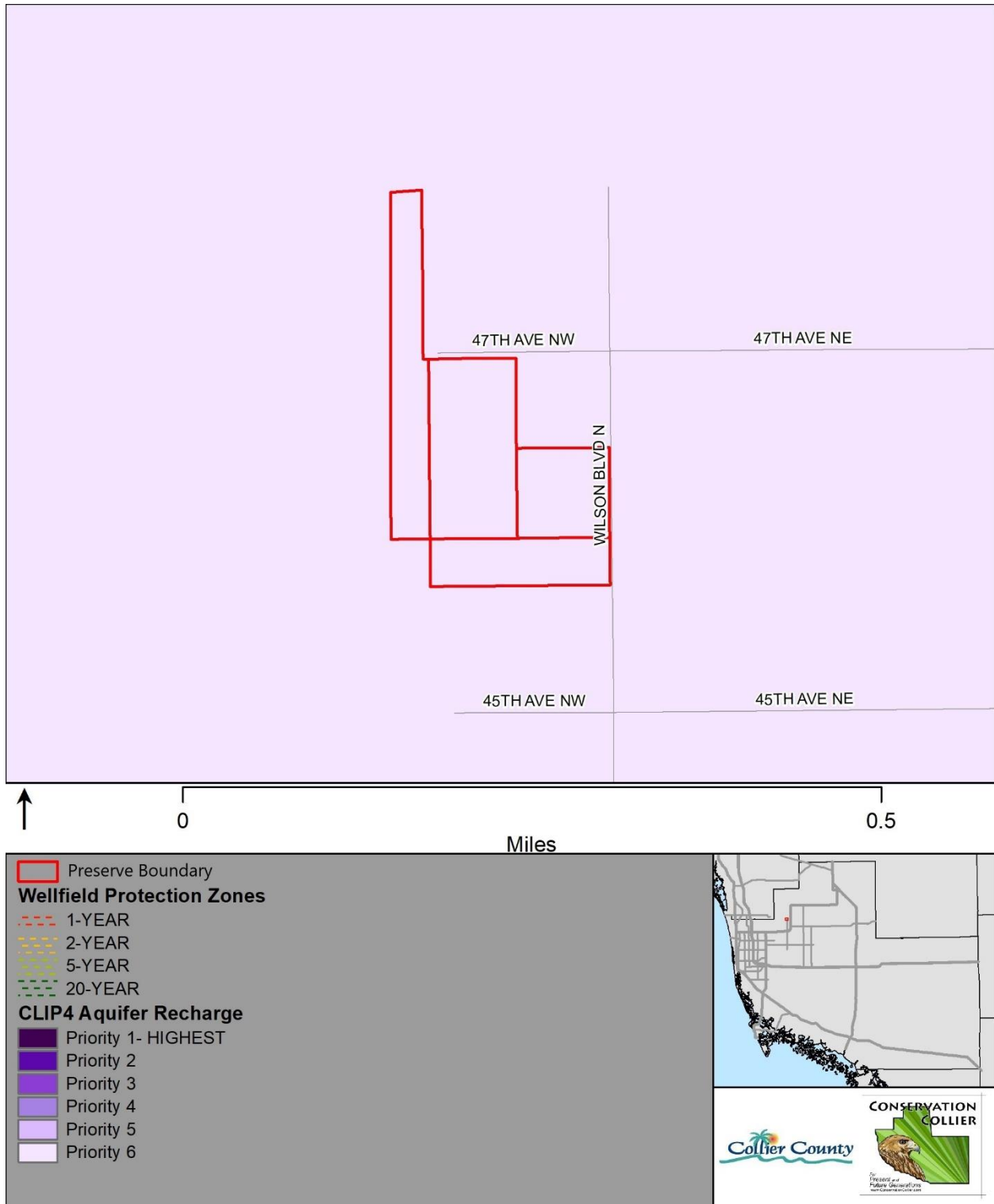


Figure 2.1.2. Aquifer Map (CLIP4 Aquifer Priority Map and Wellfield Protection Zones)

Conservation Collier Brewer's Landing Preserve Interim Land Management Plan

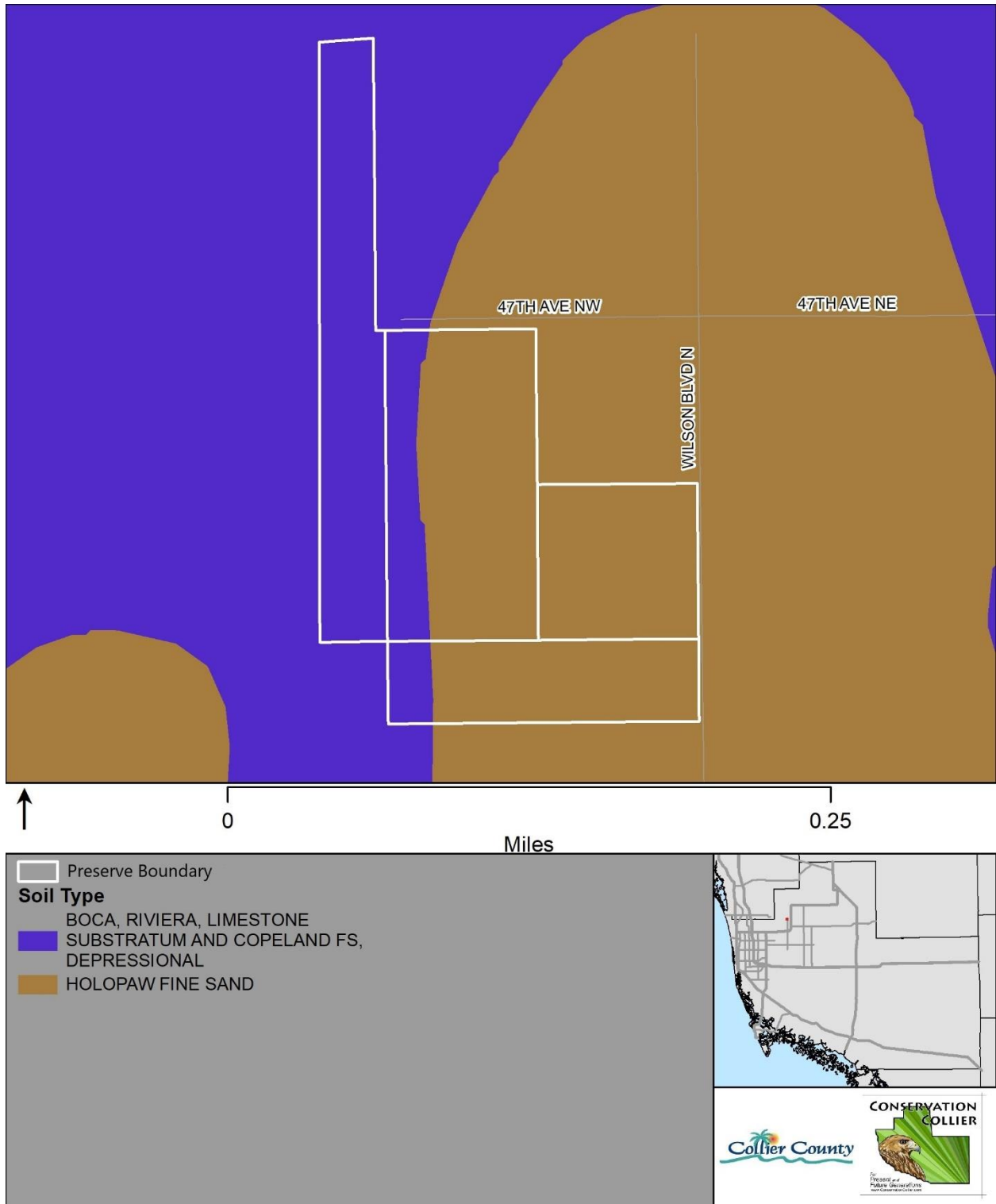


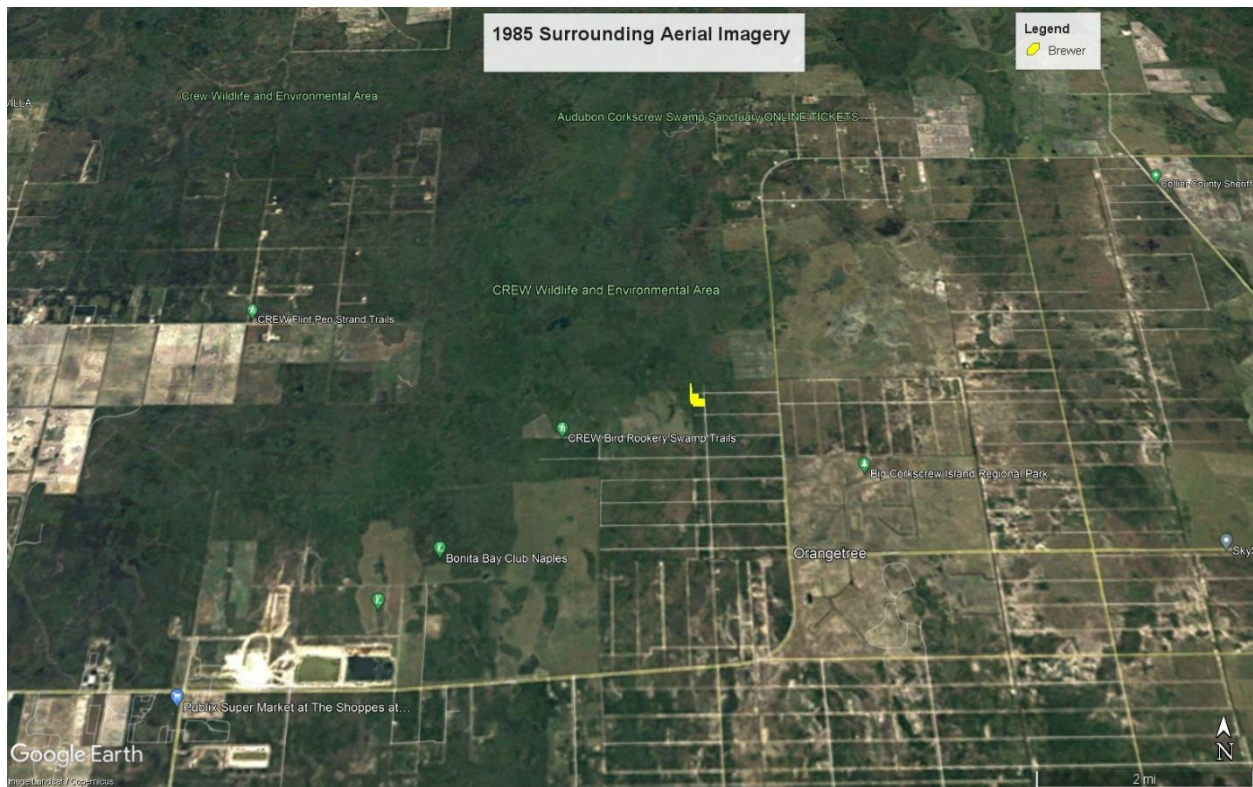
Figure 2.1.3. Hydric Soils Map (Collier County Soils Survey)

### 3. Historical Land Use

#### 3.1. Description

Aerial imagery (Photoset 3.1.1) dating back to 1969 shows significant alteration to nearby lands surrounding the preserve. Adjacent lands to the south and east are part of the North Golden Gates Estates area and are zoned for residential development. The Corkscrew Canal bisects the preserve into eastern and western halves. North and west of the preserve consists of a network of public and private conservation lands that comprise the 60,000-acre CREW (Corkscrew Regional Ecosystem Watershed) watershed; these CREW lands have generally remained intact, however development along the watershed periphery has increased as evidenced by the aerial imagery photoset.

*Photoset 3.1.1. Historical Aerial Imagery*



December 1985

# Conservation Collier Brewer's Landing Preserve Interim Land Management Plan



January 2006



January 2024

## 4. Adjacent Land Use

### 4.1. Description

Brewer's Landing Preserve is adjacent to South Florida Water Management District (SFWMD) lands to the north and west. To the south and east, the preserve is bordered by Golden Gate Estates zoned property (Figure 1.1.1).

## 5. Acquisition and Expansion

### 5.1. Acquisition Description

On September 26, 2023, the BCC approved the 4-parcel preserve for acquisition.

### 5.2. Potential Preserve Expansion

Conservation Collier could target adjacent parcels for expansion.

## Management

### 6. Vegetation Management

#### 6.1. Current Vegetative Community Conditions

The following are the Cooperative Land Cover Classification System habitats identified. Non-native species are denoted with an \*. Plant communities identified statewide under this cooperative land cover system partially rely on aerial imagery for plant community classification. Two plant communities have been identified across Brewer's Landing Preserve – these plant communities, along with general descriptions, can be found below.

**2112 Mixed Scrub-Shrub Wetlands** – Wetlands that are dominated by woody vegetation less than 20ft in height. This can occur in many situations, but in most cases involves transitional or disturbed communities on dried sites. Persistent examples of shrub wetlands include shrub bogs and willow swamps.

**Major Canopy Components:** Pop ash (*Fraxinus caroliniana*), Carolina willow (*Salix caroliniana*), buttonbush (*Cephalanthus occidentalis*), swamp dogwood (*Cornus foemina*)

**Major Midstory Components:** Brazilian pepper\* (*Schinus terebinthifolia*)

**Major Understory Components:** swamp fern (*Blechnum serrulatum*), broomsedge (*Andropogon* spp.), sawgrass (*Cladium jamaicense*), pickerel weed (*Pontederia cordata*)

## Conservation Collier Brewer's Landing Preserve Interim Land Management Plan

**2211 Cypress** - Dominated entirely by cypress, or these species important in the canopy; long hydroperiod.

**Major Canopy Components:** Cypress (*Taxodium distichum*), cabbage palm (*Sabal palmetto*), cardinal airplant (*Tillandsia fasciculata*)

**Major Midstory Components:** Pop ash (*Fraxinus caroliniana*), Brazilian pepper\* (*Schinus terebinthifolia*), cabbage palm (*Sabal palmetto*), wax myrtle (*Myrica cerifera*), pond apple (*Annona glabra*), dahoon holly (*Ilex cassine*)

**Major Understory Components:** Sawgrass (*Cladium jamaicense*), royal fern (*Osmunda regalis*), swamp fern (*Blechnum serrulatum*), crinum lily (*Crinum americanum*), peppervine (*Ampelopsis arborea*), false nettle (*Boehmeria cylindrica*), whitevine (*Funastrum clausum*), greenbriar (*Smilax* spp.), poison ivy (*Toxicodendron radicans*), pickerel weed (*Pontederia cordata*)



Conservation Collier Brewer's Landing Preserve Interim Land Management Plan

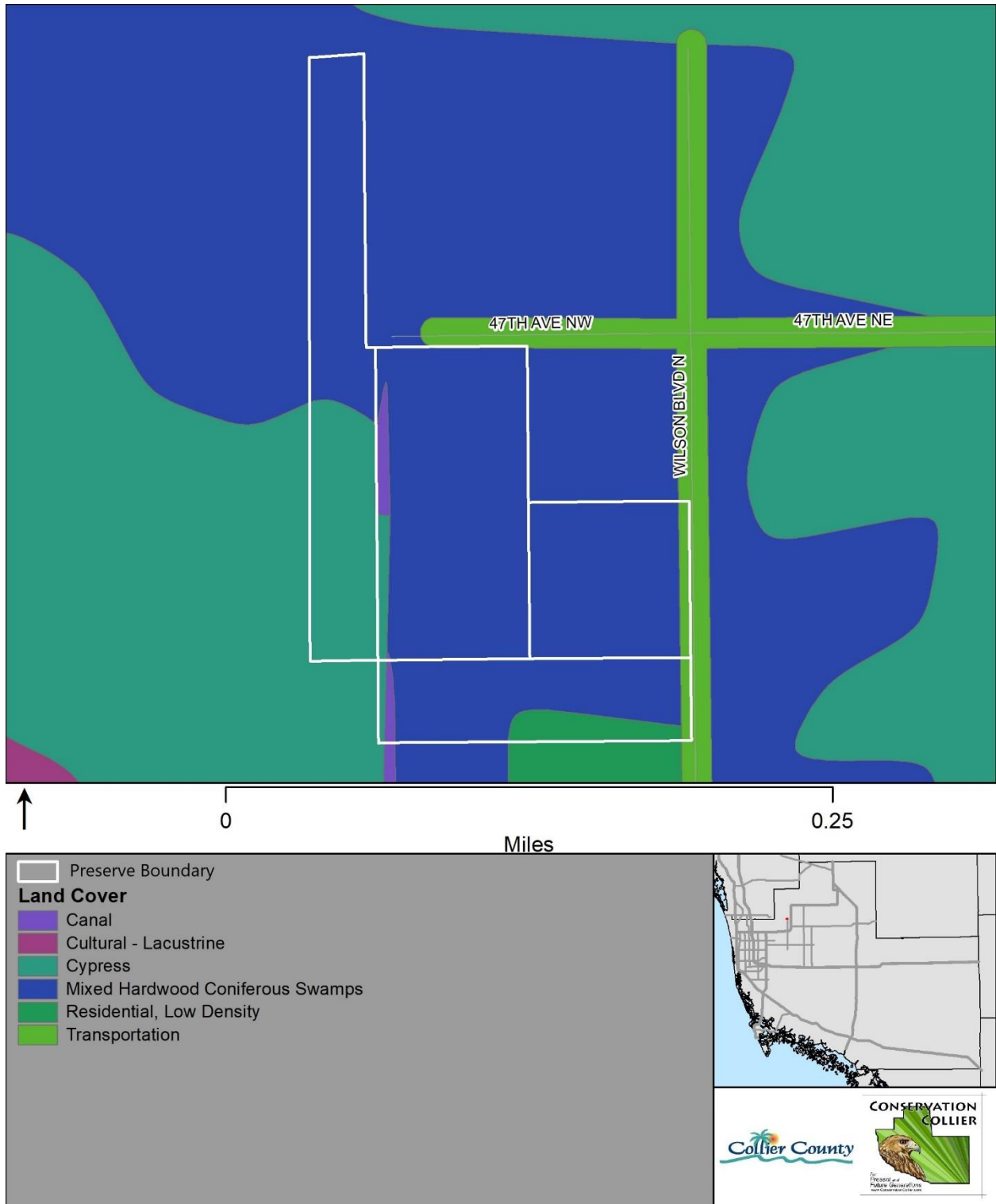


Figure 6.1.1. Cooperative Land Cover Classification Map

Table 6.1.2. Threatened and Endangered Plant Species Table

Imperiled Plant Species		Conservation Status	
Common Name	Scientific Name	State	Federal
Giant airplant	<i>Tillandsia utriculata</i>	Endangered	Not Listed

### 6.1.3. Vegetation Management Concerns

Maintaining the integrity of the kite roost site is the primary vegetation management concern on this preserve. It is unclear what vegetative factors influence the kite's utilization of this area. Excessive growth of invasive vegetation threatens to negatively alter the character of the roost. Dramatic removal of the existing vegetation may negatively impact the roost as well. Old-world climbing fern may engulf the roost trees if left unchecked, Brazilian pepper shades out the understory and prevents recruitment of new roost trees. Various other non-native species compete for limited space with more desirable native vegetation.

## 6.2. Desired Future Conditions

A preserve with a matrix of hydric plant communities, various age class roost trees, and a low infestation of invasive vegetation where practicable.

## 6.3. Management Tools

### 6.3.1. Invasive Plant Removal

The preserve is sparsely infested with non-native, invasive plants, primarily Brazilian pepper (*Schinus terebinthifolia*) and *Lygodium* spp. In areas of the preserve with less canopy cover, Caesar weed (*Urena lobata*) and Peruvian primrose willow (*Ludwigia peruviana*) is also found. Herbicidal treatments will be the primary method used to control Category I and II invasive species. A limited herbicide application targeting Brazilian pepper occurred while under private ownership. Monitoring of the site shall consist of a walk-through by staff at semi-annual intervals. Conservation Collier shall be responsible for invasive plant treatment with tasks contracted out as deemed necessary.

### 6.3.2. Native Plant Restoration

Native plantings will be appropriately utilized should management deem vegetative restoration necessary.

### 6.3.3. Hydrological Restoration

The preserve sits on the edge of the Corkscrew Regional Ecosystem Watershed. Despite land alterations adjacent to the preserve (a canal bisects the preserve), it receives substantial inundation during the wet season which continues to promote the wetland plant communities

found across the preserve. Currently, no hydrological restoration projects are being considered. However, when situations arise where preserves could be part of a water management/restoration plan, Conservation Collier will support these plans if they don’t negatively affect the preserve.

#### 6.4. Partnership Opportunities

Conservation Collier will pursue grants and funding assistance to cover the costs of vegetation maintenance.

### 7. Wildlife Management

#### 7.1. Current Wildlife Community Conditions

The preserve serves as one of the larger pre-migratory roost sites for the swallow-tailed kite. State and federally listed imperiled species observed utilizing the nearby Red Maple Swamp Preserve lands include the woodstork (*Mycteria americana*), little blue heron (*Egretta caerulea*), Florida panther (*Puma concolor coryi*), Florida bonneted bat (*Eumops floridanus*), and American alligator (*Alligator mississippiensis*). The seasonally inundated portions of the property provide habitat for a variety of imperiled wading birds, reptiles, and amphibians.

Table 7.1.1. Potential Threatened and Endangered Species Table

Type	Common Name	Species	Protection Status
<b>Mammals</b>	Big Cypress fox squirrel	<i>Sciurus niger avicennia</i>	State Threatened
	Florida panther	<i>Puma concolor coryi</i>	Federally Endangered
	Florida bonneted bat	<i>Eumops floridanus</i>	Federally Endangered
<b>Birds</b>	Everglade’s snail kite	<i>Rostrhamus sociabilis plumbeus</i>	Federally Endangered
	Crested caracara	<i>Caracara cheriway</i>	Federally Threatened
	Roseate spoonbill	<i>Platalea ajaja</i>	State Threatened
	Little blue heron	<i>Egretta caerulea</i>	State Threatened
	Tricolored heron	<i>Egretta tricolor</i>	State Threatened

#### 7.1.2. Wildlife Management Concerns

Due to the proximity to the CREW watershed, a 60,000-acre conglomerate of public and private land, the 14.78-acre preserve provides outstanding pre-migratory roosting habitat for the swallow-tailed kite before their annual migration to South America. Before this preserve was under county ownership, Richard Brewer bought the four parcels to guarantee protection of this important roost site. Since 2009, he and his colleagues have collected long term monitoring data regarding the abundance of swallow-tailed kites using this roost on an annual basis. An average of 210 birds/year have utilized the roost between 2009 and 2022. Of the kites tracked with GPS

technology, most only utilized the roost for one night before their flight across the Gulf of Mexico. The roost and the surrounding CREW lands provide the kites with important ephemeral food sources that allow them to put on fat reserves before the dangerous migration ahead. GPS tracked kites from Louisiana, South Carolina, and Georgia have been documented using this roost as their final stopover before migrating across the Gulf of Mexico.

## **7.2. Desired Future Conditions**

A preserve with the appropriate vegetative communities, resource use, and connectivity to support wildlife species native to the habitat.

## **7.3. Management Tools**

### *7.3.1. Habitat Improvements*

Treatment and removal of invasive plant species, primarily Brazilian pepper and *Lygodium* spp., will allow desired native species to recover. Effort will be made to keep these parcels as unchanged as possible due to their vital importance as a swallow-tailed kite, pre-migratory roost site.

### *7.3.2. Connectivity*

Land to the south and east of the preserve is zoned for residential development. Lands to the west and north of the preserve consist of a network of conservation lands under permanent protection. These lands have a well-documented history of Florida panther (*Puma concolor coryi*) observations (Figure 7.3.2). Maintaining these connected lands allows for panthers to disperse north out of the Golden Gate Estates area without having to cross a multitude of highways.

Conservation Collier Brewer's Landing Preserve Interim Land Management Plan

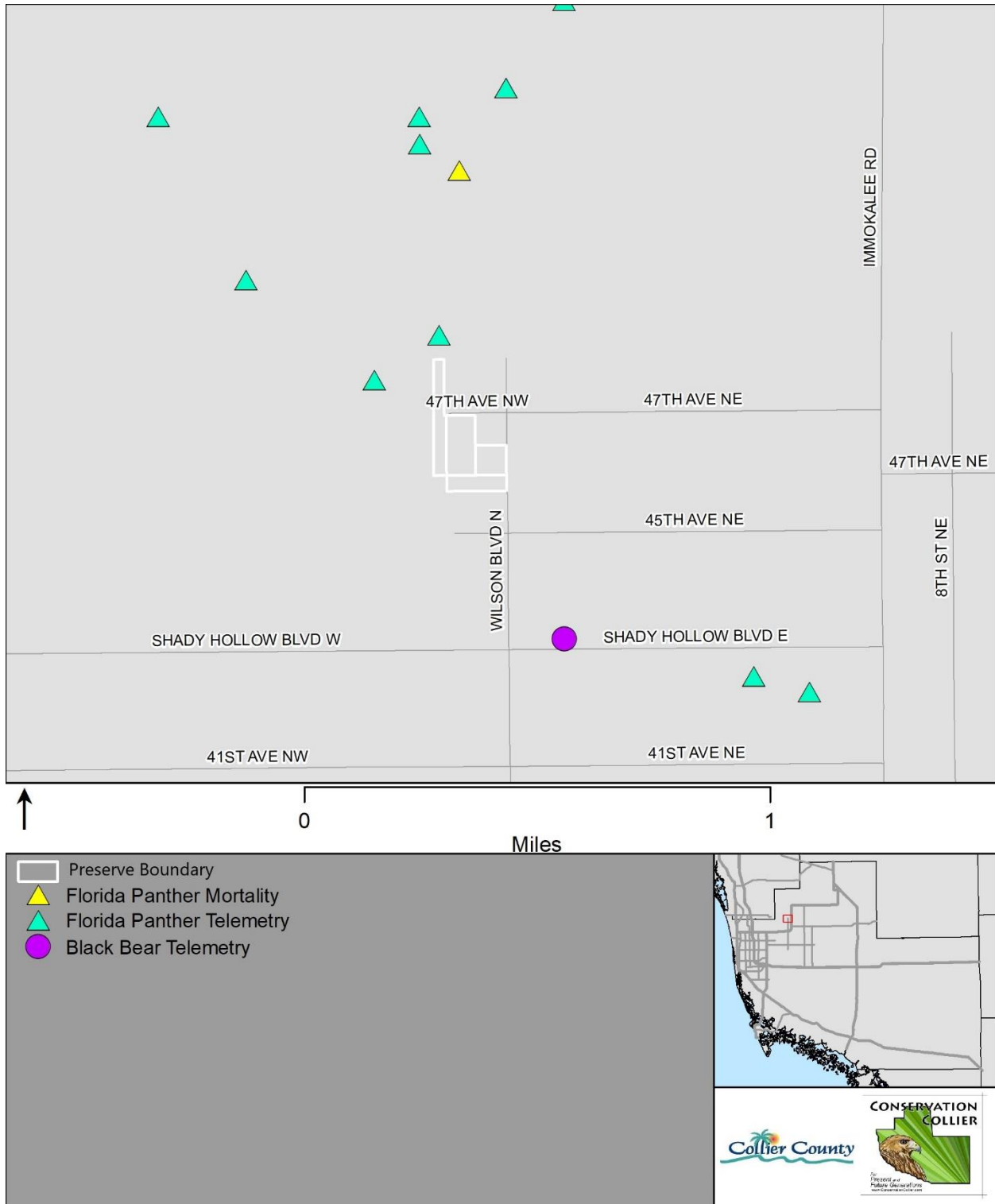


Figure 7.3.2. – Florida Panther Telemetry Locations

#### *7.3.4. Monitoring*

It is presumed that several listed species, such as Florida bonneted bats, Big Cypress fox squirrels, and wood storks will be documented on the preserve. Conservation Collier staff will deploy trail cameras on the preserve to monitor wildlife utilization. In addition to listed species, Conservation Collier will continue to monitor the roost utilization of swallow-tailed kites at this preserve.

#### **7.4. Partnership Opportunities**

Conservation Collier staff will continue to partner with the FWC, the United States Fish and Wildlife Service (USFWS), and Avian Research and Conservation Institute to monitor the kites. Grant funding may be available to enhance imperiled wildlife species habitat such as the USFWS Partners Grant. Staff will continue to partner with organizations such as the fStop Foundation for monitoring and outreach opportunities. Staff will seek opportunities to partner with researchers from higher education institutions to enhance conservation efforts of the wildlife species that utilize the preserve.

### **8. Recreation Management**

#### **8.1. Current Recreational Opportunity Conditions**

The preserve will remain closed to the public. The preserve is too small, too wet, and too sensitive to support public recreation of any kind. The head of the 12-mile-long Bird Rookery Swamp Trail (Figure 8.1.1) is only 2 miles from the preserve and tracks through comparable habitats. Even if they were appropriate, additional recreational features would be redundant on this preserve.

Conservation Collier Brewer's Landing Preserve Interim Land Management Plan

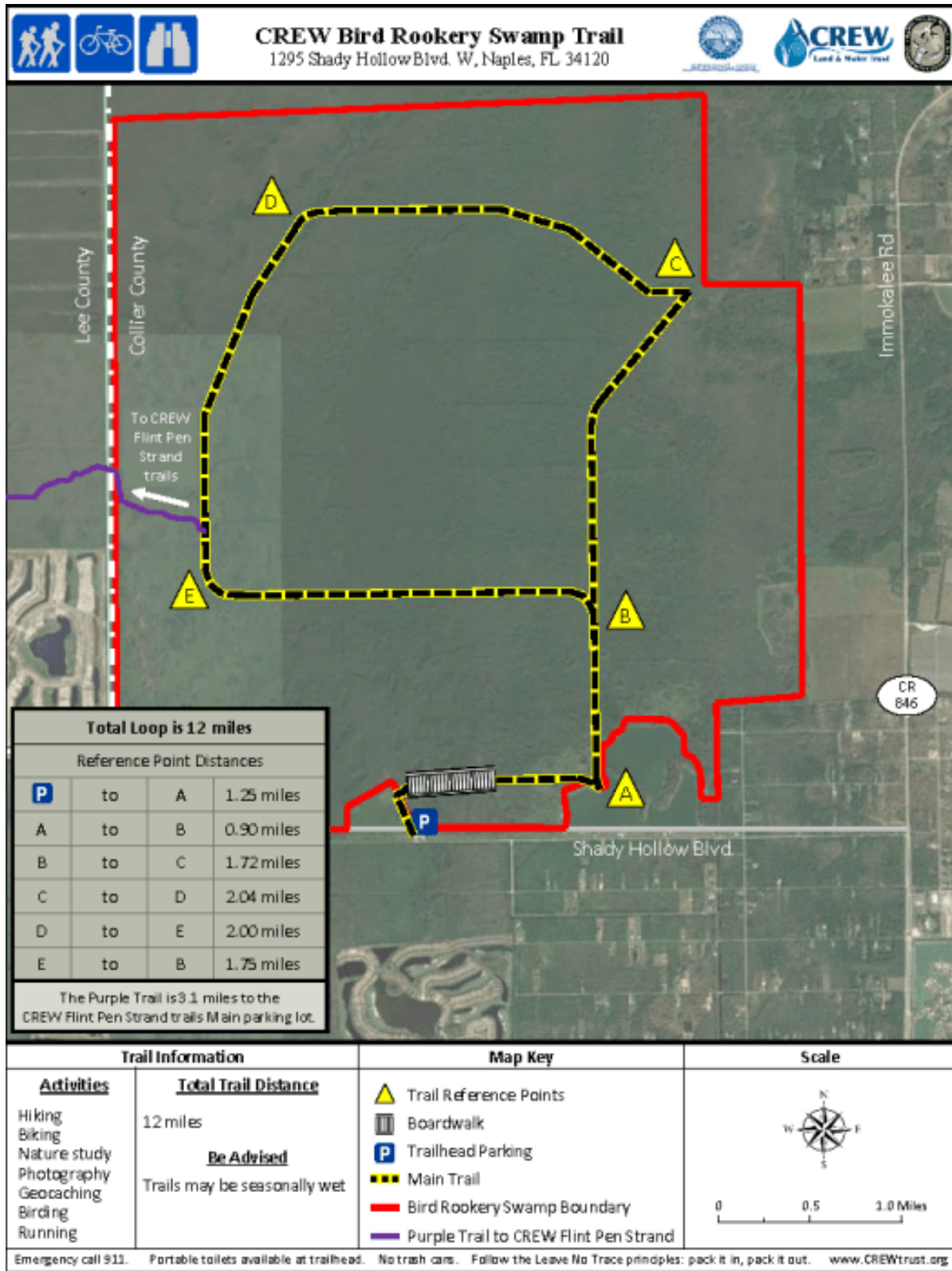


Figure 8.1.1. – CREW Bird Rookery Swamp Trail

## 9. Preserve Safety and Security Management

### 9.1. Current/Predicted Human Conflict Conditions

Like other secluded, public properties, the preserve may attract those wishing to trespass and engage in illicit activities. The preserve could also be utilized by people looking to poach game. With the network of conservation lands in the immediate area, FWC Law Enforcement does provide some security at the preserve. The presence of large and consistent groups of bird watchers may disturb the roost kites or force them to roost elsewhere. Disturbance during this time limits the kite’s ability to build energy reserves and may compromise their impending migration. The roost is already known in the birdwatching community. To prevent this preserve from being “loved to death” it is critical to avoid further publicizing its presence.

### 9.2. Desired Future Conditions

A preserve free of littering, dumping, illicit activities, neighbor disturbances, unauthorized vehicles, and after-hours trespass.

### 9.3. Management Tools

#### 9.3.1. Site Security Improvements

Staff will monitor for signs of trespass/illegal activities. Staff will collaborate with adjacent landowners and FWC Law Enforcement to address issues as they arise. Site security may be enhanced by increasing law enforcement presence in the area.

### 9.4. Partnership Opportunities

Staff will collaborate with both the Collier County Sheriff’s Office and FWC Law Enforcement to both prevent and respond to any criminal site security and safety issues as they present themselves.

## 10. Additional Resource Use Management

### 10.1. Current Additional Resource Use Conditions

Currently there are no sanctioned commercial uses on the Preserve.

## 11. Budget

Table 11.1. Projected Expenditures Table

Projected Operating Costs	2024	2025	2025	2026	2027
Vegetation Treatment	\$6,000	\$0	\$6,000	\$0	\$6,000
Total Projected Costs	\$6,000	\$0	\$6,000	\$0	\$6,000



## 12. Appendix

*Table 12.1. Legal Description*

<b>Folio</b>	<b>Calculated Acres</b>	<b>Legal Description</b>
00209681000	4.09	10 48 27 ALL THAT PART OF SEC 10 AS DESC IN OR 1547 PG 859, LESS THAT PORTION AS DESC IN OR 6016 PG 658
38601360001	5.15	GOLDEN GATE EST UNIT 38 TR 14 OR 468 PG 749
38601320106	2.73	GOLDEN GATE EST UNIT 38 S1/2 OF TR 13
38601280000	2.81	GOLDEN GATE EST UNIT 38 N 180FT OF TR 12

### *12.2. Public Meeting Comments and Staff Responses*