Nancy Payton Preserve
Land Management Plan

Managed by:

Collier County
Conservation Collier Program
Parks and Recreation Division

September 2020 – September 2025 (10 yr plan)
(Revised 2020)

Prepared by: Collier County Conservation Collier Staff

Approved by the Collier County Board of County Commissioners on September 23, 2008

Nancy Payton Preserve

Land Management Plan Executive Summary

Lead Agency: Conservation Collier Program, Collier County Parks and Recreation Division, Collier County Public Services Department

Properties included in this Plan: Folio 61730440005 & 61731240000

Acreage Breakdown: 71 acres

Management Responsibilities: Collier County Conservation Collier Program staff

Designated Land Use: Conservation and natural resource-based recreation

Unique Features: Mature Pine Flatwood Community and Red-cockaded woodpecker foraging habitat

Management Goals:
Goal 1: Maintain High Quality Habitat with Limited Disturbance for the Benefit of Native Flora and Fauna
Goal 2: Implement a biological monitoring program.
Goal 3: Continue to manage populations of invasive, exotic plants in maintenance state
Goal 4: Maintain a constant prescribed fire regime
Goal 5: Restore canopy and ground cover species in specific areas
Goal 6: Native wildlife species management
Goal 7: Problem wildlife species management
Goal 8: Maintain Public Access Trails and Amenities
Goal 9: Facilitate uses of the site for educational purposes
Goal 10: Monitor Public Use
Goal 11: Provide a plan for disaster preparedness

Acquisition Needs: none

Public Involvement:
Public meeting(s) were held in 2008 before approval of this plan with residents from the surrounding neighborhood. One additional meeting was held before the first controlled burn. A public meeting was held in November 2019 to review the 10-year Management Plan update. Staff will continue to work with neighbors and local agencies to assist in ORV trespass control. Neighbors may also become involved in volunteer events or activities.

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1.0 Introduction

The Nancy Payton Preserve is a 71-acre preserve located in an area in Collier County, FL called North Belle Meade. It is largely comprised of native, pine flatwood species. Current access to the preserve is from Blue Sage Drive north of Brantley Blvd.

The Preserve was purchased by Collier County in December 2005 through funds from the Conservation Collier Program. The County holds fee simple title. In the past, the preserve was referred to as the "School Board-Section 24 Property". In December 2006, it was officially renamed the "Nancy Payton Preserve" by the Board of County Commissioners. Nancy Payton worked for the Florida Wildlife Federation and has been very active in the preservation of this Collier County Belle Meade Area. The preserve was open to the public on May 2015, Educational tours for local schools, summer camps and birding groups have been conducted at the site. A nature trail, benches, picnic tables and educational interpretive signs have been provided for visitor use.

The Conservation Collier Program manages this parcel under authority granted by the Conservation Collier Ordinance 2002-63, as amended (available from www.municode.com). Conservation, restoration and passive public recreation are the designated uses of the property. Management activities allowed are those necessary to preserve and maintain this environmentally sensitive land for the benefit of present and future generations. Public use of this site must be consistent with these goals.

Table 1: Acquisition History and Status of Nancy Payton Preserve

Year	Benchmark
2004	Property nominated to the Conservation Collier Program
2004	Initial site assessment by Conservation Collier staff
2004	Approval of Initial Criteria Screening Report by the Conservation Collier Land Acquisition Advisory Committee
2005	Approved for purchase by the Board of County Commissioners (BCC). Closed on property in December 2005
2006	Developed Interim Management Plan- BCC approved
2006	"School Board Section-24 Property" renamed "Nancy Payton Preserve"
2008	Completed Final Management Plan
2009	Acquired 3 adjacent Kay Homes properties-4 acres total-Dec. 2009
2010	Acquired 2 additional properties (Kirby and Murphy) -2 acres total-June 2010
2014	5-year update completed on Final Management Plan
2015	Official preserve Grand Opening May 2015

This Management Plan, including all updates, shall be submitted to the Collier County Board of County Commissioners (BCC) for approval. The original Final Management Plan was approved in 2008. The program has since acquired 5 additional adjacent parcels and substantial management activities have been accomplished. The 5-year update was completed and approved in 2014. This is the official 10-year update to the plan.

1.1 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 ballot referendum. 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 a 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 Board of County Commissioners of Collier County established the Conservation Collier Program to implement the program and to manage acquired lands. As such, Conservation Collier, under the Parks and Recreation Department, holds management authority for the Nancy Payton Preserve.

1.2 Purpose and Scope of Plan

The purpose of the plan is to provide management direction for the Nancy Payton Preserve by identifying the goals and objectives necessary to eliminate or minimize any threats to the resources and integrity of the preserve. This text is a working document that establishes the foundation of a ten-year plan by identifying the appropriate management techniques necessary to preserve and/or restore the resource.

This plan will balance resource restoration and protection with natural resource-based recreational and educational use while looking at listed species protection and maintenance of the site free of invasive, exotic plant and animal species. This plan is divided into sections that incorporate an introduction, descriptions of the natural and cultural resources, projected uses of the property, and management issues, goals and objectives.

1.3 Location

The Nancy Payton Preserve property is located east of Golden Gate City in the Rural Fringe Mixed Use District Lands (category neutral), north of Brantley Blvd. and east of Blue Sage Drive (Figure 1). The property is also considered to be in an area called North Belle Meade. It is adjacent to the Golden Gate Canal along the entire northern property line and along Blue Sage Drive (Figure 2). It is located in Township 49, Range 26 and Section 24, in Collier County, Florida. The legal descriptions and area plat maps are attached as Appendix 1.

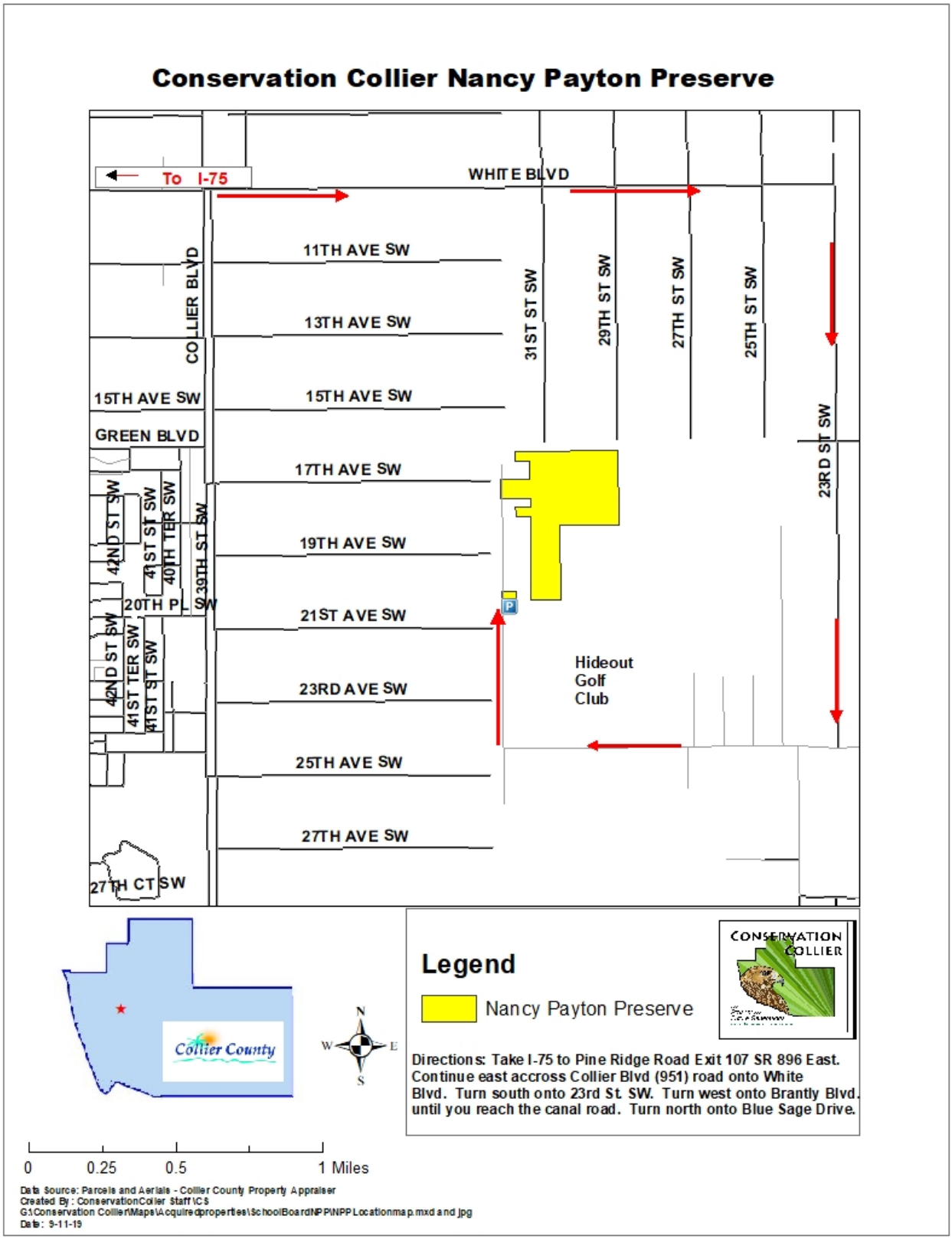

Figure 1: Nancy Payton Preserve Location Map

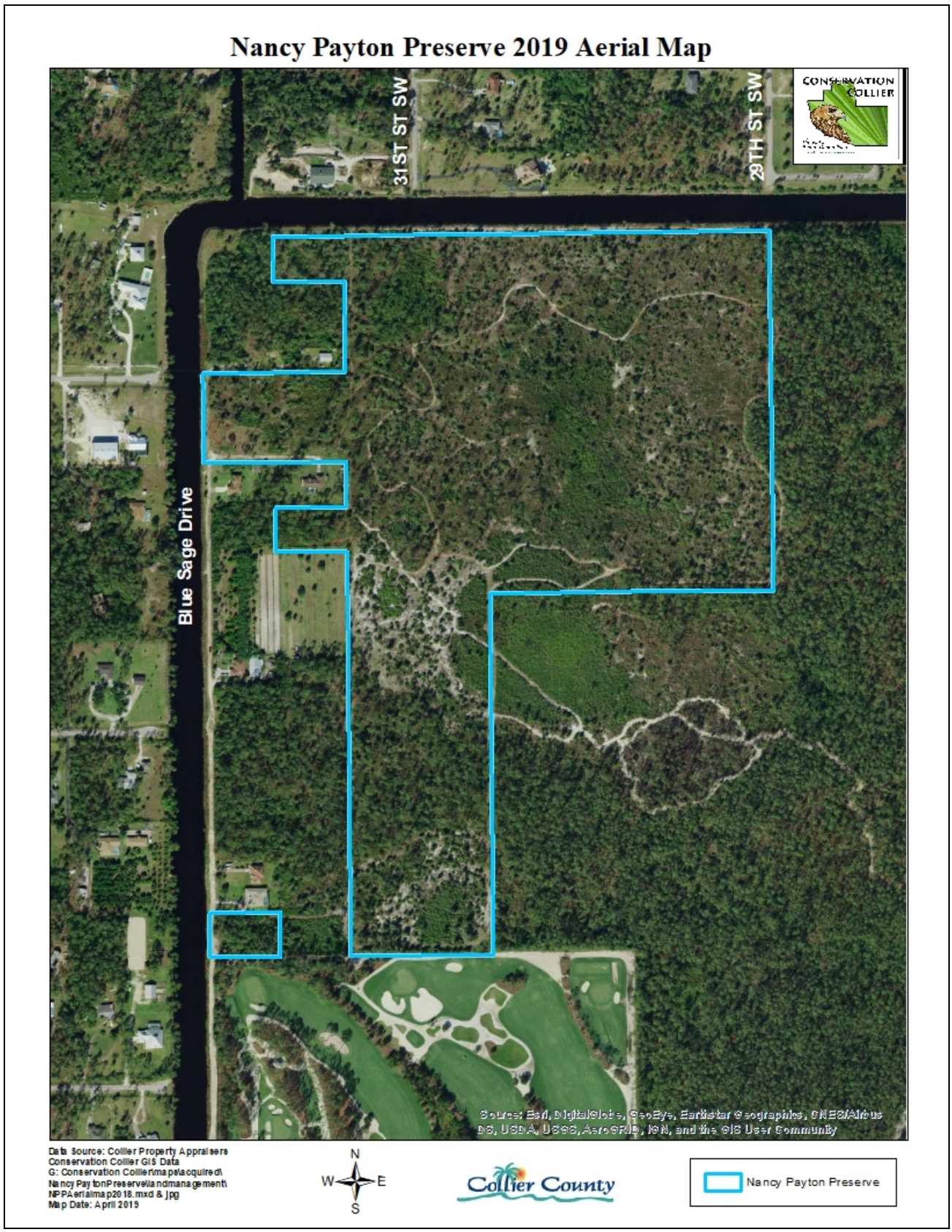

Figure 2: Nancy Payton Preserve 2019 Aerial View

1.4 Regional Significance

Despite having 881,070 acres, or 68%, of County lands protected in conservation status (Florida Natural Areas Inventory, February 2019), Collier County has lost, and is losing, many of its rare and unique habitats (Figures 3 and 4). The Conservation Collier Ordinance (2002-63, as amended) identifies these specific habitats and gave preference to them in acquisition evaluations. These habitats include, in order of preference: tropical hardwood hammocks, xeric oak scrub, coastal strand, native beach, riverine oak, high marsh (saline) and tidal freshwater marsh. The Nancy Payton Preserve does not contain any of these preferred habitats; however, it is significant in serving as an important wildlife refuge. This property provides foraging habitat for the endangered Red-cockaded woodpecker (*Picoides borealis)* (RCW), the State listed Gopher tortoise (*Gopherus polyphemus)* and Florida panther (*Puma concolor coryi)*. The protection and management of these listed species and their habitat is critical to their long term existence in Collier County and throughout their ranges.

1.5 Nearby Public Lands and Designated Water Resources

Conservation Lands, in order of increasing distance are identified in Table 2 below.

Table 2: Public Lands Located Near the Nancy Payton Preserve

Preserve Name	Distance (miles)	Direction	Type
Picayune Strand State Forest	3 miles	S	State
Logan Woods Preserve	3 miles	NW	County / Conservation Collier
Alligator Flag Preserve	5 miles	NW	County / Conservation Collier
Rookery Bay NERR	9 miles	SW	National
Florida Panther National Wildlife Refuge	10 miles	SE	National
Collier Seminole State Park	13 miles	SE	State
Ten Thousand Islands National Wildlife Refuge	15 miles	E	National

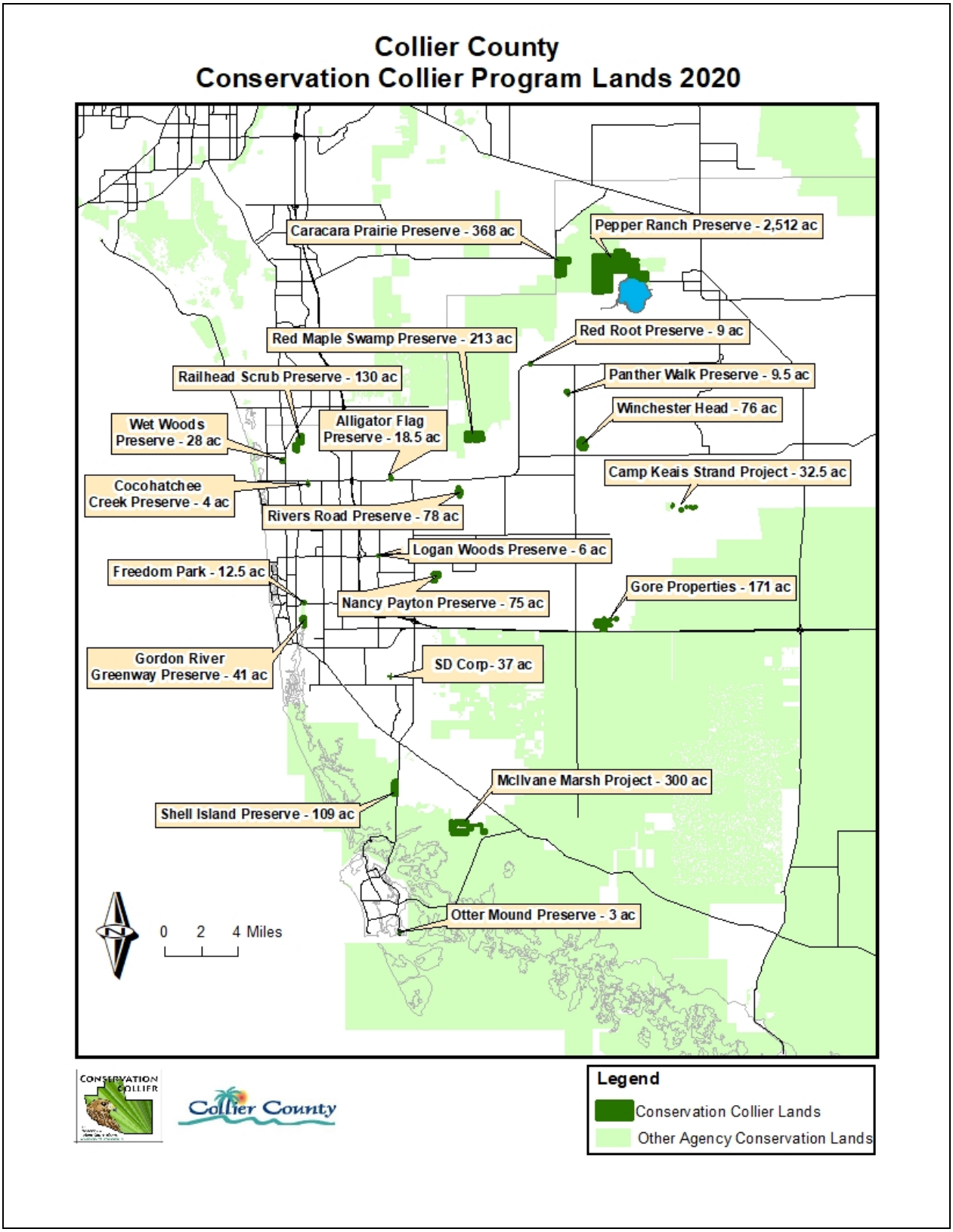

Figure 3. Conservation Collier Preserves and Designated State and Federal Land or Conservation Easements Existing in Collier County

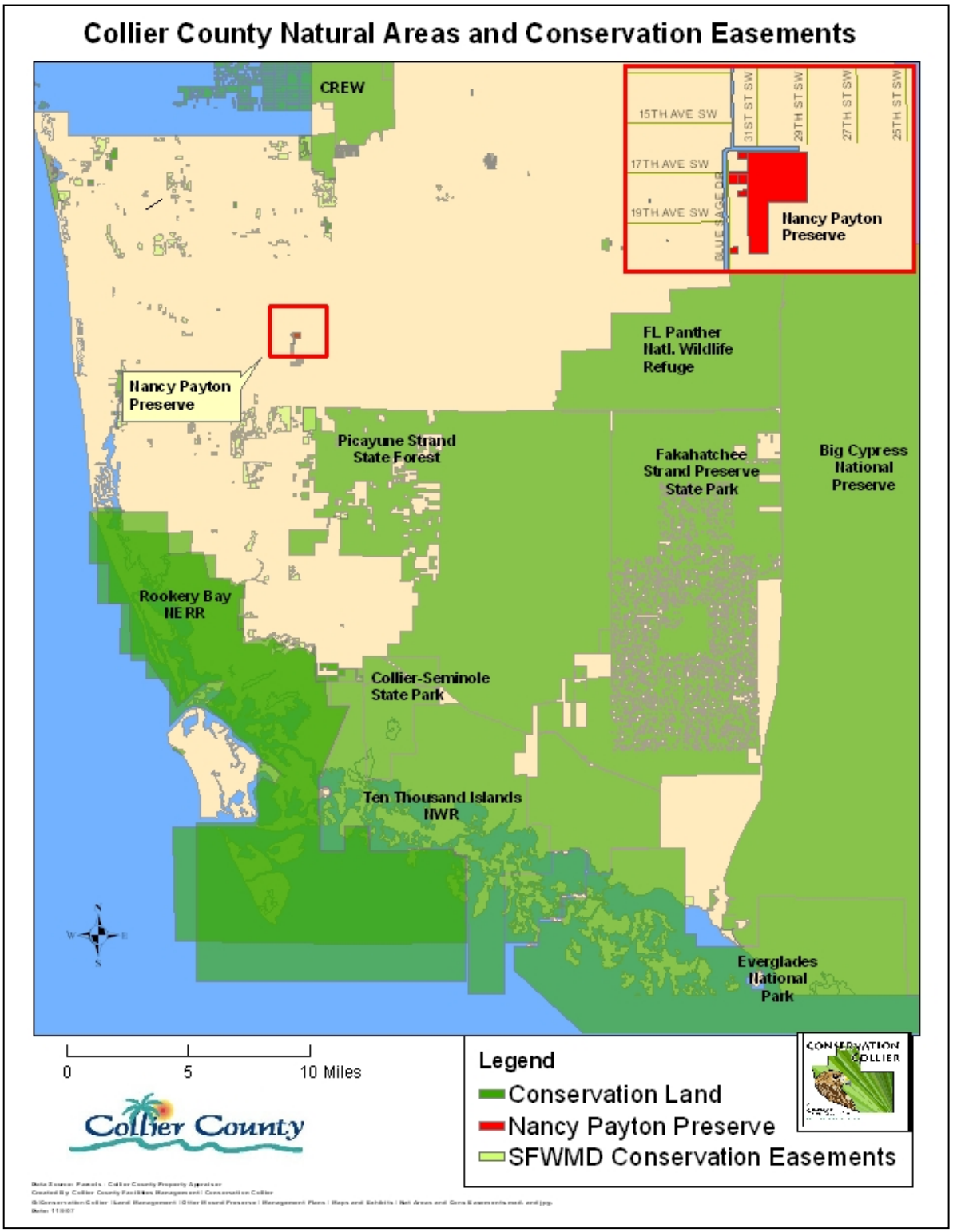

Figure 4: Collier County Conservation Areas and Designated Conservation Easements

1.6 Public Involvement

Public meeting(s) were held in 2008 before approval of this plan with residents from the surrounding neighborhood. One additional meeting was held before the first controlled burn. An additional public meeting was held in November 2019 for public review of this 10-year update to the plan. Staff will continue to work with neighbors and local agencies to assist in ORV trespass control. Public notices or meetings will be held before any major changes or management activities, such as prescribed fire that are likely to generate an intrusive aspect or that in some way affect neighboring properties prior to conducting the activity. Staff will also seek volunteers through these contacts.

One local Boy Scout Trey Blackmon completed his Eagle Scout project on the preserve in 2012. He built and donated one picnic table, 4 benches, an educational woodpecker sign, and trail markers throughout the preserve. This project has benefited preserve visitors ever since.

2.0 Natural and Cultural Resources

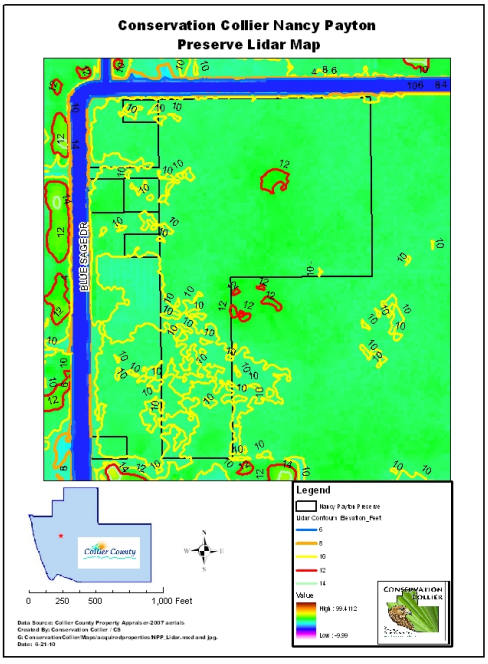

Figure 5. Nancy Payton Preserve Lidar

2.1 Physiography

The Nancy Payton Preserve lies within the Southwestern Flatwoods District. This largely low, flat district was developed on rocks and sediments that range mainly form Miocene to Pleistocene in age. Surficial materials are dominantly sand (often with relatively clayey substrate) limestone and organic deposits (Myers & Ewel 1990).

2.1.1 Topography and Geomorphology

The preserve is located in the Southwestern Slope region of the South Florida Water Management District. Topography has been established using a Light Detecting and Ranging (LIDAR) map (Figure 5). The average elevation of the surrounding lands is 10-12 feet according to North American Vertical Datum (NAVD 1988).

2.1.2 Hydrology/Water Management

Flat topography, sandy soils and seasonal precipitation strongly influence hydrological processes in flatwoods. During the rainy season, flatwood soils become saturated and poorly aerated and there may be standing water for varying periods of time. During the dry season however, high evapotranspiration draws much water from the upper horizons thus soil moisture becomes rapidly depleted and persistent droughty conditions result (Myers & Ewel 1990). A canal was dug to the north and west of the preserve in the 1950's. This has no doubt altered the natural hydrology of the site causing it to be much drier as some water runs off into the canals instead of remaining on the land and cutting potential flow from the north and west. No water management structures exist on the preserve and no water management improvements are planned for the future. The property is mapped by the South Florida Water Management District (SFWMD) to contribute minimally to the Lower Tamiami aquifer at 7-14" annually and the surficial aquifer significantly at 56-67" annually.

2.1.3 Geology

The geology of Collier County is characterized by complex sequences of interbeded sands, clays, and limestone. Closest to the surface is the Holocene aged Pamlico Sand Formation, approximately ten feet thick and composed primarily of unconsolidated quartz sand and some silt. The Pamlico Sand unconformably overlies the Pleistocene aged Fort Thompson and Caloosahatchee Formations, which vary from a few feet to more than twenty feet in thickness and are characterized by shelly and sandy limestone with vugs and solution cavities (Miller 1986).

Below the Fort Thompson and Caloosahatchee Formations are the Ochopee and Buckingham Members of the Pliocene aged Tamiami Formation, which are at least 200 feet thick in the surrounding areas (Oaks & Dunbar 1974). The Ochopee Limestone unconformably overlies the Buckingham Limestone and/or the equivalent Cape Coral Clay. This unconformity marks the bottom of the surficial aquifer separating it from the brackish underlying aquifer below. Then the Hawthorn Formation, rich in phosphate and other heavy minerals (Scott 1988), overlies the Oligocene age Suwannee Limestone and Eocene age Ocala Limestone that form the Floridian Aquifer System in Southwestern Florida.

2.1.4 Soils

Soils data is based on the Soil Survey of Collier County, Florida (USDA/NRCS, 1990, rev. 1998). Mapped soils on this parcel include, in order from larger to smaller area covered: Malabar Fine Sand, Immokalee Fine Sand, and Holopaw Fine Sand, Limestone Substratum (Figure 6). Malabar soils consist of nearly level, poorly drained soils in sloughs and poorly defined drainage ways and on ridges bordering sloughs. These soils formed in sandy over loamy marine sediments. Immokalee Fine Sand are nearly level and are poorly drained soils found in flatwoods. These soils formed in sandy marine sediments. Holopaw Fine Sand consists of level and nearly level and very poorly drained soils in sloughs, poorly defined drainage ways and marshes.

2.2 Climate

The Nancy Payton Preserve is located in an area of Florida that is influenced by both a humid subtropical climate and a tropical savanna climate in which temperatures are moderated by winds from the Gulf of Mexico and the Atlantic Ocean. A tropical savanna climate is characterized by sharply delineated wet and dry seasons and average monthly temperatures greater than 64º Fahrenheit. Monthly rainfalls may exceed ten inches during the wet season. Humid subtropical climates are characterized by less extreme rainfall fluctuations between wet and dry seasons and average monthly temperatures less than 64º Fahrenheit in some months.

The average annual temperature for this portion of Collier County is approximately 75º Fahrenheit. The warmest months are usually July and August. The humidity is high during these months but frequent afternoon thunderstorms prevent excessively high temperatures.

Two-thirds of the annual rainfall occurs in the wet season from May to October. Thunderstorms are frequent during the wet season occurring every two out of three days between June and September. Rainfall records for the area indicate that there is no significant variation in the annual rainfall throughout much of the county; however, large variations often occur during a single year. The hurricane season extends from June through November with peak activity occurring in September and October when ocean temperatures are highest.

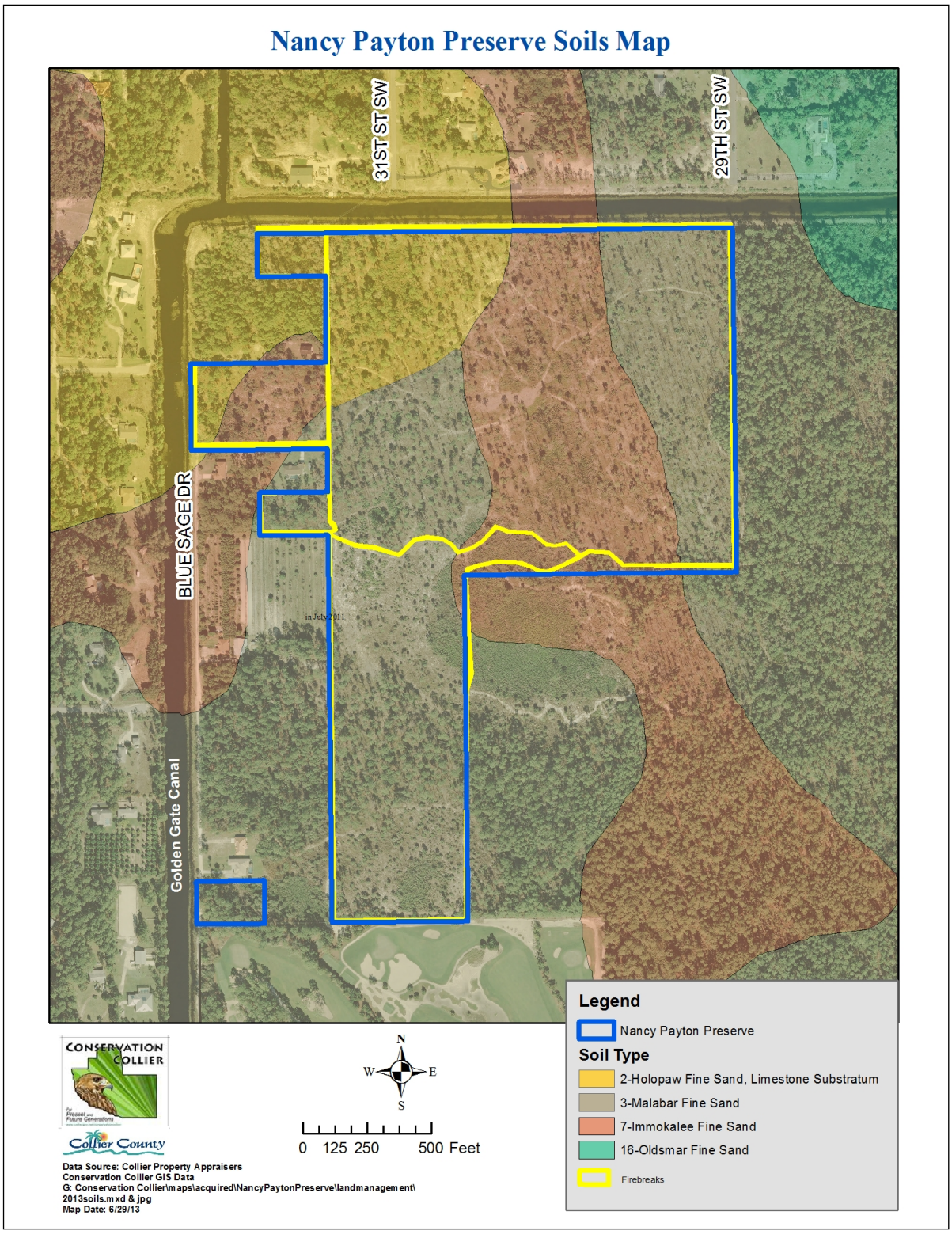

Figure 6: Nancy Payton Preserve Soils Map

2.3 Natural Plant Communities

A plant community refers to the suite of plant species that form the natural vegetation of any place. In addition to anthropogenic influence, the combination of factors such as geology, topography, hydrology, underlying soils and climate determine the types of plants found in an area. These plants in turn determine the animal species that may be found in an area.

The Florida Land Use, Land Cover and Forms Classification System (FLUCFCS) GIS layer provided by the South Florida Water Management District (SFWMD) classifies the preserve natural communities as illustrated in Figure 7. On-site field investigations have determined more accurate habitats on the preserve which are mapped in Figure 8 and are listed in Table 3.

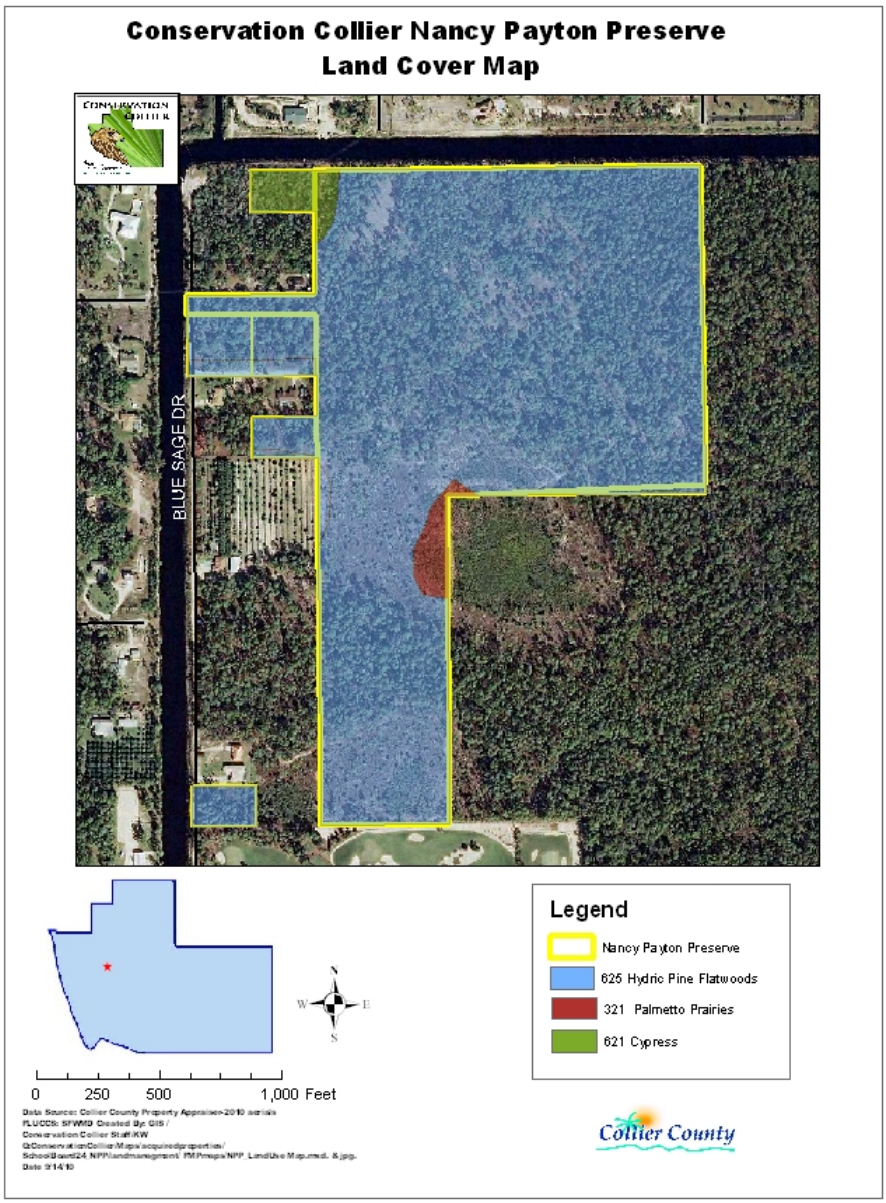

Figure 7: Distribution of Natural Communities on the Nancy Payton Preserve

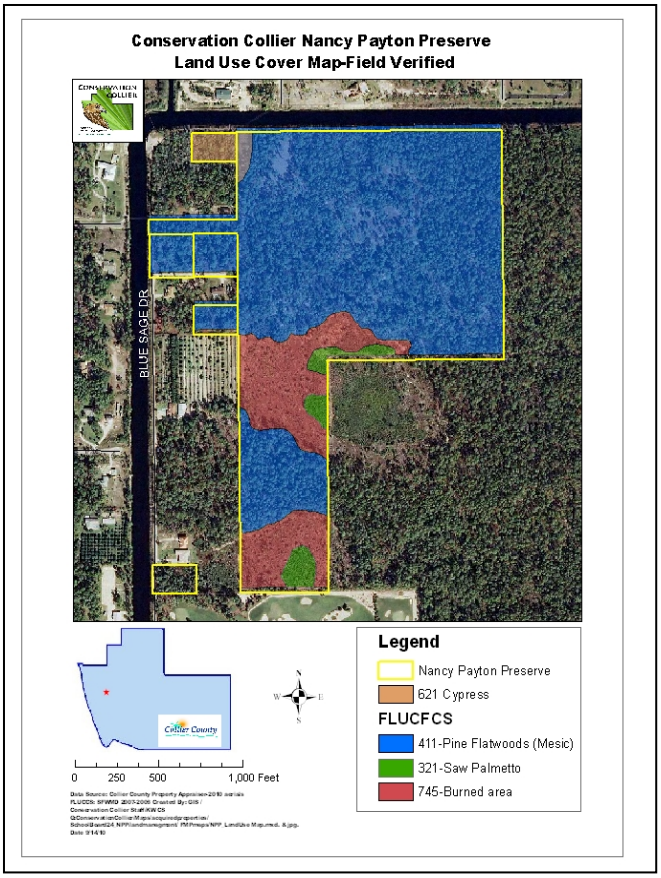

Figure 8: Extent of Natural Communities currently found on the Nancy Payton Preserve Land Use Cover- Field Verified FLUCCS

Table 3. Field Verified Land Cover on the Nancy Payton Preserve			
FLUCFCS Code	**Description**	**Acreage**	**Percent**
411	**Mesic Pine Flatwoods**	**55.85**	**78%**
745	**Burned Area**	**11.52**	**16%**
321	**Saw Palmetto/ Palmetto**	**2.13**	**3%**
6210	**Cypress**	**1.5**	**2%**
	Total	**71.00**	**100%**

The main differences are that the majority of the preserve is made up of mesic pine flatwoods as compared to hydric pine flatwoods. Also, the 2004 wildfire converted 11.5 acres into what is now considered FLUCCS-745 which describes burned areas. This area exists both in the central and southern portions of the property. The burned areas were previously mesic pine flatwood communities, however, the fire reduced the pine canopy. Also, the 6172-mixed shrubs designation is better described as 321-Saw Palmetto after field verification.

2.3.1 Mesic Pine Flatwoods

A Mesic Pine Flatwood community dominates approximately 78% of the Nancy Payton Preserve. This upland plant community encompasses the northern portion of the property and an area between the two wildfire created burned areas in the central southern area of the property (Figure 8).

Pine flatwoods are one of the most wide-ranging terrestrial plant communities in Florida and consequently one of the most influenced by anthropogenic activities (Abrahamson & Hartnett 1990). Fire strongly influences the community structure and composition of these communities.

The term pine flatwoods is a general categorization of areas that are dominated by various species of pine (*Pinus* spp.) trees. South Florida Slash Pine (*Pinus elliotii var. densa*) is the dominant canopy species present in the Nancy Payton Preserve. Pine flatwoods may be found in mesic flatlands where the landscape is made up of flat, moderately well drained sandy substrates with a mixture of organic material, often with an underlying hard pan layer. An open canopy forest of widely spaced pine trees with little or no understory but a dense ground cover of herbs and shrubs characterize natural, mesic flatwoods that have been burned regularly (FNAI & FDNR 1990). The USDA Soil Conservation Service classification system refers to these areas as South Florida flatwoods. South Florida flatwoods are typically savannas, a type of plant community intermediate between forest and grassland.

Mesic Pine Flatwoods at the Nancy Payton Preserve
Photo taken by Christal Segura 2010

Mesic pine flatwoods are also called mesic flatwoods, pine savanna, cabbage palm savanna, and pine barrens. Common mesic pine flatwood species besides the dominant slash pine canopy include minimal cypress (*Taxodium distichum*), cabbage palm (*Sabal palmetto*), saw palmetto (*Serenoa repens*), wax myrtle (*Myrica cerifera*), myrsine *(Rapanea guinensis)*, poison ivy (*Toxicodendron radicans*), muscadine grapevine (*Vitis rotundifolia*) and beauty berry (*Callicarpa Americana*) which are all found in this portion of the preserve.

Mesic flatwoods provide essential forested habitat for a variety of wildlife species including Neotropical migratory birds, wide-ranging large carnivores, mid-sized carnivores, ground-nesting vertebrates, tree-cavity dependent species, tree-nesting species and non-aquatic plant life. “At the current rate of habitat conversion, the mesic pine flatwoods, once the most abundant upland habitat in South Florida, is in danger of becoming one of the rarest habitats in South Florida” (USFWS 1999*c*).

2.3.2 Burned Areas

Approximately 14 acres of the preserve burned in a wildfire in 2004. This caused a large amount of slash pine mortality and left numerous snags behind. The subcanopy in this area is now comprised of sparse cabbage palm trees and the groundcover is predominately muscadine grapevine with a few scattered winged sumac, blue maidencane and invasive Ceasar's weed and natal grass. In 2009 this area was burned again in a prescribed burn, and in 2010 this area was replanted with slash pine seedlings in effort to restore it back to its original pine flatwoods community type. The majority of the seedlings survived and have reached 8-10 feet in height.

In 2013, approximately 80% of the pines in the NW 20 acres of the preserve died. This was due to a pine bark beetle infestation that occurred as a result of a drought that occurred after a summer prescribed burn in 2012. The majority of the snags remain or fell during hurricane Irma. Some pines were thinned before mortality completely set in. This area has now inadvertently become a nesting and foraging area for the red-headed woodpecker and the gopher tortoise habitat has improved. Since 2016, hundreds of pine saplings have naturally recruited in throughout the entire preserve.

2.3.3 Saw Palmetto

This plant community is located in the center of both 2004 burned areas of the Preserve. It lacks a canopy and subcanopy**.** The ground cover is predominately saw palmetto, and is accompanied by winged sumac (*Rhus copallina*), galberry (Ilex glabra), blue maidencane and bracken fern (*Pteridium aquilinum*), shiny blueberry (*Vaccinium myrsinites*) and muscadine grape vine. In 2010, this area was planted with slash pine seedlings to attempt to restore the canopy. This has been a success as many of the young pines are growing in well as previously mentioned.

2.3.4 Cypress

This area is a small 1.5 acre remnant that was most likely cut off when the adjacent Golden Gate canal was constructed in the 1950's. The canal contributed greatly to the drawdown of the water table thereby reducing the elevation of groundwater throughout habitats in this portion of Collier County. This is typical in the Golden Gate Estates area. There are no signs of above ground hydrology or hydrology within 6' from the surface soil. However, the dominant canopy in this area is comprised of Cypress (*Taxodium ascendens).* Other plant species found in this area include strangler fig (*Ficus aurea*), laurel oak (*Quercus laurifolia),* maidencane *(Panicum hemitomon),* bracken fern *(Pteridium aquilinum var. pseudocaudatum)* and myrsine. Some slash pine and cabbage palm trees are present as well which may indicate that it may be succeeding into a pine flatwood community.

2.4 Native Plant and Animal Species

This section discusses the flora and fauna found within these plant communities. The next section 2.5 discusses all listed species in greater detail.

2.4.1 Plant Species

One-hundred sixty-nine (169) plant species have been recorded at Nancy Payton Preserve to date. The preliminary survey was conducted in 2008 and was updated in September 2020 (Appendix 2).

2.4.2 Animal Species

Occurrences of fauna at the preserve are based on direct visual and auditory observations of animals by Collier County staff and outside researchers during site visits, breeding bird surveys, wildlife cameras, or evidence of activity such as spoor, scat, or burrows, and from the site information available in documents such as:

- the site's initial criteria screening report,
- the property's interim management plan,
- anecdotal information from persons with knowledge of the site.

Mammal species known to occur or individuals and/or evidence of activity directly observed within the preserve include the bobcat (*Felis rufus*), cotton mouse (*Peromyscus gossypinus*), eastern cottontail *(Sylvilagus floridanus),* eastern gray squirrel (*Sciurus carolinensis*), Florida panther (*Puma concolor coryi),* gray fox (*Urocyon cinereoargenteus*), nine-banded armadillo (*Dasypus novemcinctus*), raccoon (*Procyon lotor*), spotted skunk (*Spilogale putorius*), Virginia opossum (*Didelphis virginiana*), and white-tailed deer (*Odocoileus virginianus*). Several Florida black bear and Florida panther photos have also been captured on wildlife cameras.

Bird observations by Collier County staff are included in Table 4. The preserve appears to be a popular spot for woodpeckers; as many as six different species may be observed in one day.

Table 4: List of Avian Species Recorded on the Site

Common name	Scientific Name	Common name	Scientific Name
American Crow	*Corvus brachyrhychos*	Gray Catbird	*Dumetella carolinensis*
American Kestrel	*Falco sparverius*	Great Crested Flycatcher	*Myiarchus crinitus*
American Robin	*Turdus migratorius*	Great egret	*Ardea alba*
Bald Eagle	*Haliaeetus leucocephalus*	Great Horned Owl	*Bubo virginianus*
Barn Swallow	*Hirundo rustica*	Hairy Woodpecker	*Picoides villosus*
Barred Owl	*Strix varia*	killdeer	*Charadrius vociferus*
Black Vulture	*Coragyps atratus*	Mourning Dove	*Zenaidura macroura*
Blue Jay	*Cyanocitta cristata*	Northern Bobwhite quail	*Colinus virginianus*
Blue-gray Gnatcatcher	*Polioptila caerulea*	Northern Cardinal	*Cardinalis cardinalis*
Brown Thrasher	*Toxoxtoma rufum*	Northern Flicker	*Colaptes auratus*
Brown-headed Nuthatch	*Sitts pusilla*	Northern Mockingbird	*Mimus polyglottos*
Carolina Wren	*Thryothorus ludovicianus*	Palm Warbler	*Dendroica palmarum*
Cedar Waxwing	*Bombycilla cedrorum*	Pileated woodpecker	*Dryocopus pileatus*
Chimney Swift	*Chaetura pelagica*	Pine Warbler	*Dendroica pinus*
Common Grackle	*Quiscalus quiscula*	Red-bellied Woodpecker	*Melanerpes carolinus*
Common Ground-dove	*Columbina passerina*	Red-cockaded Woodpecker	*Picoides borealis*
Common nighthawk	*Chordeiles minor*	Red-headed Woodpecker	*Melanerpes erythrocephalus*

common yellowthroat	*Geothlypis trichas*	Red-shouldered Hawk	*Buteo lineatus*
Downy Woodpecker	*Picoides pubescens*	Red-tailed Hawk	*Buteo jamaicensis*
Eastern Towhee	*Pipilo erythrophthalmus*	Snowy egret	*Egretta thula*
Eastern Bluebird	*Sialia sialis*	Swallow-tailed Kite	*Elanoides forficatus*
Eastern Screech Owl	*Otus asio*	*Turkey Vulture	*Cathartes aura*
European Starling	*Sturnus vulgaris*	White-eyed Vireo	*Vireo griseus*
Fish crow	*Corvus ossifragus*	Yellow-rumped Warbler	*Dendroica coronata*

Reptile and amphibian species observed on the preserve include: the exotic brown anole (*Anolis sagrei*), Florida box turtle (*Terrapene Carolina bauri*), green anole (*Anolis carolinensis*), southern black racer (*Coluber constrictor priapus*), southern five-lined skink (*Eumeces inexpectatus*), and state listed gopher tortoise (*Gopherus polyphemus*). Due to the native habitat present and the presence of gopher tortoise burrows, other species that use the burrows (commensal species) may be present; these include the threatened eastern indigo snake (*Drymarchon corais couperi*) and the gopher frog (*Rana capito*).

Invertebrates observed at the preserve include: zebra longwing butterfly (*Heliconius charitonius*), queen butterfly (*Danaus gilippus*), gulf fritillary (*Agraulis vanillae*), white peacock butterfly (*Anartia jatrophae*), giant swallow-tail butterfly (*Papilio cresphontes*), red ants (*Solenopsis invicta*), garden/ banana spiders (*Argiope aurantia*) and red velvet ants (*Dasymutilla occidentalis).*

Other wildlife species that have not been recorded undoubtedly occur at Nancy Payton Preserve. Future, more detailed, wildlife surveys will be conducted on the preserve and the plan will be updated as new species are documented.

2.5 Listed Species

Official listings of rare and endangered species are produced at the federal level by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, and at the state level by the Florida Fish and Wildlife Conservation Commission and the Florida Department of Agriculture and Consumer Services. FNAI produces a list of rare and endangered species and maintains a database of occurrences of these species in Florida.

2.5.1 Listed Plant Species

Five plant species found at the Nancy Payton Preserve are listed by the Florida Department of Agriculture and Consumer Services (FDACS) - (1) as Endangered, (3) as Threatened, and (1) as Commercially Exploited. There are no plant species listed as endangered or threatened by the U.S. Fish and Wildlife Service or FNAI. A brief description of these species and their status is included in Table 6 and in the following paragraphs.

Table 6: Listed Plant Species Detected at the Nancy Payton Preserve

Common Names	Scientific Names	FDACS (State)
Stiff-leaved wild pine	*Tillandsia fasciculata*	Endangered
Reflexed wild pine	*Tillandsia balbisiana*	Threatened
Butterfly orchid	*Encyclia tampensis*	Commercially exploited
Threadroot orchid	*Harrisella porrecta*	Threatened
Giant orchid	*Pteroglossaspis ecristata*	Threatened

Additional listed plant species may be found at Nancy Payton Preserve following further field surveys. Confirmation of listed plant identifications should be made by a qualified botanist.

Stiff-leaved wild pine (*Tillandsia fasciculata*)
Although this air plant is abundant throughout South Florida, it is listed by the State as endangered as they are threatened by the Mexican Bromeliad weevil. Leaves may grow to as much as forty inches, they form large plants in tree tops and are often mistaken for bird or squirrel nests. They grow equally well in canopy or near ground (NAS 2007). Several are present with in Nancy Payton Preserve. It is also referred to as a cardinal air plant.

Photo taken on site by: Christal Segura

Reflexed wild pine (*Tillandsia balbisiana*)
This air plant is abundant and occurs throughout the preserve. It is also considered threatened by the State of Florida due to the Mexican Bromiliad Weevil. It is equally well-adjusted to deep shade where leaves grow long or to bright sunlight where they are contorted and highly colored from gray-green to blue-bronze or red (NAS 2007).

Reflexed Wild Pine
Photo by Melissa Abdo
Courtesy of The Institute for Regional Conservation

Butterfly orchid (*Encyclia tampensis*)
This orchid is locally abundant in central and southern counties of Florida and is commercially exploited. They grow on a wide variety of trees including live oak, red maple, bald cypress, pop ash and pond apple. They normally flower in June or July but may also flower at other times of the year (Brown 2002).

Photo by Melissa Herring
Conservation Collier

Thread root orchid (*Harrisella porrecta)*
This orchid is widespread in the central and southern counties of Florida and is considered a threatened species. Their flowering period is between August and November. Other common names are the jingle bell orchid or the leafless orchid (Brown 2002).

Photo by Rodger Hammer

Giant Orchid (*Pteroglossaspis ecristata*)

This orchid is also listed by the State of Florida as threatened. It can be found in the southeastern United States and although it is widespread throughout most of Florida it is becoming increasingly rare. It grows up from the ground similar to a grass species. It can reach 50-170 cm tall and flowers between August and October (Brown 2002).

Photo by Joel DiAngelis
Courtesy of the South West Florida Water Management District

2.5.2 Listed Wildlife Species

The Florida Natural Areas Inventory (FNAI) maintains a database of occurrences of rare, threatened, and endangered species in Florida. Within Nancy Payton Preserve, FNAI has documented the occurrence of the gopher tortoise and the Florida panther (Appendix 3, FNAI Managed Area Tracking Record and Element Occurrence Summary). In addition, the FNAI database report indicated (4) other listed species that have the potential to occur at the preserve based on the known or predicted range of the species. These likely include the eastern indigo snake (*Drymarchon couperi*), the wood stork (*Mycteria Americana*), the red-cockaded woodpecker (*Picoides borealis*), and the mangrove fox squirrel (*Sciurus niger avicennia*). The pine flatwoods habitat at the site provides habitat for all these species except the wood stork. The preserve also provide habitat for Florida black bear (*Ursus americanus floridanus*). A brief description of the documented species and their status is included in the following paragraphs.

Table 7: Rare Wildlife Species Found at Nancy Payton Preserve

Common Name	Scientific Name	Federal	State	FNAI
Red-cockaded woodpecker	*Picoides borealis*	**E**	**SSC**	
Gopher tortoise	*Gopherus polyphemus*		**T**	**G3, S3**
Florida Panther	*Puma concolor coryi*	**E**	**E**	**G5T1,S1**
Big Cypress Fox Squirrel	*Sciurus niger avicennia*		**T**	**G5T2/S2**

Gopher tortoise (*Gopherus polyphemus*)

This tortoise species is listed by the State of Florida as "Threatened". The habitat quality has been greatly improved since 2008 therefore, the population has increased significantly. The first Gopher tortoise survey was conducted in November 2008; at that time the population was estimated at 18 individuals it has now grown to over 213 individuals. Several large gopher tortoises and one juvenile have been observed on site and there are several active burrows.

(Photo by NASA)

Red-cockaded woodpecker (*Picoides borealis*)

(Photo by USMC)

This federally protected woodpecker has been listed as endangered since 1970. Florida downgraded the species from threatened to species of special concern in 2003. Florida hosts approximately 25% of the nation's RCW populations. They require at least 75 acres for nesting and foraging and prefer open pine forests maintained by periodic fire. A family may claim as many as 30 live pine trees as their home. The endangered red-cockaded woodpecker has naturally nested on the property in the past; however, a wildfire in 2004 burned out the cavity tree (s). Seven artificial cavities were installed on the preserve in 2009 and 2010. As a result, a female RCW inhabited two of the artificial cavities, then nested with a male in a natural cavity just over the property boundary to the southeast. The two birds produced two fledglings in early 2010. In 2012, 5 of the artificial cavity trees died as a result of a drought and a pine bark beetle invasion. No birds have nested since; however, birds are often seen foraging on the preserve. The preserve is only 71 acres however, there are over 300 acres of undeveloped land immediately adjacent to the preserve that the RCWs are currently using for nesting and foraging. According to a survey that was done as part of a Habitat Preservation Plan for Collier County, the North Belle Meade area in which the preserve is a part, includes approximately 3,547 acres of foraging habitat and 3,210 acres of cavity habitat. This Belle Meade habitat is also adjacent to the Picayune Strand State Forest south of I-75, where there are several RCW nesting clusters.

Florida Panther (*Puma concolor coryi)*

This large cat is a year-round resident of undeveloped lands in South Florida. It is listed as endangered by the Federal and State government. Panthers prefer hardwood hammocks and pine forests with numerous saw palmettos for resting, raising kittens, and stalking prey. In 2006, a Panther was reported along Blue Sage Drive on a property holding small goats in a fenced in area. This panther was reported to have succeeded in killing one or more of these small goats. Later reports from the Florida Fish and Wildlife Conservation Commission (FFWCC) indicated that this panther was most likely killed by an automobile while crossing over nearby I-75 to the south. Neighbors along Blue Sage Drive documented another Florida panther sighting in December 2007. The panther approached a pool cage, came into contact with a large dog then retreated back into the preserve. It then made several attempts to feed on goats on the same neighboring property; however, because the goats were locked in a secure enclosure, the panther did not succeed. Several photos of the cat were taken at night with a motion detector camera. In March 2007, local news reports stated a young male panther was killed on a nearby roadway, it was most likely the same cat. Since then several goats have been taken by other panthers in 2013 and 2013. FFWCC were contacted when each sighting and depredation occurred. They provided "Living with Panther" brochures to County staff which were in turn mailed to the preserve neighbors. Panthers are losing their habitat in South Florida and males require a large range. Increased development and traffic are another reason why this species is listed as endangered. Preserve neighbors observed panthers on occasion and have reported a sighting as recently as September 2019.

The *Big Cypress fox squirrel*

(Sciurus niger avicennia)

Photo credit: Mike Landwehr

Several Big Cypress fox squirrel sightings have been recorded on the preserve. Also known as the mangrove fox squirrel, the FFWCC lists this species as threatened in Florida. While the species is widespread in eastern and central North America, the subspecies is endemic to southwestern Florida – specifically in the Immokalee Rise, Big Cypress Swamp, and Devil's Garden area in Collier County. Some areas of this range have become vacated, while many other suitable areas are being altered or becoming isolated through development.

The subspecies uses most types of forest occurring in its range. However, dense interiors of mixed cypress-hardwood strands seem to be avoided by Big Cypress fox squirrels due dense populations of gray squirrels (*Sciurus carolinensis*) occupying these areas. Big Cypress fox squirrels have been reported in cypress swamp, pine flatwood, tropical hammock, hardwood hammock, mangrove swamp, and suburban habitats including golf courses, and residential areas in native vegetation. Big Cypress fox squirrel densities appear to be quite low, and on this basis the subspecies can be considered inherently rare (Humphrey & Jodice 1992).

2.6 Invasive, Non-native and Problem Species

Several invasive, non-indigenous plant and animal species are known to occur within Florida. A comprehensive list of invasive plant species is available from the Florida Exotic Pest Plant Council (FLEPPC). Although Florida does not have an official invasive, non-indigenous animal species list, at least 400 exotic fish and wildlife animal species have been reported, and approximately 150 species are established.

2.6.1 Exotic Wildlife Species

Armadillos are a nuisance species but on a small scale. The impact on native species is controversial, but is potentially more significant for reptiles and amphibians on whose young armadillos may feed. Other exotic, invasive wildlife species include the brown anole, red imported fire ant and Cuban tree frog (*Osteopilus septentrionalis*). If new species are found on the preserve and become problematic, management will be done to attempt to control them.

2.6.2 Invasive and Problem Plant Species

Few invasive, exotic plants are currently present on the Nancy Payton Preserve. The initial removal and treatment was performed in February 2007 when only 10% of the site contained invasive, exotics. Numerous follow-up treatments have occurred and will continue on an annual basis or as needed. Thirteen species of exotic plants found on the site are considered Category I Invasive by FLEPPC, eight are considered Category II.

FLEPPC defines Category I plants as those that alter native plant communities by displacing native species, changing community structures or ecological functions, or hybridizing with natives. All Category I exotic plants documented on the preserve are listed in Table 8.

Category II plants have increased in abundance or frequency but have not yet altered Florida plant communities to the extent shown by Category I species. These definitions do not rely on the economic severity or geographic range of the problem, but on the documented ecological damage caused (FLEPPC 2007). Treatment of these species is covered in Section 4.4, Goal 3 and in Table 11. Natal grass (*Milinis repens) and mission grass (Pennisetum polystachion* have been an ongoing problem and are being closely monitored and treated as needed. Two other non-listed species have become problematic, mickey-mouse plant *(Ochna serrulata*) and llima (*Sida cordifolia*). Mickey mouse plant has been coming in from the north west corner of the preserve and sida cordifolia has been spreading throughout the entire preserve, mostly in disturbed areas. Both species have been continually treated over the past two years.

Table 8: Category I Invasive Plant Species at Nancy Payton Preserve

Scientific Name	Common Name(s)	FLEPPC Category
Abrus precatorius	rosary-pea, crab-eyes	I
Acacia auriculiformis	earleaf acacia	I
Cupaniopsis anacardioides	carrotwood	I
Dioscorea bulbifera	air potato	I
Lantana camara	shrub verbena	I
Eugenia uniflora	Surinam cherry	I
Psidium guajava	guava	I
Milinis repens	rose natal grass	I
Nepholepis brownii	Asian sword fern	I
Nephrolepis cordifolia	tuberous sword fern	I
Schinus terebinthifolia	Brazilian pepper	I
Sporobolis jacquemontii	Smutgrass	I
Urena lobata	Caesar's weed	I

Under certain conditions, especially following hydrologic disturbance some native plant species can become invasive. Muscadine grapevine *(Vitis rotundifolia)* is currently very dense and is dominating the ground cover in most areas and is also growing up into the pine canopy. Cabbage palms can also become invasive when hydrology is altered. Management of these species has enhanced the gopher tortoise and RCW habitat. Herbicide treatment on grape vine was conducted in the Spring of 2011 before a scheduled summer prescribed burn. Since not much is known about the effects of herbicide on gopher tortoises, a 50-foot buffer was left untreated around all gopher tortoise burrows. This treatment did not significantly reduce this species in subsequent years. Frequent burning may be the only solution to keeping it at bay.

2.7 Forest Resources

No commercial forests exist, however limited timber extraction/thinning was conducted in December 2012 throughout portions of the preserve following the advice of the Florida Forest Service. This was done to reduce the basal area to improve the RCW habitat and to improve the overall health of the forest. The trees were used to create mulch. Timber thinning was done outside of RCW nesting season which extends from August 1- March 31. A large outbreak of pine canker infected a large amount of the large mature pines throughout the preserve. This was mainly due to overstocking of the canopy. Thinning the canopy was done to improve the health of the stand and to improve the habitat for gopher tortoises and RCWs. RCW's prefer basal areas of 40-70ft² per acre. The total stand basal area should not exceed 80 ft^2 per acre. Reducing the canopy cover increased the amount of sunlight and is increasing desirable ground cover forage for gopher tortoises.

2.8 Archaeological, Historical and Cultural Resources

The Nancy Payton Preserve property is not within an area of historical and archaeological probability, and no historical or archaeological sites appear to be present on the property. The County will notify the Division of Historical Resources immediately if evidence is found to suggest that any archaeological or historic resources may exist. If such resources are identified on-site, staff shall cordon off the area, and a professional survey and assessment shall be instituted. The archaeologist shall prepare a report outlining results of the assessments and issue recommendations to County staff about management of any sites discovered, per provisions of the Land Development Code Section 2.2.25. This report shall be sent to the Division of Historical Resources. The County shall cooperate fully with direction from the Division of Historical Resources on the protection and management of archaeological and historical resources. The management of these resources will comply with the provisions of Chapter 267, Florida Statutes, specifically Sections 267.061 2 (a) and (b).

3.0 Use of the Property

3.1 Previous and Current Use

Aerial photography taken in 1940 and 1975 (Figures 9 and 10) and recent visits to the site show that there has been no previous development on this property. These aerial photographs are available at the Collier County Property Appraisers office and the Collier Soil and Water Conservation District office. The 1940's aerial indicates that no development had occurred yet in the area. The 1975 aerial shows that the Golden Gate canal system had been created to the north and east. This hydrologically altered the site. In 1975 areas in the Northeast and Southern central portion of the preserve appear to have been wetter and less vegetated than they are today.

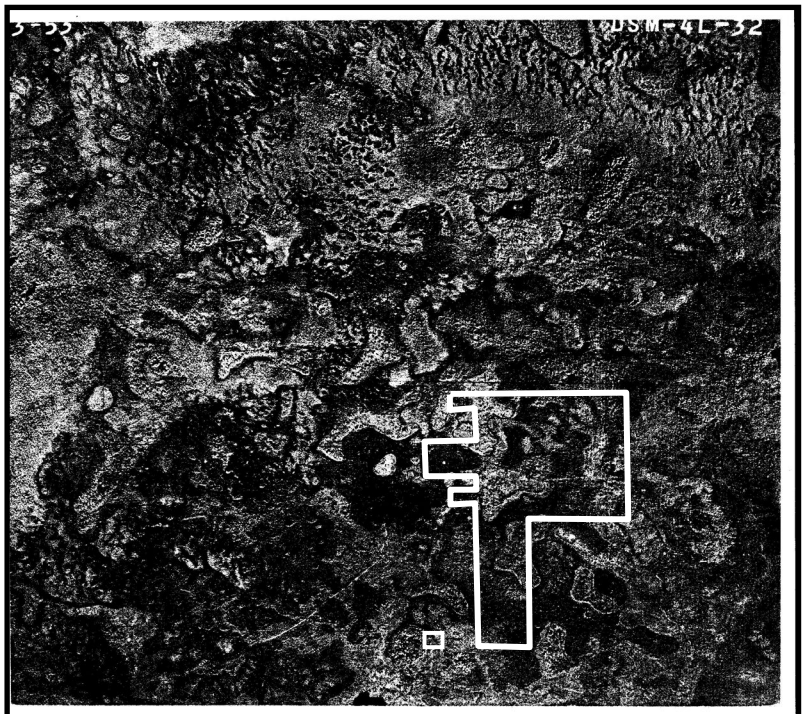

Figure 9. 1940's aerial photo before any development in the area. Aerial provided by the Collier Soil and Water Conservation District.

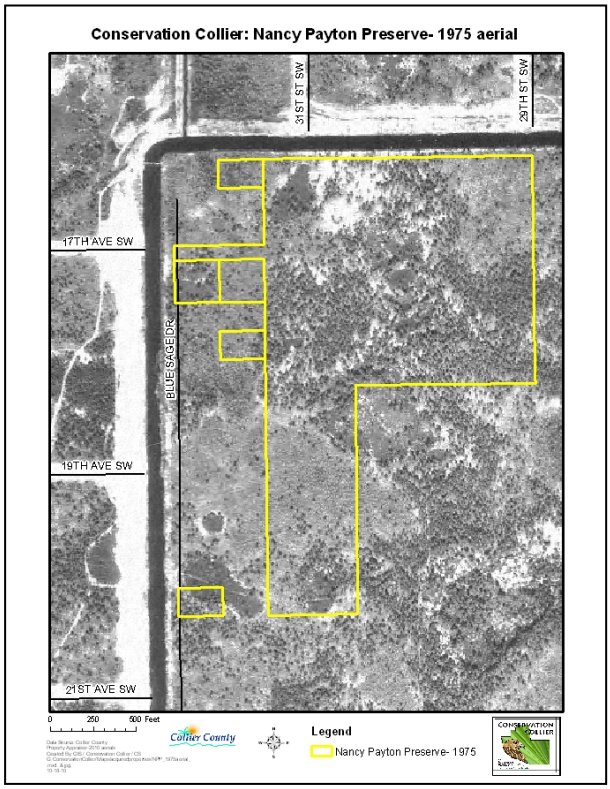

Figure 10: 1975 Aerial Photo- The preserve land remains vegetated and undeveloped. A canal system has been built to the north and west

3.2 Planned Uses and Assessment of their Impacts

Future planned uses include the continuation of passive recreational opportunities for the public. Details of public uses for the Nancy Payton Preserve and assessment of their potential impacts are provided in the following sections.

3.2.1 Identification of Public Uses Consistent with Preservation, Enhancement, Restoration, Conservation and Maintenance of the Resources.

As defined in Ordinance 2002-63, as amended, Section 5.9 the following are uses consistent with the site's classification.

- **Hiking:** Consistent with the nature of the site and its purpose
- **Nature Photography:** Photography of wildlife and plant life
- **Bird Watching:** There are great opportunities for bird watching on this preserve

3.2.2 Planned Public Uses and Assessment of their Impacts

Trail Network – Trails were created throughout most of the property to allow for hiking and nature observation within the preserve (Figure 15). The northernmost segment of the trail was located far enough south to avoid the SFWMD easement and the potential roadway that may be constructed along the northern property boundary. This roadway is not in the Collier County immediate transportation plan. It is included in the long range 2030 plan. The majority of the trails also double as fire breaks. Trails will need to be maintained and monitored to ensure that the public stay on them and no new trails are being made. Clearing the trails of fallen trees and debris and creating new trails may also enable and increase the illegal use of all terrain vehicles (ATVs) and dirt bikes on the property. See Security Management section 4.0 Goal 1 for more detail. Snags along the trails and firebreaks should be removed as they may become safety hazards for hikers and emergency services and could also cause escapes during prescribed burns.

Easements, Concessions and Leases (See Figure 11 and 12 and Appendix 1 for all easement references below) A 30 foot wide public ingress/egress easement exists on Brantley Blvd. from 23rd Street SW to Blue Sage Drive. The 30 foot wide easement continues north on Blue Sage Drive from Brantley Blvd. to the southern edge of tract 10 where there is currently a semi- active agricultural citrus operation. The access easement then extends east 250 feet and continues north to the canal between tracts 9 and 10. The easement expands from 30 feet to 60 feet wide 350 feet north of the southern boundaries of tracts 9 and 10. Although this easement runs directly through a section of Nancy Payton Preserve that is adjacent to Blue Sage Dr, staff sees no reason to clear the easement. A previously cleared 20 foot wide east/west easement already exists within the southern portion of the two adjacent Kaye Homes Parcels which the County acquired in 2008.

The non-contiguous acre of the preserve that was formerly owned by Mr. Murphy is located west of the preserve along Blue Sage Drive (See Figure 12). It previously contained a 30 foot wide east/west access easement along the south side. This easement extended 500 feet east from Blue Sage Dr. to the southwest corner of the preserve, across the southern 30 feet of two adjacent parcels currently owned by the Hideout Golf Course. However, this easement also provides access to other undeveloped interior properties adjacent and immediately west of the preserve north of the Hideout Golf Club properties. The portion of the easement that extended across the two parcels owned by the Hideout Golf Club was relocated to the northern 30 feet in 2012. This was done as a result of an agreement

between the County and the Hideout Golf Club to deter potential visitors away from the golf course fence and to allow access. An access trail will be created across this easement in the Fall of 2014 following this management plan update.

The South Florida Water Management District (SFWMD or District) owns a drainage easement that extends 30 feet east from the top of the eastern Golden Gate Canal bank. This currently may encompass portions of Blue Sage Drive. Another SFWMD drainage easement also exists along the northern property boundary and extends at least 30 feet south from the top of the southern Golden Gate Canal bank. These drainage easements are a total of 150 feet wide and are recorded over the properties that exist along the north and west sides of the canal. County staff will work with the SFWMD to comply with any current easement requirements. The District has advised County Staff that in the future, Blue Sage Drive may need to be relocated outside of the SFWMD easement. If the County or neighbors along Blue Sage wish to improve the current state of this private road, it may need to be relocated unless another option can be resolved. Currently, the SFWMD has given the County permission to access the preserve for management purposes via Blue Sage Drive using their easement.

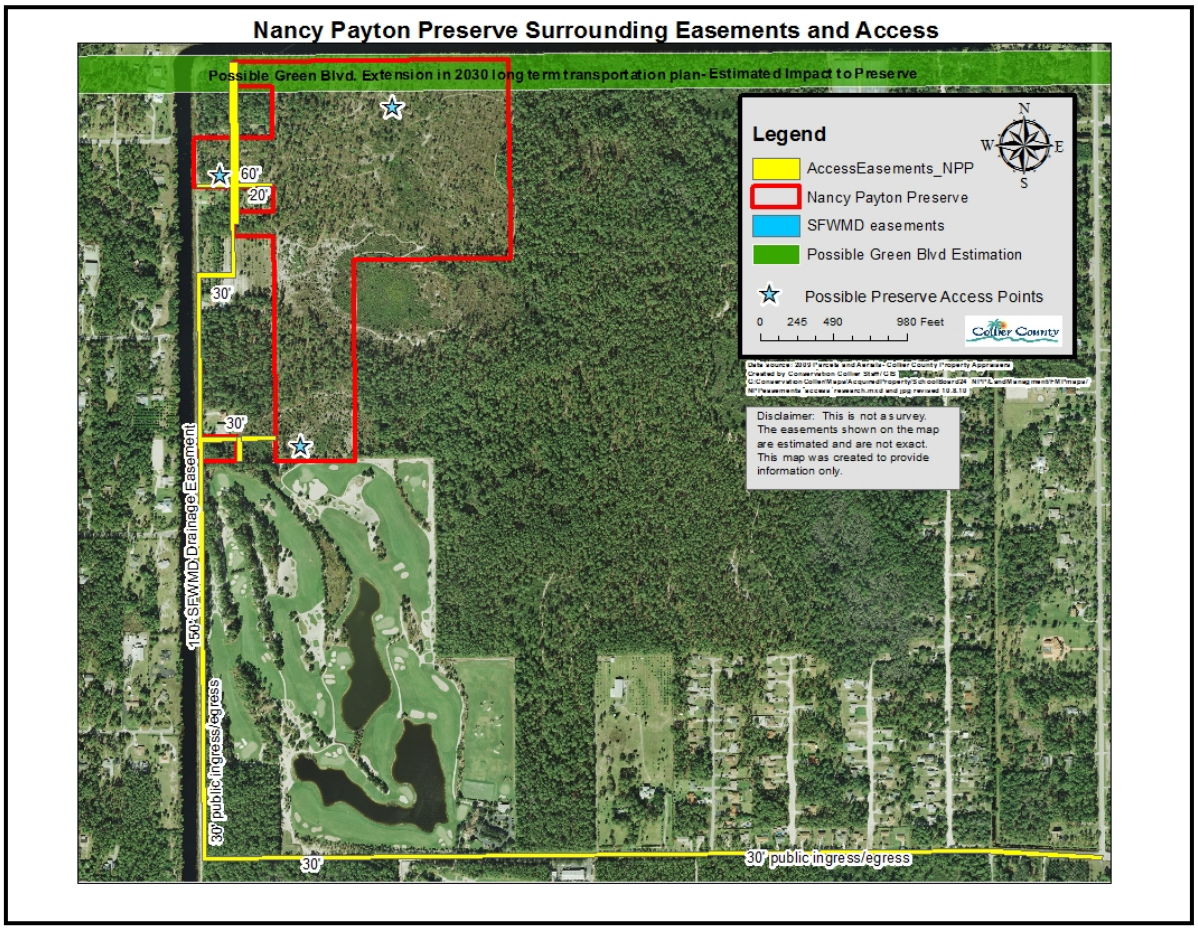

Figure11. Nancy Payton Preserve Surrounding Easements and Access Map

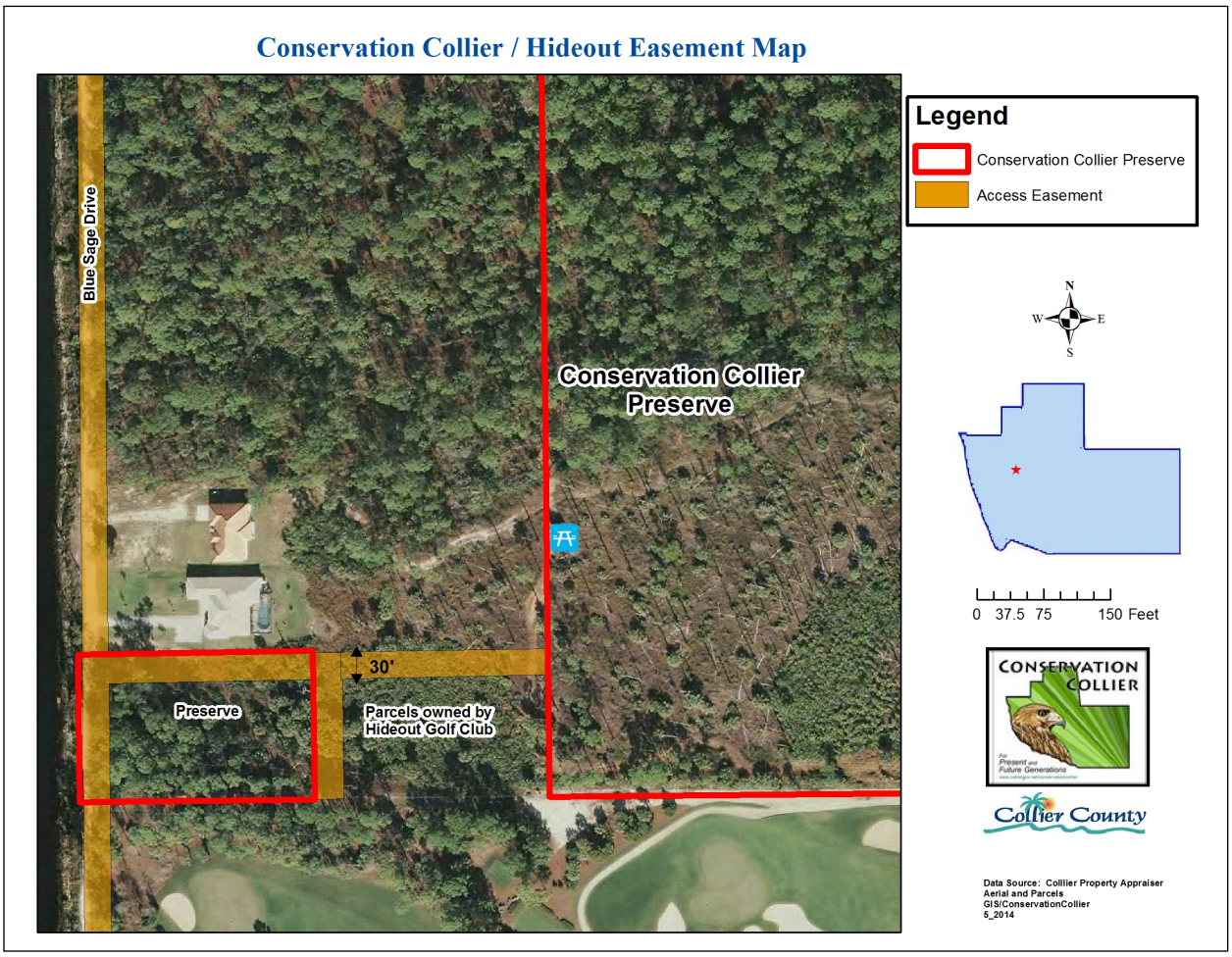

Figure 12. Conservation Collier Easement over parcels owned by the Hideout Golf Club

In accordance with the management goals of the preserve, no additional future easements, concessions, or leases are appropriate in association with this site, other than conservation related easements. Due to the easements present, there exists the potential of the requirement to grant neighboring properties access in the future; however, Blue Sage Drive runs the entire length of the property north and south and is currently what each existing resident uses to access their individual properties. It may be desirable in the future to request permission from neighboring property owners to vacate the easements that run through the center of their properties and relocate them out to Blue Sage Drive to continue the 30 foot ingress/egress easement north from the southern edge of tract 10 to the end of the road. Future access options are discussed in Section 4.0, Goal 8.

Parking / Handicap Facilities- A permanent parking area may be installed in the future, if funding allows, when a final public access route is determined. Parking spaces would be ADA compliant and would connect to an Americans with Disabilities Act (ADA) compliant trail which will lead to an accessible picnic area inside the preserve. Three possible locations are shown on Figure 15. Currently a small area in the extreme SW corner of the preserve along Blue Sage Drive is used for temporary visitor parking.

Landscaping – Natural area restoration of the preserve should include only site specific native plant material that has been determined to be non-problematic to the site and whenever possible, site specific seed sources should be utilized. In addition, hardwoods that may invade the natural areas should not be planted.

3.3 Adjacent Land Uses - Currently surrounding the preserve are a small number of single family homes, a canal, a private golf course and vacant undisturbed land.

3.4 Prospective Land Acquisitions

Several surrounding properties are prospects for acquisition. However, the majority of the property bordering the preserve to the east will be required to be conserved by the property owners according to a settlement agreement between the property owners Collier County and the State of Florida Department of Community Affairs. The landowners and their attorneys have obtained approval to cluster development on this land to alter their allowed zoning density. This would mean that the landowners will be allowed to develop 20% of their properties and preserve 80% while entering into a Safe Harbor Agreement with the U.S. Fish and Wildlife Service to maintain the properties according to USFWS standards.

Acquiring any additional adjacent properties would further conservation efforts by expanding pine flatwoods habitat and therefore critical RCW habitat. Letters were sent out to several of the surrounding property owners to express our interest in acquiring their parcels in 2006-2008. We received responses from only a few owners' of the smaller parcels west of the preserve. For management practicality the parcels that are immediately adjacent to the preserve should be pursued and acquired first then acquisition should expand out accordingly. If another referendum passes in 2020 that would allow the program to start acquiring land again, letters may be sent to surrounding land owners.

3.5 Analysis of Multiple-Use Potential

Table 9: Analysis of Multiple-Use Potential

Activity	Approved	Conditional	Rejected
Protection of endangered and threatened species	Y		
Ecosystem maintenance	Y		
Soil and water conservation	Y		
Hunting			N
Fishing			N
Wildlife observation	Y		
Hiking	Y		
Bicycling		Y	
Horseback riding	Y		
Timber harvest			N
Cattle grazing			N
Camping			N
Apiaries			N
Linear facilities			N
Off road vehicle use			N
Environmental education	Y		
Citriculture or other agriculture			N
Preservation of archeological and historical sites	Y		
(Other uses as determined on an individual basis)			

3.6 Proposed Single - or Multiple - Use Management

Management of this parcel for public use will focus on maintenance of the trail, signage, and picnic area. All of the uses are restricted to those consistent with conservation of plants, animals, any historical/archaeological features, and passive enjoyment of these resources by visitors.

4.0 Future Use of the Nancy Payton Preserve including Management Issues, Goals and Objectives

This section describes the main management issues, goals, and objectives for Nancy Payton Preserve as well as the overall management framework. Central to the management of the Preserve is the mission of the Conservation Collier Program, and the goals and objectives set forth in this management plan.

4.1 Management Plan Framework

Each property purchased by Conservation Collier shall have its own management plan. At the time the property was purchased, the Conservation Collier Ordinance required that an "Interim" Management Plan be developed within 60 days of closing. Interim plans include basic items such as removal of invasive exotics and trash, establishing site security, developing management partnerships and planning for public access. The interim plan for this site was officially approved in January 2006. The ten-year Final Management plan was completed and approved in 2008. Subsequently, the property management plan must be updated every five years. The five-year update to the 10-year plan was completed and approved in 2014. Final management plans, however, are considered living documents and can be updated at any time. Review of all management plans start in the Lands Evaluation and Management Subcommittee and must be approved by both the CCLAAC and the BCC.

4.1.1 Preserve Manager: Contact Information

The Site Manager for Nancy Payton Preserve will be a designated Collier County Environmental Specialist who can be contacted through electronic mail: ConservationCollier@Colliergov.net.

4.1.3 Preserve Rules and Regulations

No dumping, use of unauthorized vehicles, or removal or destruction of any natural or historical/archaeological resources shall be permitted within the preserve. The goal is to allow limited, non-destructive public access to maintain natural resource habitat and native plant communities and animal species.

4.2 Desired Future Conditions

This section includes a description of the proposed future condition for the site's natural areas. Management techniques to achieve these conditions are listed in the following sections.

After management goals are met, Nancy Payton Preserve will consist of a well maintained pine flatwoods habitat. The canopy will be comprised of slash pine trees. Mid-story will be maintained in an open state and will also continue to consist of scattered natives including: wild coffee and smooth sumac. Groundcover will remain native and will include: saw palmetto at heights of less than 3-5 feet, muscadine grape, swamp fern, grasses and herbs. Prescribed burns

will be conducted on a 3-5 year cycle to keep saw palmettos low and hardwoods and palm cover sparse (<25%), allowing for a diverse and dense herb layer.

Management of the preserve will continue to improve foraging habitat and productivity for the endangered RCW and state listed gopher tortoise. RCW's and gopher tortoises act as umbrella species for other suited wildlife species that thrive in well managed pine flatwoods habitats.
In the wildfire areas, after the replanting of slash pine, the canopy will eventually be restored to no greater than 60% canopy cover. This will also continue to facilitate appropriate habitat for gopher tortoises.

4.3 Major Accomplishments during previous years

Table 10: Major Accomplishments during previous years

Accomplishment	Year(s)
Initial removal of invasive, exotic vegetation	2007
Posting Property with no trespassing signs every 500 feet	2007
Floristic Survey completed	2008
Final Management Plan Completed	2008
Safe Harbor Agreement with USFWS	2008
Five artificial cavities installed (4 in NE and 1 in SW)	2009
Prescribed Burn conducted on interior 64 acres- July 2009	2009
Prescribed Burn conducted on 4 acres extending out to Blue Sage Drive March 2010	2010
Two additional artificial cavities installed in the SE March 2010	2010
Planted 5,000 slash pine in wildfire areas-April 2010	2010
Prescribed burn of 70 acres in July 2011	2011
Thinned pine canopy in December 2011	2011
Created Hiking Trails	2012
Grand opening ceremony May 2015	2015

4.4 Goals and Objectives for 10-year period

A set of goals and objectives for the Nancy Payton Preserve were developed in conjunction with the drafting of this Management Plan. The goals and objectives in this plan are tailored specifically for the Nancy Payton Preserve, based on the purposes for which the lands were acquired, the condition of the resources present, and management issues for the property. On-site managers should be familiar with the entire Management Plan. Goals and objectives from the interim management plan for the Nancy Payton Preserve were reviewed to determine if they remain meaningful and practical and if so were carried over into this plan. The goals and objectives presented here reflect programmatic goals and ideas of Conservation Collier personnel in charge of managing and protecting the area. These goals shall not be modified, but specific application of management techniques may take into consideration input by user groups and other stakeholders from outside the program, accommodating user needs and desires where practicable and where overarching management goals are not violated.

Management issues are discussed below in separate sections. Within each section, approaches for dealing with these issues are described. The ability to implement the specific goals and objectives identified in this plan is dependent upon the availability of funding resources. The following goals have been identified for the Nancy Payton Preserve:

Goal 1: Maintain High Quality Habitat with Limited Disturbance for the Benefit of Native Flora and Fauna
Goal 2: Implement a biological monitoring program.
Goal 3: Continue to keep populations of invasive, exotic plants in maintenance state
Goal 4: Continue to implement prescribed fire management
Goal 5: Restore canopy and ground cover species in specific areas
Goal 6: Native wildlife species management
Goal 7: Problem wildlife species management
Goal 8: Maintain Public access trails and amenities public use
Goal 9: Facilitate uses of the site for educational purposes
Goal 10: Monitor public use
Goal 11: Provide a plan for disaster preparedness

GOAL 1: Maintain High Quality Habitat with Limited Disturbance for the Benefit of Native Flora and Fauna

The site is being illegally utilized by citizens on off road vehicles (ORV's) on occasion and potentially for poaching deer. In order to provide for the safety of the preserve wildlife and for those lawfully using this site for passive recreation and research, and to ensure that the programs of ecological preservation and restoration can take place unabated, security measures will be put into place.

Action Item 1.1 Prohibit unauthorized vehicle use in the preserve / Security management

Staff will continue to work with enforcement agencies such as the Collier County Sheriff's Department Agriculture Division and FFWCC to enforce trespassing by citizens on off-road vehicles and poachers. One warning will be given by the Sheriff's office officers, then violators will be arrested. If anyone is caught poaching on the property or in possession of a firearm, they will automatically be arrested and taken to jail. Staff has received approval from the BCC to sign Sheriff's Department affidavits to press charges as needed. Staff will also continue to stay in contact with preserve neighbors for trespassing updates. Fences (field fence) and or gates will be installed around the perimeter or portions of it as a last resort.

Action Item 1.2 Identify locations of rare and listed native plant and animal species.

The location of rare listed plant species will be identified using a global positioning system (GPS) device and mapped to allow staff to monitor them. Public trails were constructed to avoid areas where rare and listed species exist. Actual and potential locations of resident animal life will also be identified and documented and steps will be taken to construct visitor amenities away from animal nesting sites.

Action Item 1.3 Enforce regulations prohibiting trash in or near the preserve.

Staff will monitor the trails on a regular basis and if excessive dumping or littering start to occur, enforcement actions will be sought through the County Sheriff's Department.

Action Item 1.4 Discourage visitation to the park at night.

A sign designating park hours as dawn to dusk will be installed at the entrance to the preserve and adjacent landowners will be given an emergency phone number if they detect human activity on the preserve after hours. If problems arise, the Collier County Sheriff's Office will be contacted to patrol the area and preserve on a routine basis.

GOAL 2: Implement a biological monitoring program

Action Item 2.1 Maintain permanent photo points throughout the preserve. Locations of photo points have been recorded with a GPS and all photographs taken at these locations were taken at a standard height and angle of view (Figure 13). During photo documentations, one photo is taken in each of the cardinal directions (north, east, south and west) and a 360-degree panoramic photo is taken. These photos will help to monitor exotic removal and native plant recruitment over time. If necessary, more photo points will be established to aid in management decision activities. Before and after each prescribed burn, photos will be taken at each photo point station. Photos of each point will be taken 1-2 times per year.

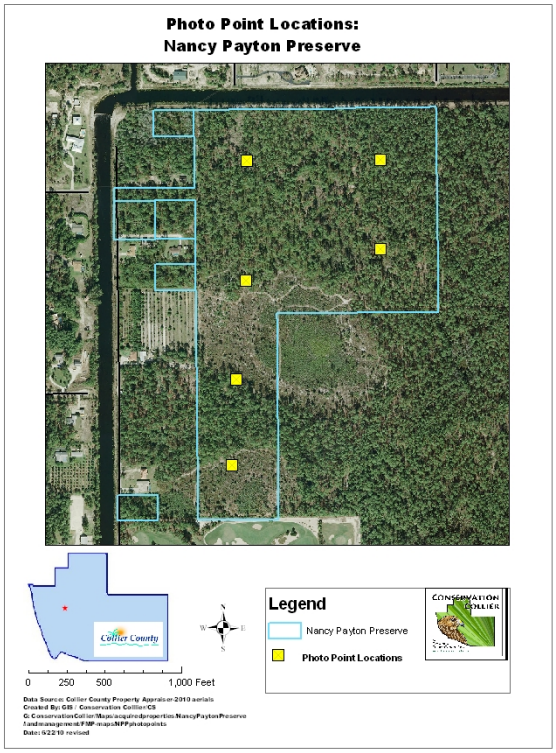

Figure 13. Photo Point Locations at Nancy Payton

Action Item 2.2 Continue long-term vegetation monitoring

Long-term management of the preserve should be based on biological data. Changes following baseline conditions should be assessed as negative or positive, and management strategies changed appropriately. This section discusses information needs and long-term monitoring needs.

Keith Bradley from the Institute for Regional Conservation (IRC) was contracted to conduct a thorough floristic inventory of the Nancy Payton Preserve. The initial survey was conducted in April of 2008 (See appendix 2). The second half of the survey was completed in August 2008; the comprehensive results of this survey have been included in this plan (Appendix 2). Mr. Bradley's findings along with those of Conservation Collier staff will comprise the baseline floristic data on which future actions will be based. The site should be inspected by Conservation Collier Staff at least twice a year and thoroughly inventoried at regular intervals (ca. 5-10 years) to detect new invasions (by natives or exotics) and extinctions. Areas undergoing extreme restoration should be assessed more frequently. Eventually, permanent vegetation monitoring plots may be established. A sampling design should be established to detect changes in species composition and structure. These plots should be sampled several times a year to determine trends, especially where management is taking place to monitor changes in species variety and percent cover.

Action Item 2.3 Continue long-term wildlife monitoring

While some wildlife data has been collected, additional baseline data should also be collected, especially on invertebrates, small mammals, reptiles, and amphibians. The site manager may contract this work out or enlist the assistance of local educators to coordinate student research projects. Wildlife and plant sampling, should take place at regular intervals (ca. 5-10 years) to detect long-term trends.

GOAL 3: Continue to keep populations of invasive exotic plants in maintenance state

The control of invasive, exotic species is critical for the preservation of the Nancy Payton Preserve's natural community. Minimal invasive species are present in the Preserve many of which were eliminated after the initial treatment. However, for the plants that will continue to need treatment and that will invade, the following treatment methods should be followed.

Action Item 3.1: Monitor site for new exotic invasions and treat accordingly

Staff will continue to inspect and treat all areas of the site for new invasive exotic growth or invaders. Approved Collier County contractors will be hired to remove any invasive exotics on an annual basis or if only a small amount exists, in-house removal and/or treatment will be conducted. Small seedlings should be pulled by hand to avoid unnecessary herbicide application. Contactors or staff will chemically treat in place or cut and treat all shrub and tree-like species on the FLEPPC Category I or II list as well as identified nuisance weedy species. Specific methods should be done according to the recommended control column in Table 11, unless new treatments are discovered that work well and do not cause non-target damage. Extreme care should be used to avoid any non-target damage, near sensitive natives, native seedlings and mature pine trees. The use of imazapyr containing herbicides should be avoided on site.

Table 11: Invasive, Exotic Plant Species Control Plan for the Nancy Payton Preserve		
Scientific Name	**Common Name(s)**	**Description and Recommended Control(s)**
Acacia auriculiformis	Earleaf acacia	Hand pull seedlings, basal bark application of 10% Garlon 4 or cut-stump treatment with 50% Garlon 3A.
Abrus precatorius	Rosary-pea, Crab-eyes	Cut stem or basal bark and treat with 10% Garlon 4. Site must be revisited frequently to pull seedlings.
Cupaniopsis anacardioides	Carrotwood	Hand pull seedlings, basal bark application of 100% Pathfinder II, or 10%-20% Garlon 4 diluted with oil; or cut stump application of 10% Garlon 3A, 100% Brush-B-Gon, 100% Roundup Pro, 100% Rodeo, or equivalent glyphosate containing product, or 100% Pathfinder II.
Dioscorea bulbifera	air potato	Pick up /dig up potatoes in the winter, cut and remove above ground vines; Foliar treat with 1.5-2% glyhosate; or 1.5% Glyphosate + Escort (0.5 grams per gallon)
Eugenia uniflora	Surinam cherry	For seedlings and small plants up to ½ inch diameter, use a basal bark treatment with 10% Garlon 4. This species takes a long time to die, and may require a subsequent herbicide application. For larger stems, use a cut-stump treatment with either 50% Garlon 3A or 10% Garlon 4. Seedlings should be hand pulled.
Lantana camara	Shrub verbena	Basal application with 10% Garlon 4 or cut stump treatment with Garlon 3A or 10% Garlon 4.
Melinis repens	Natal grass	Clip and bag seedheads and remove from site. Foliar treat remaining plant with-2.5% glyphosate mixed in water with non-ionic surfactant, treat in spring prior to seed set
Nepholepis brownii	Asian sword fern	A foliar application of Roundup at 1.5% provides control. Follow-up applications are necessary
Nephrolepis cordifolia	tuberous sword fern	A foliar application of Roundup at 1.5% provides control. Follow-up applications are necessary
Psidium guajava	guava	Basal bark application of 10% Garlon
Schinus terebinthifolius	Brazilian pepper	Hand pull seedlings. Cut-stump treatment with 50% Garlon 3A, 10% Garlon 4 or a basal bark application of 10% Garlon 4. Foliar application of Garlon 4, Garlon 3A, Roundup Pro, Roundup Super Concentrate, or Rodeo, according label directions may be used where appropriate. Glyphosate products are less effective when used alone in spring and early summer. Use Rodeo where plants are growing in aquatic sites.
Sporobolis jacquemontii	Smutgrass	Foliar treat with 2-3% Glyphosate or Garlon 3A?
Urena lobata	Caesar's weed	Hand pull seedlings, Foliar treatment with 2-5% Glyphosate in water can be sprayed on young plants. It's best to treat in the spring or summer prior to seed maturation. Responds aggressively to fire
Cenchrus polystachios	Mission grass	Clip and bag seedheads and remove from site., Foliar treat remaining plant with1-3% glyphosate. Responds aggressively to fire- re-treat growth soon after fire
Sida cordifolia	llima	Hand pull seedlings, basal bark application of 10% Garlon 4 or cut-stump treatment with 50% Garlon 3A.
Ochna serrulata	Micky-mouse plant	Hand pull seedlings, basal bark application of 10% Garlon 4 or cut-stump treatment with 50% Garlon 3A.

GOAL 4: Maintain a constant prescribed fire regime

The use of prescribed fire as a management tool is critical to the long-term health of the natural habitat and native species at the Nancy Payton Preserve. Pine Flatwoods communities require periodic fires. If pine flatwoods areas such as this go without fire for too many years, fuels build up and wildfires can occur. In late 2004 before we purchased the property, a wildfire did occur on this property. Approximately 14 acres of the preserve burned and the fire was suppressed by the Florida Forest Service (FFS). The

high temperature of the fire combined with unfavorable weather conditions resulted in mortality of the pine trees in the 14 acre burned areas (see Figure 14). At least two natural RCW cavities were lost in this wildfire.

In July 2009 a successful controlled burn was conducted on the interior 64 acres. In March 2010 an additional burn was conducted on four acres that extend out to Blue Sage Drive. FFS conducted these first two burns on the property which qualified for Urban Wildfire Mitigation Funds and was at no cost to the County. FFS also received on the ground assistance from Collier County Staff, the USFWS/Florida Panther, DEP/Rookery Bay, and local County fire departments.

In July 2011, another prescribed burn was conducted on the contiguous 70 acres of the preserve. This took two days due to weather conditions. This fire burned very hot and an unexpected drought occurred after the fire for approximately 2 weeks. This eventually contributed to the mortality of pines in the NE portion of the preserve. FFS and Rookery Bay assisted with this burn and mop-up.

Subsequent controlled burns should occur every 3-5 years on all contiguous acres. This will create desirable effects on native ground cover and will further reduce hardwoods and undesirable vegetation. However, extra care must be taken with the existing snags that exist along the eastern firelines. If possible, snags should be removed 20-30 feet from all firebreaks before the future burns to prevent ignition and escapes. Due to the pine mortality that occurred in 2013, we have held off on prescribed burning to prevent further loss of pines. We hope to resume the burn regime in the 2020 or early 2021.

Conservation Collier may hire a prescribed burn contractor to conduct prescribed burns on the preserve in 2020-2021 and every 3-5 years thereafter. They would provide all the crews and equipment needed to conduct the burns on the property and may also prepare the fire lines in advance.

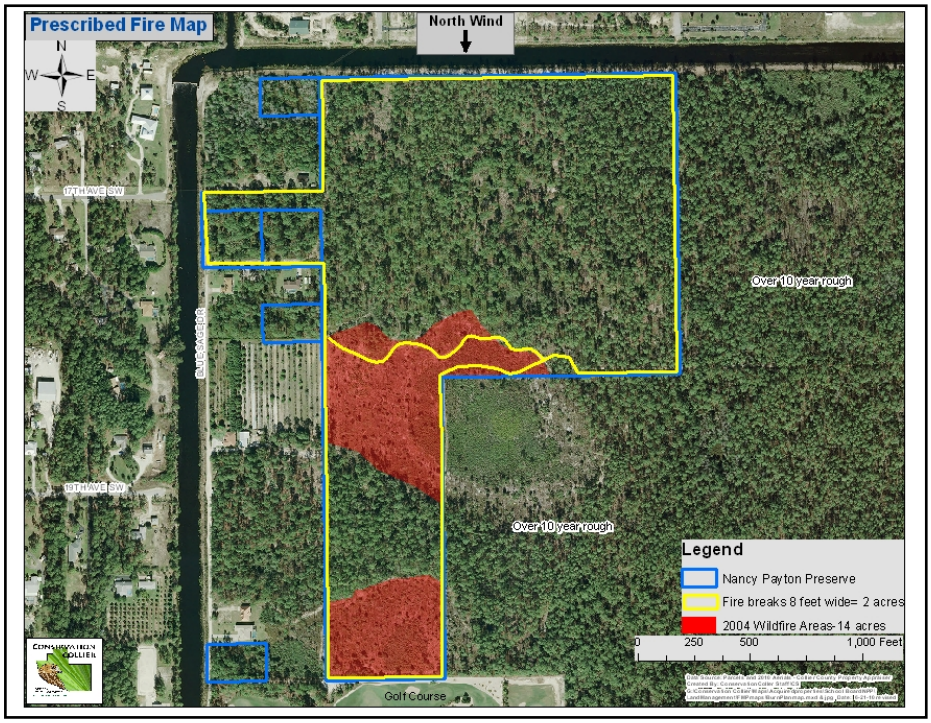

Figure 14. Prescribed Fire Map -Fire Breaks and Previous Wildfire Areas

Action Items 4.1: Create Prescribed Burn Plans for each Scheduled Burn

The preserve land manager will create a fire management plan and may coordinate with other local qualified agencies for review and approval. A burn plan shall include the following key elements: purpose and measurable objectives, description of the burn unit, map of the burn unit, weather factors, safety concerns, fuel conditions, season and time of day, smoke screening, publicity, legal requirements, firing plan, equipment and personnel, contingencies, control and mop-up, declaring the fire out and evaluation and monitoring.

Action Item 4.2 Establish Burn Units and Install Perimeter Fire Lines / Obtain Permits

The entire contiguous portions of the preserve could be burned in one day if weather conditions permit. If timing, smoke issues or weather hinder this, the preserve could be divided up into two smaller units cutting the fire off at the center fire line. Fire breaks were installed utilizing best management practices to minimize impacts to mature trees, habitat and wildlife populations and will also be maintained in the same manner; they are currently 8-10 feet wide. No lines will need to be cleared along the northern property line as the canal road and canal already exist. An estimated 6,000 linear feet or 48,000 square feet of fire lines around the perimeter was installed in 2009. In total, an estimated 2 acres or less of mid-story/understory was impacted or cleared to create these fire lines (Figure 14). Firebreaks double as hiking trails throughout the preserve.

Action Item 4.3: Reduce and control hardwood basal area and mid-story vegetation in occupied and potentially suitable RCW and gopher tortoise habitat

Areas of the preserve were mechanically and manually reduced of cabbage palms to approximately 4 per acre and within 100 feet of potential or active cavity trees before the first controlled burn. Saw palmetto greater than 3 feet in height or that surround potential or active cavity trees were also reduced. If burns are conducted on a 3-5 year schedule there should be no further reason to continue any type of mechanical fuel reduction.

Action Item 4.4 Hold Pre-Fire Public Meetings and Notify Surrounding Community

A Public meeting was held with neighbors before the first prescribed burn. A system of notifying neighboring landowners in advance of future prescribed burns will be established that will include mailing out notifications to neighbors within 1500-2000 feet of the preserve. This system will be executed before each prescribed fire. A press release will also be sent out to notify the newspaper, radio and news channels. Information will also be provided to our County Manager, County Commissioners and local fire departments prior to any burns.

Action Item 4.5 Conduct the prescribed burn, mop-up and declare fire out

The County will seek assistance from one or more of the following agencies: FFS, Florida State Parks Service, Lee County, FFWCC and the Florida Panther National Wildlife Refuge. We will need to utilize their equipment and staff time to conduct the burn and mop up until the fire is officially declared out. A certified burn manager shall be present on site during the entire burn. FFS has indicated to County staff that the creation of fire lines and conducting the burn could be considered "Urban Fire Mitigation" and therefore they could contribute toward the cost of the burn. Staff must coordinate with the Golden Gate Fire Department to ensure they are stationed at the surrounding residential structures during the entire duration of the burn.

Action Item 4.6 Conduct pre- and post-burn monitoring and evaluation to assess fire effects and timing

Photo points will be conducted as per Goal 2, Action Item 2.1. Protocols for monitoring fire effects on soil, water, air, vegetation and wildlife should be included in site burn plans. Fuel loads, wildlife observations, wildlife surveys, vegetation survey and soil and duff conditions should be recorded before the burn. A comprehensive evaluation of every burn should be conducted. The first monitoring/field evaluation should take place within 2 weeks after burn completion to record any needle scorch before any needles fall. The second evaluation should be made during or after the first post fire growing season to get a good assessment of vegetative response (USDA 1989).

GOAL 5: Restore canopy and ground cover species in specific areas

Action Item 5.1 Plant supplemental canopy trees

The two areas on the property that burned in a wildfire in 2004 experienced a large amount of pine mortality. After the initial prescribed burn in 2010, South Florida slash pine trees (*Pinus elliottii var. densa*) were planted. Due to the presence of gopher tortoise and their need for a ground cover food source, the goal was to aim for a recovery

of no more than 60% canopy cover in both areas. As of 2019, the planted pines have been very successful with many reaching 8 feet in height.

Action Item 5.2 Plant supplemental ground cover species

After a burn regime is established, vegetation monitoring will take place. If forage species for gopher tortoise is determined to be inadequate, supplemental ground cover species will be planted.

Action Item 5.3 Monitor and treat new invasive, exotic species that may occur post-fire and in fire breaks to prevent them from hindering native recruitment and regrowth

Following the first two prescribed burns, natal grass and mission grass started growing in the disturbed areas throughout the preserve with great intensity. An aggressive treatment schedule was implemented and as of 2014, adequate control has been established. Staff will continue to stay on top of it to prevent further spread.

GOAL 6: Native wildlife species management

Management of native animal species at the Nancy Payton Preserve should correspond with the management goals of the pine flatwood community. Maintenance of viable populations of native animal species should be conducted by implementing management measures that maintain the viability of the natural habitat.

The Nancy Payton Preserve should be managed to provide adequate habitat for listed species found on or near the site. Some management recommendations for state and federally listed plant and animal species found on the preserve are listed below. General management for all listed species would be consistent with general vegetation management recommendations, exotic species control-Goal 3, and fire management-Goal 5.

Action Item 6.1 Establish Red-Cockaded Woodpecker management guidelines

County staff entered into a Safe Harbor Agreement with the U.S. Fish and Wildlife Service (Appendix 4) in 2009. Safe Harbor is for landowners who wish to manage their property in a way that may benefit RCWs. The Safe Harbor Agreement provides desirable flexibility in some future land use changes, for instance cutting timber or building on the property in a way that does not reduce the property below the initial baseline number of RCWs or foraging habitat. By entering into the agreement, we were able to gain technical management assistance from FFWCC and USFWS in regard to protecting the species. It also holds our program accountable for the continued proper management for the species and other listed species. FFWCC also provides information on cost-share programs to offset the cost of necessary land management actions that the program may benefit from. This agreement also fosters public support for RCW conservation and endangered species management and demonstrates government agency sensitivity, cooperativeness and flexibility.

The initial survey conducted in June 2009, indicated there are no active cavities on the preserve. A cluster of apparently active cavity trees exists in close proximity to the preserve.

According to the national recovery plan for RCWs and the Safe Harbor Agreement, "Where a RCW group exists within one-half-mile of the enrolled property and the Property owner has the responsibility for maintaining a portion of the foraging habitat or that RCW cluster… that portion of the foraging habitat will be incorporated into the Property Owner's baseline." A one-half-mile circular buffer around the neighboring RCW cluster encompasses the entire Nancy Payton Preserve. Therefore, our Safe Harbor Agreement reflects our commitment to maintain this habitat. RCWs require an open mid-story.

If the Green Boulevard extension were to be built (part of the Department of Transportation's long range 2030 plan), it would not necessarily create a conflict with the Safe Harbor Agreement. To stay in compliance with the Safe Harbor Agreement, no artificial cavities with be placed in the general vicinity of the future roadway.

The Safe Harbor Agreement includes all management goals already listed in this plan. It is a voluntary program and the County may cancel the agreement at any time with 60 days' notice. The general agreement is included in this plan as Appendix 6. This full agreement was accepted by the CCLAAC and was approved and signed by the BCC in 2009. Management updates are required to be submitted to FFWCC annually.

Action Item 6.2 Monitor Gopher Tortoise Population

Another main priority shall be the management and inventory of the gopher tortoise population. An initial survey was conducted in 2008 by Johnson Engineering. Eight gopher tortoise burrows were GPS located in the preserve and the burrows were mapped. After the prescribed burn was conducted in 2011, an additional gopher tortoise survey was conducted by County Staff. Approximately 118 burrows were found, three of these were abandoned. Therefore, the population was then estimated to be at 57 total animals. The burrows were GPS located and mapped. Mature tortoises are frequently observed on the preserve. Several burrows also exist on an adjacent parcel not owned by the County.

In 2018, a 5% burrow survey was conducted on this preserve on August 14, 2018 and covered a 4-acre area (5% of 71 total acres). Twenty-four (24) total burrows were found - all adult and subadult burrows encountered were scoped. Out of (18) active burrows, (5 were occupied), (5) potentially occupied-inactive, (1) abandoned. Burrow sizes- (3) juvenile, (3) subadult, (18) adult burrows. If you extrapolate the number of burrows found form this survey the preserve could potentially have 426 total burrows or 213 potential tortoises.

Eliminating illegal access by ORVs would also ensure that tortoises are protected from collisions and burrow collapses.

Other priorities shall be to monitor the occurrence of the eastern indigo snake and the gopher frog. Managing the preserve for the benefit of the gopher tortoise will also benefit these potentially present species.

GOAL 7: Problem wildlife species management

Indigenous and non-native vertebrate and invertebrate species may become pests under certain conditions. Control of indigenous pest species is recommended if they interfere with management goals.

Action Item 7.1 Acquire services of licensed or qualified contractors for the removal of invasive exotic or problematic animal species as needed

To date, three (3) introduced animal species have been documented on the Nancy Payton Preserve, the red imported fire ant, armadillo and the brown anole. It is doubtful that the total eradication of these species can be achieved. However, staff and/or contractors should take measures to treat fire ant populations close to or on public access trails.

If feral cat colonies are found near the preserve, the element that sustains an undesirable population should be identified and efforts made to ask property owners to control (i.e., refuse bins, dumpsters, and supplementary feeding by humans). Traps may also be set if other methods are unsuccessful. A similar approach shall be taken to control feral dog populations, through elimination of the elements that sustain their undesirable population.

GOAL 8: Maintain Public access trails and amenities for public use

Action Item 8.1: Establish Permanent Public Access Route to the Preserve

Several options are presented below, in no particular order of priority, to establish a permanent public access route. The best of these options will be determined by working with the County Transportation Department, SFWMD and property owners adjacent to the preserve. For all options below see Figures 11 and 15.

Option One - The public would access the preserve via 23rd St. SW, west on Brantley Blvd. and north on Blue Sage Drive to the northernmost access point (Figure 15). This would be created on the westernmost parcel (Folio # 61730960006). This option, however, would require the County to improve Blue Sage Drive (4,800 feet) and the SFWMD would require Blue Sage Drive to be relocated outside of their drainage easement. The drainage easement is recorded over properties to the west of the canal which extend over to Blue Sage Drive. The County Transportation Department has stated that Blue Sage Dr. may then need to be widened to 60 feet from the easternmost boundary of the SFWMD easement to comply with drainage requirements and requirements for public access to public lands. This option could possibly displace two homes and would cut into several other properties including the Hideout Golf Course. This is not a favorable option for Conservation Collier. More research will need to be done on this option as it appears that it would be extremely difficult and expensive to achieve.

Option Two-The public would access the Preserve heading west from 23rd St. SW, west on Brantley Blvd. and north on Blue Sage Drive to the access point located farther south on Blue Sage Drive just north of the Hideout Golf Club property.

A small parking lot currently exits on the one-acre out parcel with a pedestrian access only trail through the adjacent eastern parcels leading into the preserve A small trail currently exists over the two parcels that exist in between the County properties over a 30 foot access easement that exists across the north boundary of the parcels owned by the Hideout Golf Club. Since 2015, this is the option we are currently using.

In 2019, the Collier County BCC created a Municipal Service Taxing Unit (MSTU) to allow for emergency maintenance of Blue Sage Drive to ensure passage of emergency vehicles. The BCC approved Resolutions 2015-244 and 2018-99 which were the mechanisms that allowed for work on a private road. Conservation Collier will contribute to this annual cost based on the BCC approved millage rate. Conservation Collier's share is estimated to cost approximately $2,000 per year if the BCC approves 3.0 mills. Payments towards the MSTU by Conservation Collier will start in October 2020. The maintenance of the road will greatly improve the ability for the public to access the preserve.

Option Three- When the preserve was purchased in late 2005, the Collier County Transportation Department's Five-year plan incorporated an extension of Green Boulevard to 16th Ave SE. This would have cut into the entire northern portion of the preserve but would also have been the main access point to the preserve. Since then, the extension has been removed from the County's five year plan and moved to the Long Term 2030 plan. However, these plans may change before 2030 and this option could then be reconsidered.

Option Four- This option would include building a bridge across the Golden Gate Canal that would extend off of 17th Ave SW and extend over to Blue Sage Drive. This could either be a pedestrian bridge or a vehicular bridge. This would also be an extremely costly option and may also include improving 17th Ave SE. This option would have to undergo extensive permitting by the SFWMD and the Collier County Transportation Department and may conflict with Option Three in the long term future.

Option Five- There was a development settlement agreement for Section 24 currently in litigation with the State of Florida DCA and Collier County mentioned previously in section 3.5 of this plan. If this development is permitted to go in, they will most likely be permitted access off of Brantley Blvd., north to the development area. This could open up an access possibility for Conservation Collier. However, this settlement agreement may also include a Safe Harbor Agreement with USFWS that would reduce the amount of impact allowed to the RCW's in the area. Our program will carefully consider and research this option in order not to propose an increase in the amount of impact to the habitat in this area.

Action Item 8.2: **Develop a parking area**

In 2012, a local engineering firm was hired to develop a site plan of a parking area. After it was completed, we were informed that in addition to the construction costs we would be required to improve and maintain the Blue Sage Drive. The combined cost was too high for the Program to pay. As a temporary solution, a small unpaved parking area was created to accommodate a small amount of vehicles along Blue Sage Drive. This area was previously cleared of Brazilian pepper in our initial exotic removal after we acquired the Murphy parcel in 2010. Once access issues can be resolved and if future funds allow, a small parking area may be developed to facilitate a small amount of vehicles and will also provide one or two handicapped parking spaces (Figure 15). Crushed/hardened rock, shell or pervious concrete may be used.

Action Item 8.3: Develop an ADA accessible trail system into the preserve

An ADA accessible trail may be created off of the parking area if funding allows and would lead out into the preserve roughly 300-700 feet depending on the location chosen until it reaches a picnic area. This trail will be composed of a hardened crushed lime rock shell material or other semi-pervious material. A contractor will be hired to design and install providing the least amount of impact possible. This will not be installed until a safe and permanent public access route is established.

Action Item 8.4: Maintain a hiking trail throughout the preserve

Hiking trails were created in 2012 (Figure 15). These trails followed already impacted or cleared trails made by FFS during the wildfire of 2004. One large circular trail will be maintained through the largest intact pineland area in the northernmost portion of the property- the trail follows the fire line along the eastern boundary of the property. Another leads south through the center of the property to the southernmost portion of the property. There will be a short loop through the southernmost portion of the property. The total estimated length of the both trails is 7,600 feet at 5 feet wide. This offers a visitor who desires to hike from the parking area through the entire trail system, a two mile total hike. If RCW's move onto the preserve property, trails will be diverted away from the cavity trees.

Goal 9: Facilitate uses of the site for educational purposes

Actions Item 9.1 Develop interpretive signage to educate preserve visitors.

Site specific signage will be developed to educate visitors on plant and animal identification and ecosystem information. A small kiosk may be built and placed near the parking area with a sign and map of the trails. An additional sign will be installed to explain who the preserve was named after and about how Nancy Payton has been instrumental in preserving land in Collier County. An Eagle Scout contributed to the preserve in 2013 by creating an educational sign about the different types of woodpeckers

on the preserve. It was installed in the southern portion of the preserve where he also built a picnic table.

Action Item 9.2 Provide preserve brochures in rainproof box on site

A brochure outlining the native plant communities and wildlife present at the preserve was created by County staff and they are kept in a rainproof box attached to the main entrance sign at the preserve entrance . Brochures will be refilled as necessary on a monthly basis by the preserve manager.

Action Item 9.3 Coordinate with local groups to encourage site visitation

Staff will work within the Parks and Recreation Department to encourage visitation by summer campers. Local Boy and Girl Scout Troops will be notified about the site and will be encouraged to assist in small projects on site. Birding groups will also be notified about the birding opportunities on site.

GOAL 10: Officially open the preserve for public access

Action Item 10.1 Open the site up to the public via an on site ceremony

the A Grand Opening Ceremony was held in May 2015 to officially open the preserve. Nancy Payton was invited to speak, as was the chair of our Citizens Advisory Committee Bill Poteet. Several neighbors attended and a hike was offered after the ceremony.

GOAL 11: Provide a plan for disaster preparedness

The Conservation Collier Program has a plan in place to examine the preserve and future accessways after storms. Collier County also has several vendors under contract for disaster debris removal.

Action Item 11.1 Establish pathway for emergency rescue crews to access

Creating pathways for fire and rescue will include maintaining fire breaks around the preserve. Emergency medical technician and paramedic access may be accommodated via these fire breaks or on at-grade stabilized pathways. They may use Blue Sage Drive or the driveway that runs east to west of Blue Sage near proposed access point one (Figure 15). Fire lines will be cut and maintained to allow for FFS to access areas of the property however, once controlled burns are conducted the chances of a wildfire will be greatly reduced.

Action Item 11.2 Survey trees along the trail and the perimeter of the property annually for damage

Staff will determine if trees are diseased, weak, or if they have damaged trees/limbs surrounding the trails and kiosks that should be removed for safety reasons prior to hurricane season. This activity is intended to reduce the risk of visitor injury.

Action Item 11.3 Visit preserve within 48 hours after a storm event to assess damage.

Staff will take photos of damage and fill out appropriate Collier County Risk Management Department forms. If damage is extensive, the preserve will be closed until public safety hazards are cleared.

Action Item 11.4 Promptly clear storm debris from preserve.

If necessary, a Collier County emergency debris removal contractor will be contracted as soon as possible after the storm to schedule clean-up. Removal of debris and damaged or downed trees along the trail system may be needed. Downed trees and limbs that do not appear to be a public safety hazard will be cleared at the discretion of the Preserve Manager. As much of the hurricane debris as possible may be chipped and retained on-site to be used as mulch for the trail system.

4.5 Partnerships and Regional Coordination

4.5.1 Interagency Agreements and Cooperating Agencies

The Safe Harbor Management Agreement (**Appendix 6**) is an interagency agreement between Collier County and the U.S. Fish and Wildlife and is implemented by the Florida Fish and Wildlife Conservation Commission. This program was previously mentioned in section 4.4 under Goal 6, action item 6.1.

4.5.2 Cooperating Agencies

- Florida Fish and Wildlife Conservation Commission-Safe Harbor Agreement, wildlife management assistance
- United States Fish and Wildlife Service-Safe Harbor Agreement
- Florida Wildlife Federation- Section 24 protection
- Florida Audubon Society-bird watching opportunities
- Florida Forest Service-prescribed burning assistance

4.5.3 Potential Cooperating Organizations

Naples Chapter of the Florida Native Plant Society and Local Boy and Girl Scout Troops

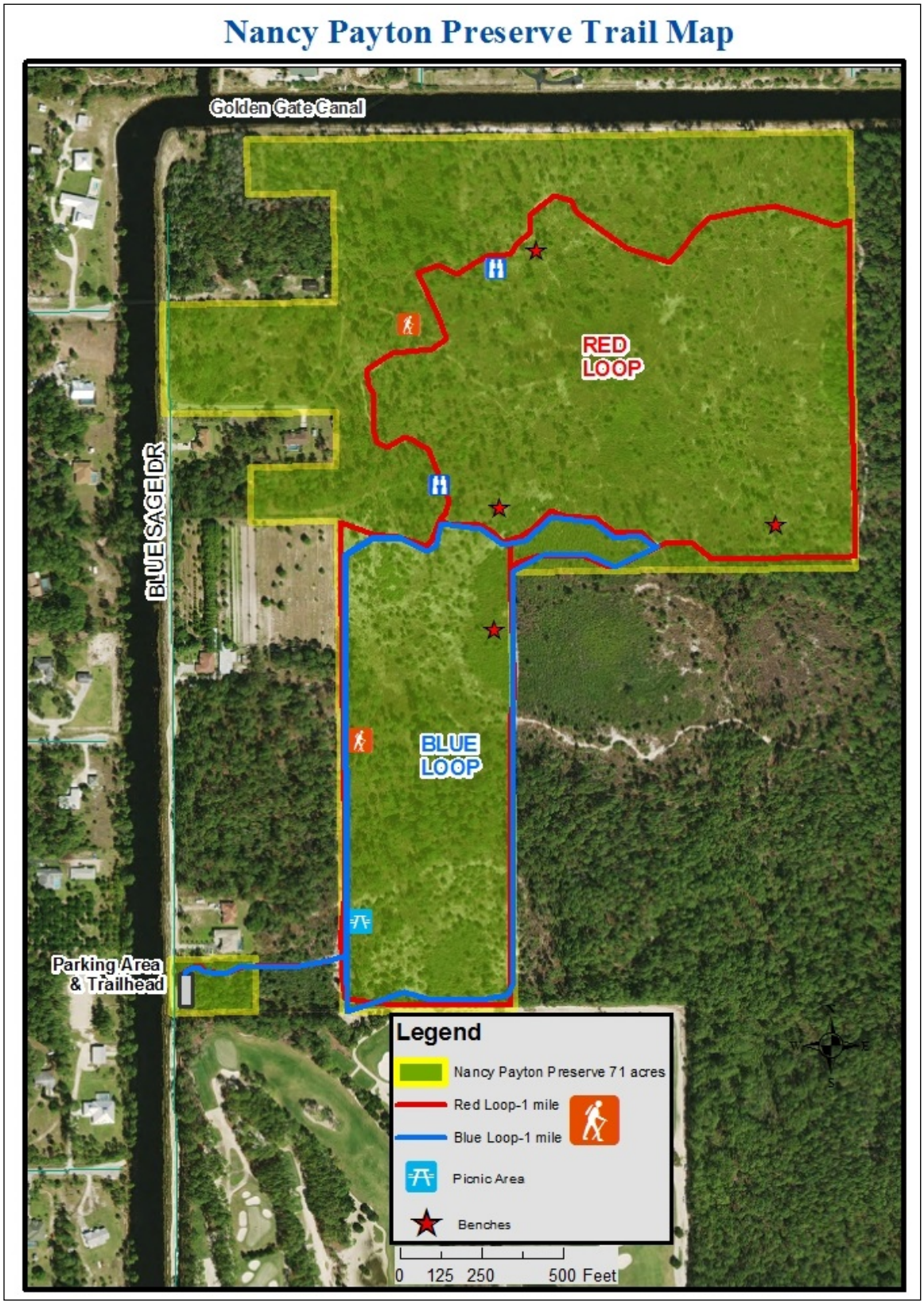

Figure 15. Current Trail Map for Nancy Payton Preserve

4.6. Establish an Operational Plan for the Nancy Payton Preserve

This section provides management recommendations for the operation of the Nancy Payton Preserve. It discusses maintenance and budgeting needs, the possibilities for contracting the restoration activities, coordination, and other management issues.

4.6.1 Maintenance

Maintenance activities for the preserve will include the control of dumping and littering within and around the preserve and trail. Other maintenance activities for the preserve will include invasive exotic species control and trail maintenance. Since the preserve is now open to the public other significant maintenance activities will be necessary for the upkeep of all amenities and signage including but not limited to the trailhead/parking areas and interpretive signage.

4.6.2 Estimated Annual Costs and Funding Sources

Preliminary budget estimates for Nancy Payton Preserve included cost breakdowns associated with resource restoration and management. The funding source identified for the restoration and management activities is the Conservation Collier Program Management Trust Fund. Table 12 shows the preserve budget that was developed using data from Conservation Collier and other cooperating entities, and is based on actual costs for land management activities and maintenance over past years and project spending for 5 additional years. The budget considers available funding and is consistent with the direction necessary to achieve the goals and objectives for Nancy Payton Preserve.

While reviewing the budget table, please note that staff received funding in 2016 from the Florida Wildlife Conservation Commission (FWC) for $14,700 for Gopher Tortoise Habitat Management. In 2019, the program received an additional $12,001 from FWC for the same purpose. Both projects involved exotic plant treatment and firebreak maintenance. Additional grants will continue to be sought to supplement existing management funds on an as needed basis. Staff may also utilize the Collier County Sheriff's Department weekenders program for certain labor projects and may also separately involve the County Scout programs for trail and amenity creation and enhancement. Private conservation organizations may also provide funding for specific projects.

Table 12. Estimated Annual Land Management Budget

Table 12: Estimated Annual Land Management Budget (Amounts in $)											
			YEARS								
Item	2014-15	2015-16	2016-17	2017-18	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	Total
Facilities Development											
Trail creation and maintenance											
ADA Trail											
Parking Area						$433					**$433**
Fence (4' field fence)											
Interior Info signage: Interpretative											
Small signs											
Plant signs											
Entry signage / small kiosk (set)											
Estimated cost for MSTU Blue Sage Dr. repair							$2,000	$2,000	$2,000	$2,000	**$8,000**
Benches (3), Picnic table (ADA) (1), trash cans (2), and bike rack (1)*											
Resource Restoration/Monitoring											
Establish vegetation plots and photo points											
Remove exotics (maintenance) and vines (acres)	$7,000	$7,700	$6,500	$10,596	$12,149	$17,045	$9,000	$9,000	$9,000	$9,000	**$96,990**
Reduce Fuel Loads		$9,500									**$9,500**
Fire Break Installation and maintenance*	$1,200	$2,500	$7,500	$3,500	$3,500	$2,750	$3,000	$3,000	$3,000	$3,000	**$32,950**
Apply Prescribed Fire (Burn Contract)							$6,000				**$8,000**
Native Plant Restoration- Supplemental Pine-3 gal											
Plant Survey											
Wildlife Surveys (Gopher Tortoise, RCW etc.)											
Vegetation Mapping for Fuel Reduction											
Permit (VRP or other)											
survey of road easement											
General/ Facilities Maintenance (month/yr)											
Grants		**-$14,700**				**-$12,001**					**-$26,701**
Grand Total	**$8,200**	**$5,000**	**$14,000**	**$14,096**	**$15,649**	**$8,227**	**$20,000**	**$14,000**	**$14,000**	**$14,000**	**$127,172**
*State financial assistance was awarded in FY2011, 2016 and 2020			Assistance funds were subtracted from the amount spent by Conservation Funds in the Grand total column								
*An Eagle Scout built one picnic table, 4 benches, and educatinal woodpecker sign and installed trail markers at no cost to the program.											

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United States Marine Corps (USMC) Lance Cpl. Matthew K. Hacker. 22 July 2005. Original caption: Photo ID: 2005729133853, Submitted by: MCB Camp Lejeune *A Red-cockaded Woodpecker takes a cockroach back to his nest.* Photograph. http://www.usmc.mil/marinelink/image1.nsf/Lookup/2005729133853?opendocument United States Marine Corps

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Appendix 1: Legal Description and Plat Maps

EXHIBIT "A"

TAX IDENTIFICATION NUMBER: 61730440005

LEGAL DESCRIPTION:

ALL OF TRACTS 7, 8, 9 AND 12, AND THE NORTH 82.5 FEET OF THE SOUTH 825.0 FEET OF TRACT 10, NAPLES FARM SITES, INC., ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 4, PAGE 34, OF THE PUBLIC RECORDS OF COLLIER COUNTY, FLORIDA. SUBJECT TO AN ACCESS EASEMENT OVER, ALONG AND ACROSS THE WEST 30 FEET THEREOF.

NAPLES FARM SITES, INC.
PARCEL 15, THE NORTH 82.5 FEET OF THE SOUTH 1237.5 FEET OF THE EAST HALF OF TRACT 10, AND PARCEL 16, THE EAST HALF OF TRACT 10, EXCEPTING THEREFROM, THE SOUTH 1237.5 FEET THEREOF, ALL IN SECTION 24, TOWNSHIP 49 SOUTH, RANGE 26 EAST, COLLIER COUNTY, FLORIDA AND RECORDED IN PLAT BOOK 4 AT PAGE 34 OF THE PUBLIC RECORDS OF COLLIER COUNTY, FLORIDA.
PROPERTY IDENTIFICATION NUMBER: 61730880005

THE SOUTH HALF (S ½) OF THE SOUTH HALF (S ½) OF THE SOUTH HALF (S ½) OF THE WEST HALF (W ½) OF TRACT 11 FOR A TOTAL OF ONE ACRE OF SECTION 24, TOWNSHIP 49 SOUTH, RANGE 26 EAST, FILED IN PLAT BOOK 4 AT PAGE 34 OF THE PUBLIC RECORDS OF COLLIER COUNTY, FLORIDA.
PROPERTY IDENTIFICATION NUMBER: 61731240000

PROPERTY TAX IDENTIFICATION NUMBER: 61731040006

LEGAL DESCRIPTION:

NAPLES FARMS SITES:

THE NORTH 165 FEET OF THE SOUTH 330 FEET OF THE EAST HALF OF TRACT 10, SECTION 24, TOWNSHIP 49 SOUTH, RANGE 26 EAST RECORDED IN PLAT BOOK 4 AT PAGE 34 OF THE PUBLIC RECORDS OF COLLIER COUNTY, FLORIDA.

AND

PROPERTY TAX IDENTIFICATION NUMBER: 61730960006

LEGAL DESCRIPTION:

NAPLES FARMS SITES:

THE NORTH 247.5 FEET OF THE SOUTH 742.5 FEET OF THE WEST HALF OF TRACT 10, RECORDED IN PLAT BOOK 4 AT PAGE 34 OF THE PUBLIC RECORDS OF COLLIER COUNTY, FLORIDA.

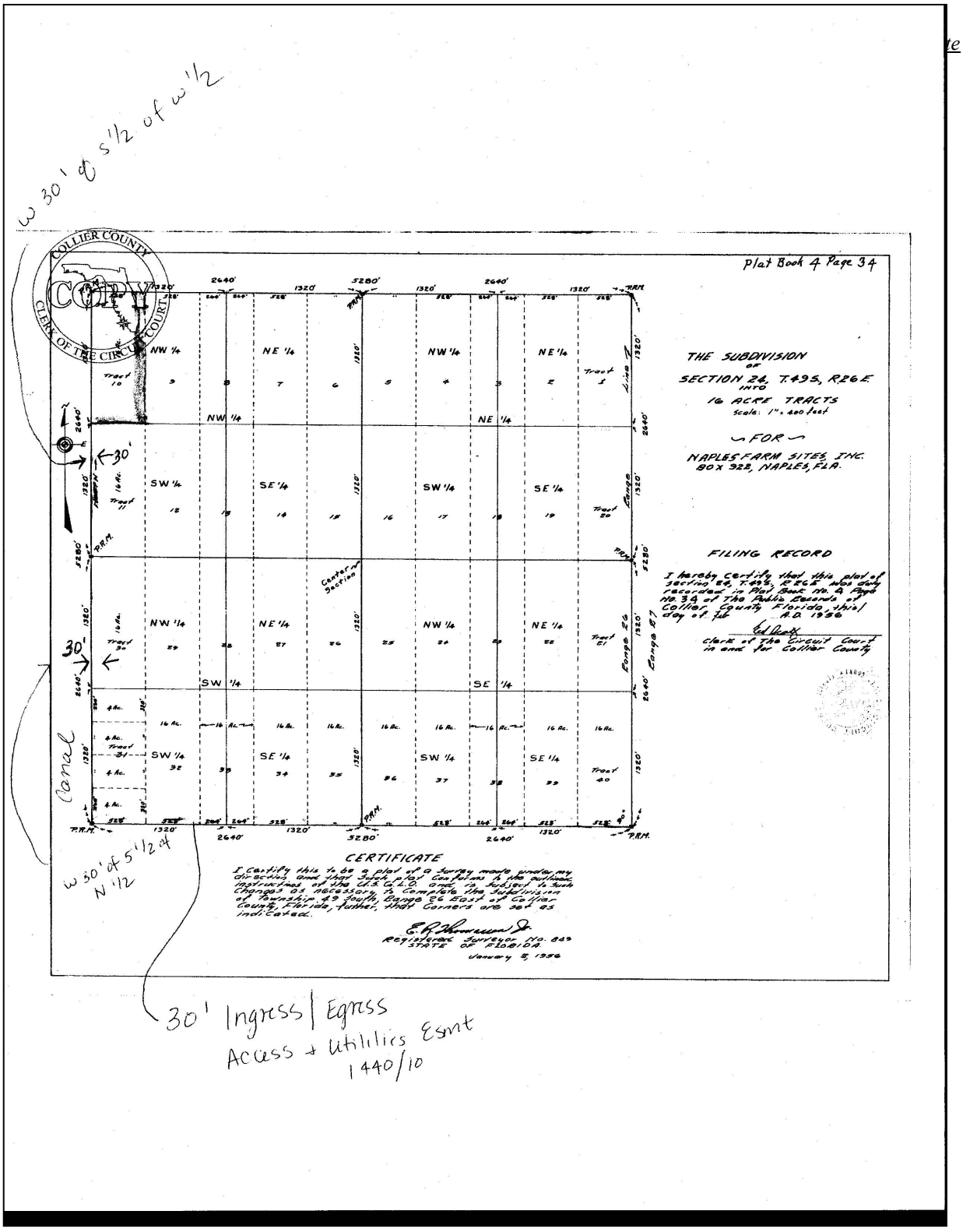
AND

PROPERTY TAX IDENTIFICATION NUMBER: 61731000004

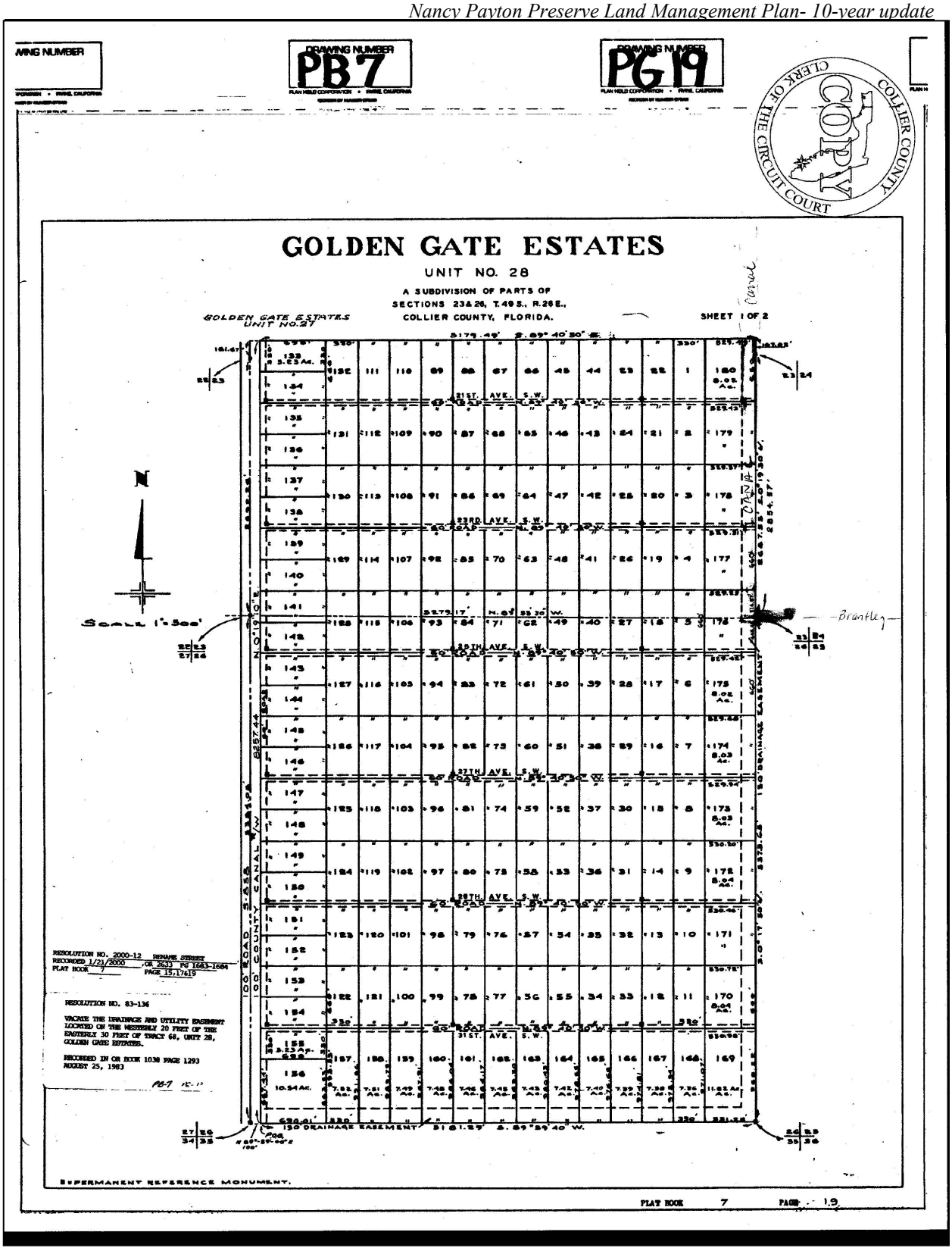
LEGAL DESCRIPTION:

NAPLES FARMS SITES:

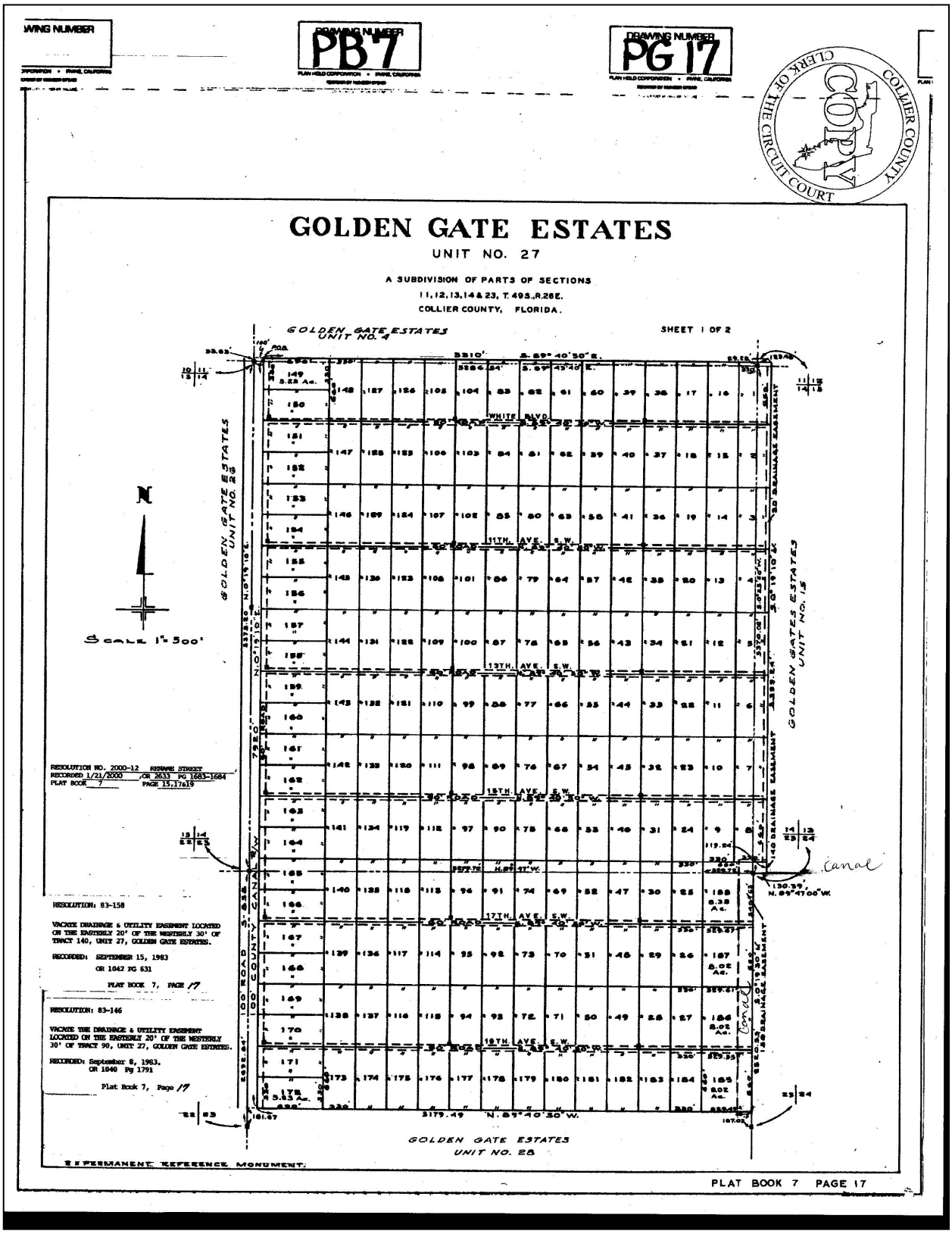
THE NORTH 247.5 FEET OF THE SOUTH 742.5 FEET OF THE EAST HALF OF TRACT 10, RECORDED IN PLAT BOOK 4 AT PAGE 34 OF THE PUBLIC RECORDS OF COLLIER COUNTY, FLORIDA.



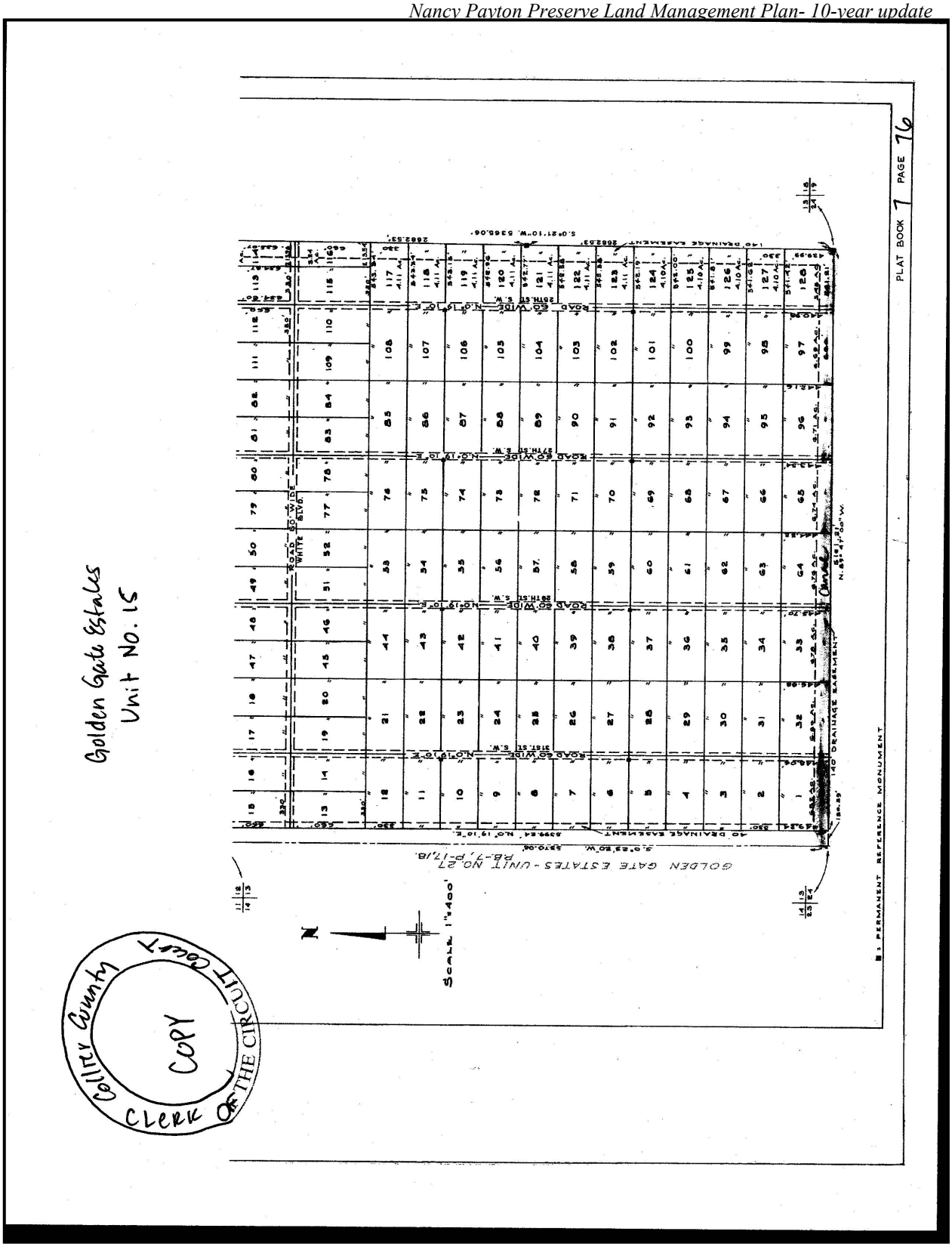
Plat Map Showing Section 24 and location of access easements



Plat Map of properties across the Golden Gate Canal to the West. Shows 150' SFWMD drainage easement



Plat Map of properties across the Golden Gate Canal to the West. Shows 150' SFWMD drainage easement



Plat map showing SFWMD Drainage easement north of the preserve

Appendix 2. 2020 Plant Inventory

Nancy Payton Preserve

by Maureen S. Bonness, with assistance from Michael J. Barry and Jean McCollom

September 2, 2020

2008	2020	Scientific Name (prior name)	Common Names	Native	Not Native	State	FNAI	FLEPPC
x	x	*Abrus precatorius*	Rosary-pea, Crab-eyes		√			I
x	x	*Acacia auriculiformis*	Earleaf acacia		√			I
x	x	*Ambrosia artemisiifolia*	Common ragweed	N				
x	x	*Amphicarpum muhlenbergianum*	Blue maidencane	N				
x	x	*Andropogon glomeratus* var. *hirsutior*	Bushy bluestem	N				
x	x	*Andropogon glomeratus* var. *pumilus*	Bushy bluestem	N				
x		*Andropogon virginicus*	Broomsedge bluestem	N				
	x	*Andropogon virginicus* var. *glaucus*	Chalky bluestem	N				
	x	*Andropogon virginicus* var. *virginicus*	Broomsedge bluestem	N				
x	x	*Asemeia violacea (=Polygala grandiflora, P. violacea)*	Candyweed, Showy milkwort	N				
x	x	*Asimina reticulata*	Common pawpaw, Netted pawpaw	N				
x	x	*Baccharis halimifolia*	Saltbush, Groundsel tree, Sea-myrtle	N				
x	x	*Bambusa vulgaris*	Common bamboo		√			
x	x	*Bidens alba*	Spanish-needles	N				
x	x	*Bulbostylis ciliatifolia*	Densetuft hairsedge	N				
	x	*Bulbostylis stenophylla*	Sandyfield hairsedge	N				
x	x	*Callicarpa americana*	American beautyberry	N				
x	x	*Cassytha filiformis*	Lovevine, Devil's gut	N				
x	x	*Catharanthus roseus*	Madagascar-periwinkle		√			
x		*Cenchrus echinatus*	Southern sandspur	N				
x	x	*Cenchrus polystachios (=Pennisetum polystachion)*	West Indian pennisetum, Missiongrass		√			II
x	x	*Cenchrus spinifex (=C. incertus)*	Coastal sandbur	N				
x	x	*Cephalanthus occidentalis*	Buttonbush	N				
	x	*Chamaecrista fasciculata*	Partridge pea	N				
	x	*Chamaecrista nictitans* var. *aspera*	Hairy sensitive-pea	N				
x	x	*Chiococca alba (=C. parvifolia)*	Pineland snowberry	N				
x	x	*Chromolaena odorata*	Jack-in-the-bush	N				
x	x	*Cladium jamaicense*	Sawgrass	N				
	x	*Coccocypselum hirsutum*	Yerba de guava		√			
	x	*Commelina erecta*	Whitemouth dayflower	N				
x	x	*Conyza canadensis*	Canadian horseweed	N				
x	x	*Crotalaria rotundifolia*	Rabbitbells	N				
x	x	*Croton glandulosus var. septentrionalis (=var. glandulosus)*	Vente conmigo	N				
	x	*Croton michauxii*	Michaux's croton	N				
x	x	*Cupaniopsis anacardioides*	Carrotwood		√			I
	x	*Cyperus compressus*	Poorland flatsedge	N				
x	x	*Cyperus croceus*	Baldwin's flatsedge	N				
	x	*Cyperus hyalinus*	Peduncled flatsedge		√			
x	x	*Cyperus ligularis*	Swamp flatsedge	N				
	x	*Cyperus metzii (=Kyllinga squamulata)*	Asian spikesedge		√			
	x	*Cyperus odoratus*	Fragrant flatsedge	N				
	x	*Cyperus ovatus (=C. retrorsus)*	Pinebarren flatsedge	N				
x	x	*Cyperus polystachyos*	Manyspike flatsedge, Texas sedge	N				
x	x	*Dactyloctenium aegyptium*	Crow's-foot grass, Durban crowfootgrass		√			II

2008	2020	Scientific Name (prior name)	Common Names	Native	Not Native	State	FNAI	FLEPPC
x		*Dendrophylax porrectus (=Harrisella porrecta)*	Needleroot airplant orchid, Jinglebell orchid	N		T		
x	x	*Desmodium incanum*	Beggar's-ticks		√			
x		*Dichanthelium aciculare*	Needleleaf witchgrass	N				
x	x	*Dichanthelium commutatum*	Variable witchgrass	N				
	x	*Dichanthelium dichotomum*	Cypress witchgrass	N				
x	x	*Dichanthelium ensifolium var. unciphyllum*	Cypress witchgrass	N				
x	x	*Dichanthelium portoricense*	Hemlock witchgrass	N				
x	x	*Dichanthelium strigosum* var. *glabrescens*	Roughhair witchgrass	N				
x	x	*Digitaria bicornis*	Asia crabgrass		√			
x		*Digitaria ciliaris*	Southern crabgrass	N				
x	x	*Digitaria longiflora*	Indian crabgrass		√			
	x	*Digitaria serotina*	Blanket crabgrass, Dwarf crabgrass	N				
	x	*Dioscorea bulbifera*	Air potato		√			I
x		*Dyschoriste angusta*	Rockland twinflower, Pineland snakeherb	N				
x		*Eleusine indica*	Indian goosegrass		√			
x	x	*Emilia sonchifolia*	Lilac tassleflower		√			
x	x	*Encyclia tampensis*	Florida butterfly orchid	N				
x		*Eragrostis atrovirens*	Thalia love grass		√			
	x	*Eragrostis ciliaris*	Gophertail lovegrass		√			
	x	*Eragrostis gangetica*	Slimflower lovegrass		√			
x	x	*Erechtites hieraciifolius*	Fireweed, American burnweed	N				
	x	*Eugenia uniflora*	Surinam cherry		√			I
x	x	*Eupatorium capillifolium*	Dogfennel	N				
x	x	*Eupatorium mohrii*	Mohr's thoroughwort	N				
	x	*Euphorbia blodgettii (=Chamaesyce blodgettii)*	Limestone sandmap	N				
	x	*Euphorbia cyathophora (=Poinsettia cyathophora)*	Painted leaf, Fire-on-the-mountain	N				
	x	*Euphorbia graminea*	Grassleaf spurge		√			
	x	*Euphorbia hirta (=Chamaesyce hirta)*	Hairy spurge, Pillpod sandmat	N				
	x	*Euphorbia hypericifolia (=Chamaesyce hypericifolia)*	Eyebane, Graceful sandmat	N				
x	x	*Euphorbia ophthalmica (=Chamaesyce ophthalmica)*	Florida hammock sandmat	N				
x	x	*Euphorbia polyphylla*	Lesser Florida spurge	N				
x	x	*Euphorbia thymifolia (=Chamaesyce thymifolia)*	Gulf sandmat	N				
	x	*Euploca polyphylla (=Heliotropium polyphyllum)*	Pineland heliotrope	N				
x	x	*Eustachys glauca*	Prairie fingergrass	N				
x	x	*Eustachys petraea*	Pinewoods fingergrass	N				
x	x	*Euthamia caroliniana*	Slender goldenrod	N				
x		*Evolvulus sericeus*	Silver dwarf morningglory	N				
x	x	*Ficus aurea*	Strangler fig, Golden fig	N				
x	x	*Funastrum clausum (=Sarcostemma clausum)*	Whitevine, White twinevine	N				
x		*Galactia regularis*	Downy milkpea	N				
x		*Habenaria quinqueseta*	Longhorn false reinorchid	N				
	x	*Heliotropium angiospermum*	Scorpionstail	N				

2008	2020	Scientific Name (prior name)	Common Names	Native	Not Native	State	FNAI	FLEPPC
x	x	*Heterotheca subaxillaris*	Camphorweed	N				
x	x	*Hexasepalum teres (=Diodia teres)*	Poor joe, Rough buttonweed	N				
x	x	*Houstonia procumbens (=Hedyotis procumbens)*	Innocence, Roundleaf bluet	N				
	x	*Hypericum hypericoides*	St. Andrew's-cross	N				
x		*Hyptis alata*	Musky mint, Clustered bushmint	N				
x	x	*Ilex cassine*	Dahoon holly, Dahoon	N				
x	x	*Ilex glabra*	Gallberry, Inkberry	N				
	x	*Ipomoea sagittata*	Everglades morningglory	N				
	x	*Ipomoea* sp.	Morningglory					
x		*Iresine diffusa*	Bloodleaf, Juba's bush	N				
x	x	*Juniperus virginiana*	Red cedar	N				
x	x	*Lantana strigocamara (=L. camara)*	Shrubverbena		√			I
x	x	*Liatris garberi*	Garber's gayfeather	N				
x		*Lobelia paludosa*	White lobelia	N				
x	x	*Ludwigia maritima*	Seaside primrosewillow	N				
x	x	*Lyonia fruticosa*	Coastalplain staggerbush	N				
x	x	*Macroptilium lathyroides*	Wild bushbean		√			II
x	x	*Meliins repens (=Rhynchelytrum repens)*	Rose Natalgrass		√			I
x	x	*Melochia spicata*	Bretonica peluda	N				
x		*Melothria pendula*	Creeping-cucumber	N				
x	x	*Momordica charantia*	Balsampear		√			II
x	x	*Morella cerifera (=Myrica cerifera)*	Wax myrtle, Southern bayberry	N				
x	x	*Muhlenbergia capillaris*	Muhlygrass, Hairawnmuhly	N				
x	x	*Myrsine cubana (=Rapanea punctata)*	Myrsine, Colicwood	N				
x	x	*Nephrolepis brownii (=Nephrolepis multiflora)*	Asian sword fern		√			I
	x	*Nephrolepis cordifolia*	Tuberous sword fern		√			I
x	x	*Oldenlandia corymbosa (=Hedyotis corymbosa)*	Flattop mille graines		√			
x	x	*Orthochilus ecristatus (=Pteroglossaspis ecristata)*	Giant orchid	N		T	S2	
x	x	*Orthosia scoparia (=Cynanchum scoparium)*	Leafless swallowwort	N				
	x	*Panicum dichotomiflorum*	Fall panicgrass	N				
x	x	*Panicum hemitomon*	Maidencane	N				
x		*Panicum tenerum*	Bluejoint panicum	N				
x	x	*Parthenocissus quinquefolia*	Virginia-creeper, Woodbine	N				
	x	*Paspalum conjugatum*	Sour paspalum, Hilograss	N				
x	x	*Paspalum monostachyum*	Gulfdune paspalum	N				
x	x	*Paspalum notatum*	Bahia grass		√			
x	x	*Paspalum setaceum*	Thin paspalum	N				
x	x	*Passiflora suberosa*	Corkystem passionflower	N				
	x	*Pectis prostrata*	Spreading cinchweed	N				
x	x	*Persea palustris*	Swamp bay	N				
x	x	*Phlebodium aureum*	Golden polypody	N				
	x	*Phyllanthus tenellus*	Mscarene Island leafflower		√			
	x	*Phyllanthus urinaria*	Chamber bitter		√			
	x	*Physalis walteri*	Walter's groundcherry	N				
x		*Physostegia purpurea*	False dragonhead, Eastern false dragonhead	N				
x	x	*Phytolacca americana*	American pokeweed	N				

2008	2020	Scientific Name (prior name)	Common Names	Native	Not Native	State	FNAI	FLEPPC
x	x	*Piloblephis rigida*	Wild pennyroyal	N				
x	x	*Pinus elliottii* var. *densa*	South Florida slash pine	N				
x	x	*Piriqueta cistoides subsp. caroliniana (= Piriqueta caroliniana)*	Pitted stripeseed	N				
x	x	*Pityopsis graminifolia*	Narrowleaf silkgrass	N				
	x	*Polanisia tenuifolia*	Slenderleaf clammyweed	N				
x	x	*Polypremum procumbens*	Rustweed, Juniperleaf	N				
	x	*Portulaca pilosa*	Pink purselane, Kiss-me-quick	N				
x		*Pseudognaphalium obtusifolium (=Gnaphalium obtusifolium)*	Rabbit tobacco, Sweet everlasting	N				
x		*Psidium guajava*	Guava		√			I
x	x	*Pteridium aquilinum* var. *caudatum*	Tailed bracken fern	N				
x	x	*Pteridium aquilinum* var. *pseudocaudatum*	Tailed bracken fern	N				
x		*Pteris vittata*	China brake		√			II
x	x	*Pterocaulon pycnostachyum*	Blackroot	N				
x	x	*Quercus laurifolia*	Laurel oak, Diamond oak	N				
x	x	*Quercus virginiana*	Virginia live oak	N				
x		*Randia aculeata*	White indigoberry	N				
x		*Rhexia mariana*	Pale meadowbeauty, Maryland meadowbeauty	N				
x	x	*Rhus copallinum*	Winged sumac	N				
	x	*Rhynchospora divergens*	Spreading beaksedge	N				
x	x	*Richardia brasiliensis*	Tropical Mexican clover		√			
	x	*Richardia grandiflora*	Largeflower Mexican clover		√			II
	x	*Richardia scabra*	Rough Mexican clover		√			
	x	*Rubus trivialis*	Southern dewberry	N				
x	x	*Sabal palmetto*	Cabbage palm	N				
	x	*Saccharum giganteum*	Sugarcane plumegrass	N				
	x	*Sacciolepis striata*	American cupscale	N				
	x	*Samolus valerandi* subsp. *parviflorus*	Pineland pimpernel	N				
x	x	*Schinus terebinthifolia*	Brazilian pepper		√			I
x	x	*Schizachyrium rhizomatum*	Rhizomatous bluestem	N				
x		*Schizachyrium scoparium*	Little bluestem	N				
	x	*Scleria ciliata*	Fringed nutrush	N				
x	x	*Scoparia dulcis*	Sweetbroom, Licoriceweed	N				
x	x	*Serenoa repens*	Saw palmetto	N				
x	x	*Sida cordifolia*	Llima		√			
	x	*Sida ulmifolia*	Common wireweed, Common fanpetals	N				
x	x	*Sideroxylon reclinatum*	Florida bully, Buckthorn	N				
x	x	*Smilax auriculata*	Earleaf greenbrier	N				
x		*Solidago gigantea*	Giant goldenrod	N				
	x	*Solidago stricta*	Narrow-leaved goldenrod, Wand goldenrod	N				
x	x	*Spermacoce remota (=Spermacoce assurgens)*	Woodland false buttonweed	N				
x	x	*Spermacoce verticillata*	Shrubby false buttonweed		√			II
	x	*Sphagneticola trilobata (=Wedelia trilobata)*	Creeping wedelia, Creeping oxeye		√			II
x	x	*Sporobolus jacquemontii (=S. indicus var. pyramidalis)*	Smutgrass, West Indian dropseed		√			I
	x	*Steinchisma hians (=Panicum hians)*	Gaping panicum	N				

2008	2020	Scientific Name (prior name)	Common Names	Native	Not Native	State	FNAI	FLEPPC
x		*Stillingia sylvatica*	Queensdelight	N				
x	x	*Stipulicida setacea*	Pineland scalypink	N				
x	x	*Taxodium ascendens*	Pond cypress	N				
x	x	*Telmatoblechnum serrulatum (=Blechnum serrulatum)*	Swamp fern	N				
x	x	*Thelypteris kunthii*	Southern shield fern	N				
x	x	*Tillandsia balbisiana*	Reflexed wild-pine, Northern needleleaf	N		T		
x	x	*Tillandsia fasciculata*	Stiff-leaved wild-pine, Cardinal airplant	N		E		
x	x	*Tillandsia paucifolia*	Potbelly airplant	N				
x	x	*Tillandsia recurvata*	Ball-moss	N				
x	x	*Tillandsia setacea*	Thin-leaved wild-pine, Southern needleleaf	N				
x	x	*Tillandsia usneoides*	Spanish-moss	N				
x	x	*Toxicodendron radicans*	Eastern poison-ivy	N				
	x	*Trema micrantha*	Nettletree	N				
x	x	*Urena lobata*	Caesarweed		√			I
x	x	*Vaccinium myrsinites*	Shiny blueberry	N				
x	x	*Verbesina virginica*	Frostweed, White crownbeard	N				
x	x	*Vitis rotundifolia*	Muscadine, Muscadine grape	N				
x	x	*Vittaria lineata*	Shoestring fern	N				
x		*Ximenia americana*	Hog-plum, Tallowwood	N				
Count								
144	**169**			**152**	**42**	**4**	**1**	**21**

State Codes: E=Endangered, T=Threatened
FNAI Codes: S1=critically imperiled; S2=imperiled because of rarity; S3=very rare in Florida or restricted range
FLEPPC Codes: Category I = species has altered native plant communities; Category II = species with increasing abundance or frequency

Sources. Scentific plant names and Native/Not-Native status is according to the Atlas of Florida Plants website as of July 2020. State status is from Florida Department of Agriculture and Consumer Services 2018 list. FNAI category is from Florida Natural Areas Inventory April 2019 list. FLEPPC category is from the Florida Exotic Pest Plant Council 2019 list.

Appendix 3. Florida Natural Areas Inventory Managed Area Tracking Record and Element Occurrence Summary; FNAI ranking system explanation and Natural Communities Descriptions for Occurring Natural Communities

FLORIDA
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Suite 200-C
Tallahassee, FL 32303
850-224-8207
fax 850-681-9364
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October 29, 2007

Christal Segura
Collier County Conservation Program
2201 Tamiami Trail Building W
Naples, FL 34112

Dear Ms. Segura,

Thank you for your request for information from the Florida Natural Areas Inventory (FNAI). We have compiled the following information for your project area.

Project: Nancy Payton Preserve
Date Received: October 22, 2007
Location: Collier County

Based on the information available, this site appears to be located within a significant region of natural areas and habitat for several rare species. Special consideration should be taken to avoid and/or mitigate impacts to these natural resources, and to design land uses that are compatible with these resources.

Element Occurrences

A search of our maps and database indicates that currently we have several Element Occurrences mapped within the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

The Element Occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, Element Occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant.

*Several of the species and natural communities tracked by the Inventory are considered **data sensitive**. Occurrence records for these elements contain information that we consider sensitive due to collection pressures, extreme rarity, or at the request of the source of the information. The Element Occurrence Record has been labeled "Data Sensitive." We reque that you not publish or release specific locational data about these species or communities without consent from the Inventory. If you have any questions concerning this please do not hesitate to call.*

Likely and Potential Rare Species

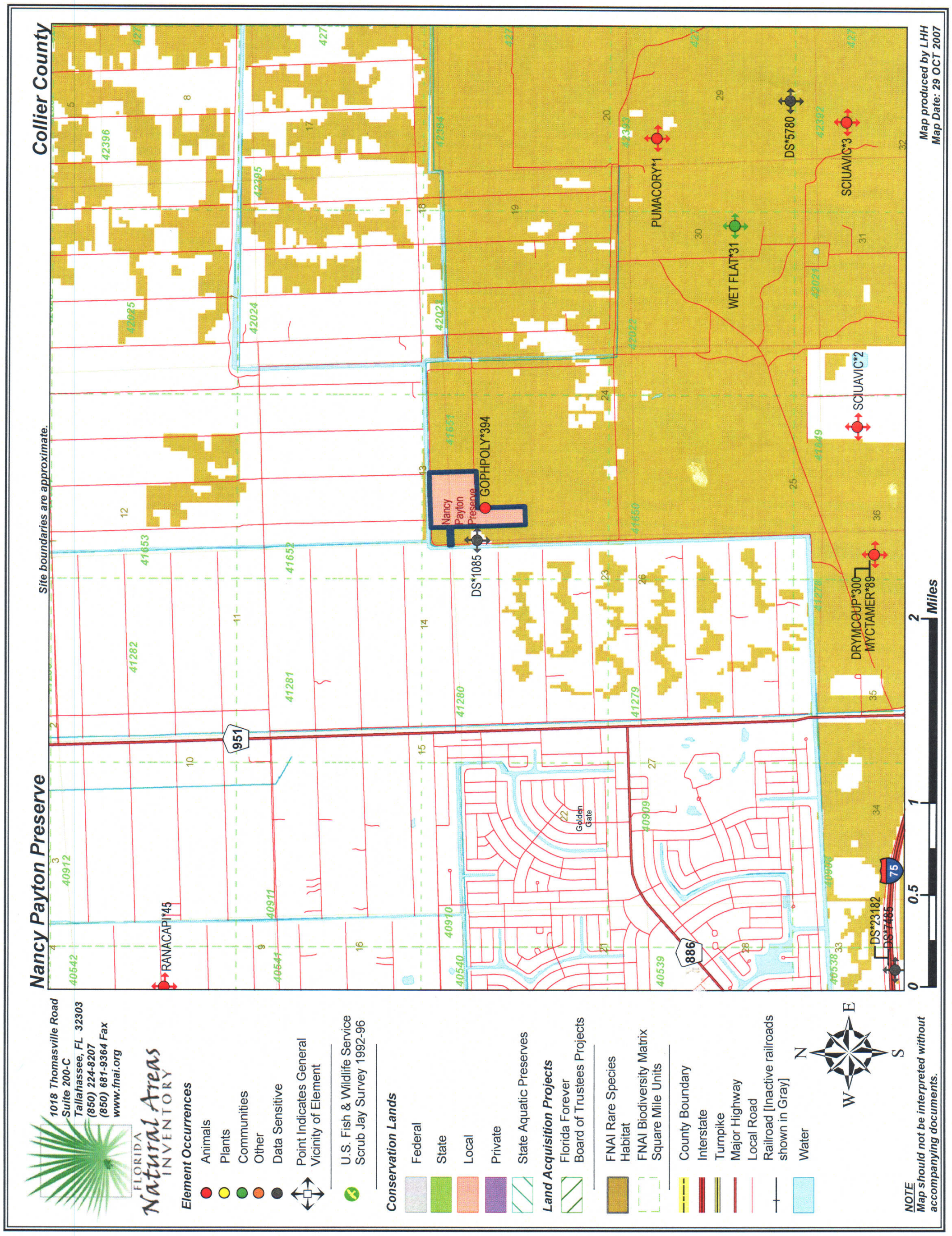
In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity

Florida Resources
and Environmental
Analysis Center

Institute of Science
and Public Affairs

The Florida State University

Tracking Florida's Biodiversity


Nancy Payton Preserve
Collier County
Site boundaries are approximate.
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Tallahassee, FL 32303
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(850) 681-9364 Fax
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FLORIDA Natural Areas INVENTORY
Element Occurrences
Animals
Plants
Communities
Other
Data Sensitive
Point Indicates General Vicinity of Element
U.S. Fish & Wildlife Service Scrub Jay Survey 1992-96
Conservation Lands
Federal
State
Local
Private
State Aquatic Preserves
Land Acquisition Projects
Florida Forever
Board of Trustees Projects
FNAI Rare Species Habitat
FNAI Biodiversity Matrix Square Mile Units
County Boundary
Interstate
Turnpike
Major Highway
Local Road
Railroad [Inactive railroads shown in Gray]
Water
NOTE
Map should not be interpreted without accompanying documents.
Miles
0
0.5
1
2
Map produced by LHH
Map Date: 29 OCT 2007
Nancy Payton Preserve
GOPHPOLY*394
DS*1085
PUMACORY*1
WET FLAT*31
DS*5780
SCIUAVIC*3
SCIUAVIC*2
DRYMCOUP*300
MYCTAMER*89
RANACAPI*45
DS*23182
951
886
75
Golden Gate

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ELEMENT OCCURRENCES DOCUMENTED ON OR NEAR PROJECT SITE

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
DS*1085	Data Sensitive Element	Data Sensitive	G3	S2	LE	LS	1988-07-18	Data Sensitive	Data Sensitive
DS*5780	Data Sensitive Element	Data Sensitive	G3	S2	LE	LS	1990-00-00	Data Sensitive	Data Sensitive
DS*7485	Data Sensitive Element	Data Sensitive	G3	S2	LE	LS	1991-01-00	Data Sensitive	Data Sensitive
GOPHPOLY*394	Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS	1988-pre	SAW PALMETTO PRAIRIE WITH SCATTERED SLASH PINES, DENSE LOW COVER ALSO INCLUDES LYONIA, GREENBRIAR, PENNY ROYAL.	1 BURROW WAS SEEN. THE INDIVIDUAL WAS NOT VISIBLE.
DS*23182	Data Sensitive Element	Data Sensitive	G3	S3	N	N	1988-pre	Data Sensitive	Data Sensitive
RANACAPI*45	Rana capito	Gopher Frog	G3	S3	N	LS	ZZ	No general description given	SPEC. (LA-60564), COLLECTOR N/A, DATE N/A.
DRYMCOUP*300	Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT	1970	No general description given	MUSEUM SPECIMEN: UF-45618 (P. MEYLAN, NO DATE, PRESUMABLY POST-1970).
MYCTAMER*89	Mycteria americana	Wood Stork	G4	S2	LE	LE	1991-12-09	No general description given	1991-12-09: INDIVIDUALS OBSERVED FORAGING.
PUMACORY*1	Puma concolor coryi	Florida Panther	G5T1	S1	LE	LE	1990	PART OF BIG CYPRESS SWAMP; INCLUDES SEVERAL WATER COURSES, NUMEROUS PONDS AND LOW "UPLANDS". DIVERSE HABITATS INCLUDE WET AND DRY PRAIRIE, CYPRESS FOREST (LOGGED), MIXED PINES, MIXED HARDWOODS, SEASONALLY FLOOD.	PROBABLY THE LARGEST REMAINING EO, DESPITE FREQUENT ROADKILLS ON S-29 AND S-84 (ALLIGATOR ALLEY); KNOWN ANIMALS (1987) INCLUDE: 3 ADULT FEMALES, 3 ADULT MALES, 1 JUV. FEMALE; ANIMALS TEND TO BE MALNOURISHED, THOUGH SOME ARE HEALTHY; 1 OF 3 *POPULATION CE
SCIUAVIC*3	Sciurus niger avicennia	Mangrove Fox Squirrel	G5T2	S2	N	LT	ZZ	No general description given	INDIVIDUAL(S) OBSERVED IN SUITABLE HABITAT.
SCIUAVIC*2	Sciurus niger avicennia	Mangrove Fox Squirrel	G5T2	S2	N	LT	ZZ	No general description given	INDIVIDUAL(S) OBSERVED IN SUITABLE HABITAT.

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ELEMENT OCCURRENCES DOCUMENTED ON OR NEAR PROJECT SITE

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
WET FLAT*31	Wet flatwoods		G4	S4	N	N	1999	PINUS ELLIOTTII VAR. DENSA - TAXODIUM ASCENDENS/AMPHICARPUM MUHLENBERGIANUM-PANICUM ERECTIFOLIUM-LINDERNIA DUBIA-LACHNOCAULON ANCEPS VAR. GLABRUM PLANT COMMUNITY TYPE OF WET FLATWOODS. ONE OF THE MOST ECOLOGICALLY STRIKING FEATURES OF THE BELLE VEADE SIT	1999: Update to last obs date was based on interpretation of aerial photography (previous value was 1992-06-15) (U05FNA02FLUS). THE SLASH PINE-POND CYPRESS IS DOMINATED BY BUTTRESS-BASED SOUTH FLORIDA SLASH PINE AND POND CYPRESS (TAXODIUM ASCENDENS). WIT

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Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listin
Matrix Unit ID: 41651					
Documented					
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Puma concolor coryi	Florida Panther	G5T1	S1	LE	LE
Likely					
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Mycteria americana	Wood Stork	G4	S2	LE	LE
Picoides borealis	Red-cockaded Woodpecker	G3	S2	LE	LS
Sciurus niger avicennia	Mangrove Fox Squirrel	G5T2	S2	N	LT
Potential from any/all selected units					
Andropogon arctatus	Pine-woods Bluestem	G3	S3	N	LT
Elytraria caroliniensis var. angustifolia	Narrow-leaved Carolina Scalystem	G4T2	S2	N	N
Eumops floridanus	Florida bonneted bat	G1	S1	N	LE
Lechea cernua	Nodding Pinweed	G3	S3	N	LT
Linum carteri var. smallii	Carter's Large-flowered Flax	G2T2	S2	N	LE
Mesic flatwoods		G4	S4	N	N
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3	S3	N	N
Nemastylis floridana	Celestial Lily	G2	S2	N	LE
Polyrrhiza lindenii	Ghost Orchid	G2G4	S2	N	LE
Rostrhamus sociabilis plumbeus	Snail Kite	G4G5T3C	S2	LE	LE
Roystonea elata	Florida Royal Palm	G2G3	S2	N	LE
Sceloporus woodi	Florida Scrub Lizard	G3	S3	N	N
Ursus americanus floridanus	Florida Black Bear	G5T2	S2	N	LT*

Definitions: Documented - Rare species and natural communities documented on or near this site.
Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
Potential - Rare species and natural communities likely to occur based on suitable habitat and/or known occurrences in the vicinity.

Florida Natural Areas Inventory Rank Explanations **February, 2007**

GLOBAL AND STATE RANKS

Florida Natural Areas Inventory (FNAI) defines an **element** as any rare or exemplary component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature. FNAI assigns two ranks to each element found in Florida: the **global rank**, which is based on an element's worldwide status, and the **state rank**, which is based on the status of the element within Florida. Element ranks are based on many factors, including estimated number of occurrences, estimated abundance (for species and populations) or area (for natural communities), estimated number of adequately protected occurrences, range, threats, and ecological fragility.

GLOBAL RANK DEFINITIONS

G1	Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
G2	Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
G3	Either very rare and local throughout its range (21-100 occurrences or less than 10,0000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
G4	Apparently secure globally (may be rare in parts of range).
G5	Demonstrably secure globally.
G#?	Tentative rank (e.g., G2?)
G#G#	Range of rank; insufficient data to assign specific global rank (e.g., G2G3)
G#T#	Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1)
G#Q	Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q)
G#T#Q	Same as above, but validity as subspecies or variety is questioned.
GH	Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
GNA	Ranking is not applicable because element is not a suitable target for conservation (e.g. as for hybrid species)
GNR	Not yet ranked (temporary)
GNRTNR	Neither the full species nor the taxonomic subgroup has yet been ranked (temporary)
GX	Believed to be extinct throughout range
GXC	Extirpated from the wild but still known from captivity/cultivation
GU	Unrankable. Due to lack of information, no rank or range can be assigned (e.g., GUT2).

STATE RANK DEFINITIONS

Definition parallels global element rank: substitute "S" for "G" in above global ranks, and "in Florida" for "globally" in above global rank definitions.

Tracking Florida's Biodiversity

FEDERAL AND STATE LEGAL STATUSES (U.S. Fish and Wildlife Service – USFWS) PROVIDED BY FNAI FOR INFORMATION ONLY.

For official definitions and lists of protected species, consult the relevant state or federal agency.

FEDERAL LEGAL STATUS

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

LE	Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species which is in danger of extinction throughout all or a significant portion of its range.
LE,XN	A non essential experimental population of a species otherwise Listed as an Endangered Species in the List of Endangered and Threatened Wildlife and Plants. LE,XN for Grus americana (Whooping crane), Federally listed as XN (Non essential experimental population) refers to the Florida experimental population only. Federal listing elsewhere for Grus americana is LE.
PE	Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.
LT	Listed as Threatened Species, defined as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
LT,PDL	Species currently listed Threatened but has been proposed for delisting.
PT	Proposed for listing as Threatened Species.
C	Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants, Category 1. Federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.
SAT	Threatened due to similarity of appearance to a threatened species.
SC	Species of Concern, species is not currently listed but is of management concern to USFWS.
N	Not currently listed, nor currently being considered for addition to the List of Endangered and Threatened Wildlife and Plants.

FLORIDA LEGAL STATUSES (Florida Fish and Wildlife Conservation Commission – FFWCC/ Florida Department of Agriculture and Consumer Services – FDACS)

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission - FFWCC, 1 August 1997, and subsequent updates.

LE	Listed as Endangered Species by the FFWCC. Defined as a species, subspecies, or isolated population which is so rare or depleted in number or so restricted in range of habitat due to any man-made or natural factors that it is in immediate danger of extinction or extirpation from the state, or which may attain such a status within the immediate future.
LT	Listed as Threatened Species by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.
LT*	Indicates that a species has LT status only in selected portions of its range in Florida. LT* for Ursus americanus floridanus (Florida black bear) indicates that LT status does not apply in Baker and Columbia counties and in the Apalachicola National Forest. LT* for Neovison vison pop. 1 (Southern mink, South Florida population) state listed as Threatened refers to the Everglades population only (Note: species formerly listed as Mustela vison mink pop. 1. Also, priorly listed as Mustela evergladensis).
LS	Listed as Species of Special Concern by the FFWCC, defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification,

environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species.

LS* Indicates that a species has LS status only in selected portions of its range in Florida. LS* for Pandion haliaetus (Osprey) state listed as LS (Species of Special Concern) in Monroe County only.

PE Proposed for listing as Endangered.

PT Proposed for listing as Threatened.

PS Proposed for listing as a Species of Special Concern.

N Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or please visit: http://DOACS.State.FL.US/PI/Images/Rule05b.pdf

LE Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973, as amended.

PE Proposed by the FDACS for listing as Endangered Plants.

LT Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in such number as to cause them to be endangered. LT* indicates that a species has LT status only in selected portions of its range in Florida.

PT Proposed by the FDACS for listing as Threatened Plants.

N Not currently listed, nor currently being considered for listing.

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Suite 200-C
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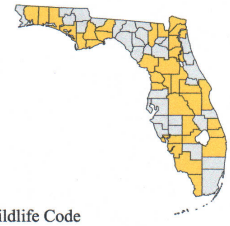
RED-COCKADED WOODPECKER

Picoides borealis



Order: Piciformes
Family: Picidae
FNAI Ranks: G3/S2
U.S. Status: Endangered
FL Status: Threatened
U.S. Migratory Bird Treaty Act and state Wildlife Code prohibit take of birds, nests, or eggs.

Description: This small woodpecker can be distinguished by its barred, black and white back and wings, black cap and nape, and white cheek patches on each side of the head. Sexes of adults are difficult to distinguish. Red streaks or "cockades" on either side of head of adult males are rarely visible. Juvenile males can be identified by a small, circular patch of red on top of the head that is visible until early fall. This is absent in juvenile females.

© Barry Mansell

Similar Species: No other Florida woodpecker has a barred "ladder" or "zebra" back and the large, unbroken white cheek patches. Downy (*Picoides pubescens*) and hairy (*P. villosus*) woodpeckers are most likely to be confused, but these species have solid white down the middle of the back and a black triangular patch that covers much of the cheek.

Habitat: Inhabits open, mature pine woodlands that have a diversity of grass, forb, and shrub species. Generally occupies longleaf pine flatwoods in north and central Florida, mixed longleaf pine and slash pine in south-central Florida, and slash pine in south Florida outside the range of

Field Guide to the Rare Animals of Florida — Florida Natural Areas Inventory, 2001

RED-COCKADED WOODPECKER ***Picoides borealis***

longleaf pine. Forage in several forested habitat types that include pines of various ages, but prefer more mature pines.

Seasonal Occurrence: Nonmigratory. Maintains territories throughout year. They are cooperative breeders with young males characteristically remaining in many natal territories. Young females and non-helper males typically disperse a limited distance during their first winter in search of breeding opportunities elsewhere. Social groups or clans generally constrict the use of their home range when nestlings are present and expand their use during fall and winter after young have fledged.

Florida Distribution: Occurs locally from the western panhandle through the peninsula to south Florida. Distribution tied to remaining areas of old-growth pine forests. Southernmost occurrence is the Big Cypress National Preserve in Collier and Monroe counties.

Range-wide Distribution: Primarily Southeastern Coastal Plain from North Carolina to Texas and southern Arkansas. Currently, populations are highly fragmented, and most are small. As of 1990, nearly 90 percent of active sites were in Florida, Georgia, the Carolinas, Louisiana, and Texas. More than half of the remaining population (9,300 birds) were found on just six sites, while the remaining birds were scattered across more than 100 sites.

Conservation Status: Florida has the largest number of active sites in the world, but increasing fragmentation and poor management of appropriate habitat is cause for concern. Largest concentrations occur on federally managed lands (ca. 80 percent of active sites), with state-owned and private lands supporting a significant number of smaller populations. Two largest populations, comprising 70 percent of active sites, occur on Eglin Air Force Base and Apalachicola National Forest, and there is evidence of declines in the latter.

Protection and Management: Federal and state agencies must aggressively manage their extensive tracts of pine forests. Habitat quality in such areas depends on fire for maintaining open, park-like conditions. Considerable variation exists in habitat parameters range-wide, resulting in variable home-range sizes depending on amount and quality of available habitat. Focus management actions on both nesting and foraging requirements. Protect additional populations on private lands to help guard against catastrophic events (e.g., hurricanes).

Selected References: James 1991, Kulhavy et al. (eds.) 1995, Poole and Gill (eds.) 1994, Robertson and Woolfenden 1992, Rodgers et al. (eds.) 1996, Stevenson and Anderson 1994.

GOPHER TORTOISE

Gopherus polyphemus

Order: Testudines
Family: Testudinidae
FNAI Ranks: G3/S3
U.S. Status: None in Florida; Threatened in Louisiana, Mississippi, and western Alabama
FL Status: Species of Special Concern

Florida prohibits take, possession, sale, or purchase of tortoises or their parts except by permit.

© Dan Hipes

juvenile © Dan Hipes

Description: A medium-sized turtle (to 10 in. = 254 mm) fully adapted for life on land. Upper shell brown and relatively flat above; lower shell yellowish, without hinge, and projecting forward, especially in male; skin brown to dark gray. Forelimbs greatly expanded for digging; hind limbs reduced, stumpy, lacking any form of webbing between toes. Lower shell of male somewhat concave. Young: scales of carapace often with yellow centers, skin yellowish to tan; approximately 2 in. (51 mm) shell length at hatching.

Similar Species: The only other native land turtle in Florida, the box turtle (*Terrapene carolina*), is distinguished by its smaller size (to 8 in. =

GOPHER TORTOISE ***Gopherus polyphemus***

203 mm), less stout feet, moveable hinge on lower shell, and often but not always by black and yellow upper shell. Tortoise burrows, which are useful in determining species' presence, typically have lower, flatter profile than more rounded burrows of armadillos; this reflects differences in cross-sectional shapes of the two animals.

Habitat: Typically found in dry upland habitats, including sandhills, scrub, xeric oak hammock, and dry pine flatwoods; also commonly uses disturbed habitats such as pastures, oldfields, and road shoulders. Tortoises excavate deep burrows for refuge from predators, weather, and fire; more than 300 other species of animals have been recorded sharing these burrows.

Seasonal Occurrence: Above-ground activity is greatly reduced during cold weather, with tortoises in northern Florida remaining below ground for months. Nonetheless, burrows are relatively conspicuous year-round.

Florida Distribution: State-wide except absent from the Everglades and Keys.

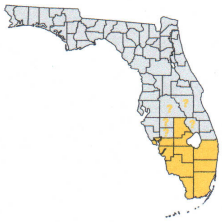
Range-wide Distribution: Lower Southeastern Coastal Plain, extending from southern South Carolina southward through lower Georgia and Florida and westward through southern Alabama, Mississippi, and extreme southeastern Louisiana.

Conservation Status: Despite its widespread occurrence throughout Florida, there is considerable concern about the declining abundance of this species. Much of its native habitat has been lost to agriculture, citriculture, forestry, mining, and urban and residential development. Although protected populations occur on many state, federal, and private conservation lands, recent development of a severe respiratory disease threatens even those.

Protection and Management: Manage large, undivided tracts of upland habitat to maintain native vegetative conditions; this generally requires periodic prescribed fire beneath trees to reduce brush and favor growth of grasses and forbs. Avoid building roads and houses in xeric uplands. Because of risk of introducing tortoises infected with respiratory disease to uncontaminated populations, tortoises should not be relocated except under strictly controlled programs.

Field Guide to the Rare Animals of Florida Florida Natural Areas Inventory, 2001

FLORIDA PANTHER
Puma concolor coryi



Order:	Carnivora
Family:	Felidae
FNAI Ranks:	G5T1/S1
U.S. Status:	Endangered
FL Status:	Endangered

© Jerry Lee Gingerich, DVM

Description: A large (70 - 150 lbs. = 32 - 68 kg) cat with a long tail. Fur is dark buff to tawny above and light buff to white below; muzzle and tip of tail are black. The head is broad, and ears are round. Typical track shows four clawless toe pads around a three-lobed heel pad. Defining characteristics of the subspecies are a dorsal hair whorl, a crook in the tail, and white flecking on the neck and shoulders.

Field Guide to the Rare Animals of Florida — Florida Natural Areas Inventory, 2001

FLORIDA PANTHER ***Puma concolor coryi***

Similar Species: Bobcat (*Lynx rufus*) has a short tail and is approximately half the size of a Florida panther. Western cougars (panthers, pumas; different subspecies) occasionally escape captivity or have been released and can be mistaken for Florida panthers; defining characteristics listed above may be unreliable in distinguishing these close relatives.

Habitat: Requires extensive blocks of mostly forested communities. Large wetlands that are generally inaccessible to humans are important for diurnal refuge. Will tolerate improved areas in a mosaic of natural communities.

Seasonal Occurrence: Year-round resident.

Florida Distribution: Collier, Glades, and Lee counties are the stronghold for the Florida panther; Miami-Dade and Monroe counties are also important. Dispersing individuals may range well north in the peninsula searching for new territories.

Range-wide Distribution: Subspecies formerly found throughout the southeastern U.S. from Arkansas and Louisiana east to Georgia and south to Florida.

Conservation Status: Found on several public conservation lands, including Big Cypress National Preserve, Florida Panther National Wildlife Refuge, Fakahatchee State Park, Picayune Strand State Forest, and Everglades National Park. Apparently, numbers are increasing as a result of genetic improvement project.

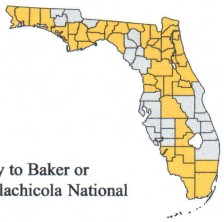
Protection and Management: Preserve large natural or slightly modified landscapes. Maintain viable populations of deer. Develop safe places for crossing highways. Maintain public support for recovery projects.

Selected References: Brown 1997, Humphrey (ed.) 1992, Maehr 1997.

Field Guide to the Rare Animals of Florida Florida Natural Areas Inventory, 2001

FLORIDA BLACK BEAR

Ursus americanus floridanus



Order: Carnivora
Family: Ursidae
FNAI Ranks: G5T2/S2
U.S. Status: None
FL Status: Threatened (does not apply to Baker or Columbia counties or Apalachicola National Forest)

Description: A large mammal (3 to 3.5 ft. = 2.8 - 3.2 m at the shoulder) with glossy black hair and a brown muzzle. Females average approximately 180 lbs. (82 kg); males average approximately 250 lbs. (113 kg). Individuals in southern Florida may lose their dorsal guard hairs, exposing the woolly brown undercoat. A white chest patch may be present on some individuals. Tail is short and inconspicuous. Ears are round and widely separated. In males, front feet range from 3.5 - 5.5 in. (89 -140 mm)

Appendix 4: Safe Harbor Agreement with FFWCC and USFWS

Safe Harbor Management Agreement for Florida's Statewide Red-cockaded Woodpecker Safe Harbor Program

I. Introduction

This Safe Harbor Management Agreement (SHMA), effective and binding on the date of last signature below, is between the Florida Fish and Wildlife Conservation Commission ("Commission") and the participating Property Owner, Collier County on behalf of the Conservation Collier Program (Property Owner) (herein referred to as the Parties). This SHMA is subject to all terms and conditions in the Florida Statewide RCW Safe Harbor Agreement (FL RCW SHA) between the United States Fish and Wildlife Service ("Service') and the Commission and the Enhancement of Survival Permit ("Permit") both of which are incorporated herein and made a part of this SHMA by reference.

Agreement/Tracking Number:
003 (the Commission shall provide a tracking number for each SHMA it enters into)

Agreement Duration:
The duration of this SHMA is for 97 years. This time period is believed sufficient to allow a determination that the net conservation benefit(s) specified in the SHMA will be met.

This SHMA covers the following property: The real property covered by this SHMA ("Enrolled property") is described in Attachment A of this document and delineated in Attachment B to this SHMA.

This Agreement covers the following species:
The Red-cockaded woodpecker (*Picoides borealis*) ("RCW"), a federally endangered species, is the only species for which incidental take authority is sought. This species is considered the "covered species" as defined in the Service's Safe Harbor Policy (published at 64 FR 32717) (herein referred to as the "Policy").

II. Purpose

The purpose of this SHMA is for the Parties to collaborate in order to implement management activities for the RCW on the Enrolled property that will provide a net conservation benefit to the RCW in the State of Florida. Under this SHMA, the Property Owner agrees to undertake the activities and procedures described herein on the Enrolled property for the benefit of the RCW. In accordance with the FL RCW SHA and the associated Permit, the Property Owner is authorized to carry out lawful activity on the Enrolled property that may result in the incidental take[1] of RCW(s) or RCW habitat that is above the Property Owner's baseline responsibilities.

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1 An incidental take is the "take" of any federally listed wildlife species that is incidental to, but not the purpose of, otherwise lawful activities (see definition of "take" on page 13) [ESA section 10(a)(1)(B)]. For example, deliberately shooting or wounding a listed species would not be considered an incidental take. Conversely, the destruction of endangered species habitat for development generally would be construed as incidental and would be authorized by an Incidental Take Permit.

For more information on incidental take see Section IV.C., below.

III. Net Conservation Benefits

The Property Owner's voluntary management activities will provide one or more of the following expected conservation benefits to RCWs:

1. Maintain occupied nesting and foraging habitat at current levels and help maintain population stability.
2. Increase existing populations through the installation of artificial nesting and roosting cavities.
3. Create new groups and populations through natural population expansion and translocation efforts.
4. Augment populations through translocation of surplus subadults to acceptable sites.
5. Enhance, restore, and/or create suitable habitat on enrolled properties.
6. Decrease pine forest fragmentation and increase habitat connectivity as a result of habitat enhancement, restoration, and creation efforts.

The above specific net conservation benefit(s) will be provided to the RCW by the management activities of the Property Owner, as set forth in the Evaluation Form (Attachment A).

The expiration date of the signed SHMA and Certificate of Inclusion ("Certificate") will be no later than the expiration date of the Permit, which is 12/31/2105. A Property Owner will have the option to sign up for shorter periods of time as long as a net conservation benefit can be established during their requested SHMA duration.

IV. SHMA Implementation

A. Conservation Strategy

On one or more mutually agreeable areas, the Property Owner agrees to enhance habitat for RCWs by allowing or providing for one or more of the following management activities:

1. Prescribed burning.
2. Implement forest management practices that enhance habitat for existing baseline groups or provide habitat for additional groups of RCWs (thinning, longer rotations, regeneration that favors native pine species).
3. Providing hardwood midstory control
4. Install artificial cavities in baseline and/or recruitment clusters.
5. Population management.

The above conservation strategy will be provided to the RCW by the management activities of the Property Owner, as set forth in the Evaluation Form (Attachment A)[2].

2 The Property Owner has described the nature, extent, timing, and other pertinent details of the management activities that the Property Owner will voluntarily undertake to provide a net conservation benefit, including a schedule for implementation. The Property Owner has described how the management activities will benefit the RCW.

B. Baseline Considerations

Baseline Conditions

The baseline conditions that will be maintained on the Enrolled property are described in the Evaluation Form (Attachment A). The baseline will also include a description of the required foraging habitat (total basal area and acres) for each group or active cluster. Appropriate maps depicting foraging partitions for each baseline cluster will also be included. Using the proper surveys, described below, the Property Owner may differentiate the number of active clusters into potential breeding groups and solitary bird (typically male) groups.

Determining Baseline Conditions

The first step in determining the baseline conditions is to determine if suitable RCW habitat exists or if a known RCW group exists within one-half-mile of the property (at the discretion of the Commission, Property Owner knowledge may be the basis for determining the distance to known sites on neighboring properties). Suitable habitat consists of pine or pine-hardwood (50 percent or more pine) stands 30 years of age or older (USFWS 2003). If this type of habitat is not present, and there are no RCW groups within one-half-mile of the property, further assessment is not necessary, and the Property Owner's baseline will be zero. If a RCW group exists within one-half-mile of the Property Owner's property and the Property Owner has the responsibility of maintaining a portion of the habitat for the RCW cluster, as required by the ESA, that portion of habitat will be incorporated into the Property Owner's baseline.

If suitable habitat is present, the Property Owner will determine if RCW groups exist. To determine if RCW groups exist, the Property Owner will conduct surveys for cavity trees in stands that contain suitable nesting habitat. Red-cockaded woodpeckers select and require old-growth pines for cavity excavation. Age of cavity trees depends on the ages of pines available, but there is a minimum age, generally 60 to 80 years, depending on tree and site factors (USFWS 2003). Old-growth pines are relatively rare throughout the south and remnants (both single trees and stands) within today's forests are critically important habitat (USFWS 2003). Property Owner properties that must be surveyed for RCW cavity trees include:

1. Pine and pine-hardwood stands over 60 years of age.
2. Pine and pine-hardwood stands under 60 years of age containing scattered or clumped old-growth (over 60 years of age) pine trees.
3. Hardwood-pine over 60 years of age adjacent to pine and pine-hardwood stands over 30 years of age.
4. Pine stands containing sawtimber, including stands thought to be generally less than 60 years of age but containing scattered or clumped trees over 60 years of age.

1. RCW Surveys

Unless all Parties have previously agreed upon the Property Owner's baseline[3], a baseline survey will be conducted by the Property Owner within one (1) year prior to the SHMA to inventory all existing groups to establish baseline responsibilities. Surveys for RCWs will follow the protocol described below. The survey will only include RCWs, unless the Property Owner specifically requests other species to be surveyed. Accurate surveys are essential for determining baseline conditions. To limit undetected cavity trees and misjudged activity status, qualified personnel should be used to conduct baseline surveys. Baseline numbers are subject to approval by the Commission and the Service.

The Property Owner is responsible for any costs associated with surveys (baseline or supplemental). The results of the surveys done shall be the property of the Property Owner and shall be used only at the Property Owner's discretion. However, no SHMA will be signed until the baseline survey is reviewed and approved by the Commission. Supplemental surveys as specified in Section IV.C that are required prior to activities that may result in incidental take must be submitted to the Commission at least 60 days prior to commencing such activities.

The Property Owners shall identify how the baseline was determined, when and how the baseline surveys were conducted, or if the baseline was established based on already-known information or other factors.

Potential nesting habitat (pines greater than or equal to 60 years old) is surveyed by running line transects through stands and visually inspecting all medium –sized and large pines for evidence of cavity excavation by RCWs. Transects must be spaced so that all trees are inspected. Necessary spacing will vary with habitat structure and season from a maximum of 100 yards between transects in very open pine stands to 50 yards or less in areas with dense midstory. Transects are run north-south, because many cavity entrances are oriented in a westerly direction (USFWS 2003).

When cavity trees are found, their location is recorded in the field using a Global Positioning System unit, aerial photograph, and/or field map. Activity status, cavity stage (start, advanced start, or complete cavity), and any entrance enlargement are assessed and recorded at this time. If cavity trees are found, more intense surveying within 1500 feet of each cavity tree is conducted to locate all cavity trees in the area. Cavity trees are later assigned into clusters based on observations of RCWs as described below.

Property Owners that wish to differentiate the number of active clusters in their baseline into the number of potential breeding groups and the number of solitary male groups will be required to complete group checks as described in the Recovery Plan (USFWS 2003). To perform group checks, trained and qualified personnel must track or "follow" each group for a half an hour to an

3 Property Owners that agree to implement management activities to enhance RCW populations or territories on their property prior to the availability of this SHMA may establish a baseline with the approval of the Commission and the Service. The Property Owner must receive concurrence with the baseline assessment from the Commission and the Service. However, concurrence with the baseline assessment in no way guarantees participation or acceptance in the Agreement.

hour, immediately after the birds exit their cavities in the morning, to determine group size. Group size is determined by observation of bird behavior and groups are classified as: a) two or more birds, b) a solitary bird, or c) no birds. Groups of two or more birds that remain together and peacefully interact are assumed to represent potential breeding groups.

The Commission and the Service will ensure that Property Owners accurately classify RCW groups. Groups roosting extra-territorially in clusters occupied by one or more residents, captured clusters, and territorial conflicts can confuse the observer and result in erroneous group classification. If any doubt as to group membership exists, the Commission will require the "follow" (described above) to be repeated and/or the "follow" time to be increased until all doubt as to the group membership is removed. Two observers may be necessary if two clusters are located very close together or if cavity trees within a cluster are spread over a large area.

Group checks are valid only if implemented during the breeding season. Groups of two or more birds at other times of the year may or may not represent potential breeding groups. The group check method is labor intensive (one group per observer per day at best) and complete population censuses are possible only in small populations or with multiple observers. Property Owners unwilling or unable to perform group checks will assume each active cluster is occupied by a potential breeding group for their baseline responsibility.

2. Baseline Responsibilities

The baseline responsibilities of the Property Owner are to provide all the overstory necessary to maintain the cavity trees and the foraging area for all RCW groups discovered by a baseline survey of the Enrolled Property[4]. Baseline responsibilities may include providing foraging areas for known groups on neighboring lands as described below in Section IV(F). **If no groups are discovered during the baseline survey and there are no known groups on neighboring lands, there are no baseline responsibilities.**

Specifically, the Property Owner's baseline responsibilities as derived from the Service's guidelines for managed stability set forth in Appendix 5 of the RCW Recovery Plan, 2nd Revision[5] (USFWS 2003), are to:

1. Mark all trees containing complete and incomplete cavities (i.e. cavity trees) in baseline clusters and take reasonable[6] precautions when conducting silvicultural, prescribed burning[7],

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4 The Property Owner will provide a complete description of the agreed upon baseline inventory. This description will include; when and how the baseline surveys were conducted, maps of the survey area, and location, cavity stage and activity status of all RCW cavity trees, if applicable.

5 The Commission and the Service will not require the Property Owner to abide by more strict habitat requirements for baseline groups of RCWs should the Service revise the guidelines for managing RCWs on private lands. Should the habitat requirements be reduced, this agreement will be modified to reflect the new guidelines.

6 Reasonable precautions would include, but are not limited to, directional felling away from cavity trees, logging during dry conditions to minimize soil compaction, careful log removal to avoid scraping or otherwise damaging residual trees, careful prescribed burning to minimize the risk of igniting cavity trees, avoidance of skidding near cavity trees, and avoidance of fire line plowing near cavity trees.

7 Precautions should be taken to minimize the risk of igniting cavity trees—examples include raking litter away from the base of cavity trees (10-20 feet depending on fuel load), wetting cavity trees or limiting burning to high moisture conditions.

or other activities within baseline clusters to protect cavity trees that are part of the baseline from injury or timber harvest. Any active cavities damaged by prescribed fire will be immediately replaced within the cluster boundaries by installing two artificial cavities (inserts or drilled). The Commission and the Service must review on a case-by-case basis the removal of any active or inactive cavity tree. In the event that the location of any active cavity tree(s) changes over time such that one or more cavity tree(s) becomes established within a construction area, the Property Owner may be allowed to remove those cavity trees outside of the nesting season (August-March). For each active cavity tree removed in the construction area, a minimum of two artificial cavities (drilled or inserts) must be installed elsewhere on the lot (at least 200 feet from the building site) four months prior to initiation of construction.

2. Manage each cluster as a timber stand comprising at least ten contiguous acres, if currently present on the Property Owner's land, with the purpose of retaining potential cavity trees (pines greater than 60 years of age). If ten contiguous acres are not currently present on the Property Owner's land, the Property Owner will retain all of the potential cavity trees within the cluster.
3. Maintain cluster boundaries of at least 200 feet from cavity trees.
4. Provide at least 50 feet^2 of basal area per acre in pine trees $\geq$10 inches in diameter at breast height (DBH) in active baseline clusters if the trees are currently present on the Property Owner's land or when they become available. On property where south Florida slash pine is the predominant pine species, basal area requirements are for pine trees $\geq$8 inches DBH. Small areas of regenerating trees that exceed 70 feet^2 of basal area per acre may be retained within a cluster provided RCW cavity tree entrances are not obstructed by the regenerating trees.
5. Maintain the midstory vegetation within RCW clusters in an "open" condition by prescribed burning, precommercial thinning, or other means by ensuring that 1) no hardwood midstory exists or if a hardwood midstory is present it is sparse and less than 2.1 m (7 feet.) in height and 2) canopy hardwoods are less than 10 percent of the number of canopy trees.
6. Provide at least 3000 feet^2 of basal area in pine trees (including the trees in the cluster) $\geq$10 inches DBH ($\geq$8 inches DBH in S. Florida slash pine) for foraging habitat on a minimum of 75 acres[8], if the trees are currently present on the Property Owner's land. If 3000 feet^2 of basal area of pine trees $\geq$10 inches DBH is not available for foraging habitat ($\geq$8 inches DBH in S. Florida slash pine), the Property Owner will maintain the existing pines inside the foraging area and provide the 3000 feet^2 of basal area of pine trees $\geq$10 inches DBH as soon as possible.
7. Conduct timber harvesting within the active baseline clusters only between August 1 and March 31, or as otherwise approved by the Commission. If there is a need to harvest timber within an active cluster outside this window of time, the Property Owner should notify the Commission 60 days in advance of the desired starting harvest date. The Commission will determine the stage of nesting activity within the cluster and advise the Property Owner of appropriate precautions. Timber harvesting cannot be permitted during nest initiation, while the female is in the process of laying eggs, while the nesting cavity contains viable eggs or young, or until the fledglings are capable of sustained flight. Possible exceptions to this are

8 Foraging habitat for each RCW group must be contiguous to the cluster stand with no gaps between stands exceeding 200 feet.

emergency harvest as described in Section IV.E., below, due to insect infestations, natural disasters, or other disasters.

8. Cannot construct any new roads and/or utility right of ways within active baseline clusters.
9. Provide reasonable protection for RCW groups from human activities that could incidentally cause injury or death in active baseline clusters.
10. Provide the Commission and the Service the opportunity to review proposed timber sales at least 60 days in advance of the desired starting harvest date to ensure that the baseline responsibilities discussed above in this section will be met. As part of the review, documentation of before and after harvest foraging availability for each RCW baseline group will be provided by the Property Owner to the Commission.

3. Baseline Responsibility for Foraging Habitat for Clusters on Neighboring Lands

Where a RCW group exists within one-half-mile of the Enrolled property and the Property Owner has the responsibility for maintaining a portion of the foraging habitat for that RCW cluster, as required by the RCW Recovery Plan, 2nd Revision, that portion of the foraging habitat will be incorporated into the Property Owner's baseline. The map, which is Attachment C to this SHMA, shall identify known non-Enrolled property RCW groups for which the Property Owner agrees to provide habitat as part of the Property Owner's baseline responsibilities. The Evaluation Form (Attachment A) of this document sets forth the Property Owner's responsibilities with respect to providing foraging habitat for such non-Enrolled property groups.

4. Baseline Adjustment

a. Loss of Baseline Groups

In spite of management and protection efforts, there may be circumstances, through no fault of the Property Owner, where groups that gave rise to the Property Owner's baseline responsibilities cease to exist on the Enrolled property. If RCW baseline groups cease to exist on the Enrolled property, the Enrolled property Owner **will not** be held accountable for the loss of the RCW baseline groups provided the following have occurred:

1. The RCW groups have remained absent from the Enrolled property for a minimum of five years;
2. The RCW cluster remains inactive for a minimum of five years; and
3. The loss of the RCW baseline group occurred through no fault of the Property Owner and in spite of total compliance with the SHMA.

A Property Owner's RCW baseline can be reduced for each RCW group that meets all of the three criteria listed above. The Property Owner must request a baseline reduction from the Commission in writing. The Property Owner must allow the Commission and/or the Service access to the Enrolled property to conduct an investigation, if the Commission and/or the Service so choose. If the Commission and/or the Service determine the group is eligible for removal from the baseline, the Commission will modify the SHMA and Certificate to reflect the change in baseline responsibilities. The Enrolled property will not obtain a reduction in baseline if a RCW group moves to a new cluster on the same Enrolled property. The Enrolled property can

get a reduction if a cluster moves onto neighboring property as long as the criteria above are followed. A Property Owner may be required, however, to provide foraging habitat if the owner on the neighboring property is unable or unwilling to do so.

b. Shifting Baseline

RCW baseline responsibilities will be associated with specific active clusters in existence at the time the Property Owner enters into the SHMA. Property Owners may, with the Commission's consent, shift their baseline responsibilities to a new active cluster that has formed on their property subsequent to the signing of the SHMA. When a new active cluster is formed on an Enrolled property, it may replace any other cluster harboring a group of similar or lesser demographic status (i.e., potential breeding pair can replace solitary bird or same sex groups) that was within the Property Owner's original RCW baseline responsibility as long as the following conditions are met:

1. The Property Owner is in total compliance with the SHMA.
2. The Property Owner has maintained his/her baseline as specified in the SHMA.
3. The Property Owner has replaced:
    a. A baseline potential breeding group with another potential breeding group, or
    b. A baseline solitary bird group is replaced with either a potential breeding group or another solitary bird group of the same sex.
4. The Property Owner has replaced a baseline potential breeding group with an above-baseline potential breeding group[9] that has been in existence for at least six months, including a breeding season (April to July), prior to the replacement.
5. The Property Owner has replaced baseline clusters with above-baseline clusters and will provide suitable nesting and foraging habitat as defined in the guidelines for managed stability set forth in Appendix 5 of the RCW Recovery Plan, 2nd Revision (found in this document in Sections IV.B.2. Baseline Responsibilities and IV.B.5. Management Activities). If other groups are present within the Enrolled property, replaced groups are located so that they can physically contact the other groups that are present on the Enrolled property.
6. The Property Owner has replaced solitary bird groups prior to replacing potential breeding groups when possible.
7. The Property Owner will be required to maintain the entire foraging and nesting habitat needed for the new group.

The Commission must concur in writing prior to a Property Owner's shifting his or her RCW baseline requirements from one group to another. The Commission's approval is required because of those circumstances in which maintenance of the original cluster is necessary in order to maintain contiguity of habitat, dispersal habitat, or other desirable features of the landscape or population. Where possible, flexibility will be used by the Commission with concurrence from the Service. Upon the Commission's concurrence to transfer RCW baseline responsibilities, sufficient documentation (i.e. maps reflecting change) of the shift in baseline will be placed in the Enrolled property's file with the Commission.

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9 If the baseline is defined as the number of active clusters, supplemental monitoring will be required to establish group composition.

5. Management Activities for Baseline RCW Groups

The Property Owner agrees to undertake activities to maintain and enhance the habitat (foraging and nesting habitat) of all active baseline groups indicated on the map labeled Attachment B and described in the Evaluation Form (Attachment A).

1. Manage active baseline clusters as follows:
    a. Overstory stocking in a cluster will be maintained between 50 and 80 feet^2 of pine basal area per acre (≥10 inches DBH; ≥8 inches DBH in S. Florida slash pine) if the trees are currently present or when they become available. Small areas of regeneration may occur within a cluster provided cavity entrances are not obstructed.
    b. Hardwood basal area in a cluster will be maintained below 10 feet^2 of basal area per acre. All hardwoods within 50 feet of cavity trees will be removed.
    c. Maintain a minimum average spacing of 25 feet between trees within the cluster, except where closer spacing already exists.
    d. No hardwood midstory or if a hardwood midstory is present, it is sparse and less than 7 feet in height[10].
2. Maintain at least the minimum foraging habitat of 3000 feet^2 of basal area in pine trees that are at least 30 years old with a DBH ≥ 10 inches (≥8 inches DBH in S. Florida slash pine) on a minimum of 75 acres for each active baseline cluster as follows:
    a. Overstory stocking for foraging habitat will be maintained between 40 feet^2 and 80 feet^2 of basal area per acre. Stands managed on an uneven-aged basis may have patches of regeneration or residual stands of older trees higher than 80 feet^2 of basal area per acre.
    b. Average pine basal area of pines < 10 inches (<8 inches in S. Florida slash pine) will be maintained below 20 feet^2 per acre.
    c. Total stand basal area, including overstory hardwoods, will not exceed 80 feet^2 per acre.
    d. No hardwood midstory or if a hardwood midstory is present, it is sparse and less than 7 feet in height.
3. Allow the Commission and/or the Service, if it so chooses, to translocate surplus subadult RCWs off the Enrolled property to augment other populations if such removal of subadults will not affect the Property Owner's baseline responsibilities.

C. Incidental Take of Above-baseline Groups and/or Foraging and Nesting Habitat

The participating Property Owner under a SHMA and Certificate will be allowed to develop, harvest trees upon, or make any other lawful use of his/her property, even if such use results in the incidental take of RCWs or RCW habitat provided all of the following qualifications are met:

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10 The RCW Recovery Plan's guidance on hardwood midstory given in the RCW recovery plan refers to the hardwood midstory as a whole, which allows some flexibility for individuals so that midstory may exceed 7 feet in height. The term "sparse" is used to describe the midstory of desirable RCW foraging habitat. A more subjective habitat assessment (i.e., sparse) allows land managers flexibility to account for the variability found within most forested systems. Additionally, prescribed burning and other activities to reduce brush and understory competition will be required no more than once every other year after understory is under control.

1. The Enrolled property Owner must be in total compliance with the SHMA;
2. The Enrolled property Owner must have maintained his or her RCW baseline as specified in the SHMA;
3. RCWs may not be shot, captured, or otherwise directly taken;
4. The take is incidental to otherwise lawful activities;
5. The Enrolled property Owner must conduct a supplemental survey immediately (no more than 180 days but no less than 60 days) prior to any activity, which may result in the incidental taking of above-baseline RCWs or RCW habitat and provide the Commission with the results of the survey 60 days prior to the commencing of this activity. Only the specific area that will be affected requires this supplemental RCW survey. No surveys will be required within one year of the baseline survey, unless recruitment clusters have been established in the area that will be affected by this activity;
6. Proposed activities that could result in the incidental take of RCWs must take place only during the non-reproductive season (August 1st through March 31st of following year) unless otherwise authorized by the Commission; and
7. The Enrolled property Owner shall not undertake any activity that could result in incidental take of RCWs until the Property Owner has provided the Commission with at least 60 days written notice of the Property Owner's intention to conduct such activity to allow the Commission, the Service and/or their agents the opportunity to translocate the affected RCW group(s) to a suitable recipient site.

Notwithstanding the 60-day notice requirement, the Property Owner should provide as much notification to the Commission as possible. Upon receipt of the requested notice, the Commission, the Service and/or their agents shall give a consolidated effort to respond to the Property Owner's notice. However, should the Commission, the Service and/or their agents fail to respond to the Property Owner within the 60-day time frame, the Property Owner may proceed with the proposed activity.

Activities that would or could result in take include, but are not limited to: any activities occurring within a cluster during the RCW breeding season, any timber harvesting within a cluster, any timber harvesting within foraging habitat that reduces basal area in pine trees $\geq$10 inches DBH below 3000 feet^2 (on property where south Florida slash pine is the predominant pine species, basal area requirements are for pine trees $\geq$8 inches DBH), application of forest chemicals within a cluster, new road construction within or near a cluster, and any new building construction within or near a cluster. The Property Owner agrees to contact the Commission and/or the Service to determine if a proposed activity may result in take of RCWs. Prescribed burning and installation of artificial cavities is allowed during the nesting season as necessary for the continued survival of the group and will not require notification.

D. Monitoring and Reporting

For the duration of the SHMA the Property Owner agrees to provide an annual monitoring report by January 15 of each year to the Commission (Attachment E) that describes the general monitoring process, the implementation and results of the agreed upon management activities,

and the occurrence of any incidental take of RCWs. Annual monitoring reports will also document any changes in the condition of RCWs and/or their habitat.
Specifically the Property Owner agrees to:

1. Identify the monitoring schedule as follows:
    a. Submit monitoring reports and denote whether data is provided from the Property Owner, professional scientist or other specific individual or entity.
    b. Identify when the agreed upon management activities were or will be implemented and when the results were or will be evaluated.
2. Describe the implementation of the management activities as follows:
    a. Identify which management activities the Property Owner agreed to provide for the annual monitoring period.
    b. Identify which management activities were provided during the annual monitoring period.
    c. Discuss any problems with the implementation of the management activities during the monitoring period.
3. Describe any incidental take, which occurred during the reporting period including:
    a. A description of the land-use activities that may result in incidental take of RCWs.
    b. A discussion of the actual or potential incidental take expected for above-baseline RCWs and/or habitat.
    c. A description of the activities that returned or would be expected to return the Enrolled property to baseline conditions.
4. Describe any new or above-baseline clusters discovered during the reporting period including:
    a. A description of the management activities associated with the new or above-baseline clusters.
    b. A map with the new cluster's location.
    c. A description of the cluster (i.e. total number of cavities, age, species, and DBH of cavity trees).

E. Emergency Salvage Harvest Situations

Emergency situations, such as natural disasters or insect infestations, may require that emergency (salvage) harvesting of timber on the Enrolled property begin with less than the 60-day notice set forth in the preceding section IV(C). For above-baseline groups, the Property Owner shall notify the Commission by written certified notice at least three days prior to conducting an emergency harvest. The Commission, the Service, and/or their respective agents shall have this three-day time period to translocate above-baseline impacted birds. The Property Owner shall not initiate such harvest until three days after the Commission has received notice.

For emergency situations involving baseline groups/clusters, the Property Owner will notify the Commission and/or the Service before emergency (salvage) harvesting begins. The Commission and the Service will evaluate each case on an individual basis, and both the Commission and the Service must concur on the appropriate management actions

F. Neighboring Property Owners' Responsibilities

The Commission and the Service recognize the implications to neighboring property owners of the successful implementation of management actions on enrolled lands. Further, the Commission and the Service recognize and acknowledge that some Property Owners may be reluctant to initiate management actions that may have land, water, and/or natural resource use implications to neighboring Property Owners. The implications to neighboring Property Owners with non-enrolled lands will be assessed on a case-by-case basis. For example, when the Commission and the Service believe that occupation of non-enrolled neighboring lands is likely, the Commission will make every effort to include the neighboring Property Owner in the FL RCW SHA through an SHMA and Certificate, thus extending the Safe Harbor assurances.

The Policy allows the Service to use the maximum flexibility allowed under the ESA in addressing neighboring properties not covered under Safe Harbor Agreements and their associated SHMAs. The Policy also allows flexibility with regard to associated incidental take authorizations, including, but not limited to, granting of incidental take to neighboring Property Owners where occupation of their lands is expected as a result of an SHMA. However, this does not mean that neighboring Property Owners fitting this scenario will be automatically given incidental take authorization if listed species occupation occurs.

G. Successors in Interest

Property Owners who enter into SHMAs with the Commission shall have the right to transfer their rights and obligations under the SHMA to non-federal entities in conjunction with the conveyance of all or part of the Enrolled property and within the limits set forth in this section. A Property Owner is required to notify the Commission by written certified letter at least 30 days in advance of any conveyance of the Enrolled property whether in whole or part or as soon as practicable, but prior to such conveyance.

If the Enrolled property Owner conveys ownership of all of the Enrolled property, the Commission and the Service will regard the new Property Owner as having the same rights and obligations as the previously Enrolled property Owner under the SHMA and the associated Certificate, if the new property owner agrees in writing to accept the transfer of SHMA rights and responsibilities and signs an amendment to the SHMA making the new property owner a party to the original SHMA within 90 days of the conveyance. If the new Property Owner attempts to do so more than after 90 days after the conveyance, the Commission and the Service may allow such a transfer in their sole discretion. Upon becoming a party to the original SHMA, actions taken by the new property owner that result in the incidental take of above-baseline RCW group(s) would be authorized if the new Property Owner maintains the terms and conditions of the original SHMA and the associated Certificate. If the new Property Owner does not become a party to the SHMA, the new Property Owner would neither incur responsibilities under the Agreement nor receive any safe harbor assurances relative to this Agreement. If a new Property Owner agrees to become a party to the original SHMA and associated Certificate, the new Property Owner will only be bound to undertake the original baseline responsibilities.

If the Enrolled property Owner conveys ownership of a portion of the Enrolled property, the Enrolled property Owner may continue to operate under the existing SHMA; however, the SHMA must be amended to redefine the Enrolled property and the number of active clusters on the newly defined Enrolled property. If the new Property Owner enters into a SHMA within 90 days of the conveyance of the portion of the Enrolled property, that SHMA shall limit baseline responsibilities to those for which there were baseline responsibilities under the previous SHMA, thus, effectively transferring the baseline for the conveyed portion of the Enrolled property. If the new Property Owner attempts to enter into a SHMA more than after 90 days after the conveyance, the Commission and the Service may allow such a transfer in their sole discretion.

The Property Owner bears sole responsibility to inform their successor(s) in interest or potential buyers about enrollment of the listed property in the SHMA. However, after any notification of change in ownership of the Enrolled property, the Commission, at its discretion, may attempt to contact the new or prospective Property Owner to explain the baseline responsibilities applicable to the property and determine whether the new Property Owner will become a party to the original SHMA, enter a new SHMA, or cease enrollment. If the new Property Owner agrees to the terms of the SHMA in writing, the baseline will remain the same in the new SHMA.

H. Regulatory Assurances

The Service and the Commission shall, through the Florida RCW SHA and its associated Permit, grant regulatory assurances to Property Owners in good standings through Certificates of Inclusion. These assurances are as follows:

> "If additional conservation and mitigation measures are deemed necessary, the Service may require additional measures of the enrolled landowner, but only if such measures are limited to modifications within conserved habitat areas, if any, for the affected species and maintain the original terms of the SHMA to the maximum extent possible. Additional conservation and mitigation measures will not involve the commitment of additional land, water or financial compensation or additional restrictions on the use of land, water or other natural resources otherwise available for development or use under the original terms of the SHMA without the consent of the Enrolled property Owner.
>
> These assurances allow the Enrolled property Owner to alter or modify the Enrolled property, even if such alteration or modification results in the incidental take of the RCW to such an extent that the take returns the RCW to the originally agreed upon baseline conditions. These assurances may apply to the entire Enrolled property or to portions of the Enrolled property as designated or otherwise specified in the SHMA. These assurances are also contingent on the Enrolled property Owner's compliance with the obligations of the SHMA. Further, the assurances apply only to this particular SHMA, only if the SHMA is being properly implemented, and only with respect to species covered by the SHMA."

I. Other Federally-listed Species

Although the Commission and the Service regard it as unlikely, the possibility exists that other listed, proposed, or candidate species, or species of concern may occur in the future on the

Enrolled property as a direct result of the management actions specified in the Evaluation Form (Attachment A). If that occurs and the Property Owner requests, the Commission and the Service may agree to amend the FL RCW SHA and associated SHMAs to cover additional species and to establish appropriate baseline conditions for such other species.

Surveys for other federally listed species will not be required of SHMA participants. However, according to Section 9 of the ESA, Property Owners will be subject to restrictions against **"take"** of any federally listed animal not covered by their Certificate. The term "take" as defined by the ESA, means to harass, harm, pursue, hunt, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Federally listed plants are considered legal property of the Property Owner and according to the Policy, are not subject to "take" restrictions. If other federally listed species are known to exist on the enrolling property, then the Commission and the Service will consult with and assist the Property Owner in tailoring his/her management actions to avoid take and to minimize any disturbance of these species.

The Enrolled property Owner shall notify the Commission in advance of any activity covered by the SHMA that may potentially impact any federally-listed wildlife species other than the RCW in order to be advised of ways to avoid incidental take of that species and/or to obtain an incidental take permit or an incidental take statement to cover the potential take of that species.

The Enrolled property Owner shall notify the Commission at least 60 days in advance of any activity that may result in the destruction of any federally-listed, proposed, or candidate plant species *known to occur* on the Enrolled property and shall provide the Commission with an opportunity to remove the affected plants, where appropriate to do so, to sites that are outside of the Enrolled property or, with the Property Owner's written permission, to other sites within the Enrolled property.

J. Obtaining Other Necessary State and Federal Permits

The Property Owner agrees that he/she and/or his/her agent must obtain any necessary state or federal permits for activities such as capturing, banding, reintroducing, etc. of RCW(s), if such is planned. The Property Owner agrees to provide a list of the names of permit holder(s) for these activities and the corresponding permit number(s) to the Commission prior to the Property Owner engaging in any such activities on the Enrolled property.

V. SHMA Management

A. Termination of SHMA

1. By the Property Owner

The Property Owner or its enrolled successor in interest must give the Commission 60 days written notice, by certified letter, of his/her intent to terminate this SHMA and must give the Commission and/or the Service an opportunity to relocate individuals of the covered species within 30 days of such written notice. As provided for in Part 12 of the Policy, a Property Owner may terminate a SHMA prior to the expiration date of the SHMA for circumstances

beyond the Property Owner's control. Provided that the baseline conditions have been maintained, the Property Owner, subject to the previously mentioned notice requirement and opportunity to relocate individuals of the covered species, may return the Enrolled property to baseline conditions, even if the expected net conservation benefits have not been realized. If the Property Owner is unable to continue implementation of the management activities, plans and stipulations of this SHMA, whether due to catastrophic destruction of the species population numbers or habitat or due to unforeseen hardship, the Property Owner must relinquish his/her Certificate of Inclusion to the Commission. Species management on the Property Owner's property would return to its status prior to the signing of this SHMA (i.e., original baseline). If a Property Owner has not returned his/her property to baseline conditions at the time of termination of his/her SHMA, and the number of RCW groups has increased, the additional groups will be protected by the take prohibitions of Section 9 of the ESA because the Property Owner's take authorization (via the Certificate of Inclusion) will have become invalid upon termination of the SHMA. If the Property Owner terminates an SHMA for any other reason, the Certificate of Inclusion shall immediately cease to be in effect.

2. By the Commission and the Service

The Commission has the right to terminate this SHMA where the Property Owner is found to be in non-compliance with the terms and conditions of this SHMA. If the Property Owner is found to be in non-compliance with this SHMA, the Commission will issue a written letter of non-compliance to the Property Owner. The Property Owner shall have 60 days from receipt of the letter to rectify the non-compliance issue(s). If the issue(s) is not resolved to the satisfaction of the Commission by the end of the 60-day period, the Commission shall terminate this SHMA and the associated Certificate, which contain the regulatory assurances.

Should the Property Owner fail to comply with the terms of this SHMA, and the Commission is unwilling and/or unable to terminate this SHMA, the Service reserves the right to utilize the provisions of the previous paragraph of this section at its discretion or to review and/or terminate this SHMA.

3. By Termination of the Florida RCW SHA

Should the Service or the Commission terminate the Florida RCW SHA, this SHMA shall also terminate concurrently with the effective date on which the Florida RCW SHA and associated Permit are terminated.

B. Access to Enrolled property

The Property Owner shall grant access to the Commission at least annually to verify that the conditions of the SHMA are being upheld, to assess the condition of the baseline groups and any new RCW group(s) that have been discovered, and to measure, monitor, and tag/band individual RCWs as appropriate. The Commission shall give the Property Owner reasonable notice (generally 30 days) of these visits and may be accompanied by the Property Owner or an agent of the Property Owner. The scope of the visit will be agreed to in advance. The Property Owner

shall not unreasonably withhold access to enter upon his/her property and agrees to grant the Commission and/or the Service access with reasonable notification.

C. Financial Assistance

If funds become available for managing RCWs on private land, the Commission shall seek to give the Property Owner priority access to those funds to help offset the costs of undertaking management activities. Any financial assistance given to the Property Owner must be used for current or future activities and **not** applied to past activities. Activities including, but not limited to, baseline surveys, midstory control, pre-commercial thinning, prescribed burning, artificial cavity installation, cavity maintenance and demographic monitoring can be considered for financial assistance.

Section VI. Attachments to the Agreement

The following attachments are hereby incorporated and made part of this Agreement:

Attachment A – Evaluation Form Outlining Baseline Responsibilities, Conservation Measures and Conservation Benefits

Attachment B – Map of the Property Owner's Enrolled property and the Enrolled property's Legal Description (include RCW habitat and cluster locations)

Attachment C – Map of RCW Clusters within 0.5 miles of the Enrolled property (if any exist)

Attachment D – Certificate of Inclusion

Attachment E – Annual Report of Activities for Safe Harbor Management Agreement (to be added after 1 year of enrollment of Property Owner through to expiration/termination date)

RCW Clusters Attachment – Form for Providing Information on Multiple RCW Clusters

VII. Signatures and Information

Administrator:
Tim Breault
Florida Fish and Wildlife Conservation Commission
620 South Meridian St.
Tallahassee, Florida 32399-1600
Phone: (850) 488-4676

Signature: Timothy A Breault Date: 11 March 2009

Property Owner:

Name: Conservation Collier Program Collier County Government

Mailing Address: 3301 Tamiami Trail East, Bldg. W
Naples, FL 34112

Physical Address: Same as above

Telephone Number: (239) 252-2495 or (239) 252-2961

Cellular Phone Number: (239) 289-3310

E-Mail Address: christalsegura@colliergov.net or ConservationCollier@colliergov.ne

ATTEST:
DWIGHT E. BROCK, CLERK
Attest as to Chairman's signature only.

Approval as to form and legal Sufficiency:

J B White
Jennifer B. White
Assistant County Attorney

BOARD OF COUNTY COMMISSIONERS OF COLLIER COUNTY, FLORIDA

By: Donna Fiala
DONNA FIALA, CHAIRMAN

VIII. Literature Cited

U.S. Fish and Wildlife Service. 2003. Red-cockaded woodpecker (*Picoides borealis*) recovery plan: Second Revision. U.S. Fish and Wildlife Service, Southeast Region, Atlanta, Georgia. 296 pp.

VII. Signatures and Information

Administrator:
Tim Breault
Florida Fish and Wildlife Conservation Commission
620 South Meridian St.
Tallahassee, Florida 32399-1600
Phone: (850) 488-4676

Signature: Timothy A Breault Date: 11 March 2009

Property Owner:

Name: Conservation Collier Program Collier County Government

Mailing Address: 3301 Tamiami Trail East, Bldg W
Naples, FL 34112

Physical Address: Same as above

Telephone Number: (239) 252-2495 or (239) 252-2961

Cellular Phone Number: (239) 289-3310

E-Mail Address: christalsegura@colliergov.net or ConservationCollier@colliergov.ne

ATTEST:
DWIGHT E. BROCK, CLERK
Attest as to Chairman's signature only

Approval as to form and legal Sufficiency:

Jennifer B. White
Assistant County Attorney

BOARD OF COUNTY COMMISSIONERS
OF COLLIER COUNTY, FLORIDA

By: ______________
DONNA FIALA, CHAIRMAN

ATTACHMENT A
TO
FLORIDA SAFE HARBOR MANAGEMENT AGREEMENT
NO. 2005.001
Evaluation Form Outlining Baseline Responsibilities, Conservation Measures and Conservation Benefits

---

I. Background Information

A. Date of evaluation: 10/28/2008

B. Tract Name: Nancy Payton Preserve

C. Tract Location:

1. County: Collier
2. Tax Map #: 61730440005
3. Latitude: 26° 11' 52" N; Longitude: 81° 40' 2" W

D. Tract Owners

Name: Collier County Conservation Collier Program
Address: 3301 Tamiami Trail E, Naples, FL, 34112
Phone #: 239-252-2961; Fax #: 239-793-3795

E. Contact Person: Christal Segura

(Owner__; Employee__; Consultant__; Manager X)
Address: Conservation Collier – Facilities Bldg W
3301 Tamiami Trail E, Naples, FL, 34112
Phone #: 239-252-2495; Fax #: 239-793-3795

II. Baseline Assessment

1. Tract Information

A. Total tract acreage: 69

B. Total number of acres enrolled in Safe Harbor: 69

C. Number of active clusters for which Property Owner has 100% responsibility: 0

D. Number of active clusters for which Property Owner has partial responsibility: 0

E. Number of active clusters for which Property Owner has 100% foraging habitat responsibility: 0 ; Total acreage involved: 0

F. Number of active clusters for which Property Owner has partial foraging habitat responsibility: 1 ; Total acreage involved: 69

G. For each RCW cluster, provide the following information (see separate "RCW Clusters" attachment for providing information on more than 1 cluster):

Cluster #____
Total basal area of pines 10" DBH or greater (≥8 inches DBH in S. Florida slash pine) provided for forage _____ sq. ft.
Number of RCWs present _____
Sex & age, if known _____ _____ _____ _____ _____
Total Number of cavity trees _____
Number of active completed cavities _____
Number of inactive, but suitable, cavities _____
Number of active starts _____
Number of inactive starts _____

H. Identify how the baseline was determined, when and how the baseline surveys were conducted, and whether the baseline was established based on already-known information or other factors: On 10/28/2008, Roy DeLotelle, Collier County staff and FWC Safe Harbor Coordinator Kristina Jackson walked the site looking for RCW cavities. No cavities and no RCWs were seen that day. In recent times, multiple site visits by Collier County staff have been conducted where RCWs were observed. It is believed that local RCWs depend on this land for foraging.

I. Individual(s) who conducted RCW cavity tree surveys:
Primary Contact: Roy DeLotelle
Phone Number: 352-871-3105
Additional Names: Marilyn Knight, US Fish & Wildlife Service
Christal Segura – Collier County

J. Individual(s) who calculated foraging habitat analysis:
Primary Contact: n/a
Phone Number: _____
Additional Names: _____
_____

K. Based on the total tract size, current number of active clusters and the associated cluster and foraging habitat, current and/or expected future forest conditions, and the Property Owner's long-term land management objectives, are there opportunities to increase the RCW population on the tract? _X_Yes ____No. If yes and the tract is large enough to support at least 10 active clusters, is the Property Owner interested in considering serving as a mitigation bank? ____Yes ____No.

2. Neighboring Tract Information –

List all known RCW populations by tract/owner name, # of active clusters, and distance (to the closest mile) within 10 miles of Property Owner's property
(1) population: Hideout Golf Course, Folio # 61731640008
Size: 1 cavity tree ; distance: about 500 feet east of property line
(2) population: James Cowan, Folio # 61731680000
Size: 2 cavity trees; distance: 584 feet and 760 feet east of property line.
(3) population: Antonio Faga TR 00332360007;
size: 5 cavities; distance: 2 miles
(4) population: Roy S. Claudio 00338400000;
size: 1 cavity; distance: 1.9 miles
(5) population: Vincent Borrero 00339000001;
size: 1 cavity; distance: 2.3 miles
(6) population: Charlie & Margaret Lunt 00337880003;
size: 1 cavity ; distance: 2.4 miles
(7) population: Lisa Loiacano 00338720007;
size: 3 cavities; distance: 2.6 miles
(8) population: Francis & Mary Hussey, Jr. 00342040003;
size: 5 cavities; distance: _____

III. **Conservation Measures to be Implemented** (as program funding allows)
Note: Check all that apply and fill in the blanks.

Prescribed Fire

___ Property Owner agrees to conduct prescribed fires on a regular or recurring basis in occupied RCW habitat that will be maintained or enhanced by the prescribed fire. Property Owner will prescribe burn _____ (acres or %) of the enrolled property every _____ year(s).

_X_ Property Owner agrees to conduct prescribed fires on a regular or recurring basis in potentially suitable nesting or foraging habitat and the use of prescribed fire will restore or enhance the areas as RCW habitat. Property Owner will prescribe burn _at least 64 acres or 93%_ (acres or %) of the enrolled property every _3-5_ year(s).

_X_ Property Owner agrees to conduct prescribed fires on a regular or recurring basis in unsuitable habitat, but, in this situation, also agrees to conduct the prescribed fires for a period sufficient for the habitat to either become occupied by RCWs or to become potentially suitable nesting or foraging habitat. Property Owner will prescribe burn at least 64 acres or 93%_ (acres or %) of the enrolled property every _3-5_ year(s).

Forest Management

___ Property Owner agrees to implement timber management practices in occupied RCW habitat that are compatible with RCW habitat requirements on the enrolled property.
Silvicultural system(s) used within RCW clusters: _____
Silvicultural system(s) used in foraging habitat: _____

_X_ Property Owner agrees to implement forest management practices that are compatible with RCW nesting and/or foraging habitat requirements in unoccupied but potentially suitable habitat.
Practices will include the following:

_____ Increase rotation age from ____ years to ____ years in potential nesting habitat over at least 10 contiguous acres.

_____ Increase rotation age from ____ years to ____ years in potential foraging habitat over at least 75 contiguous acres.

__X__ Plant appropriate native pine (typically longleaf or **south Florida slash**) and maintain those pines for at least 40 years.

_____ Thin overstocked (greater than 80ft^2 basal area/acre) stands; acres will be thinned to between 40 and 70 ft^2 pine basal area.

_X_ Property Owner agrees to implement or maintain a forest management strategy or plan that restores habitat to a condition that will, in the future, provide potentially suitable nesting or foraging habitat.
Practices will include the following:

_____ Increase rotation age from ____ years to ____ years in potential nesting habitat over at least 10 contiguous acres.

_____ Increase rotation age from ____ years to ____ years in potential foraging habitat over at least 75 contiguous acres.

__X__ Plant appropriate native pine (typically longleaf or **south Florida slash**) and maintain those pines for at least 40 years.

_____ Thin overstocked (greater than 80ft^2 basal area/acre) stands; acres will be thinned to between 40 and 70 ft^2 pine basal area.

Hardwood Control

___ Property Owner agrees to reduce/control hardwood basal area and midstory vegetation in occupied habitat on the enrolled property using the following methods:

_____ Prescribed burning at a ___ to ___ year interval

_____ Chemical treatment;

List chemicals_____

_____ Mechanical treatment;

List methods_____

_X_ Property Owner agrees to reduce/control hardwood basal area and midstory vegetation in unoccupied but potentially suitable RCW habitat on the enrolled property using the following methods:

__X___Prescribed burning at a 3 to 5 year interval

_____ Chemical treatment;

List chemicals_____

__X__ Mechanical treatment;

List methods possibly a Posi-trac or Brown Tree Cutter for dense palmetto areas; hand removal of scattered sabal palms

_X_ Property Owner agrees to reduce/control hardwood basal area and midstory vegetation in habitat that is unsuitable for a period sufficient for the habitat to either become occupied by RCWs or to become potentially suitable nesting or foraging habitat using the following methods:

__X___ Prescribed burning at a 3 to 5 year interval

_____ Chemical treatment;

List chemicals_____

__X__ Mechanical treatment;

List methods_possibly a Brown Tree Cutter for dense palmetto areas; hand removal of scattered sabal palms

RCW Cavity Installation and Maintenance

___ Property Owner agrees to install artificial cavities in occupied RCW clusters on the enrolled property. Each active RCW cluster must have at least 4 complete cavities in suitable condition.

_____ cavities in _____ clusters

_____ insert cavities; _____ drilled cavities

___ Property Owner agrees to install cavity restrictors on enlarged cavities such that each cluster has a minimum of 4 complete cavities in suitable condition.

_____ restrictors in _____ clusters

_X_ Property Owner agrees to install and maintain artificial cavities at appropriate sites on the enrolled property in potentially suitable, unoccupied nesting habitat and at least four (4) complete cavities are installed per site.

RCW Population Management

___ Property Owner agrees to provide opportunity for the Commission, USFWS, or a third party to translocate subadults from other properties to the enrolled property. Translocations will involve the following:

_____ Potential Breeding Pair(s) (unrelated subadults)
_____ Single Male(s)
_____ Single Female(s)

___ Property Owner agrees to provide opportunity for the Commission, USFWS, or a third party to translocate subadults into habitat on the enrolled property that is occupied by a single (male or female) RCW. Translocations will involve the following:

_____ Potential Breeding Pair(s) (unrelated subadults)
_____ Single Male(s)
_____ Single Female(s)

___ Property Owner agrees to provide opportunity for the Commission, USFWS, or a third party to translocate subadults from the enrolled property to other properties. Translocations will involve the following:

_____ Potential Breeding Pair(s) (unrelated subadults)
_____ Single Male(s)
_____ Single Female(s)

IV. Conservation Benefits

The following conservation benefits to RCWs are expected as a result of implementing the conservation measures identified in this Agreement:
Note: the Commission will check all that apply.

___ Occupied RCW nesting and foraging habitat will be maintained at current levels, which will assist in meeting RCW recovery goals and will help maintain population stability.

___ Existing RCW populations will be maintained and enhanced through the installation of artificial RCW nesting and roosting cavities.

_X_ New RCW groups will be created through natural population expansion and/or the installation of artificial RCW nesting and roosting cavities and/or translocation efforts on the enrolled property.

___ Other RCW populations will be augmented through translocation of surplus subadult RCWs from the enrolled property to suitable sites.

_X_ Suitable RCW habitat will be enhanced, restored, and/or created.

_X_ RCW habitat connectivity will increase as a result of habitat enhancement, restoration, and creation efforts.

___ Additional information on RCW population productivity and demographics in Florida will be obtained.

_X_ Public support for RCW conservation and endangered species management will increase by demonstrating government agency sensitivity, cooperativeness, and flexibility. Much of the past and current criticism of environmental regulations and private property rights has focused on ESA-related habitat management restrictions.

V. Implementation Schedule

Specify the time frames within which the Property Owner agrees to accomplish the conservation measures agreed upon in this Agreement. For each activity, list the agreed upon dates to accomplish each action:

Management Activities to be Implemented

A. Activity: reduce palms and palmettos by mechanical means
Completion Date: end of calendar year 2008 (Complete)

after A is completed

B. Activity: 1st prescribe burn will occur sometime in the Winter as a dry season burn (weather permitting). A cooler burn is necessary to reduce fuel loads before switching to growing season burning.
Completion Date: end of calendar year 2009 or early 2010

after B is completed

C. Activity: prescribe burn at least 93% of property every 3-5 years
Completion Date: every 3-5 years after first initial burn

D. Activity: reduce palms and palmettos using mechanical or chemical means
Completion Date: as appropriate; when midstory becomes more than sparse and/or greater than 7ft. in height. Mechanical/chemical reduction will be used before burn routine begins then prescribed fires should be all that is needed to maintain midstory control.

E. Activity: thin pine stands
Completion Date: as appropriate to maintain stocking at or below 70BA

F. Activity: plant south Florida slash pine in areas where wildfire occurred
Completion Date: 2013

G. Activity: install artificial cavities
Completion Date: Winter 2008-2009 after hardwood control and/or 1st burn

H. Activity: _____
Completion Date: _____

I. Activity: _____
Completion Date: _____

J. Activity: _____
Completion Date: _____

K. Activity: _____
Completion Date: _____

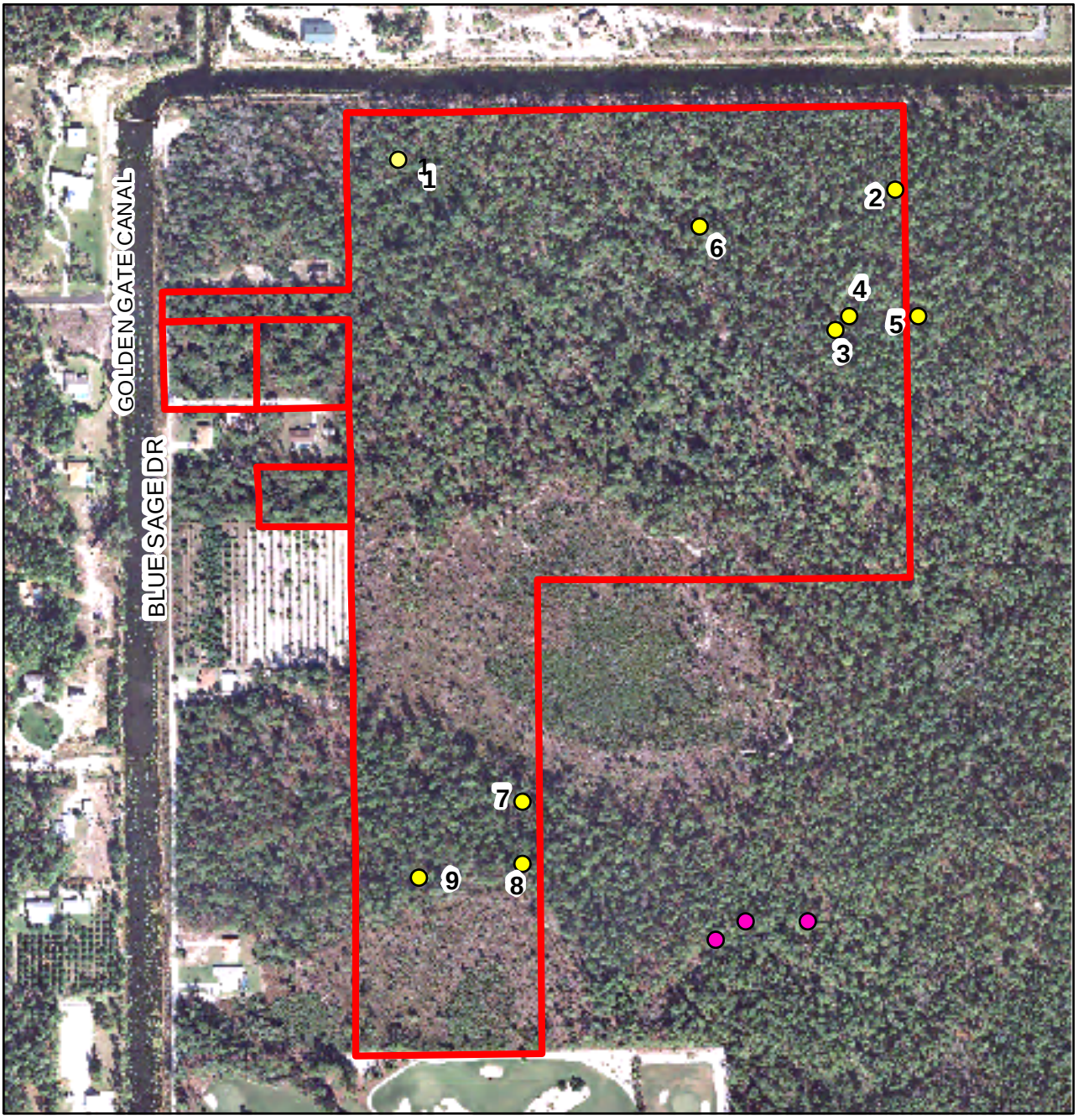
L. Activity: _____
Completion Date: _____

M. Activity: _____
Completion Date: _____

N. Activity: _____
Completion Date: _____

Attachment B

Conservation Collier Nancy Payton Preserve & Baseline Survey Waypoints



0 265 530 1,060 Feet

Collier County

Folio Number: 61730440005

Data Source: Collier County Property Appraiser-2008 aerials
Waypoints: KJ (FWC)
Created By: GIS / Conservation Collier / CS
G: ConservationCollier/Maps/acquiredproperties/ schoolboardclose aerial/SafeHarbor/Baslinewaypts_12_4_08.mxd & jpg.
Date 12/4/08

Legend

- Nancy Payton Preserve
- Adjacent RCW trees Private Property

WAYPOINT

- 1- potential cluster area
- 2-good artificial cavity tree
- 3-good artificial cavity tree
- 4-good artificial cavity tree
- 5-good cavity tree area-(5 possible trees)
- 6-potential cluster area
- 7-good artificial cavity tree-18.5 dbh
- 8-good artificial cavity tree-20 dbh
- 9-big old tree

ATTACHMENT B PART 2

CONSERVATION COLLIER
Property Identification Number: 61730440005

TAX IDENTIFICATION NUMBER: 61730440005

LEGAL DESCRIPTION:

ALL OF TRACTS 7, 8, 9 AND 12, AND THE NORTH 82.5 FEET OF THE SOUTH 825.0 FEET OF TRACT 10, NAPLES FARM SITES, INC., ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 4, PAGE 34, OF THE PUBLIC RECORDS OF COLLIER COUNTY, FLORIDA. SUBJECT TO AN ACCESS EASEMENT OVER, ALONG AND ACROSS THE WEST 30 FEET THEREOF.

PROPERTY TAX IDENTIFICATION NUMBER: 61731040006

LEGAL DESCRIPTION:

NAPLES FARMS SITES:

THE NORTH 165 FEET OF THE SOUTH 330 FEET OF THE EAST HALF OF TRACT 10, SECTION 24, TOWNSHIP 49 SOUTH, RANGE 26 EAST RECORDED IN PLAT BOOK 4 AT PAGE 34 OF THE PUBLIC RECORDS OF COLLIER COUNTY, FLORIDA.

AND

PROPERTY TAX IDENTIFICATION NUMBER: 61730960006

LEGAL DESCRIPTION:

NAPLES FARMS SITES:

THE NORTH 247.5 FEET OF THE SOUTH 742.5 FEET OF THE WEST HALF OF TRACT 10, RECORDED IN PLAT BOOK 4 AT PAGE 34 OF THE PUBLIC RECORDS OF COLLIER COUNTY, FLORIDA.

AND

PROPERTY TAX IDENTIFICATION NUMBER: 61731000004

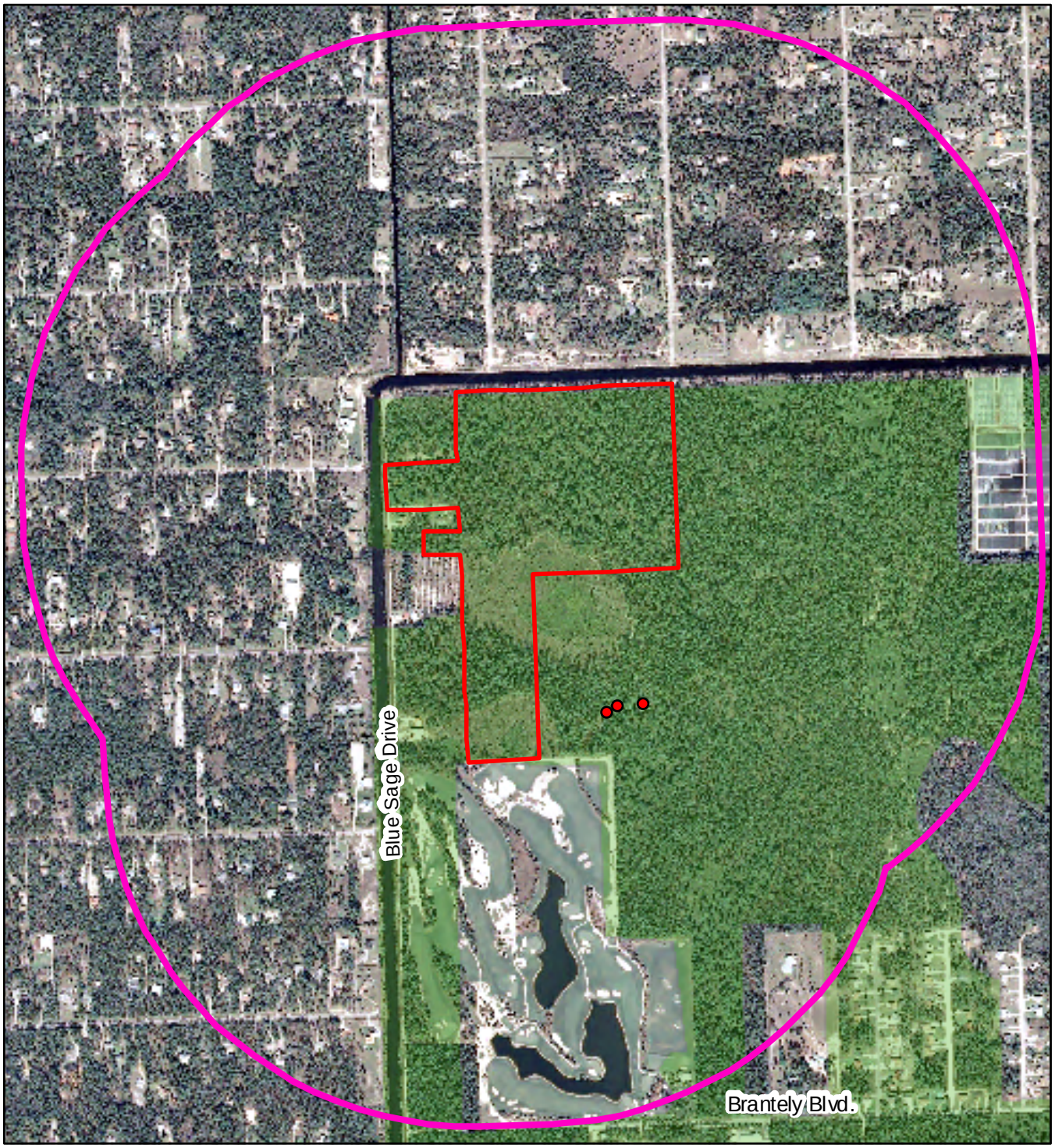
LEGAL DESCRIPTION:

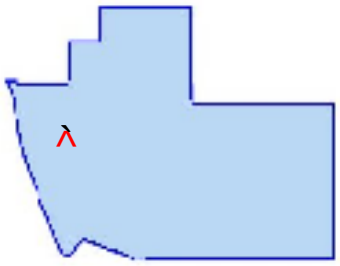
NAPLES FARMS SITES:

THE NORTH 247.5 FEET OF THE SOUTH 742.5 FEET OF THE EAST HALF OF TRACT 10, RECORDED IN PLAT BOOK 4 AT PAGE 34 OF THE PUBLIC RECORDS OF COLLIER COUNTY, FLORIDA.

Attachment C

Conservation Collier Nancy Payton Preserve and Surrounding RCW Cluster Locations (within 0.5 miles)





Legend

- Nancy Payton Preserve
- Adjacent RCW Cavity Trees or Clusters
- NPP_half mile buffer
- Land Use Cover-Pine Flatwoods

0 0.125 0.25 0.5 Miles

Collier County

Data Source-Parcels and Aerials- Collier County Property Appraiser
Created by: GIS/Conservation Collier/ CS
G: Conservation Collier/maps/acquiredproperties/schoolboard/safeharbor/NPP_SurrRCWs_revised_buffer.mxd and jpg 1-23-09

ATTACHMENT D
TO
FLORIDA SAFE HARBOR MANAGEMENT AGREEMENT
Certificate of Inclusion
in the Florida Statewide Red-cockaded Woodpecker
Safe Harbor Agreement and Enhancement of Survival Permit

This certifies that (Property Owner's Name = Property Owner) _Collier County Conservation Collier Program_, the Property Owner (s) of the property located in Collier County, east of Blue Sage Drive, north of Brantley Blvd (township 49, range 26, section 24), and any future owner(s) of the property, are included within the scope of Enhancement of Survival Permit No.TE 113463-0, issued by the U.S. Fish and Wildlife Service (Service) on (Date) 05/19/2006 to the Florida Fish and Wildlife Conservation Commission (the Commission). This Certificate of Inclusion authorizes the Property Owner to conduct the activities that are specified in Safe Harbor Management Agreement (SHMA) No.003 between the Property Owner and the Commission for the red-cockaded woodpecker (*Picoides borealis*) (RCW). The Property Owner, and any future owners of the property, are hereby authorized, subject only to the terms and conditions of the Permit and the terms and conditions of the SHMA, to engage in, implement, or otherwise conduct the activities specified in the SHMA on the property even though these activities may result in the incidental taking of the RCW. However, the incidental taking of the RCW shall not result in a diminishment of the Property Owner's baseline responsibilities on the property as specified in the SHMA.

Additionally, this Certificate provides the Property Owner with the following regulatory assurances:

> "If additional conservation measures are necessary to respond to unforeseen circumstances, the Service may require additional measures of the Permittee (and/or participating Property Owners) only if such measures are limited to modifications within the SHMA's conservation strategy for the affected species, and only if those measures maintain the original terms of the SHMA (and Certificates issued therein) to the maximum extent possible. Additional conservation measures will not involve the commitment of additional land, water, or financial compensation, or additional restrictions on the use of land, water, or other natural resources available for development or use under the original terms of the SHMA (and Certificates issued therein) without the consent of the Permittee (and affected participating Property Owner (s))."

The Service will have the burden of demonstrating that unforeseen circumstances exist, using the best scientific and commercial data available. These findings must be clearly documented and based upon reliable technical information regarding the status and habitat requirements of the affected species. The Service will consider, but not be limited to, the following factors:

- Size of the current range of the affected species;
- Percentage of range adversely affected by the Agreement;
- Percentage of range conserved by the Agreement;
- Ecological significance of that portion of the range affected by the Permit;

- Level of knowledge about the affected species and the degree of specificity of the species' conservation program under the Agreement; and
- Whether failure to adopt additional conservation measures would appreciably reduce the likelihood of survival and recovery of the affected species in the wild.

These assurances allow the enrolled Property Owner to alter or modify the enrolled property, even if such alteration or modification results in the incidental take of the RCW to such an extent that the take returns the RCW to the originally agreed upon baseline conditions. These assurances may apply to the entire enrolled property or to portions of the enrolled property as designated or otherwise specified in the SHMA. These assurances are also contingent on the enrolled Property Owner's compliance with the obligations of the SHMA. Further, the assurances apply only to this particular SHMA, only if the SHMA is being properly implemented, and only with respect to species covered by the SHMA.

These authorizations and assurances expire on (Date Permit Expires) 12/31/2105

Timothy A Blewett 11 March 2009
(The Commission, Permittee) (Date)

ATTEST:
DWIGHT E. BROCK, CLERK

By: Patricia Polaski
Attest as to Chairman's signature only.

BOARD OF COUNTY COMMISSIONERS
OF COLLIER COUNTY, FLORIDA

By: Donna Fiala
DONNA FIALA, CHAIRMAN

Approval as to form and legal Sufficiency:

J B White
Jennifer B. White
Assistant County Attorney