Nancy Payton Preserve

Land Management Plan

FIRST DRAFT

Managed by:
Collier County
Conservation Collier Program

[June 2008 – June 2018 (10 yr plan)]

Prepared by: Collier County Conservation Collier Staff

2008

Nancy Payton Preserve

Land Management Plan Executive Summary

Lead Agency: Conservation Collier Program, Collier County Facilities Management Department, Collier County Administrative Services Division

Properties included in this Plan: One Parcel– Folio 61730440005

Acreage Breakdown: 65 acres

Management Responsibilities: Collier County Conservation Collier Program Staff

Designated Land Use: Conservation and natural resource-based recreation

Unique Features: Mature Pine Flatwood Community

Archaeological/Historical: N/A

Management Goals:
Goal 1: Eliminate or reduce human impacts to indigenous plant and animal life
Goal 2: Implement a biological monitoring program.
Goal 3: Continue to keep populations of invasive exotic plants in maintenance state
Goal 4: Create and implement a prescribed fire program
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: Develop and implement a plan for public use
Goal 9: Facilitate uses of the site for educational purposes
Goal 10: Officially open site up for public access
Goal 11: Provide a plan for disaster preparedness

Acquisition Needs: Any adjacent parcels, to increase access from the west and to increase acreage specifically to the east

Surplus Lands: None

Public Involvement: Working with neighbors and local agencies to assist in ATV trespass control. Public meeting(s) to be held before approval of this plan with residents from the surrounding homes and associations and also before controlled burns.

Table of Contents

List of Figures

List of Tables

List of Appendices

1.0 Introduction

The Nancy Payton Preserve is a 65-acre preserve located in Central Collier County in an area called North Belle Meade. It is largely comprised of native, pine flatwood species. Current access to the preserve is from Blue Sage Drive off 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 by the Board of County Commissioners, the "Nancy Payton Preserve." Nancy Payton currently works for the Florida Wildlife Federation and has been active in the preservation of this Collier County Belle Meade Area. The preserve will be open to the public and educational tours for local schools and groups will most likely be conducted at the preserve. A nature trail, benches, picnic tables and educational interpretive signs will be provided for visitors.

The Conservation Collier Program manages this parcel under authority granted by the Conservation Collier Ordinance 2002-63 (available from www.municode.com). Conservation, restoration and passive public use are the designated uses of the property. Management activities allowed are those necessary to preserve and maintain this environmentally and historically endangered 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 Wet Woods 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 in December 2005
2006	Developed Interim Management Plan- BCC approved
2006	Watkins-Jones property renamed "***Nancy Payton Preserve"***
2007	Conducted initial exotic plant treatment and removal
2008	Completed Final Management Plan

This is the Final Management Plan for the Nancy Payton Preserve. This management plan will be submitted to the Collier County Board of County Commissioners (BCC) for its approval. When approved, this plan will replace the Interim Management Plan. Updates to the plan will be completed every 5 years.

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 conservation lands within Collier County, Florida (Ordinance 2002-63). Properties must support at least two of the following qualities to qualify for further consideration: rare habitat, aquifer recharge, flood control, water quality protection, and listed species habitat. The Collier County Board of County Commissioners (BCC) appointed a Land Acquisition Advisory Committee 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 holds management authority for the Wet Woods Preserve.

1.2 Purpose and Scope of Plan

The purpose of the plan is to provide management direction for 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 the 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 restoration needs, 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, management issues, and goals and objectives.

1.3 Location

The School Board property is located east of Golden Gate City in the Rural Fringe Mixed Use District Lands north of Brantley Blvd. and east of Blue Sage Drive. The property is also considered to be in the North Bell Meade area. It is adjacent to a canal along the entire northern property line and along Blue Sage Drive. It is located in Township 49, Range 26 and Section 24, in Collier County, Florida. The site location is shown in Figure 1. The legal description is attached as Appendix 1.

Figure 1: Nancy Payton Preserve Location Map

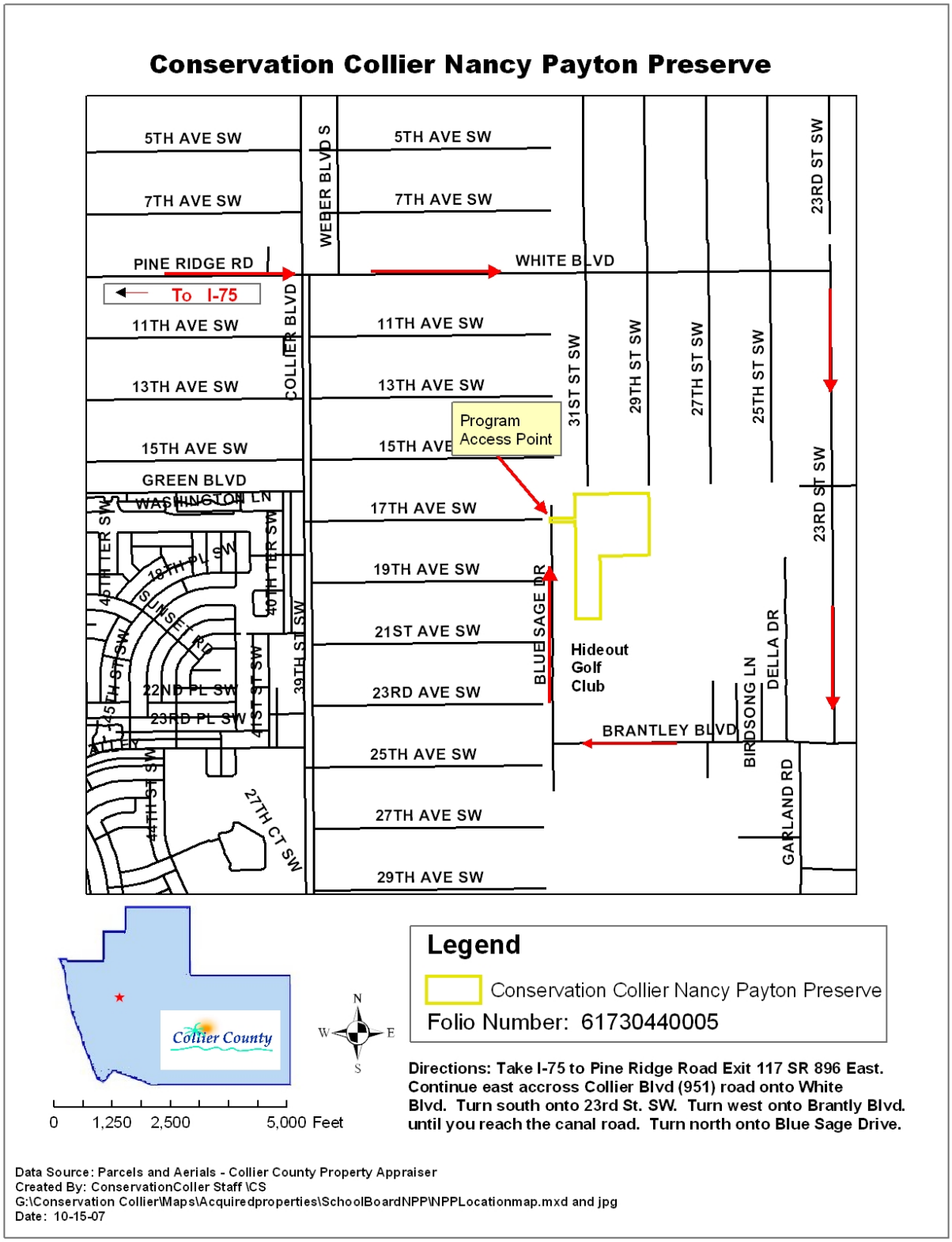
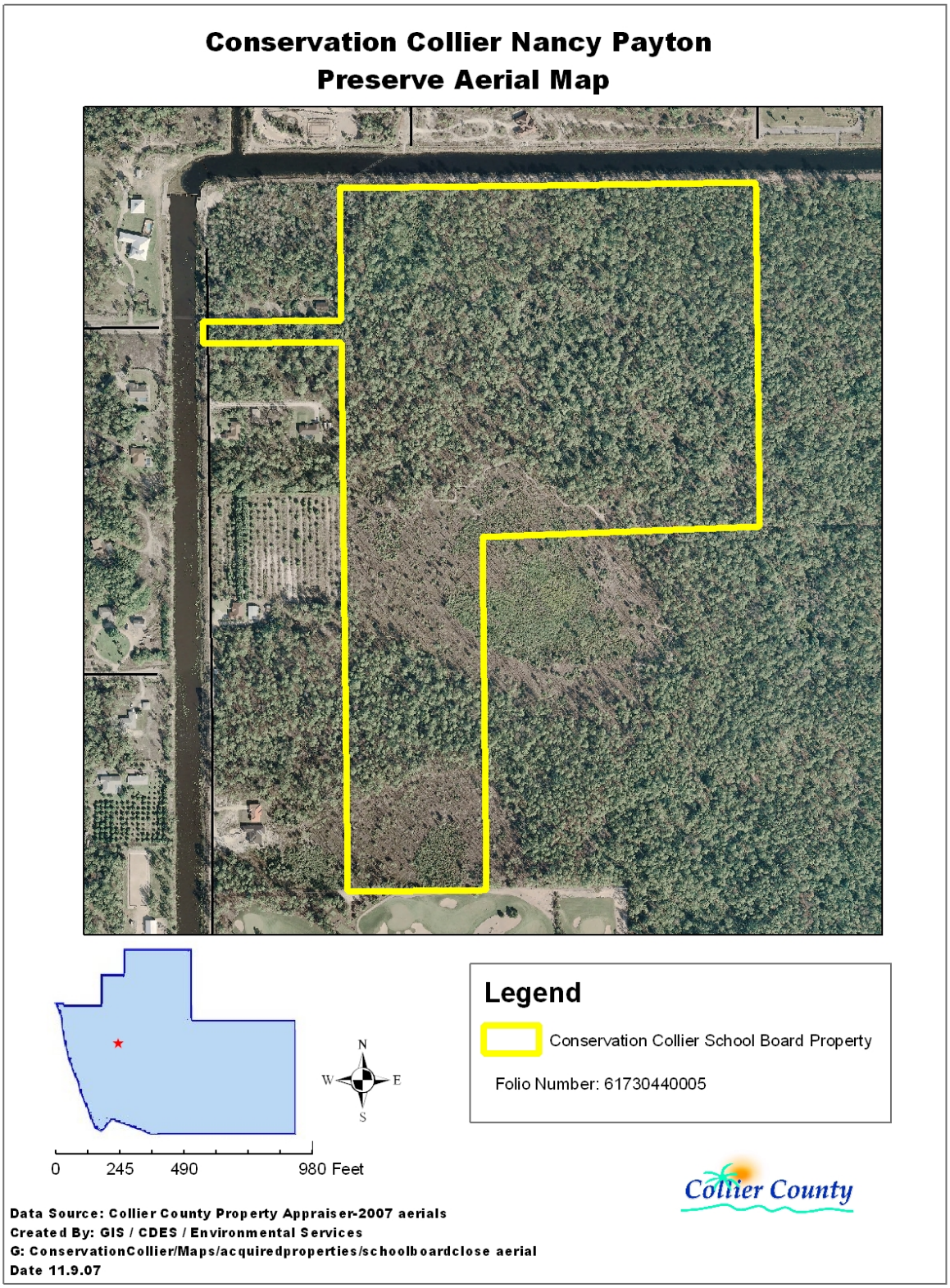


Figure 2: Nancy Payton Preserve 2007 Aerial View



1.4 Regional Significance

Despite having 867,000, or 64%, of County lands protected in conservation status, Collier County has lost, and is losing, many of its rare and unique habitats. The Conservation Collier Ordinance (2002-63) identifies these specific habitats and gives 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 is not one of these preferred habitats however, it is significant in serving as an important wildlife refuge. This property provides habitat for the State listed Gopher Tortoise and Florida Panther. It also previously provided habitat for the Endangered Red-Cockaded Woodpecker (RCW) pre-wildfire and currently continues to provide foraging habitat for RCW's. The protection and management of these listed species and their habitat is critical to their long term existence in Collier County and globally.

1.5 Nearby Public Lands and Designated Water Resources

Other preserves, in order of increasing distance are identified in Table 2 below.

Table 2: Public Lands Located Near the Logan Woods Preserve

Preserve Name	Distance (miles)	Direction	Type
Picayune State Forest	3 miles	S	State
Logan Woods Preserve	3 miles	NW	County / Conservation Collier
Milano Preserve	5 miles	NW	County / Conservaton 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

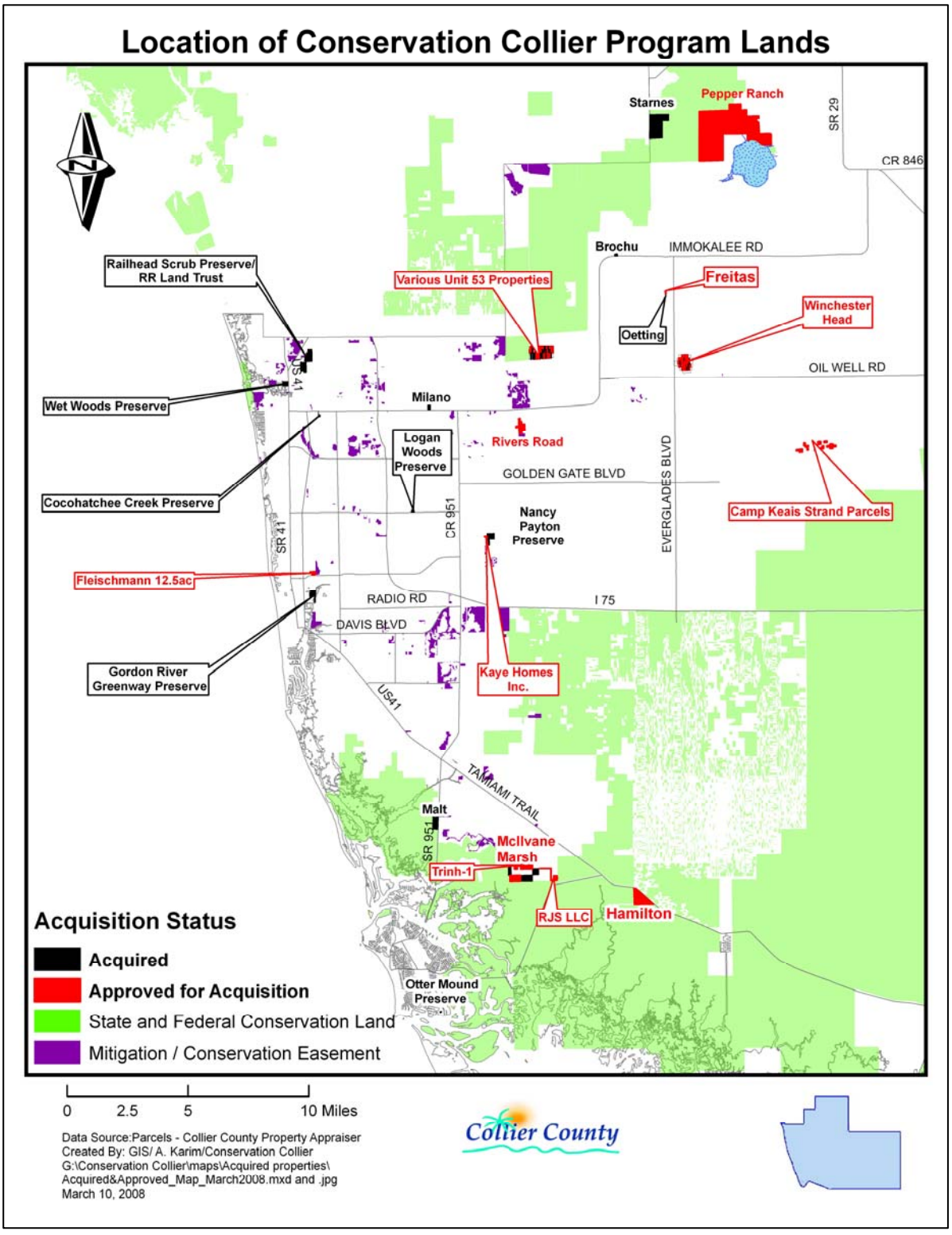


Figure 3. Conservation Collier Preserves and Designated State and Federal Land or Conservation Easements Existing in Collier County

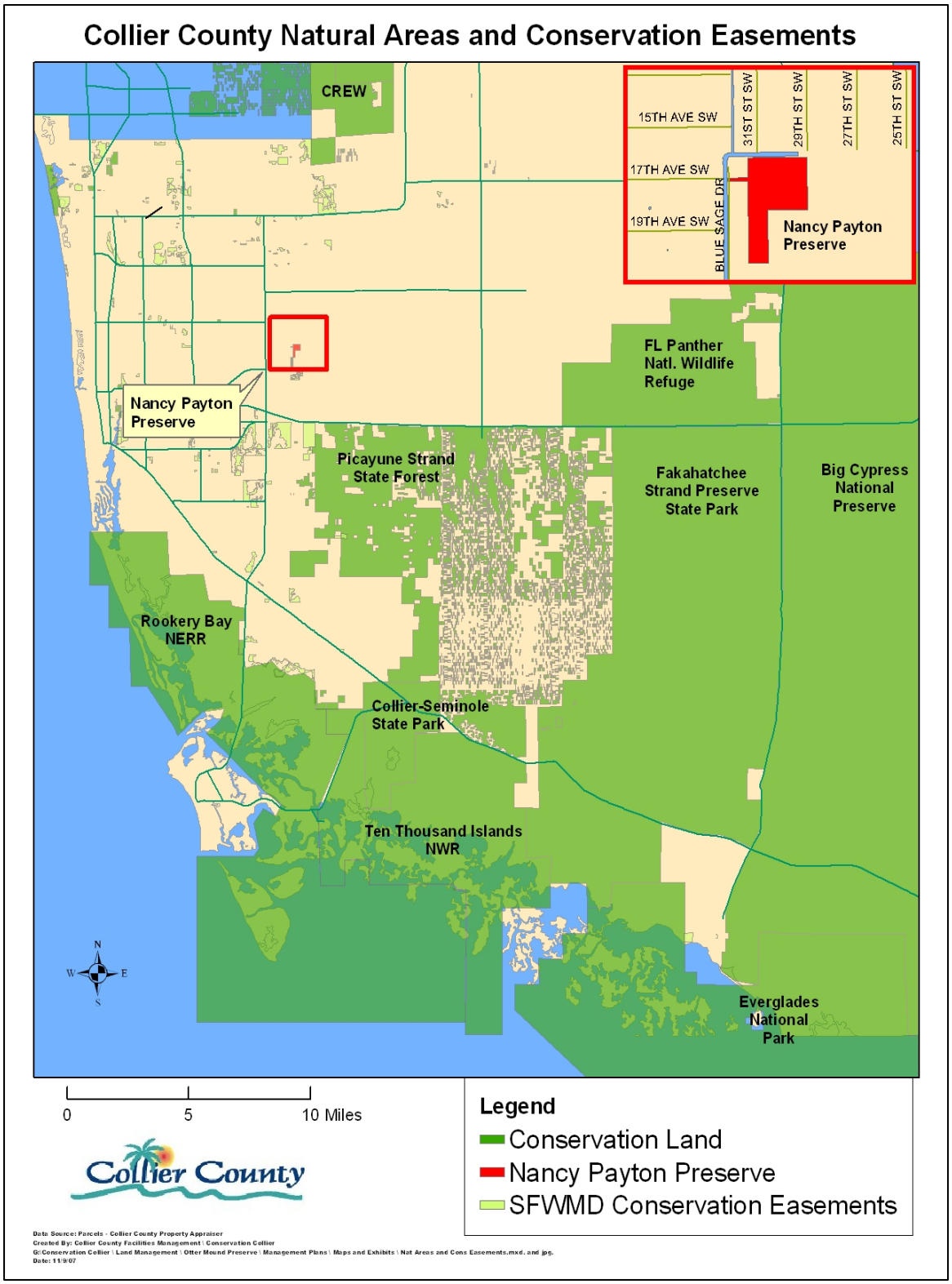


Figure 4: Collier County Conservation Areas and Designated Conservation Easements

1.6 Public Involvement

Neighborhood involvement will be sought through direct mailing notices for public meetings for residents within the surrounding area, owners of properties that border the preserve, and organizations with an interest in the preserve. Any major changes or management activities, such as prescribed fire that are likely to generate an intrusive aspect or in some way affecting neighboring properties will be reviewed with these contacts prior to conducting the activity. Staff will also seek volunteers through these contacts.

2.0 Natural and Cultural Resources

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 Pleistocence in age. Surficial materials are dominantly sand (often with relatively clayey substrate) limestone and organic deposits (Myers and Ewel 1990).

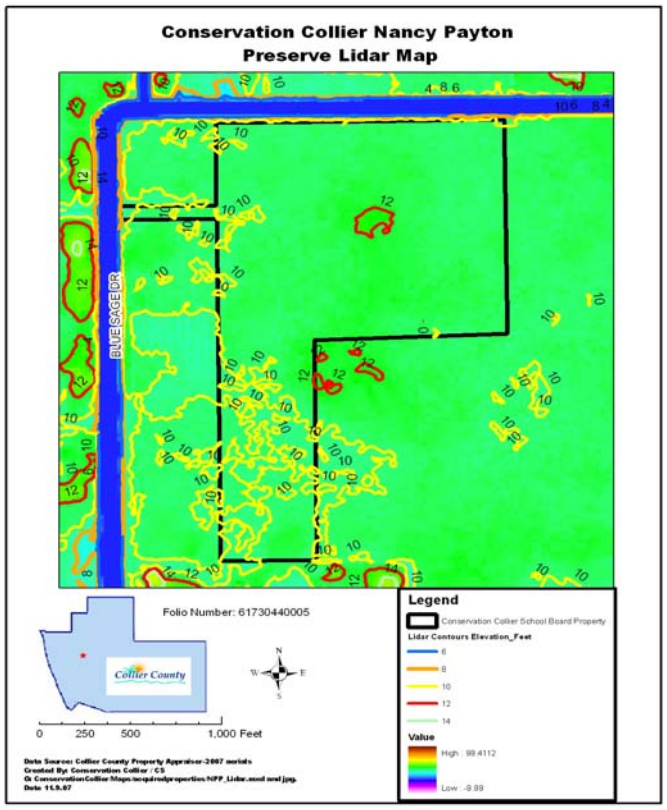


Figure 5. Nancy Payton Preserve Lidar Elevations Map

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 3). The average elevation of the surrounding lands is 10-12 feet NAVD (1988).

2.1.4 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 persistant droughty conditions result (Myers and 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. Also, since the majority of the site hasn't burned in many years the soil moisture is likely to be higher as the litter and vine ground cover layer is thick and holds in moisture that would normally evaporate. No water management structures exist on the preserve and no water management improvements are planned for the future. The property contributes

minimally to the Lower Tamiami aquifer at 7-14" annually and the surficial aquifer significantly at 56-67" annually.

2.1.2 Geology

The geology of northern Collier County, where the Nancy Payton Preserve is located, 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 Floridan Aquifer System in Southwestern Florida. Figure 4 provides a current aerial view of the Nancy Payton Preserve.

2.1.3 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 Subtratum. 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 found in flatwoods. These soils formed in sandy marine sediments. Holopaw Fine Sand consists of level and nearly level poorly drained 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 overlapped by 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 not 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.

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 Classification System (FLUCCS) GIS layer provided by the South Florida Water Management District classifies the entire site as Upland Coniferous Forest, Pine Flatwoods-Melaleuca Infested. Site evaluations confirm this, however, no melaleuca exists on the site and no evidence is present to show that it ever has.

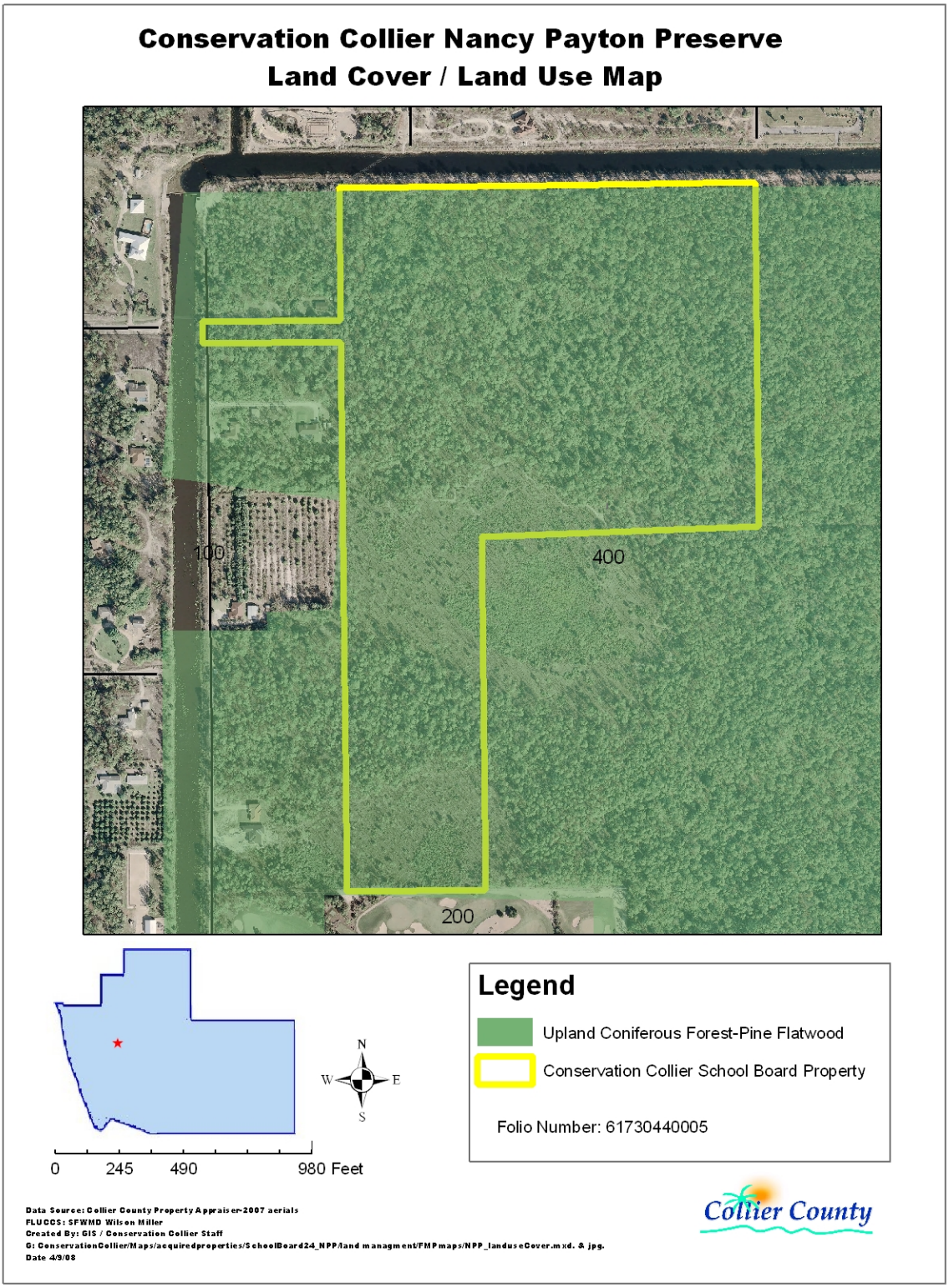


Figure 6: Nancy Payton Preserve Land Cover / Land Use Map

The vegetation classification scheme of the Florida Natural Areas Inventory (FNAI) and the Florida Department of Natural Resources (FDNR)(1990) are presented in table 3. This table is based on the plant communities observed and mapped on the Nancy Payton Preserve.

Table 3: Summary of Natural Communities in the Nancy Payton Preserve

FNAI Natural Community Type	# Acres	% of Area	Global Rank	State Rank	Comments
Mesic Flatwoods	65	100%	G4	S4	9 active gopher tortoise burrows located, 1 adult gopher tortoise observed and one juvenile

G4: Apparently secure globally (may be rare in parts of range);
S4: Apparently secure in Florida (may be rare in parts of range).

2.4 Native Plant and Animal Species

The 65-acre preserve is a natural South Florida Pine Flatwood Community. One-hundred and thirteen (113) plant species were recorded at Nancy Payton Preserve in April 2008 (Appendix 2). Data was collected by Keith Bradley of the Institute of Regional Conservation. Of these 113 plants, (91) species or 81%, are native to the site, and 22 species or 19% are exotic. In general the canopy is dominated by South Florida slash pine trees (*Pinus elliottii var. densa*) and scattered cypress (*Taxodium ascendens*), the midstory with cabbage palms (*Sabal palmetto*) and saw palmetto (*Serenoa repens*) and ground cover is mainly mucadine grapevine (Vitus rotundifolia) and grasses.

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 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 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 Florida panther (*Puma concolor coryi),* Virginia opossum (*Didelphis virginiana*), nine-banded armadillo (*Dasypus novemcinctus*), spotted skunk (*Spilogale putorius*), raccoon (*Procyon lotor*), eastern gray squirrel (*Sciurus carolinensis*), bobcat (*felis rufus*), white-tailed deer (*Odocoileus virginianus*), and cotton mouse (*Peromyscus gossypinus*). A Florida black bear was located on adjacent properties within 1 mile of the parcel.

Bird observations by staff from the Collier County Environmental Services Department are included in Table 4. It appears to be a popular spot for woodpeckers as often 6 different species can be observed in one day. The Endangered Red-cockaded Woodpecker (RCW) has nested on the property in the past however, a wildfire in 2004 burned out the cavity tree (s). Since then sightings of the bird continue on the property. No new cavities have been found on the property however, three were documented within 750 feet to the east on private adjacent lots. This would then designate the preserve a USFWS RCW foraging area.

Table 4: List of Avian Species Recorded on the Site			
Common Name	**Scientific Name**	**Common Name**	**Scientific Name**
Red-tailed Hawk	*Buteo jamaicensis*	Eastern Bluebird	*Sialia sialis*
Red-shouldered Hawk	*Buteo lineatus*	Brown Thrasher	*Toxoxtoma rufum*
Swallow-tailed Kite	*Elanoides forficatus*	Gray Catbird	*Dumetella carolinensis*
American Kestrel	*Falco sparverius*	Northern Mockingbird	*Mimus polyglottos*
Great Horned Owl	*Bubo virginianus*	Blue Jay	*Cyanocitta cristata*
Eastern Screech Owl	*Otus asio*	American Robin	*Turdus migratorius*
Barred Owl	*Strix varia*	Cedar Waxwing	*Bombycilla cedrorum*
Northern Bobwhite Quail	*Colinus virginianus*	Brown-headed Nuthatch	*Sitts pusilla*
Mourning Dove	*Zenaidura macroura*	Carolina Wren	*Thryothorus ludovicianus*
Common Ground-dove	*Columbina passerina*	Blue-gray Gnatcatcher	*Polioptila caerulea*
Red-headed Woodpecker	*Melanerpes erythrocephalus*	White-eyed Vireo	*Vireo griseus*
Red-bellied Woodpecker	*Melanerpes carolinus*	Pine Warbler	*Dendroica pinus*
Downy Woodpecker	*Picoides pubescens*	European Starling	*Sturnus vulgaris*
Hairy Woodpecker	*Picoides villosus*	Common Grackle	*Quiscalus quiscula*
Red-cockaded Woodpecker	*Picoides borealis*	Northern Cardinal	*Cardinalis cardinalis*
Northern Flicker	*Colaptes auratus*	Eastern (formerly Rufous-sided) Towhee	*Pipilo erythrophthalmus*
Great Crested Flycatcher	*Myiarchus crinitus*		

The Florida Breeding Bird Atlas lists 49 bird species that have been recorded as confirmed, probable, or possible breeding in the vicinity of the site (in the Belle Meade NW USGS quadrangle) that may be present at Nancy Payton Preserve (Table 5). The Breeding Bird Atlas documents breeding distributions of all bird species in Florida between 1986 and 1991. Some of these species may breed at the Nancy Payton Preserve.

Table 5: Breeding Bird Species Recorded in the Belle Meade NW Quadrangle Encompassing the Nancy Payton Preserve (* = non-indigenous)

Common Name	Scientific Name	Common Name	Scientific Name
Green Heron	*Butorides striatus*	Northern Flicker	*Colaptes auratus*
Wood Duck	*Aix sponsa*	Pileated Woodpecker	*Dryocopus pileatus*
Mottled Duck	*Anas fulvigula*	Great Crested Flycatcher	*Myiarchus crinitus*
Swallow-tailed Kite	*Elanoides forficatus*	Loggerhead Shrike	*Lanius ludovicianus*
Bald Eagle	*Haliaeetus leucocephalus*	White-eyed Vireo	*Vireo griseus*
Red-shouldered Hawk	*Buteo lineatus*	Blue Jay	*Cyanocitta cristata*
Red-tailed Hawk	*Buteo jamaicensis*	American Crow	*Corvus brachyrhynchos*
Northern Bobwhite	*Colinus virginianus*	Fish Crow	*Corvus ossifragus*
Common Moorhen	*Gallinula chloropus*	Purple Martin	*Progne subis*
Killdeer	*Charadrius vociferus*	Tufted Titmouse	*Parus bicolor*
Least Tern	*Sterna antillarum*	Brown-headed Nuthatch	*Sitta pusilla*
Mourning Dove	*Zenaida macroura*	Carolina Wren	*Thryothorus ludovicianus*
Common ground dove	*Columbina passerina*	Eastern Bluebird	*Sialia sialis*
Eastern Screech-Owl	*Otus asio*	Northern Mockingbird	*Mimus polyglottos*
Great Horned Owl	*Bubo virginianus*	Brown Thrasher	*Toxostoma rufum*
Burrowing Owl	*Athene cunicularia*	*European Starling	*Sturnus vulgaris*
Barred Owl	*Strix varia*	Pine Warbler	*Dendroica pinus*
Common Nighthawk	*Chordeiles minor*	Eastern Towhee	*Pipilo erythrophthalmus*
Chuck-will's-widow	*Caprimulgus carolinensis*	Northern Cardinal	*Cardinalis cardinalis*
Chimney Swift	*Chaetura pelagica*	Red-winged Blackbird	*Agelaius phoeniceus*
Ruby-throated Hummingbird	*Archilochus colubris*	Eastern Meadowlark	*Sturnella magna*
Red-headed Woodpecker	*Melanerpes erythrocephalus*	Common Grackle	*Quiscalus quiscula*
Red-bellied Woodpecker	*Melanerpes carolinus*	Boat-tailed Grackle	*Quiscalus major*
Downy Woodpecker	*Picoides pubescens*	*House Sparrow	*Passer domesticus*
Red-cockaded Woodpecker	*Picoides borealis*		

Source: Florida Breeding Bird Atlas, www.wildflorida.org/bba

Reptile and amphibian species observed on the preserve include: the brown anole (*Anolis sagrei*), green anole (*Anolis carolinensis*), southern black racer (*Coluber constrictor priapus*), and gopher tortoise (*Gopherus polyphemus*). Other potential species could include the threatened eastern indigo snake (*Drymarchon corais couperi*), and the gopher frog (*Rana capito*) due to the presence of gopher tortoise burrows.

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

Other wildlife species that have not been recorded undoubtedly occur at Nancy Payton Preserve.

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. The Institute for Regional Conservation (IRC) also ranks native plant species by conservation status in the 10-county area of South Florida.

2.5.1 Listed Plant Species

There are an estimated (4) plant species at Nancy Payton Preserve that are listed by the Florida Department of Agriculture and Consumer Services (FDACS), (1) as Endangered, (2) 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 # and in the following paragraphs.

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

Scientific Name	Common Names	FDA	FWS
Stiff-leaved wild pine	*Tillandsia fasciculata*	E	Not listed
Reflexed wild pine	*Tillandsia balbisiana*	T	Not listed
Butterfly orchid	*Encyclia tampensis*	C	Not listed
Threadroot orchid	*Harrisella porrecta*	T	Not listed

E: Endangered, T: Threatened, C: Commercially Exploited

Additional rare plant species may be found at Nancy Payton Preserve following further field surveys. Confirmation of rare 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 forms large plants in tree tops are often mistaken for bird or squirrel nests; grows equally well in canopy or near ground. Several are present with in Nancy Payton Preserve. It is also referred to as a cardinal airplant.

Photo taken on site by: Christal Segura

Reflexed wild pine (*Tillandsia balbisiana*)

This air-plant is abundant and 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.

Butterfly orchid (*Encyclia tampensis*)

This orchid is locally abundant in central and southern counties of Florida and are commercially exploitable. 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 (Paul Martin Brown 2002).

Photo by: Rodger Hammer

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 (Paul Martin Brown 2002).

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, the wood stork, the red cockaded woodpecker, and the mangrove fox squirrel. The pine flatwood community at the site provides habitat for all these species besides the wood stork. The preserve may also provide habitat for Florida black bear (*Ursus americanus floridanus*) which is listed as threatened by the State. 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**

Gopher tortoises (*Gopherus polyphemus*)

This tortoise species is listed by the State of Florida as "Threatened" and a map has been prepared by staff showing locations of existing Gopher tortoise burrows; however, it is not appended to this plan to protect the animals from disturbance. One large Gopher tortoise and one juvenile have been observed on site and several burrows found appear to be active. The majority of the burrows are found in the area that burned in the 2004 wildfire. A complete survey of the population will be conducted on the site before any site alteration is done.

Red-cockaded woodpecker (*Picoides borealis*)

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 feeding and prefer open Pine Forests maintained by periodic fire. A family may claim as many as 30 trees as their home. They only nest in mature live pine trees. There was an active cavity on the Nancy Payton Preserve until it was burned out in a wildfire in 2004. Cavities do currently exist on adjacent properties to the southeast and RCW's have been documented on the Nancy Payton preserve frequently as they are currently using the site for foraging.

Florida Panther (*Puma concolor coryi)*

Photo taken by an automatic motion detector camera owned by neighbor on Blue Sage Dr. adjacent to the Preserve in December 2007

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 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. It first walked up to 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, they were locked in a secure enclosure so it 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. Florida Fish and Wildife Conservation Commission (FFWCC) were contacted when each sighting occurred and 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 need a large range. Increased development and traffic are another reason why this species is listed as endangered.

2.6 Invasive Non-native and Problem Species

Several invasive, non-indigenous plant and animal species are known to occur within Florida. A list of invasive plant species is available from the Florida Exotic Pest Plant Council (EPPC). 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 in Florida, and approximately 125 species are established.

2.6.1 Exotic Wildlife Species

The wild hog, (Sus scrofa) is an exotic animal that has not been documented on the preserve but could potentially become a nuisance. They can also be referred to as wild boar or feral pig, and may have been introduced as early as 1539 (FFWCC). "Feral hogs are a big problem on all conservation lands," according to Kevin Love, a land manager with the Southwest Florida Water Management District, who calls them one of the most severe exotic problems facing Florida."

Their favorite food is acorns but they roam in large groups and will eat native frogs, snakes and ground nesting birds while rooting up the ground with their snouts – destroying acre upon acre. Virtually overnight, they can change the entire plant composition of the land by scooping up indigenous species and clearing a path for monocultures of invasive plants.

They may weigh over 150 pounds, and be 5-6 feet long and reproduce at a rapid rate. They travel in herds containing several females and their offspring. Wild hogs occur throughout Florida in various habitats, but prefer moist forests and swamps, and pine flatwoods. They are omnivorous and feed by rooting with their broad snouts. They may cause great damage of the understory and leave an area looking like a plowed field.
(http://baysoundings.com/fall06/hogsgonewild.asp)

Armadillos are also a nuisance species but on a much smaller scale. They impact on native species is controversial, but is potentially more significant for reptiles and amphibians on whose young armadillos may feed.

Other invasive wildlife species include the brown anole (*Anolis sagrei)*, red imported fire ants (*Solenopsis invicta*) and Cuban tree frogs (*Osteopilus septentrionalis*).

2.6.2 Invasive and Problem Plant Species

Few invasive exotic plants are 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. All exotic plants documented on the preserve are listed in Table 8. Seven species of exotic plants found on the site are considered Category I: Invasive by the Florida Exotic Pest Plant Council (FLEPPC), two are considered Category II and one non-native grass (Pennisetum polystachion) is not listed yet by FLEPPC however, is spreading rapidly into the preserve from the disturbed land to the west. FLEPPC defines Category I plants as those that alter native plant communities by displacing native species, change community structures or ecological functions, or hybridize with natives. 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).

Table 8: Invasive Plant Species at Nancy Payton Preserve		
Scientific Name	**Common Name(s)**	**FLEPPC Category**
Acacia auriculiformis	Earleaf aacia	I
Schinus terebinthifolius	Brazilian pepper	I
Syzygium cumini	Java Plum, Jambolan	I
Cupaniopsis anacardioides	Carrotwood	I
Abrus precatorius	Rosary-pea, Crab-eyes	I
Lantana camara	Shrub verbena	I
Rhynchelytrum repens	Rose natal grass	I
Pteris vittata	China brake fern	II
Urena lobata	Caesar's Weed	II
Pennisetum polystachion	West Indian pennisetum, mission grass	

Under certain conditions, especially following hydrologic disturbance, some native plant species can become invasive. Muscadine grapevine *(Vitis rotundifolia Michx.)* is currently very dense and is growing up into the pine canopy due to lack of fire. Cabbage palms can also become invasive when hydrology is altered and without fire. Management of this species is planned to enhance the gopher tortoise and red-cockaded woodpecker habitat.

2.7 Forest Resources

No commercial forests exist, and timber extraction is not appropriate for this site. If portions of the preserve need thinning, fire should assist in this process to thin out young pines. The total stand basal area should not exceed 80 ft squared per acre.

2.8 Archaeological, Historical and Cultural Resources

The School Board 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 any archaeological or historic resources are discovered. 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 1962 (see Figure 7) and recent physical visits to the site show that there has been no previous development on this property. These photographs are available in the public records and available at the Collier County Property Appraisers office. A canal system was created in the 1950's that hydrologically altered the site.

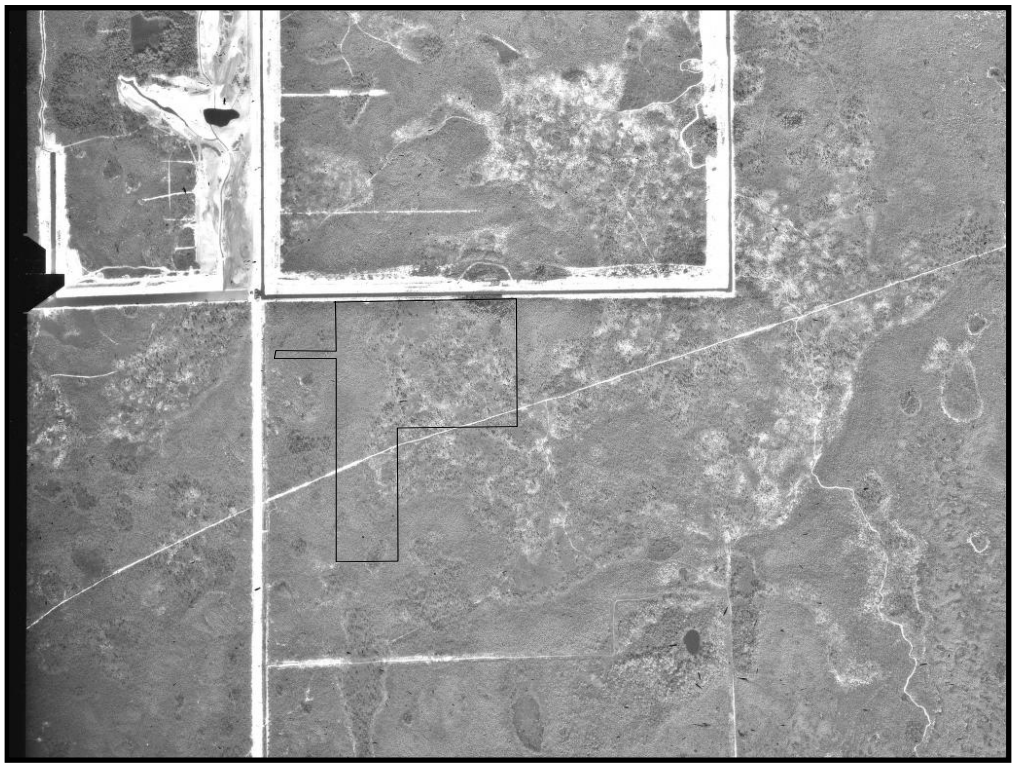


Figure 7: Area Historical Maps- 1962 Aerial- The land is fully vegetated. A dirt road cuts through the center of the property and a canal system had been built to the north and to the west (shape of Nancy Payton Preserve is only an estimate of location and size).

3.2 Planned Uses and Assessment of their Impacts

Currently, the site is not officially open to the public for recreational use. Occasional researchers and bird surveyors visit the property and they sign access waivers beforehand. The only way to currently access the site is off of Blue Sage Drive which is a private unpaved road. Future planned uses include passive recreational opportunities for the public. Details of planned 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 Section 5.9 the following are uses consistent with the sites classification.

- **Hiking:** Consistent with the nature of the site and its purpose
- **Nature Photography:** There is potential for nature photography of wildlife and plant life
- **Bird Watching:** There is huge potential for bird watching on this site specifically for several different species of woodpecker.
- **Environmental education:** Several interpretive signs will be created installed throughout the site as well and plant identification signage. A brochure outlining the native ecosystem and wildlife present at the preserve will also be created.

3.2.2 Planned Public Uses and Assessment of their Impacts

Trail Network – Long trails will be established throughout most of the property to allow for hiking and nature observation within the preserve (See Figure 11 for conceptual plan). Local birding groups will frequent the preserve and County staff will provide quarterly public tours of the site to the public. Local Schools may also use the site for nature based field trips. Some trails already exist due to fire lines that were cut as a result of a wildfire that impacted the site in late 2004 as well as trails that have been worn due to trespass and ORV use. Future trails can follow new fire breaks that are installed and maintained. Trails will need to be maintained and monitored to ensure that the public stay on the established trails and no additional new trails are being made. Clearing the current trails of fallen trees and debris and creating new trails may also enable and increase the illegal use of ATVS and dirt bikes on the property. See Security Management section 4.5.13 for more detail.

Easements, Concessions and Leases – There is one undeveloped 60 foot easement that runs north and south through the center of the westernmost peninsular portion of the property. Currently, there is no reason why this would need to be cleared for access or in the foreseeable the future. There is also a 20 foot easement in the lower half of the same peninsular portion which runs east and west in the properties owned by Kay Homes Inc. in which the County is tentatively scheduled to close on in June 2008. This easement is already cleared as a driveway. Legal access is highlighted in yellow in Figure 8. In accordance with the management goals of the preserve, no additional future easements,

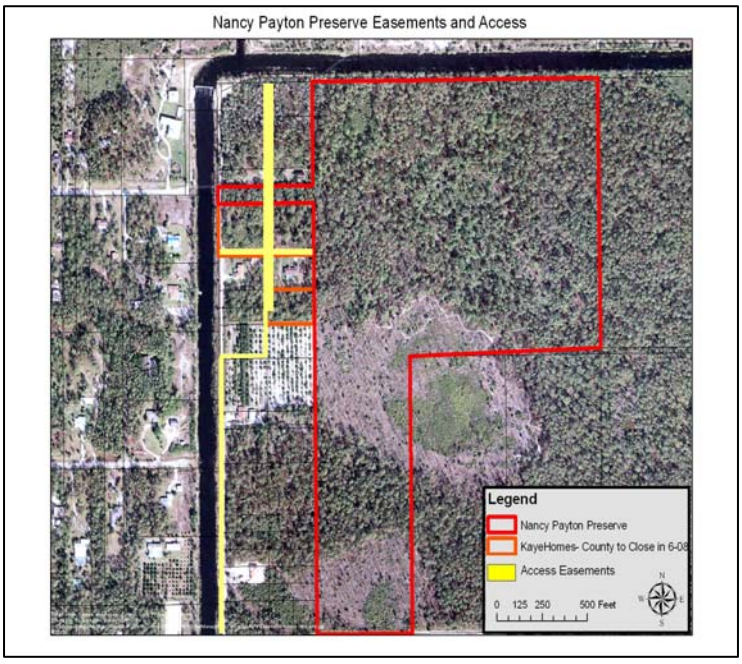


Figure 8. Nancy Payton Preserve Easements and Access

concessions, or leases are appropriate in association with this site, other than conservation related easements. Due to the minor 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 that is currently what each existing resident uses to access the area. (Add Kaye Homes if acquired)

Parking / Handicap Facilities- A parking area will be installed in the future. The parking spaces will be ADA compliant and will connect to an ADA compliant trail.

Landscaping – There may be minimal native landscaping installed around the future parking area. Natural area restoration of the preserve should include only site specific native plant material that has been determined to be non-problematic at 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.

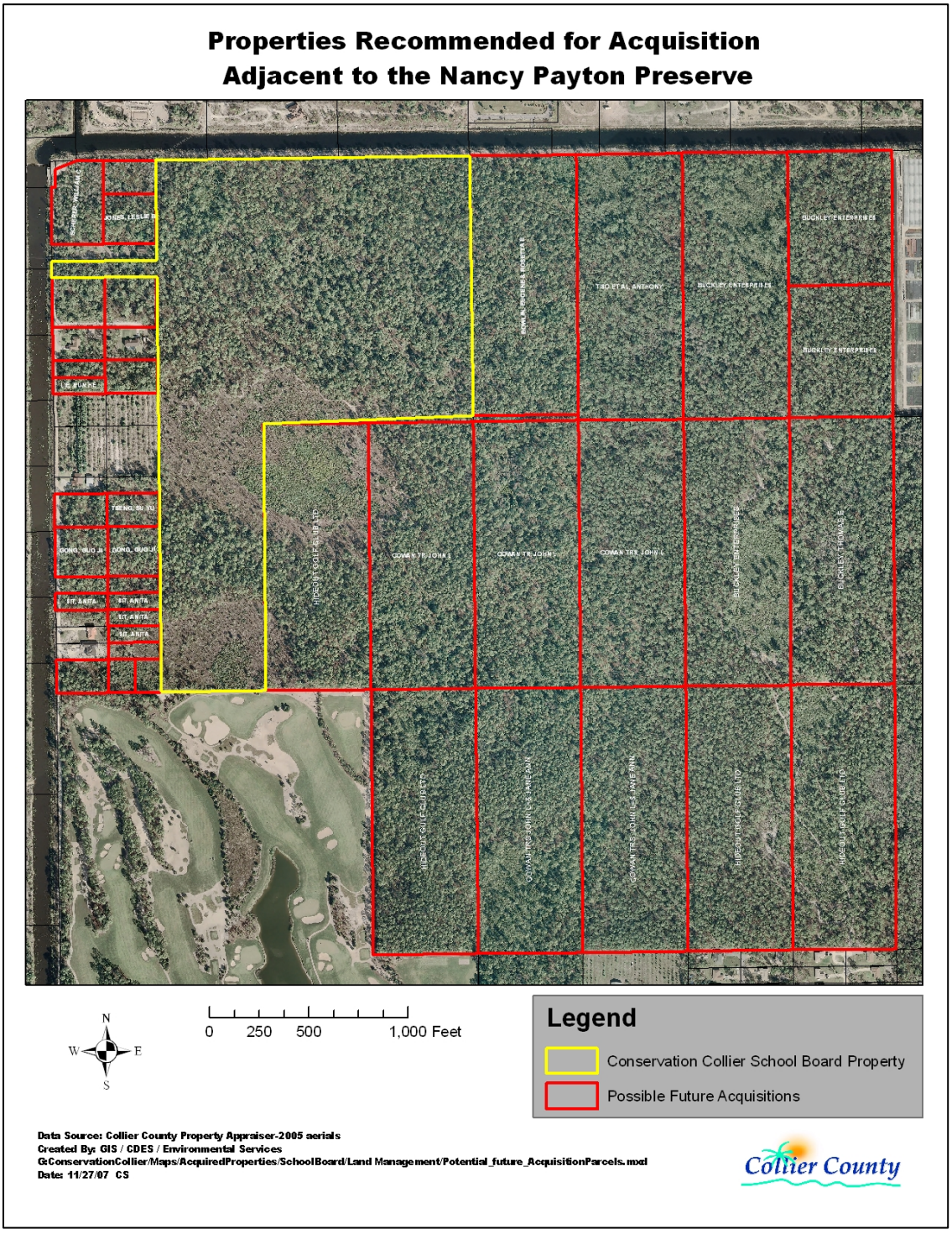
3.4 Adjacent Land Uses - Currently surrounding the preserve are a small number of single family homes, a canal, a private golf course and vacant undisturbed land.

3.5 Prospective Land Acquisitions

Several surrounding properties are prospects for acquisition (See Figure 9). Acquiring any additional properties would further conservation efforts by expanding not only pine flatwood habitat but critical Red-cockaded woodpecker habitat at the same time. Letters have been sent out to several of the surrounding property owners in 2006 and 2007 with responses from only a few of the smaller parcels. See Appendix 4 for a list of (34) prospective properties, acreage, current ownership, and the reason for interest in acquisition. Since this list is quite extensive and for management practicality the parcels that are immediately adjacent to the preserve should be pursued and acquired first then expand out accordingly.

There is currently a settlement agreement in litigation between the Department of Community Affairs, Florida Audubon, Florida Wildlife Federation and land owners to the east and south of the preserve. The land owners and their attorneys are proposing to obtain approval to cluster their allowed zoning density. This will mean that the landowners will be allowed to develop 20% of their properties while preserving 80% while entering into a Safe Harbor Agreement with the U.S. Fish and Wildlife Service. There is potential that this 80% (140+ acres) or a portion of it will be conveyed to Conservation Collier.

Figure 9: Potential Properties Recommended for Future Acquisition



3.6 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)			

3.7 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 and historical/archaeological features and passive enjoyment of these resources by visitors.

4.0 Future Use of the Logan Woods Preserve including Management Issues, Goals and Objectives

This section describes the main management issues, goals, and objectives for Logan Woods 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 ordinance then requires a "Final" management plan be developed within two years. Subsequently, the property management plan must be updated every five years. 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 Board of County Commisioners.

4.1.1 Preserve Manager: Contact Information

The Site Manager for Logan Woods 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 natural or historical/archaeological resources shall be permitted within the preserve. The goal is to allow limited nondestructive public access to 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 flatwood 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 feet, muscadine grape, swamp fern, grasses and herbs. Prescribed burns will be conducted on a 2-4 year cycle to keep saw palmettos low and hardwoods and palm cover sparse (<25%), allowing for a diverse and dense herb layer.

The managed habitat will also improve productivity for the endangered Red-cockaded woodpecker and promote reoccupancy of the state listed Gopher tortoises in the currently no occupied mesic flatwood areas. RCW's and gopher tortoises act as umbrella species for other suited wildlife species that thrive in well managed pine flatwood habitats. Artificial RCW cavities will be installed in suitable areas after the first controlled burn to attempt to increase existing neighboring populations and bring the birds back onto the preserve property. The slash pine canopy will eventually be restored to no greater than 50% canopy cover in the wildfire areas as a result of replanting efforts. This will 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

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 should be included in 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: Eliminate or reduce human impacts to indigenous plant and animal life
Goal 2: Implement a biological monitoring program.
Goal 3: Continue to keep populations of invasive exotic plants in maintenance state
Goal 4: Create and implement a prescribed fire program
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: Develop and implement a plan for public use
Goal 9: Facilitate uses of the site for educational purposes
Goal 10: Officially open site up for public access
Goal 11: Provide a plan for disaster preparedness

GOAL 1: Eliminate or reduce human impacts to indigenous plant and animal life

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

Action Item 1.1 Prohibit unauthorized vehicle use in the preserve

Staff will continue to maintain the site as legally posted. Currently "No Trespassing-Collier County" signs are posted every 500 feet or less and at every corner of the property. Conservation Collier signs also exist in two of the trailhead areas with additional signage stating "authorized vehicular used only". This fulfills our legal posting requirement. If signs are removed or vandalized, they will be fixed and replaced as needed. They may need to be stabilized with concrete if they continue to be removed.

Staff will continue to work with enforcement agencies such as the Collier County Sheriff's Department Agriculture Division and Florida Fish and Wildlife Conservation Commission 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 brought to jail. Staff has received approval from the

Board of County Commissioners 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 at last resort.

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

The location of plant species will be identified using a global positioning system (GPS) device and mapped to allow staff to monitor them. Public trails will be 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 Monitor public access

Once the site is opened up for public access, future visitors will be encouraged to stay on established trails. Staff will frequent the site to conduct inspections and will coordinate with visiting children's groups to educate them about how important protecting the resource is.

Action Item 1.4 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.

GOAL 2: Implement a biological monitoring program

Action Item 2.1 Set up permanent photopoints throughout the preserve.

Locations of photo points will be recorded with a GPS and all photographs taken at these locations will be taken at a standard height and angle of view. 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 with a vegetation height measuring stick present in each photo.

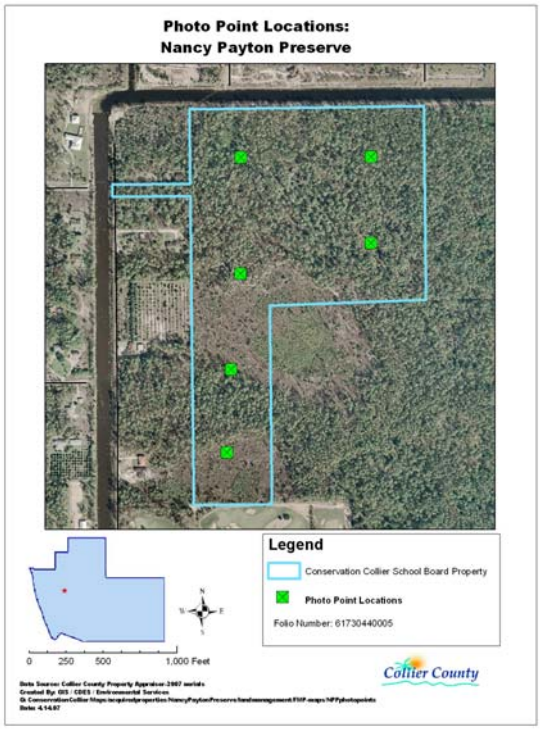


Figure 10. Photo Point Locations at Nancy Payton Preserve

Action Item 2.2 Establish 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) has been 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 will be completed later in 2008 and the final initial survey will become a part of this plan. His 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 will 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 Establish 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 sampling, like plant sampling, should take place at regular intervals (ca. 5-10 years) to detect long-term trends.

After the first prescribed burn, artificial RCW cavities will be installed. These will be monitored on a regular basis to determine success. If the birds do move back on the preserve a more intense monitoring system will be established with the help of FFWCC.

Staff may also in the long term, attempt to work with the Florida Audubon and FFWCC on setting up a Red-cockaded woodpecker web camera if the birds eventually move back into this preserve. This will allow the County, all interested agencies, and Collier County school children to remotely view a nest cavity. Grants could be sought to help to cover the costs of the project as an educational and research based tool.

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 Nancy Payton Preserves native natural community. Minimal invasive species are present in the Preserve and many have been 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. 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 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.

Action Item 3.2 Conduct initial exotic removal on any newly acquired properties purchased adjacent to the preserve as soon as possible after closing

Table 11: Invasive, Exotic Plant Species Control Plan for the Nancy Payton Preserve

Scientific Name	Common Name(s)	Description and Recommended Control(s)[a]
Acacia auriculiformis	Earleaf acacia	Hand pull seedlings, basal bark application of 10% Garlon 4 or cut-stump treatment with 50% Garlon 3A.
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.
Syzygium cumini	Java Plum, Jambolan	Hand pull seedlings, mature trees may take up to 9 months to die. Cut-stump treatment with 50% Garlon 3A or 10% Garlon 4, or use a basal bark treatment with 10% Garlon 4.
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.
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.
Lantana camara	Shrub verbena	Basal application with 10% Garlon 4 or cut stump treatment with Garlon 3A or 10% Garlon 4.
Rhynchelytrum repens	Rose natal grass	Foliar-2.5% glyphosate mixed in water with non-ionic surfactant, treat in spring prior to seed set
Pteris vittata	China brake fern	
Urena lobata	Caesar's Weed	Hand pull seedlings, Foliar treatment with 2-5% Glyphosate in water can be sprayed on young plants. Its best to treat in the spring or summer prior to seed maturation. Responds aggressively to fire
Pennisetum polystachion	West Indian pennisetum, mission grass	Foliar- 1-3% glyphosate. If natives surrounding, cut plants to ground level and spray with 5% glyphosate when it re-grows to 8-12 feet Remove cut stems from site. Responds aggressively to fire- re-treat growth soon after fire

GOAL 4: Create and implement a prescribed fire program

The use of prescribed fire as a management tool will be critical to the long-term health of the natural habitats and native species at the Nancy Payton Preserve. Pine Flatwood communities require periodic fires. A controlled burn is planned for the entire property as soon as weather and proper conditions allow in late Fall / Early Winter of 2008. Burning at this time of the year is safest and is necessary to reduce fuel loads before switching to growing season burning. Subsequent controlled burns should occur in 2 years (2010). This will create desirable effects on native ground cover and will further reduce hardwoods and undesirable vegetation. Following the growing season burns the site should be burned within 3-5 year increments.

Action Items 4.1: Create a Prescribed Burn Plan

The preserve land manager will create a fire management plan and will coordinate other local qualified agencies and with the Department 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 (Interagency 2006). An example prescribed burn plan for this preserve is in Appendix 4 in the back of this plan.

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

This entire preserve could be burned in one day if weather conditions permit. If timing, smoke issues or weather hinder this, the unit could be divided up into smaller units. Before clearing any vegetation, permits must be received from the County Community Development and Environmental Services Department. Fire lines will be installed utilizing best management practices to minimize impacts to mature trees, habitat and wildlife populations. Fire breaks will be disked down to soil and will go around all mature pines trees; they will be a maximum of 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 will need to be installed.

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

Action Item 4.3a: Map and plan areas to reduce midstory vegetation

Goals will be to mechanically or manually reduce cabbage palms to no greater than 4 per acre and within 100 feet of potential or active cavity trees before any controlled burn. Saw palmetto greater than 3 feet in height or that surround potential or active cavity trees should be reduced before any controlled burn. These areas will need to be mapped, with acreage calculated to obtain appropriate County permits before conducting any of the above mentioned activities. This activity shall be conducted within one month of a scheduled prescribed burn to allow the debris to dry out. The debris can be spread out in open areas to assist in carrying the fire. If any RCW cavities exist on the property either artificial or natural, special precautions will be taken around each particular tree.

Action Item 4.3b: Cut and pull vines down out of canopy trees

Vines that extend into the canopy of trees in the preserve will need to be removed before any prescribed burns to prevent the fire from traveling up into the canopy. Also, this will prevent enabling predators, such as snakes into future RCW cavities.

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

Public meeting(s) will be held before each burn and a system of notifying neighboring landowners in advance of prescribed burns will be established (via door postings, email, phone trees, etc.) 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 and County Commissioners and local fire departments prior to any burns.

Staff will work with the County Comprehensive Planning department to discuss where we need our smoke to go for our future prescribed burns on the preserve. This will hopefully influence where future development is planned or encourage "Fire Wise Communites" to be considered or required.

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

Due to lack of County staffing qualified to perform a prescribed burn, the County will seek assistance from one or more of the following agencies: Department of Forestry, Florida Parks, Lee County, Florida Fish and Wildlife Conservation Commission and the Florida Panther 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.

Action Item 4.6 Conduct pre- and post-burning 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 (Interagency 2006). A comprehensive evaluation of every burn must 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 postfire growing season to get a good assessment of vegetative response(USDA 1989).

Action Item 4.7 Explore the use of alternatives to fire

Overgrown management areas in between houses where prescribed burning appears impossible to achieve shall be mechanically or manually reduced to prevent wildfire. Methods will be explored that will inflict the least amount of disturbance to these areas.

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 killed approximately 90-95% of the existing canopy in these areas. After the intial prescribed burn, south Florida Slash Pine Trees (Pinus elliottii var. densa) will be planted right before rainy season. Due to the presence of gopher tortoise and their need for a ground cover food source, the goal will be to aim for a recovery of no more than 60% canopy cover in both areas.

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.

GOAL 6 **Native wildlife species managment**

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 communities at the preserve.

Action Item 6.1 Listed Wildlife Species Management

The Nancy Payton Preserve should be managed to provide habitat for listed species found or potentially found on 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 6.2 Establish Red-Cockaded Woodpecker Management Guidelines

A population of Red-cockaded Woodpeckers (RCWs) exist in close proximity to the preserve. The preserve once contained an active cavity tree before it burned in the 2004 wildfire. RCWs require an open mid-story. Due to lack of fire in the majority of the site, the midstory and ground cover vines are growing at a rapid rate. This overgrowth needs to be reduced as soon as possible to prevent another potential wildfire and to increase potential habitat for RCWs.

County staff has been working with the Florida Fish and Wildlife Conservation Commission to enter into a Safe Harbor Agreement and U.S. Fish and Wildlife (See appendix 4). This agreement is generally for landowners who wish to develop their property which may contain RCWs. This allows them to establish baseline level responsibilities for protecting RCWs while allowing incidental takings for any new colonizers that may come into their property after the fact. Conservation Collier is in no way interested in this aspect of the plan. However, by entering into the agreement, we would be able to gain technical management assistance from FFWCC and USFWS in regard to protecting the species. This will also hold 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.

Additional conservation benefits to be gained would be to manage our site to the degree that it can become a suitable recipient site for translocated birds. Artificial cavities will be installed after the first prescribed burn on the site. This would also foster public support for RCW conservation and endangered species management. It will demonstrate government agency sensitivity, cooperativeness and flexibility.

This agreement includes all management goals listed in this plan already and would need to be signed by the Board of County Commissioners to be put into effect. It is a voluntary program and it would be in effect for 98 years. The agreement can be cancelled with 60 days' notice.

Action Item 6.3 Monitor Gopher Tortoise Population

Another main priority shall be the management and inventory of the gopher tortoise population. Eight gopher tortoise burrows have been located in the preserve. The burrows have been GPS located and mapped however this information will not be included in the plan one mature tortoise was observed in 2004 and another juvenile was observed in 2007. All of the burrows appear to be active. Several also exist on an adjacent parcel not owned by the County. A gopher tortoise survey will be conducted on site before any fire lines or fuel reduction measure take place. Once a controlled burn is conducted on the preserve site, an additional comprehensive survey will be done to verify the estimated population. This will allow us to determine if it is appropriate to become a gopher tortoise relocation site. If the site is deemed acceptable, staff will pursue all actions necessary to become recognized as a relocation site with the Florida Fish and Wildlife Conservation Commission (FFWCC). FFWCC guidelines for management identify a viable gopher tortoise population as consisting of 40 – 50 individuals requiring 25-50 acres of appropriate habitat. Eliminating illegal access by ORV would also ensure that tortoises are protected from collisions and burrow collapses by ORV use.

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 potential existing 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 8.1 Acquire services of licensed or qualified contractors for the removal of invasive exotic or problematic animal species

Wild hogs have not currently been observed on the preserve, however, if they become a nuisance, they will be trapped using pens with trap doors and baited with acorns or old corn (FFWCC). A contractor would most likely be hired to accomplish this if the need arises. They may be hunted in other areas of the County that are designated wildlife management areas however, his will be strongly prohibited on the preserve. Total exclusion of hogs is not usually possible. However, as soon as the first hog is observed trappers will be contacted.

To date, two (2) introduced animal species have been documented on the Wet Woods Preserve, the RIFA 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 remove RIFA 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). A similar approach shall be taken to control feral dog populations, through elimination of the elements that sustain their undesirable population.

GOAL 8: Develop and implement a plan for public use

Action Item 8.1: **Develop a parking area along Blue Sage Drive**

A small parking area will be developed off of Blue Sage Drive to facilitate 4-6 cars and also provide a handicapped parking space (Refer to Figure 11-Conceptual Plan). Crushed/hardened rock, shell or pervious concrete will be used for the non-ADA parking spaces. Contractors will provide a design and pricing to County staff to determine how to implement while providing the least amount of impacts to the site. If school buses visit the site, the east west driveway/easement to the south of the westernmost peninsular portion of the site will be utilized. All activities must be permitted by the Collier County Community Development and Environmental Services Department.

Action Item 8.2: Develop an ADA accessible trail system into the preserve

An ADA accessible trail will start off of the parking area and will lead out into the larger northern pineland area roughly 700 feet until it reaches a picnic area. This trail will be composed of a 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 be installed as soon as possible after the first prescribed burn.

Action Item 8.3: Develop a hiking trail throughout the preserve

Two mulched hiking trails will start off of the picnic area at the east end of the ADA accessible trail (See Figure 11). One will lead to the north and another to the south. These trails will follow already impacted or cleared trails made either by ATV use or trails made by DOF during the wildfire of 2004. One large circular trail will be made through the largest intact pineland area in the northernmost portion of the property- the trail will follow the fire line along the eastern boundary of the property. Another will lead south through the center of the property to the southernmost portion of the property. There will be a short loop through the southernmost portion that will circle back to the north south trail and will lead back north to the parking area. The total estimated length of the trail is 7,600 feet at 5 feet wide. This would offer a visitor who desired to hike from the parking area through the entire trail system, a two mile total hike.

The County will work with the Sheriff's Department weekend work crews and/or local boy scout troops to assist in laying the mulch down to create the trails. Environmentally friendly mulch will be used on the trails. Mulch will smolder in a fire so it should not be laid down until after the first prescribed burn and will not be replenished until after each subsequent burn. Further evaluation will be done to determine is mulch is even needed to establish the trails.

The areas that were burned in the wildfire of 2004 will be avoided during trail creation as they contain large standing snags that could become potential hazards for visitors. A sign will be installed to warn visitors of this and to stay on designated trails. The snags do benefit the wildlife community, specifically the woodpecker species that nest and feed on the site.

GOAL 9: **Facilitate uses of the site for educational purposes**

Actions Item 9.1 Develop interpretive signage to educate preserve visitors.

Once a trail system is complete, site specific signage will be developed to educate visitors on plant and animal identification and ecosystem information. A kiosk will be built and placed near the parking area with a large 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. Another educational sign will be installed near the picnic area.

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 will be created by County staff and kept in a rainproof boxes attached to the kiosk near the preserve entrances. These boxes will be inspected monthly by the Preserve Manager and refilled as necessary.

Action Item 9.3 Coordinate with local groups to encourage site visitation

Staff will contact the Parks and Recreation Department to encourage visitation by summer campers. The 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 up the site for public access

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

Once the site is determined to be safe for public access, after the parking area and trails and signage have been installed, the site will become officially open for public use. A ceremony will be held on site to commemorate the event. Nancy Payton will be invited to speak, as the preserve is named after her, as will as the district Collier County Commissioner. Anticipated opening is in 2010.

Action Item 10.2 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 site on a routine basis.

GOAL 11: **Provide a plan for disaster preparedness**

The Conservation Collier Program has a plan in place to examine the preserve and future access ways 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

Pathways for Fire and Rescue include maintaining fire breaks around the preserve. EMT access may be accommodated via these fire breaks or on at-grade stabilized pathways. Fire lines will be cut and maintained to allow for the Department of Forestry (DOF) 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 utilize the services of a certified arborist to determine diseased, weak, or damaged trees/limbs surrounding the trails and kiosks that should be removed for safety reasons and prior to hurricane season. This activity is intended to reduce the risk of visitor injury.

Action Item 8.4 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 8.5 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 hurricane debris as possible will be chipped and retained on-site – to be used as mulch for the trail.

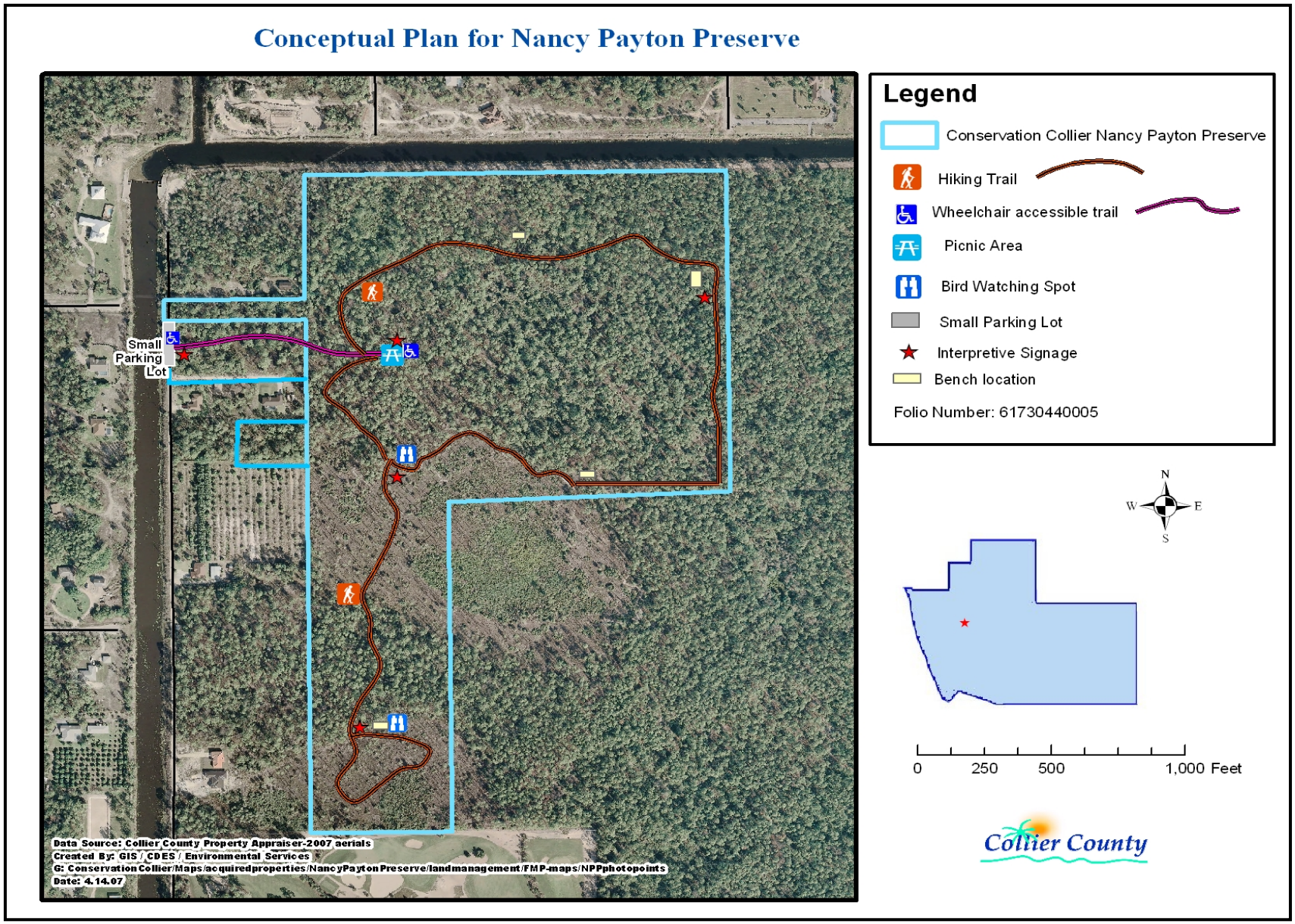


Figure 11. Conceptual Plan for Nancy Payton Preserve

Table 12. Estimated Annual Land Management Budget –

Table 12: Estimated Annual Land Management Budget (Amounts in $)													
			YEARS										
Item	QTY	Cost ($)	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13[1]	2013-14	2014-15	2015-16	2016-17	Total
Facilities Development													
Mulched Trails (LF) [2]	7,600	$9,504			$9,504								$9,504
ADA Trail		$50,000			$50,000								$50,000
Parking Area [4]		$25,000			$25,000								$25,000
Fence (4' field fence) [5]		$5 per foot											
Interior Info signage: Interpretative [6]	4	500				2,000							$2,000
Small signs	10	100				1,000							$1,000
Plant signs	50	10				500							$2,500
Entry signage (set) [7]	1	2,500				2,500							$2,500
*Benches, Picnic table (ADA) & trashcans [9]	6*	6,600				3,000							$3,000
***One ADA picnic table, 3 benches, two garbage cans a**													
Resource Restoration/Monitoring													
Establish vegetation plots and photo points		n/a											
Remove exotics (acres) [14]		13,155	4,880	3000	3000	3000	3000	3000	3000	3000	3000	3000	45,035
Apply Prescribed Fire (treatment) [16]		t.b.d.											t.b.d.
Fire Break Installation		DOF funded?											
Native Plant Restoration (acres) [17]		t.b.d.											t.b.d.
Plant Survey	1		$2,950					$2,950					$5,900
Regular Maintenance													
Reduce Fuel Loads [18]	TBD	$25,000		$25,000									$25,000
General Facilities Maintenance (month/yr) [19]	6	200					200	200	200	200	200	200	$1,200
Grand Total			**7830**		**$87,504**	**14500**	**3200**	**6150**					**$175,139**
***One ADA picnic table, 3 benches, two garbage cans and one bike rack**													

4.5 Partnerships and Regional Coordination

4.5.1 Interagency Agreements and Cooperating Agencies

The Safe Harbor Management Agreement (**Appendix 6**) would be 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, 6.2.

4.5.2 Cooperating Agencies

Florida Fish and Wildlife Conservation Commission
US Fish and Wildlife Service
Florida Wildlife Federation
Florida Audubon Society

4.5.3 Cooperating Organizations

Naples Chapter of the Florida Native Plant Society
Boy and Girl Scouts

4.5.4 Land Use Coordination

4.6 Priority List of Management, Research, and Information Needs

Wildlife surveys
Complete second half of plant survey
Gopher Tortoise Survey

5.0 Literature Cited

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Add:

(http://baysoundings.com/fall06/hogsgonewild.asp)

Florida Audubon Website

IRC website

Guide for Prescribed Fire in Southern Forests-USDA 1989

Interagency Basic Prescribed Fire Manual

Appendix 1: Legal Description

*** OR: 3944 PG: 3925 ***

CONSERVATION COLLIER
Property Identification Number: 61730440005

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.

School Board Attorney Review

Appendix 2. Preliminary Plant List

Nancy Payton Preserve: Preliminary Plant List
Keith A. Bradley, The Institute for Regional Conservation
April 1, 2008

Scientific Name	Common Names	Native Status	State	FNAI	FLEPPC	Cypress	Disturbed	Mesic Flatwoods (unburned)	Mesic Flatwoods (burned)
Abrus precatorius	Rosary-pea, Crab-eyes	Introduced			I	X	X		
Acacia auriculiformis	Earleaf acacia	Introduced			I			X	
Amphicarpum muhlenbergianum	Blue-maidencane	Native					X	X	X
Andropogon glomeratus var. *pumilus*	Common bushy bluestem	Native						X	
Andropogon virginicus	Broomsedge bluestem	Native						X	
Asimina reticulata	Common pawpaw, Netted pawpaw	Native						X	X
Baccharis halimifolia	Saltbush, Groundsel tree, Sea-myrtle	Native					X		X
Bambusa vulgaris	Common bamboo	Cultivated Only					X		
Bidens alba var. radiata	Spanish-needles	Native				X	X		
Blechnum serrulatum	Swamp fern, Toothed midsorus fern	Native				X		X	
Bulbostylis ciliatifolia	Densetuft hairsedge	Native						X	
Callicarpa americana	American beautyberry	Native				X		X	X
Cassytha filiformis	Lovevine, Devil's gut	Native					X	X	X
Catharanthus roseus	Madagascar-periwinkle	Introduced					X		
Cenchrus echinatus	Southern sandbur	Native					X		
Cenchrus incertus	Coastal sandbur	Native					X		
Cephalanthus occidentalis	Common buttonbush	Native						X	
Chamaesyce ophthalmica	Florida hammock sandmat	Native					X		
Chiococca parvifolia	Pineland snowberry	Native						X	X
Chromolaena odorata	Jack-in-the-bush	Native				X		X	
Cladium jamaicense	Saw-grass, Jamaica swamp sawgrass	Native				X		X	
Conyza canadensis var. *pusilla*	Dwarf Canadian horseweed	Native					X		X
Croton glandulosus	Vente conmigo	Native					X	X	
Crotalaria rotundifolia	Rabbitbells	Native						X	
Cupaniopsis anacardioides	Carrotwood	Introduced			I			X	X
Cynanchum scoparium	Hairnetvine, Leafless swallowwort	Native				X		X	
Cyperus ligularis	Swamp flatsedge	Native					X		
Dactyloctenium aegyptium	Crow's-foot grass, Durban crowfootgrass	Introduced					X		
Desmodium incanum	Beggar's-ticks	Native					X		
Dichanthelium commutatum	Variable witchgrass	Native				X		X	
Dichanthelium ensifolium var. *unciphyllum*	Cypress witchgrass	Native						X	
Dichanthelium portoricense	Hemlock witchgrass	Native						X	
Dichanthelium strigosum var. *glabrescens*	Glabrescent roughhair witchgrass	Native						X	
Digitaria longiflora	Indian crabgrass	Introduced					X		
Diodia teres	Poor joe, Rough buttonweed	Native					X		X
Dyschoriste angusta	Rockland twinflower, Pineland snakeherb	Native						X	X
Emilia sonchifolia	Lilac tassleflower	Introduced					X		X
Encyclia tampensis	Florida butterfly orchid	Native	C					X	
Eragrostis atrovirens	Thalia love grass	Introduced					X	X	
Eupatorium capillifolium	Dog-fennel	Native				X		X	X
Euphorbia polyphylla	Pineland euphorbia, Lesser Florida spurge	Native						X	
Eustachys glauca	Prairie fingergrass, Saltmarsh fingergrass	Native					X	X	
Eustachys petraea	Common fingergrass, Pinewoods fingergrass	Native					X	X	

Nancy Payton Preserve: Preliminary Plant List
Keith A. Bradley, The Institute for Regional Conservation
April 1, 2008

Scientific Name	Common Names	Native Status	State	FNAI	FLEPPC	Cypress	Disturbed	Mesic Flatwoods (unburned)	Mesic Flatwoods (burned)
Euthamia caroliniana	Slender goldenrod	Native				X		X	
Ficus aurea	Strangler fig, Golden fig	Native				X			
Harrisella porrecta	Needleroot airplant orchid	Native	T	S1		X			
Hedyotis corymbosa	Flattop mille graines	Introduced							X
Hedyotis procumbens	Innocence, Roundleaf bluet	Native						X	
Hyptis alata	Musky mint, Clustered bushmint	Native							X
Ilex cassine	Dahoon holly, Dahoon	Native						X	
Ilex glabra	Gallberry, Inkberry	Native						X	X
Iresine diffusa	Bloodleaf, Juba's bush	Native					X		
Juniperus virginiana	Red cedar	Introduced					X		X
Lantana camara	Shrubverbena	Introduced			I	X	X		X
Lyonia fruticosa	Coastalplain staggerbush	Native						X	
Macroptilium lathyroides	Wild-bean, Wild bushbean	Introduced					X		
Melothria pendula	Creeping-cucumber	Native							X
Melochia spicata	Bretonica peluda	Native						X	
Momordica charantia	Wild balsam-apple, Balsampear	Introduced					X		
Muhlenbergia capillaris	Muhlygrass, Hairawnmuhly	Native						X	
Myrica cerifera	Wax myrtle, Southern Bayberry	Native						X	
Panicum hemitomon	Maidencane	Native				X			
Panicum tenerum	Bluejoint panicum	Native						X	
Parthenocissus quinquefolia	Virginia-creeper, Woodbine	Native				X	X	X	X
Paspalum monostachyum	Gulfdune paspalum	Native						X	X
Paspalum notatum	Bahia grass	Introduced				X	X		
Paspalum setaceum	Thin paspalum	Native					X	X	X
Passiflora suberosa	Corkystem passionflower	Native					X		
Pennisetum polystachion	West Indian pennisetum, Missiongrass	Introduced					X	X	X
Persea palustris	Swamp bay	Native						X	
Phlebodium aureum	Golden polypody	Native				X			
Piloblephis rigida	Wild pennyroyal	Native						X	X
Pinus elliottii var. densa	South Florida slash pine	Native				X		X	X
Piriqueta caroliniana	Pitted stripeseed	Native					X	X	X
Pityopsis graminifolia	Narrowleaf silkgrass	Native							X
Polygala grandiflora	Candyweed, Showy milkwort	Native						X	X
Polypremum procumbens	Rustweed, Juniperleaf	Native					X	X	
Pteridium aquilinum var. *pseudocaudatum*	Tailed bracken fern	Native				X			X
Pterocaulon pycnostachyum	Blackroot	Native						X	
Pteris vittata	China brake	Introduced			II			X	
Quercus laurifolia	Laurel oak, Diamond oak	Native				X		X	
Rapanea punctata	Myrsine, Colicwood	Native				X			X
Rhus copallinum	Winged sumac	Native					X	X	
Rhynchelytrum repens	Rose Natalgrass	Introduced			I		X	X	X
Sabal palmetto	Cabbage palm	Native				X		X	X
Schizachyrium rhizomatum	Rhizomatous bluestem	Native						X	

Nancy Payton Preserve: Preliminary Plant List
Keith A. Bradley, The Institute for Regional Conservation
April 1, 2008

Scientific Name	Common Names	Native Status	State	FNAI	FLEPPC	Cypress	Disturbed	Mesic Flatwoods (unburned)	Mesic Flatwoods (burned)
Schizachyrium scoparium	Little bluestem	Native						X	
Scoparia dulcis	Sweetbroom, Licoriceweed	Native						X	X
Serenoa repens	Saw palmetto	Native				X	X	X	X
**Shinus terebinthofolious*	Brazillian Pepper	Introduced			I				
Sideroxylon reclinatum subsp. *austrofloriden*	Everglades bully	Native						X	
Sideroxylon reclinatum	Recline Florida bully	Native							X
Smilax auriculata	Earleaf greenbrier	Native				X		X	
Spermacoce verticillata	Shrubby false buttonweed	Introduced				X	X	X	X
Sporobolus indicus var. *pyramidalis*	West Indian dropseed	Introduced					X		X
Stillingia sylvatica	Queensdelight	Native						X	
Stipulicida setacea	Pineland scalypink	Native						X	
Taxodium ascendens	Pond cypress	Native				X		X	X
Tillandsia balbisiana	Reflexed wild-pine, Northern needleleaf	Native	T			X			
Tillandsia fasciculata var. *densispica*	Stiff-leaved wild-pine, Cardinal airplant	Native	E			X	X	X	
Tillandsia paucifolia	Twisted wild-pine, Potbelly airplant	Native						X	
Tillandsia recurvata	Ball-moss	Native						X	
Tillandsia setacea	Thin-leaved wild-pine, Southern needleleaf	Native				X		X	
Tillandsia usneoides	Spanish-moss	Native				X			
Toxicodendron radicans	Eastern poison-ivy	Native				X		X	
Trema micranthum	Florida trema, Nettletree	Native				X	X		
Urena lobata	Caesarweed	Introduced			II	X	X	X	X
Vaccinium myrsinites	Shiny blueberry	Native							X
Verbesina virginica	Frostweed, White crownbeard	Native						X	
Vitis rotundifolia	Muscadine, Muscadine grape	Native				X	X	X	X
Vittaria lineata	Shoestring fern	Native						X	
Ximenia americana	Hog-plum, Tallowwood	Native						X	

**staff found small seedlings on site after survey*

Appendix 3:

Florida Natural Areas Inventory

Biodiversity Matrix Query Results
UNOFFICIAL REPORT
Created 4/10/2008
(Contact FNAI Data Services Coordinator
for an official **Standard Data Report**)
(Contact the FNAI Data Services Coordinator at 850.224.8207 for information on an official Standard Data Report)
NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

Report for 1 Matrix Unit: 41651

Descriptions

DOCUMENTED - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit.

DOCUMENTED-HISTORIC - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however the occurrence has not been observed/reported within the last twenty years.

LIKELY - The species or community is *known* to occur in this vicinity, and is considered likely within this Matrix Unit because:

1. documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; *or*
2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit.

POTENTIAL - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.

Matrix Unit ID: 41651

2 **Documented** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Gopherus polyphemus Gopher Tortoise	G3	S3	N	LS
Puma concolor coryi	G5T1	S1	LE	LE

Florida Panther

0 **Documented-Historic** Elements Found

4 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
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

Matrix Unit ID: 41651

13 **Potential** Elements for Matrix Unit 41651

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
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	G4G5T3Q	S2	LE	LE

Snail Kite				
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*

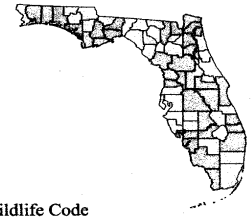
Disclaimer

The data maintained by the Florida Natural Areas Inventory represent the single most comprehensive source of information available on the locations of rare species and other significant ecological resources statewide. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. FNAI shall not be held liable for the accuracy and completeness of these data, or opinions or conclusions drawn from these data. FNAI is not inviting reliance on these data. Inventory data are designed for the purposes of conservation planning and scientific research and are not intended for use as the primary criteria for regulatory decisions.

Unofficial Report

These results are considered unofficial. FNAI offers a Standard Data Request option for those needing certifiable data.

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.

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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

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.

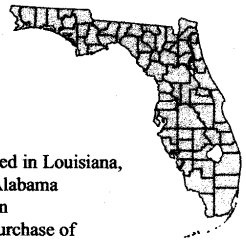
Range-wide Distribution: Primarily Southeastern Coastal Plain from North Carolina to Texas and southern Arkansas. Currently, populations are highly fragmented, and most are small. As of 1990, nearly 90 percent of active sites were in Florida, Georgia, the Carolinas, Louisiana, and Texas. More than half 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.

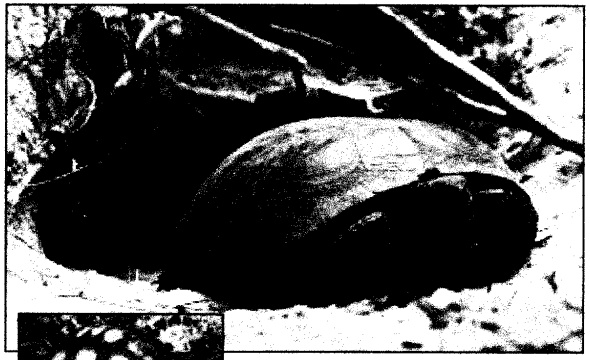
Protection and Management: Federal and state agencies must aggressively manage their extensive tracts of pine forests. Habitat quality in such areas depends on fire for maintaining open, park-like conditions. Considerable variation exists in habitat parameters range-wide, resulting in variable home-range 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.

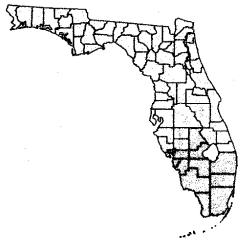
Florida Distribution: State-wide except absent from the Everglades and Keys.

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.

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.

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.

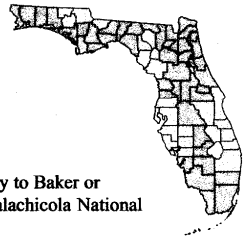
Range-wide Distribution: Subspecies formerly found throughout the southeastern U.S. from Arkansas and Louisiana east to Georgia and south to Florida.

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.

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)

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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: Potential Adjacent Properties to Pursue for Future Acquisition

Recommended Acquisition Priorities--All properties contain Additional Pine Flatwood Habitat			
Parcel Folio #	**Acres**	**Property Description Current Owner**	**Acquisition Reason**
61730640009	0.50	BARRETT EST, TED E	To increase access and habitat off of Blue Sage
61731280002	1.00	BENNETT, RAYMOND	To increase access and habitat off of Blue Sage
61730400003	15.64	BOWLIN, EUGENE & ROSETTA E	To expand preserve & RCW habitat
61730280003	8.00	BUCKLEY ENTERPRISES	To expand preserve & RCW habitat
61730320002	16.00	BUCKLEY ENTERPRISES	To expand preserve & RCW habitat
61730240001	8.00	BUCKLEY ENTERPRISES	To expand preserve & RCW habitat
61731800000	16.00	BUCKLEY ENTERPRISES	To expand preserve & RCW habitat
61731840002	16.00	BUCKLEY, THOMAS E	To expand preserve & RCW habitat
61731720009	16.00	COWAN TR, JOHN L	To expand preserve & RCW habitat
61731680000	16.00	COWAN TR, JOHN L	To expand preserve & RCW habitat
61734080005	16.00	COWAN TRS JOHN L=& JANE ANN	To expand preserve & RCW habitat
61731760001	16.00	COWAN TRS, JOHN L	To expand preserve & RCW habitat
61734040003	16.00	COWAN TRS, JOHN L=& JANE ANN	To expand preserve & RCW habitat
61731160009	0.50	DURGA, BRAMHANAND=& SHANTI	To increase access and habitat off of Blue Sage
61731440004	1.50	GONG, GUO JI	To increase access and habitat off of Blue Sage
61731480006	1.50	GONG, GUO JI	To increase access and habitat off of Blue Sage
61731360003	0.50	HIDEOUT GOLF CLUB LTD	To increase access and habitat off of Blue Sage
61731320001	0.50	HIDEOUT GOLF CLUB LTD	To increase access and habitat off of Blue Sage
61734000001	16.00	HIDEOUT GOLF CLUB LTD	To expand preserve & RCW habitat
61731640008	16.00	HIDEOUT GOLF CLUB LTD	To expand preserve & RCW habitat
61733960003	16.00	HIDEOUT GOLF CLUB LTD	To expand preserve & RCW habitat
61734120004	16.00	HIDEOUT GULF CLUB LTD	To expand preserve & RCW habitat
61730840003	1.50	JONES, LESLIE B	To increase access and habitat off of Blue Sage
61731000004	1.52	KAYE HOMES INC	To increase access and habitat off of Blue Sage-
61731040006	1.01	KAYE HOMES INC	To increase access and habitat off of Blue Sage
61730960006	1.52	KAYE HOMES INC	To increase habitat
61731080202	0.50	LIE, RUN HE	To increase access and habitat off of Blue Sage
61730800001	2.38	SCHERER, WILLIAM C	To increase access and habitat off of Blue Sage
61731578002	0.50	SIT, ANITA	To increase access and habitat off of Blue Sage
61731577003	0.50	SIT, ANITA	To increase access and habitat off of Blue Sage
61731576004	0.50	SIT, ANITA	To increase access and habitat off of Blue Sage
61731573007	0.50	SIT, ANITA	To increase access and habitat off of Blue Sage
61730360004	16.00	TISO ET AL, ANTHONY	To expand preserve & RCW habitat
61731571009	0.50	TRAPANI, DOLORES S	To increase access and habitat off of Blue Sage

Appendix 4. Example Prescribed Fire Plan

Appendix 5: Interagency Agreement
Safe Harbor Agreement