Prairie Pines Preserve
Land Management Plan
Second Edition

18400 North Tamiami Trail
North Fort Myers, Florida 33903








Prepared by the
Land Stewardship Section
Lee County Department of Parks and Recreation

Approved by the Lee County Board of County Commissioners: January 6, 2015

Acknowledgements

We would like to thank the following for their assistance in the development of this document: The Conservation 20/20 Land Acquisition and Stewardship Advisory Committee, Cathy Olson, and other Lee County staff for carefully reviewing the Prairie Pines Preserve Land Management Plan. Also, we thank the Bird Patrol members who have helped and continue to help with our wildlife list for this Preserve.

Laura Greeno
Laura Jewell

Table of Contents

List of Exhibits

List of Acronyms

ATV	all-terrain vehicle
C20/20	Conservation 20/20
CLASAC	Conservation Lands Acquisition and Stewardship Advisory Committee
DHR	Florida Department of State Division of Historical Resources
FCT	Florida Community Trust
FDACS	Florida Department of Agriculture and Consumer Services
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FGUA	Florida Governmental Utility Authority
FFS	Florida Forest Service
FLEPPC	Florida Exotic Pest Plant Council
FLU	future land use
FNAI	Florida Natural Areas Inventory
FWC	Florida Fish and Wildlife Conservation Commission
IRC	Institute for Regional Conservation
LCDP	Lee County Division of Planning
LCDCD	Lee County Department of Community Development
LDOT	Lee County Department of Transportation
LCEC	Lee County Electric Coop
LCPR	Lee County Parks and Recreation
LCPWD	Lee County Public Works Department
LSOM	Land Stewardship Operations Manual
LMP	Land Management Plan
LiDAR	Light Detecting and Ranging
MU	Management Unit
ORV	Off-road Vehicle
PPP	Prairie Pines Preserve
SFWMD	South Florida Water Management District
STRAP	Section-Township-Range-Area-Block.Lot (Parcel)
USACOE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service

Vision Statement

It is the vision of the Lee County Parks and Recreation Department and the Conservation 20/20 Program to conserve, protect, and restore Prairie Pines Preserve to a productive, functional, and viable ecosystem. The primary stewardship objective for Prairie Pines Preserve will be to continue exotic plant control and hydrologic restoration which benefit the natural plant communities and listed species utilizing the site. The Preserve will continue to provide the currently offered resource-based recreation with its current facilities.

I. EXECUTIVE SUMMARY

Prairie Pines Preserve (PPP) is located in northern Lee County within Sections 1,2,3,11,12,13,14,15 and 16 of Township 43 South, Range 24 East, within North Fort Myers. The Preserve consists of STRAPs 01-43-24-00-00002.0000, 02-43-24-00-00001.0000, 03-43-24-00-00003.0000, 12-43-24-00-00001.0000, 13-43-24-00-00001.0000, 14-43-24-00-00002.0000, 14-43-24-00-00005.0000, 15-43-24-00-00005.0000 and 16-43-24-00-00006.0000. The main public entrance is located at 18400 North Tamiami Trail.

PPP was purchased through Lee County's Conservation 20/20 Program (C20/20). C20/20 was established in 1996 after Lee County voters approved a referendum that increased property taxes by up to .5 mil for the purpose of purchasing and protecting environmentally sensitive lands. Nomination 134, totaling 2334 acres was purchased on April 27, 2001 for $6,350,000 and Nomination 194, totaling 320 acres was purchased on April 1, 2003 for $5,440,530. County staff obtained a Florida Communities Trust grant for the reimbursement of 50% of the purchase cost of Nomination 194. This reimbursement money was used to construct the public use amenities and for restoration. The remainder will be used to fund costs related to public use, facility maintenance and restoration.

The Preserve's northernmost boundary is the Lee/Charlotte County line. The eastern boundary abuts an active railroad and private residences. Del Prado Blvd. and Mellow Lane border the southern boundary. Parcel 194, referred to as "the arm" is bordered by North Tamiami Trail/US 41 to the west, the airstrip and private residences to the north, mobile home communities and raw land to the south and is separated from Parcel 134 by an abandoned railroad bed and an easement for a Lee County Electric Coop transmission line.

The natural elevations range from 25 feet above sea level along the northern boundary of site 134 and slope in a general southerly direction to 12 feet above sea level.

There are fourteen different soil types found at the Preserve. All of the soils within the Preserve are described as nearly level and poorly drained, have severe limitations for urban uses because of the high water table and all but one soil type (Hallendale Fine Sand) are categorized with rapid permeability in the surface and subsurface levels. This means that water is able to move downward through the soil layers between 6-20 inches per hour.

PPP is within the Powell Creek and Daughtry's Creek sub basins of the South Florida Water Management District's Lower West Coast Region. Lee County's Natural Resources Department define different boundaries for their watersheds.

The Preserve lies within the county's Powell Creek and Yellow Fever Creek – East Branch watersheds.

Hydrological alterations have been made on and directly adjacent to PPP that affect the natural sheet flow across the lands. The existing ditches, berms, ag roads, old and currently maintained trails all influence the water flow on the site by either interrupting sheet flow or holding water for extended periods in some areas, while excessively draining other areas. Residential development, roads and ditching off-site have drastically altered the amount and timing of water entering the Preserve.

PPP contains a combination of wetland and upland communities that serve as important habitat for a variety of birds, mammals, reptiles and amphibians. The Preserve consists of 18 natural or altered plant communities described by the Florida Natural Areas Inventory. While wet and mesic flatwoods are the most common plant communities, approximately 16% of the Preserve has been categorized as disturbed communities, primarily due to lack of fire, an abundance of invasive exotic species or hydrologic changes. Nearly 56% of PPP is classified as wetlands. The Preserve is home to 27 species which are state and/or federally listed and is thus important conservation land.

Land use history for PPP is similar to much of the land in Lee County. Logging and stumping, row crop production and cattle grazing were done on portions of PPP. Prior to being owned by Lee County, PPP was known as the Little Ranches property, named for the company that owned it.

The goal of this land management plan is to identify Preserve resources, develop strategies to protect the resources and implement restoration activities to continue to restore PPP to a productive, functional and viable ecosystem while protecting listed species and ensuring that the Preserve will be managed in accordance with Lee County Parks and Recreation's Land Stewardship Operations Manual. This ten year update to the original Land Stewardship Plan is in keeping with the original conservation goals and Florida Communities Trust grant requirements.

Restoration and management activities at PPP will focus on controlling invasive exotic plant and animal species, protecting listed species, managing pine density, removing debris, and enhancing wildlife habitat. A Management Action Plan outlines restoration and stewardship goals. This plan outlines these goals and strategies, explains how the goals will be accomplished, and provides a timetable for completion. Any future land acquisitions to the Preserve will be managed similarly to this land management plan. This plan will be revised in ten years (2024).

II. INTRODUCTION

Prairie Pines Preserve was purchased through Lee County's Conservation 20/20 Program (C20/20). The Conservation 20/20 Program was established in 1996 after Lee County voters approved a referendum that increased property taxes by up to .5 mil for the purpose of purchasing and protecting environmentally sensitive lands. Nomination 134, totaling 2334 acres was purchased on April 27, 2001 for $6,350,000 and Nomination 194, totaling 320 acres was purchased on April 1, 2003 for $5,440,530. County staff obtained a Florida Communities Trust grant for the reimbursement of 50% of the purchase cost of Nomination 194.

The Preserve's native plant communities consist of a mosaic of hydric and mesic pine flatwoods intermixed with numerous isolated herbaceous wetlands. Nearly 56% of PPP is classified as wetlands. This mosaic serves as important habitat for a variety of wildlife. PPP has a very high diversity of bird species. The list contains several state/federally listed species including: roseate spoonbills (*Platalea ajaja),* wood storks (*Mycteria americana*), snail kites (*Rostrhamus sociabilis*) and peregrine falcons (*Falco peregrinus*) as well as unusual migrants: Swainson's hawk (*Buteo swainsoni*) and bobolink (*Dolichonyx oryzivorus*).

PPP was previously owned by the Little Ranches Company, which utilized the property for various agricultural activities, primarily cattle ranching. Influences, such as the two railroads bordering the Preserve on the east and west, construction of I-75 and Del Prado Extension have altered the landscape and hydroperiod of the Preserve.

Many changes have taken place on PPP since completion of the first management plan. Public use facilities, including marked designated trails, a wildlife blind, an ADA compliant trail, restroom facilities, paved parking area, and related landscaping have been completed. Staff and volunteers have hand removed over 6.63 miles of interior barbed wire fence on many workdays. Perimeter boundary fence and firelines have been installed. Multiple sweeps for invasive exotic plants have been conducted on parcel 194. Melaleuca logging and pine tree thinning was conducted across the entire preserve. After the melaleuca removal invasive exotic plant treatments were conducted across parts of 134. Overgrown palmetto was rollerchopped on 194 and some of 134. A berm and ditch were constructed as a result of actions taken to alleviate flooding of a neighborhood on the eastern boundary (discussed further in the Internal Influences section). During the next ten years this edition of the management plan covers, rollerchopping will continue, prescribed burning will be conducted and hydrologic improvements including plugging of small ditches will be done.

The purpose of this management plan is to define conservation goals for PPP that will address the above concerns. It will serve as a guide for Lee County's Department of Parks and Recreation (LCPR) to use best management practices and adaptive management strategies to ensure proper stewardship and

protection of the Preserve. It also serves as a reference guide because of the field studies and research of scientific literature and historic records conducted by C20/20 staff that help to explain the Preserve's ecosystem functions, its natural history and influences from human use.

III. LOCATION AND SITE DESCRIPTION

PPP is located in north central Lee County, within Sections 1,2,3,11,12,13,14,15 and 16 of Township 43 South, Range 24 East. PPP is bordered by the Lee/Charlotte County line to the north, an active railroad and I-75 on its northeast side, Lost Lane, which is unimproved, and a drainage ditch on its east side, Del Prado Extension/Mellow Drive and a drainage ditch on its south side. On the west side there is an abandoned railroad grade that is owned by the Lee County Division of Utilities, with 320 acres of the Preserve extending west beyond this railroad grade towards US 41. The west, east and south boundaries of this portion of the Preserve are surrounded mainly by housing developments and mobile home communities.

The Preserve consists of STRAP # 01-43-24-00-00002.0000, 02-43-24-00-00001.0000, 03-43-24-00-00003.0000, 12-43-24-00-00001.0000, 13-43-24-00-00001.0000, 14-43-24-00-00002.0000, 14-43-24-00-00005.0000, 15-43-24-00-00005.0000 and 16-43-24-00-00006.0000. The BOCC approved an easement swap and sale of a portion of PPP to Lee County Department of Transportation. This altered the property boundary of the southeast corner and eastern line of parcel 134. The amount of land conveyed totaled 54.6 acres in the amount of $205,900 which was put into the acquisition fund of the Conservation 20/20 fund. The original easement bisected 134 and was vacated. Until road construction commences, fences and boundary signs will not be moved to align with the new property boundary. Further information on this is provided in the External Influences section of this document.

The Preserve is approximately 2684 acres in size and contains 18 plant communities. Dominant areas are mesic and wet flatwoods and freshwater marshes. Approximately 16% of the plant communities are designated as "disturbed," typically due to land clearing activities, lack of fire, invasive exotic plant infestations and/or changes in the natural drainage patterns. Figure 1 shows PPP's location in Lee County while Figure 2 identifies the original and current boundaries of PPP in a 2014 aerial photograph.

Figure 1: Location Map

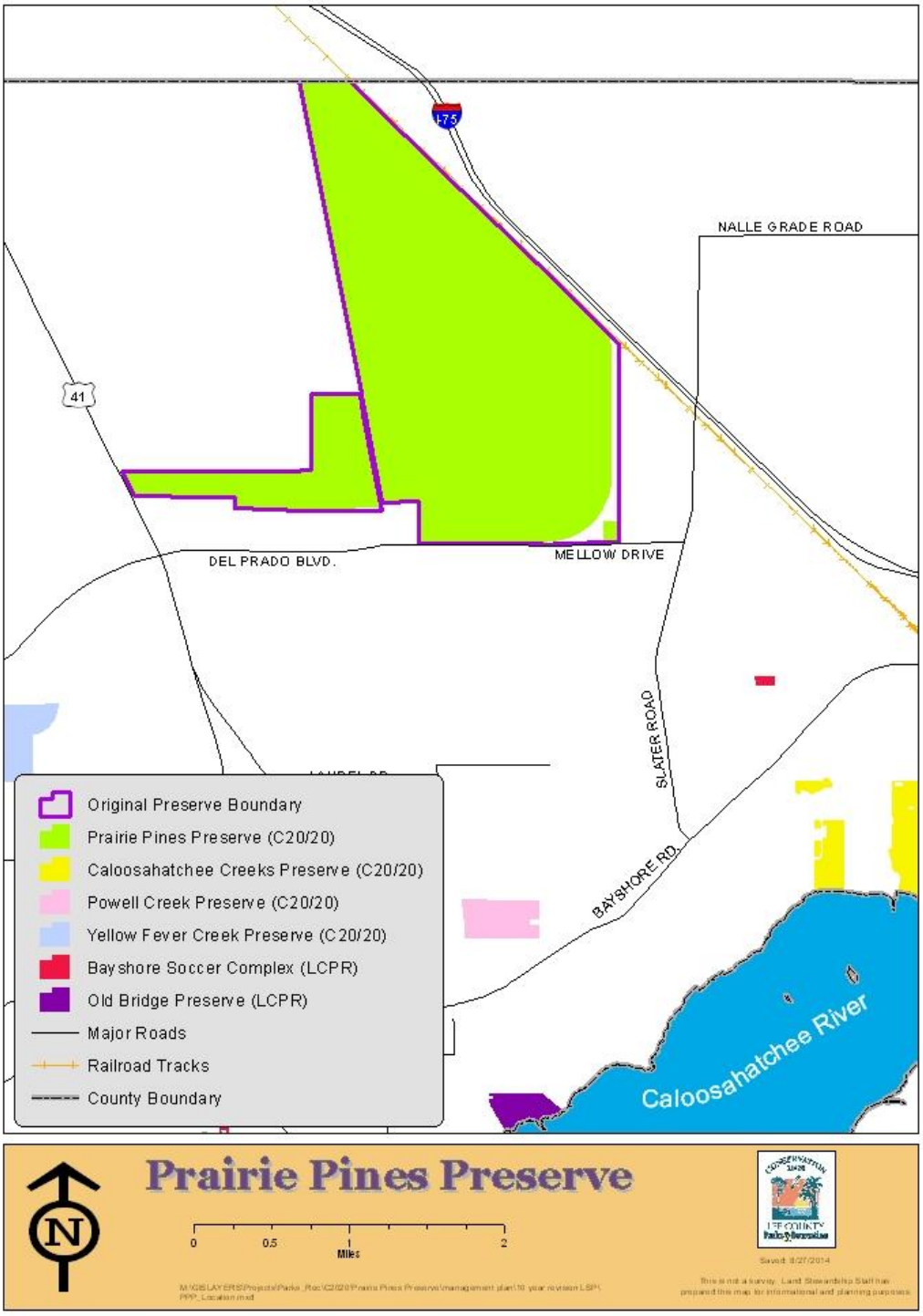
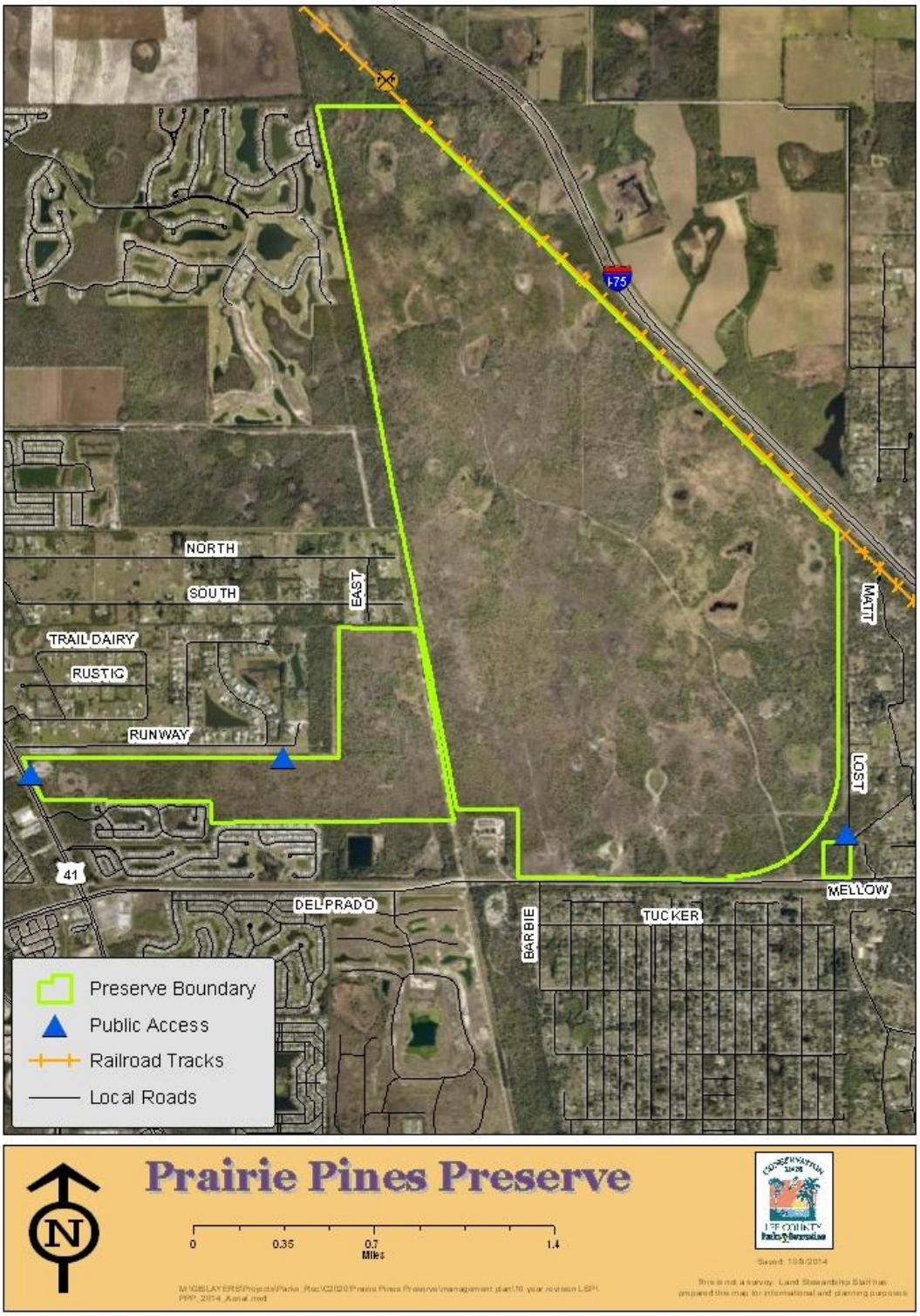


Figure 2: 2014 Aerial



IV. NATURAL RESOURCES DESCRIPTION

A. Physical Resources

i. Climate

General information on the climate of southwest Florida is located in the Land Stewardship Operations Manual's (LSOM) Land Stewardship Plan Development and Supplemental Information section.

ii. Geology

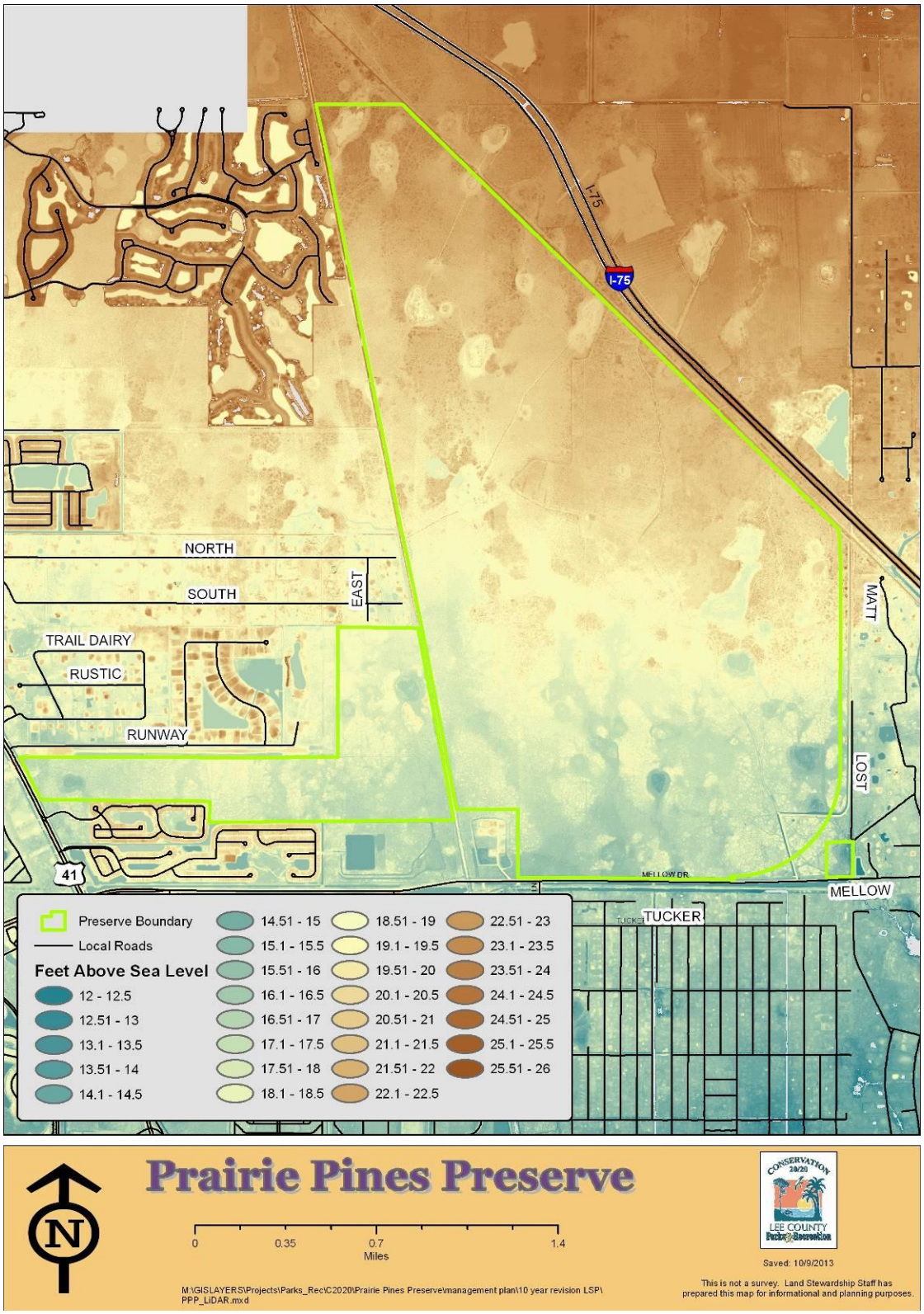
Specific information on the geologic features such as physiographic regions, formations and maps can be found in the LSOM's Land Stewardship Plan Development and Supplemental Information section.

iii. Topography

Natural elevations at PPP range widely from 25.75' above sea level in small patches on the northern boundary of site #134 and slope in a general southerly direction to 15' above sea level at the southern portion, with lower wetland elevations. This wide range is partially due to the size (over three miles, north to south). Man-made features at PPP include ditches and berms associated with agricultural activities, an abandoned railroad bed which bisects the Preserve, an agricultural access road bisecting the eastern portion of the Preserve, and a levy constructed from the south boundary of the Preserve that turns to the east and follows the boundary until terminating at the railroad bed. None of these man-made features exceed the natural topography limits for the Preserve. However, they still have a large impact on water flow, often increasing the speed that the water flows through and drains out of the Preserve. These features and impacts will be discussed more thoroughly in the Hydrology and Watershed section of this plan. Exterior topographic features include the active railroad tracks to the east and Del Prado Boulevard/Mellow Road to the south.

The following topographic map (Figure 3) uses light detecting and ranging (LiDAR) data, which is an optical remote sensing technology that measures properties of scattered light to find range and/or other information of a distant target. This data was flown in 2007 and represents the published 5 foot digital elevation model. The change in color gradient visually demonstrates the change in elevation from the higher north end of the Preserve to lower elevations in the southern end.

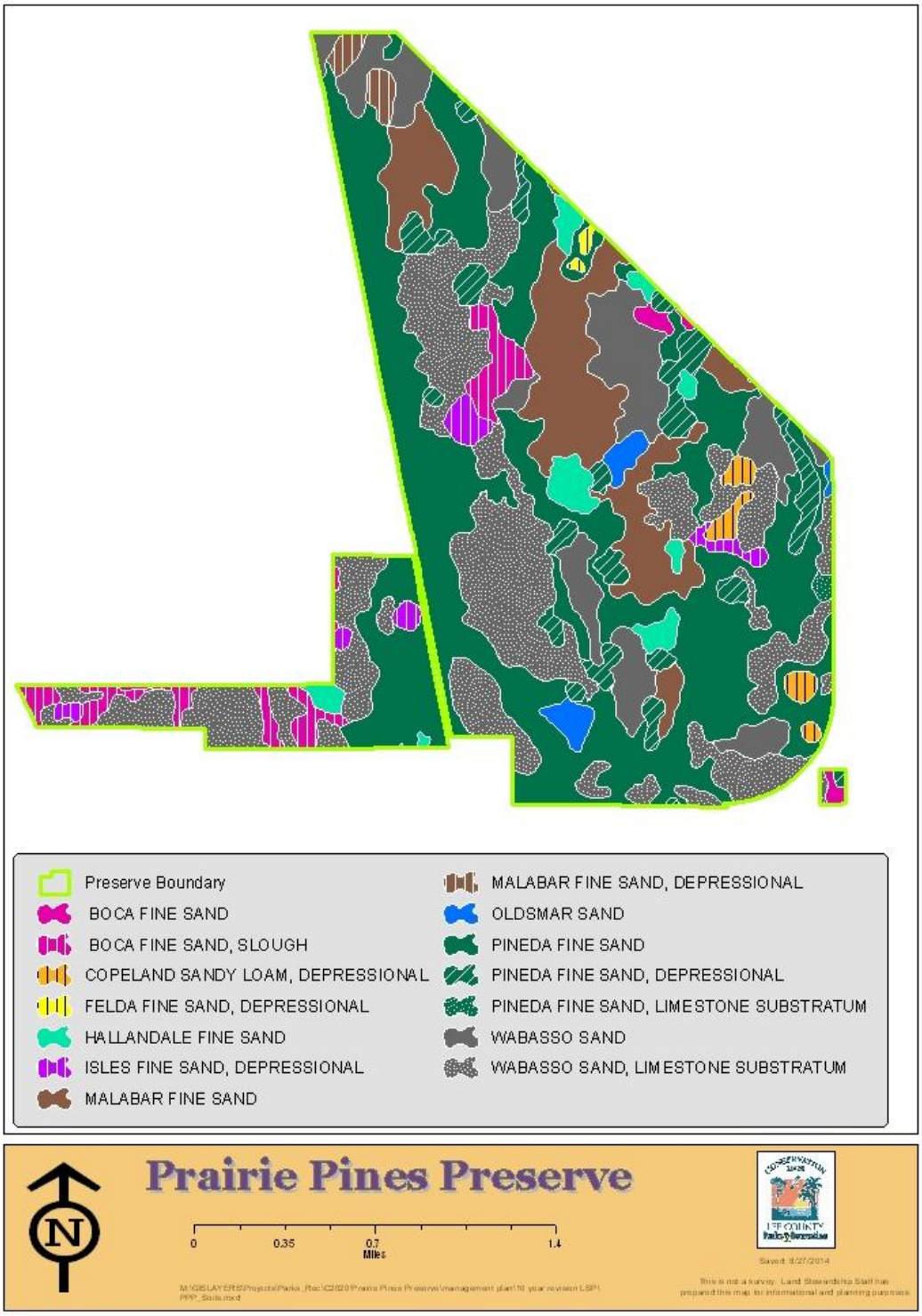
Figure 3: LiDAR Map



iv. Soils

PPP contains a total of 14 different soils (Appendix A and Figure 4). All of the soils are described as nearly level and poorly drained, have severe limitations for urban uses because of the high water table and all but one soil type (Hallendale Fine Sand) are categorized with rapid permeability in the surface and subsurface levels. This means that water is able to move downward through the soil layers between 6-20 inches per hour. Soils play an important role in dictating the location and types of recreation that the Preserve can provide. When the trails were installed at PPP, many existing trails were re-routed to avoid areas with soil types considered severely limited for recreational use. These soil types are typically found in wetland communities on the Preserve. Refer to the LSOM's Land Stewardship Plan Development and Supplemental Information section for additional information on soil types and limitation.

Figure 4: Soils Map



v. Hydrologic Components and Watershed

PPP is within both the Daughtrey Creek and Powell Creek subbasin of the South Florida Water Management District's (SFWMD) Lower West Coast Region (Figure 5). Lee County's Natural Resources Department defines different boundaries for their watersheds. The Preserve lies within the County's Powell Creek and Yellow Fever Creek – East Branch watersheds (Figure 5).

PPP experiences significant sheetflow of rainwater from the upper reaches of the Daughtry Creek and Powell Creek watersheds during the rainy season and storm events.

The Caloosahatchee Estuary was identified by DEP as impaired by nutrients and a basin management action plan (BMAP) was implemented to reduce total maximum discharge limits for total nitrogen in 2009. The purchase and conversion to conservation lands of Prairie Pines Preserve was calculated to reduce 3 LBS/YR of TN from the Caloosahatchee Estuary.

PPP has dozens of isolated, wet prairies or depression marshes that vary in size from 0.2 to 29.5 acres and are dispersed throughout the site. See the Natural Plant Communities section for more information on the characteristics of these wetlands.

Two agricultural ditches, in the north portion of the Preserve, bisect and drain five depression marshes. These ditches will require plugging or backfilling to improve the hydroperiod of the affected herbaceous wetlands and improve the overall hydrology of the Preserve. Both ditches run and drain in a northeast-southwest direction. Several smaller ditches, often with associated low berms, were dug throughout the Preserve, often for row-crop farming. An additional impact took place on the Preserve in the summer of 2001. Flooding in a residential development east of the Preserve prompted the construction of a levy. See Figure 6 for location of the wetlands, ditches and levy. In addition to the constructed ditches, trails and plowlines from wildfires cross the site and act as shallow ditches. The unnatural features will be discussed more fully in the Internal Influences section of this plan.

Restoration projects on the Preserve will be carefully planned so as to enhance natural communities and to work with the public amenities that have been created. Hydrologic projects that negatively affect the natural communities, listed species or public amenities, including designated trails, will not be undertaken.

In 1974 the United States Fish and Wildlife Service (USFWS) directed its Office of Biological Services to conduct an inventory of the nation's wetlands. Wetlands were identified on aerial photography by vegetation, visible water features and geography, and subsequently classified in general accordance with the Classification of Wetlands and Deep Water Habitats of the United States

(Cowardin et al. 1979). More information about the different classifications can be found there, or in the LSOM's Land Stewardship Plan Development and Supplemental Information section.

Not all wetland systems were mapped during the inventory, which resulted in portions of the Preserve not showing as wetland communities on their map layer (much of the white area). A more accurate depiction of wetlands is provided in the Natural Plant Communities section of this LMP.

Figure 5: Watershed Map

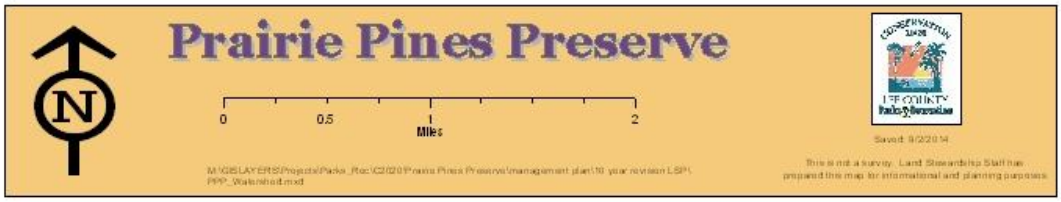
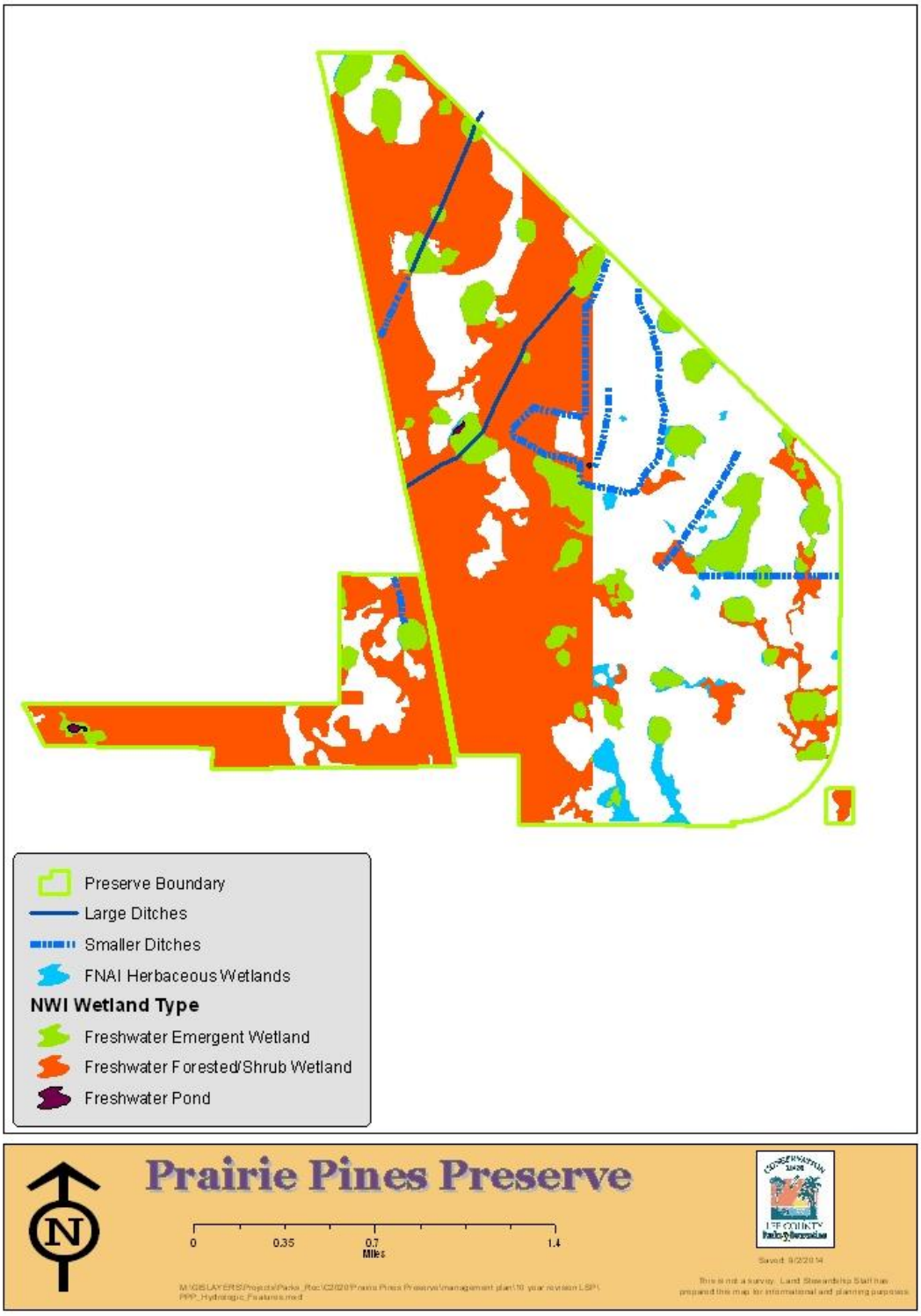


Figure 6: Hydrologic Features Map



B. Biological Resources

i. Ecosystem Function

Lee County's preserves contain a diversity of plant communities that provide habitat for numerous plant and animal species. The majority of the preserves are not islands of habitat, but are pieces of a larger conservation effort striving to create or maintain a healthy and viable ecosystem.

Pine flatwoods provide essential cover and forage material for a variety of birds, small mammals, reptiles and amphibians and some large mammals including gopher tortoise (*Gopherus polyphemus*), eastern indigo snake (*Drymarchon coraiscouperi*) and Florida black bear (*Ursus americanus floridanus*). Birds find shelter in the palmetto understory, nest in the tall pines and forage in the grasses. Oak toads (*Anaxyrus quercicus*) will dig burrows in the sandy soil and hunt for spiders and insects. There are a number of rare wildlife species that primarily occur in the flatwoods, as well as numerous rare plants, including some endemic species. During the wet season, these communities provide dry refuge for non-aquatic animals. During a severe flood, the flatwoods serve as a water storage area to help protect adjacent land from flooding (Tiner 1998). Hydric pine flatwoods function seasonally as both a wetland and upland. This hydrologic transformation allows for an abundant diversity of flora, which in turn, supports a wide range of wildlife (USFWS 1999).

Fire is an important natural component of pine flatwoods. Florida has more thunderstorm days per year than anywhere else in the country and, in turn, one of the highest frequencies of lightning strikes of any region in the United States. Fire shapes ecosystem processes in the flatwoods including creation of soil conditions suitable for germination of seeds of some species, turnover of litter, humus and nutrients, reduction of competition from hardwoods and increasing the hardiness of some species (Myers and Ewel 1990). Mechanical thinning and rollerchopping of pine flatwoods is beneficial, especially in areas that have suffered fire suppression or have had hydrologic alterations to surrounding lands which in turn creates conditions favoring growth of pines over hardwood species. Without regular fire or mechanical work, pine flatwoods can become dense stands of palmetto and have tall weak pines which block sunlight from reaching the ground, further decreasing the biodiversity and coverage of native grasses and wildflowers that gopher tortoises, quail and many other species depend upon. Mechanical reduction of vegetation is also important for converting overgrown abandoned agricultural fields to more natural and dynamic plant communities.

There are numerous isolated herbaceous wetlands scattered throughout the Preserve. The freshwater wetlands of south Florida are important to a variety of wildlife and people. Birds feed, fish and frogs live and breed, and people rely on

these marshes to improve water quality and recharge the aquifers. Seasonal changes profoundly affect the hydrological conditions of preserve areas. During the late spring and summer months, the rain begins to fall and the wetlands fill to capacity. Fish populations begin to increase both in number and biomass. In the fall when the rains end, the water recedes and the fish are concentrated in the shallow marshes. The wading birds then come in to feast which in turn aids the remaining fish by decreasing the density and increasing the availability of dissolved oxygen. Most wildlife utilizing these communities have adapted by migrating from one wetland to another as the shallow ones dry up.

The depression marshes are also important to some species of wading birds for their nesting success. For example, the white ibis (*Eudocimus albus)* chooses nesting sites near marshes that have appropriate drying conditions. Some herons and wood storks need specific falling water conditions over a prolonged four-month nesting season. The faster the marsh dries, the sooner nesting starts. If the water level rises, then nesting success declines (Myers and Ewel 1990).

This drying period is not only important to the fauna but also to the flora. Plants in these areas also benefit from the seasonal wet/dry flux. The plants in these wetlands become completely dry, die, decay and release nutrients that are bound in their tissues. This makes the soils highly productive for the next wet season. Typically, these plants have low nutrient requirements so they stockpile the excess, which is beneficial to herbivores feeding upon them. Most aquatic plants cannot germinate under water and require a drying phase.

ii. Natural Plant Communities

PPP contains a combination of wetland and upland communities that serve as important habitat for a variety of birds, mammals, reptiles and amphibians. The Preserve consists of 18 natural or altered plant communities described by the Florida Natural Areas Inventory (FNAI). While wet and mesic flatwoods are the most common plant communities; approximately 16% of the Preserve has been categorized as disturbed communities, primarily due to lack of fire, an abundance of invasive exotic species or hydrologic changes. Nearly 56% of PPP is classified as wetlands. Figure 7 shows the location of the plant communities found at PPP. The plant communities are defined using the Guide to the Natural Communities of Florida (2010) prepared by FNAI.

Acreages and percent of cover for each community are listed below. Descriptions of the plant communities and characteristic animals found within each community, as well as management suggestions can be found in the LSOM. The percent cover is slightly under 100% due to rounding off values. A complete list of plant species identified during site inspections to PPP can be found in Appendix B. This list will be updated on a seasonal basis to identify plants in their inflorescence phase.

Baygall – 0.31 acres, 0.01% coverage of PPP

Depression Marsh – 207.82 acres, 7.75% coverage of PPP

Prairie Mesic Hammock – 4.16 acres, 0.14% coverage of PPP

Prairie Mesic Hammock (Disturbed) – 2.0 acres, 0.07% coverage of PPP

The disturbance to this community is encroaching invasive exotic plants.

Scrubby Flatwoods – 49.77 acres, 1.86% coverage of PPP

Shrub Bog – 3.92 acres, 0.15% coverage of PPP

Successional Hardwood Forest – 13.7 acres, 0.5% coverage of PPP

Wet Flatwoods – 560.5 acres, 20.89% coverage of PPP

Wet Flatwoods (Disturbed) – 448.75 acres, 16.73% coverage of PPP

The disturbance to this community is caused by invasive exotic plants. Melaleuca (*Melaleuca quinquenervia*), Brazilian pepper (*Schinus terebinthifolius*) and cogongrass (*Imperata cylindrical*) are the primary invasive exotic plants causing disturbance.

Mesic Flatwoods – 912.55 acres, 34.01% coverage of PPP

Mesic Flatwoods (Disturbed) – 107.62 acres, 4.01% coverage of PPP

The disturbance to this community is caused by invasive exotic plants. Melaleuca, Brazilian pepper and cogongrass are the primary invasive exotic plants causing disturbance

Marl Prairie– 8.01 acres, 0.3% coverage of PPP

Wet Prairie– 49.41 acres, 1.84% coverage of PPP

Altered Landcover Types:

Abandoned Field – 239.2 acres, 8.91% coverage of PPP

Developed – 5.27 acres, 0.2% coverage of PPP

Spoil Area – 2.35 acres, 0.09% coverage of PPP

Spoil areas on this Preserve are remnant berms created from agricultural ditching. The berms are low and vegetated with a mix of native and exotic vegetation.

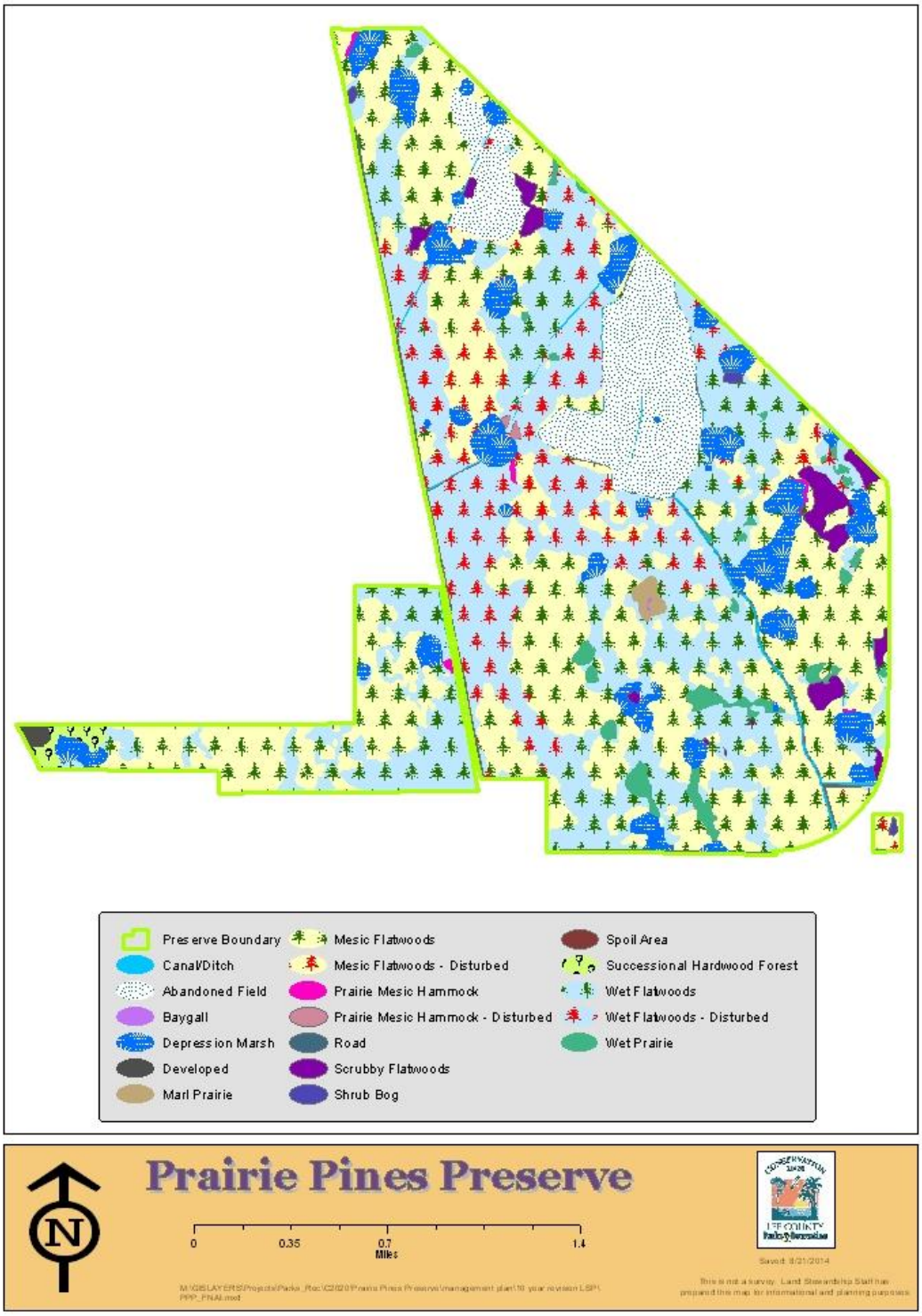
Canal/Ditch – 19.33 acres, 0.72% coverage of PPP

Two agricultural ditches, in the north portion of the Preserve, bisect and drain five depression marshes. These ditches will require restoration to improve the hydroperiod of the affected herbaceous wetlands and improve the overall hydrology of the Preserve. Both ditches run and drain in a northeast-southwest direction. Several smaller ditches, often with associated low berms, were dug throughout the Preserve for row-crop farming.

Road – 23.32 acres, 0.86% coverage of PPP

The old farm road and the primitive trails comprise this category.

Figure 7: Plant Communities Map



iii. Fauna

PPP provides a variety of habitats for wildlife including those that are state and federally listed. Fifteen exotic wildlife species have been documented at the Preserve. Appendix C has the complete list of wildlife documented on the Preserve at the time of writing this LMP; as recorded through staff field work and site inspections as well as the volunteers in Bird Patrol.

Stewardship goals will focus on maintaining healthy, functioning ecosystem processes to provide optimal habitat for native wildlife (including listed species). Restoration of the disturbed areas and control of invasive exotic plants and animals will be critical components in providing the best possible habitat for native wildlife.

Additional general information about fauna on all C20/20 preserves can be found in the LSOM's Land Stewardship Plan Development and Supplemental Information section.

iv. Designated Species

There are a variety of designated animal and plant species found at PPP. Although all native plant and animal species found on the Preserve have some protection due to the preservation of this property, certain species need additional attention. For stewardship and management purposes, all plants and animals listed by the USFWS, Florida Fish and Wildlife Conservation Commission (FWC), Florida Department of Agriculture and Consumer Services (FDACS), the Institute for Regional conservation (IRC) and FNAI will be given special consideration when considering recreation and hydrological projects. If additional listed species are documented on the Preserve, they will be added to the lists in Appendices B or C.

The following are brief summaries of designated wildlife species and reasons for their decline. Unless stated otherwise, the reasons for the species' decline and the management recommendations, if available, were obtained from Hipes et al. (2001).

Sherman's Fox Squirrel

The Sherman's fox squirrel (*Sciurus niger shermani*) has been eliminated from much of its historic range. Many acres of the fox squirrel's pine-oak forest have been converted to pine plantations, agriculture and development. Collisions with vehicles are another common cause of decline of the species. When the first edition of the PPP management plan was written in 2004, this species had only been seen in the area and not on the preserve. It has now been documented several times on the Preserve. Although no prescribed burning has taken place,

wildfires, extensive invasive exotic plant removal and roller chopping are helping to improve the habitat for this species.

Regular burn regimes of 2-5 years during the growing season (April-July) are critical to maintain their habitat with an open canopy with minimal understory. At PPP these squirrels are most commonly seen on 194 in the areas where pine thinning and rollerchopping were done to open the understory.

Florida Black Bear

Although the Florida black bear was delisted in 2012, the Florida black bear is an example of a large mammal that still faces decline due to the loss of core habitat and of corridors capable of handling their large ranges, especially in rapidly developing parts of the state. A wide variety of forested communities are needed to support the varied seasonal diet of black bears. Forested wetlands are particularly important for diurnal cover.

The Florida black bear faces numerous challenges including poaching, roadkill mortality, low reproductive rate and most importantly loss of habitat to timber harvesting, development and other uses. "Long-term conservation of the Florida black bear is dependent upon preservation of large contiguous woodlands." Scientists with FWC have found the average home range for female black bears is almost 7,000 acres and males average over 42,000 acres (Humphrey 1992).

The most recent recorded spotting of a Florida black bear at PPP was November 2000. Although PPP may not be large enough to provide year round home range, the Preserve can act as foraging and denning site as well as a safe corridor for travel. Scientists have found that large scale winter burning reduces the diversity of food available to bears as compared to growing season burns (Humphrey 1992). Prescribed burns conducted in the late spring would not only be beneficial to bears, but many other species as well.

Wood Stork and Florida Sandhill Crane

Wood storks are very sensitive to water levels in freshwater wetlands, as they require high concentrations of fish in fairly shallow water for foraging. Threats to Florida sandhill cranes (*Grus canadensis pratensis*) include loss and degradation of wetlands, fire suppression, free ranging dogs and cats and entanglement in fencing (Rodgers et al. 1996). Unnaturally high water levels during nesting seasons and extended droughts are both threats that wood storks and Florida sandhill crane face. Both of these species are regularly seen at the Preserve.

Management practices that will benefit these species include invasive exotic plant control in the numerous wetlands, hydrologic restoration of the numerous ditches and berms, implementing a prescribed fire plan that includes both burning the uplands that the cranes forage in and occasionally allowing the fires

to burn into the depressional marshes to reduce brush encroachment. At this time over 8.5 miles of interior barbed wire fencing at the Preserve has been removed, greatly reducing the risk of entanglement to the birds sandhill cranes. Feral animals will be trapped as feasible to protect cranes and other wildlife. All designated public use trails were routed around wetland areas. Finally, although the western "arm" of the Preserve allows leashed dog walking, off-leash dog exercising will not be permitted at any time and dogs will not be allowed on 134 to further protect listed species.

Herons, Egrets, Ibises, Bitterns and Spoonbills

The little blue heron's (*Egretta caerulea*) and tricolored heron's (*Egretta tricolor)* decline are due to loss of freshwater wetlands and alteration of their natural hydroperiod. There is also some indication that pesticides and heavy metal contamination may affect this heron. Yellow-crowned (*Nyctanassa violacea*) and black-crowned (*Nycticorax nycticorax*) night heron "populations have probably declined due to illegal shooting, disturbance at breeding colonies, and drainage of wetlands used for foraging. In Florida, the destruction and alteration of more than half of the wetlands, due to the phenomenal increase in population has caused a substantial decline in ardeids. Wetlands have been filled and or impacted by housing developments, agriculture, human activity (i.e. sports, recreation) and the infrastructure that supports these activities" (Rodgers et al. 1996).

Like these herons, the great egret (*Ardea alba*) and snowy egret (*Egretta* thula) have been declining throughout their ranges since the 1950s. Scientists believe that the main reason for this decline is the loss and alteration of wetlands where they forage. Similar to the herons and egrets listed above, the white ibis and glossy ibis (*Plegadis falcinellus)* are declining throughout their range due to the reduction and degradation of wetlands and human disturbances to their rookeries.

During the summer months, least bitterns (*Ixobrychus exilis*) breed throughout the eastern and central U.S. and southern Ontario from coastal Maine to Florida, and westward to the eastern Dakotas and central Texas. They are known to be in scattered locations in the western United States, in Mexico, Caribbean, and Central and South America. During winter months, least bitterns range from the mid-Atlantic seaboard to south Florida and southward. They prefer freshwater or brackish marshes with tall emergent vegetation and are difficult to survey, so few data are available. Loss of wetland habitat and the encroachment of exotic species of marsh vegetation may pose a threat (CLOa 2003).

The roseate spoonbill nests in coastal mangrove areas with a mix of other bird species and occasionally in willowheads around freshwater systems. They forage in shallow-water. Their decline is attributed to human disturbance of

nesting colonies, alteration of foraging sites and alterations of hydrologic patterns.

All 10 of these species of wading birds are seen regularly at PPP. The management practices that benefit wood storks and Florida sandhill cranes will also benefit these species.

Kites

Swallow-tailed kites (*Elanoides forficatus*) migrate to southwest Florida from South America in late February/early March for their nesting season that lasts through late July/early September. In the early 1900s, swallow-tailed kites were confirmed as nesting in 21 states; today they are only found in seven southeastern states including Florida. Loss of nesting sites through development and conversion to agriculture are the major threats to this species.

The Everglades snail kite (*Rostrhamus sociabilis plumbeus*), the subspecies of the snail kite in the United States, is endangered because many of the marshlands that serve as its habitat have been drained for development, which in turn has caused diminishing numbers of the kite's prey species, the apple snail (*Pomacea paludosa*). Success in locating apple snails is further obstructed by the introduction of exotic plants such as water lettuce, which hinders foraging. Apple snails have also suffered from agricultural runoff, eutrophication, pesticides and other pollutants. There were only 65 snail kites known to exist when the Endangered Species Act was passed in 1973.

Snail kites have only been observed once at PPP during a site inspection in 2007. Swallow-tailed kites are seen regularly, but have not been spotted nesting at PPP. In the future, if it is discovered that they are nesting on the property the tree will be protected from disturbance and nearby recreational trails may be temporarily closed during breeding season and planned management activities that could disturb the nesting pair(s) will be postponed. Otherwise, planned restoration activities (hydrologic restoration, invasive exotic plant removal, mechanical understory reduction and implementing regular prescribed fires) will all benefit the species.

Eagles and Hawks

Bald eagle (*Haliaeetus leucocephalus)* numbers have steadily increased in Florida after a low of 120 active nests in 1973, primarily caused by impacts from DDT and related pesticides. Still, loss of habitat and human disturbance due to development is a primary concern for this species. Secondary poisoning of bald eagles from the consumption of lead shot in waterfowl contributed to the 1991 ban on lead shot for waterfowl hunting in the United States.

During the summer Cooper's hawks (*Accipeter cooperii)* breed across southern Canada southward to southern United States and into central Mexico. In the winter, they range throughout the United States and Mexico. They breed in deciduous, mixed, and coniferous forests, although documentation of breeding in south Florida is scant, and are becoming more common in suburban and urban areas.

"Declines of the Cooper's hawk in the late 1940s and 1950s were blamed on DDT and pesticide contamination. Populations started increasing in the late 1960s, but it is still listed as threatened or of special concern in a number of states. The Cooper's hawk appears to be adapting to breeding in urban areas, which may help increase populations" (CLOb 2003).

Neither species has been documented utilizing PPP for nesting. If nesting is observed in the future, bald eagle nests will be protected according to Federal, state and local laws and the management activities listed under kites will also be implemented to protect any nests.

Falcons

The peregrine falcon is a migratory, seasonal resident of Florida. Originally listed due to drastic population declines caused by organophosphates such as DDT, peregrine populations recovered enough to be de-listed from the Federal endangered species list in 1999 and from the Florida state list in 2009. Peregrines feed on birds, especially shorebirds and waterfowl during their migration and over-wintering. Pollution and decreased availability of food for wading birds and waterfowl can impact peregrine populations. Alteration of wetlands for development or agricultural purposes can also decrease prey availability.

Peregrine falcons have been recorded twice (March 2004 and March 2009) by Bird Patrol volunteers.

American Oystercatcher

American oystercatchers (*Haematopus palliatus*) are declining due to loss of habitat and harassment from people and domestic animals.

Like the magnificent frigatebird, this sighting was extremely unusual and management practices at the Preserve will not specifically address the needs of this species.

Least Tern

Although still listed as "Threatened" by the state of Florida, the least tern (*Sterna antillarum*) appears to be increasing in numbers since the 1970s. The same

factors that affect the other terns listed above also affect least terns. This species is known to regularly nest on natural sandy beaches as well as gravel rooftops throughout Florida including Lee County.

Since the Preserve does not contain nesting habitat, little can be done at PPP for their protection other than implementing proper management of the herbaceous wetlands to continue to provide them with a viable food source.

Woodpeckers

The red-cockaded woodpecker (*Picoides borealis)* inhabits open, mature pine flatwoods that have good diversity of groundcover and an uneven aged stand of pines. Habitat fragmentation and poor management of appropriate habitat, along with development and clearing of forest for agricultural purposes threatens this species. Maintaining open park-like conditions with adequate forage species is key to continued territory use.

The hairy woodpecker (*Picoides villosus*) is a "resident from central Alaska to Newfoundland, southward to Florida and Central America, but can also be found in the Bahamas." They are "found in mature woods, small woodlots, wooded parks, and residential areas with large trees." Hairy woodpeckers build their nest in cavities of trees or a dead branches and do not put additional materials in the cavity. They are considered "common and widespread, but may be declining in some areas. The hairy woodpecker is attracted to the heavy blows a pileated woodpecker makes when it is excavating a tree. The hairy forages in close association with the larger woodpecker, pecking in the deep excavations and taking insects that the pileated missed" (CLOd 2003).

Hairy woodpeckers are frequently recorded at PPP. The call of one red-cockaded woodpecker was documented by a bird patrol volunteer in June 2012. Staff and bird patrol volunteers will be on the lookout for foraging birds and any nesting cavities. Additionally, returning burn regimes to the pine flatwood communities of every 1-5 years during the beginning of the wet/growing season will improve the habitat quality. Snags will be left standing across the Preserve for woodpecker forage and nesting opportunities.

Bachman's Sparrow

The Bachman's sparrow's (*Aimophila aestivalis*) *"*nests are grassy domes placed on or near the ground in a palmetto clump or dense shrub and lay 3-4 white eggs from early April through July" (Kale and Maehr 1990). Loss of habitat, predation (i.e. cats, raccoons), and forest management techniques are reasons listed for their decline. "Thinning of forest canopy and controlled burns can create suitable habitat for these birds. Thinning also provides more open habitat for a few years following timber harvest. Old-field habitat was once provided by abandoned

farmland. Extensive ground disturbance during site management should be avoided" (MDC 2007).

One Bachman's sparrow was observed by a bird patrol volunteer in 2006. Pine tree thinning that has occurred as well as future mechanical understory reduction or prescribed burning will be beneficial to this species.

American Alligator

American alligators (*Alligator mississippiensis*) have recovered dramatically since the 1960s. There are now some populations large enough to support limited harvests. Pollution and destruction of wetlands are currently the main threat to this species. Protecting wetlands from ditching, filling and pollution are the management recommendations for this species.

The hydrologic restoration activities planned for Prairie Pines Preserve will benefit this species.

Gopher Tortoise

Gopher tortoises are in decline throughout their range due to loss and degradation of habitat. As a species dependant on dry, upland communities much of their habitat has been lost to urban and residential development, agriculture, citrus groves, mining and pine plantations. Additional threats include a highly contagious respiratory disease and human consumption.

Although no formal census has been conducted, gopher tortoises are uncommon at Prairie Pines due to the wetness of the site. Several burrows, most small, have been found on the berm along the eastern boundary. Staff limits vehicular traffic on the berm and has installed barriers to equestrian access to this area. Exotic plant removal, pine tree thinning, mechanical brush reduction, and prescribed burning will benefit this species. Before restoration activities that utilize heavy equipment take place in areas with high burrow concentrations, staff will provide operator burrow maps, or will mark off burrows. Staff will determine if burrows will be flagged and equipment operators will be advised to stay away from the burrows based on type of work being planned and time of year. High intensity chopping should be planned for winter months when gophers will be less active outside of the burrow.

Eastern Diamondback Rattlesnake

Although not an officially listed species, the eastern diamondback rattlesnake (*Crotalus adamanteus*) is commonly thought to be in decline throughout its range. Scientists believe that it requires 10,000 acres or more to sustain long-term viable populations. Additional threats to this species include indiscriminate killing because of fear, as well as for trade and being hit by cars.

Prescribed burning and exotic plant removal will both be beneficial to this species. Additionally, public education about the ecological value of this and other species of snakes will help to protect them from visitors to the Preserve and from adjacent landowners.

Florida Bonneted Bat

Although not documented yet at PPP, the Florida bonneted bat (*Eumops floridanus*) is another designated species staff will need to be prepared to manage for. This bat is listed as Federally Endangered. Staff will be monitoring for this species and if documented on-site, roost areas will be protected during management activities.

Plant Species

In addition to designated wildlife, these Preserves may provide habitat for plant species listed by the IRC or FDACS. The following are brief summaries of the FDACS designated plant species explaining reasons for their decline and typical communities where they are located.

Nodding Club-moss

Nodding club-moss (*Lycopodiella cernua*) is listed as Commercially Exploited by FDACS. It can be found in wet flatwoods, pond margins, bogs, hammocks and ditches.

Ray Fern

Ray fern (*Schizaea pennula*) was discovered by botanists Steven Woodmansee and Jimi Sadle with the IRC during their first installment of their Complete Floristic Inventory of the Preserve. Although this plant species was previously known to be located in Pinellas, Palm Beach and Dade counties none of these populations had been sighted in many years (Nelson, 2000). In 2002 there are only two other known populations of this fern in Florida in the Arthur R. Marshall Loxahatchee National Wildlife Refuge (Gann, 2002) and in the Big Cypress National Preserve (Woodmansee per. com.). Threats to this species include invasion by exotic plants, non-target herbicide damage, hydrologic modifications and wildfires.

When invasive exotic plant control will be taking place in the vicinity of the fern locations staff will alert workers to the location and provide information on id of this plant. Before a prescribed burn is conducted in a Management Unit that contains ray fern, the area will be marked and burning techniques will be used to minimize the severity of fire.

Northern Needleleaf, Cardinal and Giant Airplants

The northern needleleaf (*Tillandsia balbisiana*) is a state threatened species occasionally found in a variety of communities including pinelands, hammocks and mangroves. Endangered cardinal airplants (*Tillandsia fasciculata var. densispica*) and giant airplants (*Tillandsia utriculata*) are found in hammocks, cypress swamps and pinelands. Threats to this species include illegal collecting, habitat destruction and the exotic Mexican bromeliad weevil (*Metamasius callizana*) (Save 2004).

Currently, scientists are researching biological control agents for the exotic Mexican bromeliad weevil. Staff will keep current with the research developments and work with scientists in the future if the United States Department of Agriculture (USDA) is in need of release sites.

Catesby's Lily

Catesby's (or pine) lily (*Lilium catesbaei*) is a state threatened plant found in moist flatwoods and savannas. There is concern that the population of this species is decreasing and is likely to become endangered in the near future. As a plant found in a fire dependent plant community, it generally benefits from occasional fire (USF 2004).

Removing invasive exotic plants and utilizing prescribed burning as a management tool will benefit the species.

Long-lipped Ladiestresses

Long-lipped ladies'-tresses (*Spiranthes longilabris*) is a state threatened species found in moist, grassy roadsides, and pine flatwoods habitats.

Management techniques for this wildflower will be the same as for the Catesby's lily.

Yellow Butterwort

The yellow butterwort (*Pinguicula lutea*) is found in hydric flatwood areas throughout the Preserve. It is also considered Threatened by FDACS.

Management techniques listed for the Catesby's lily will also benefit this species.

IRC, which is not a regulatory agency, also maintains a listing of threatened plant species. IRC's designation is either obtained from their book Rare Plants of South Florida: Their History, Conservation and Restoration, (Gann 2002) or internet website regionalconservation.org.

Scientists working for this Institute have conducted a tremendous amount of field work and research documenting plants occurring in conservation areas throughout Florida's 10 southernmost counties. This initial floristic inventory allowed the IRC to rank plant species in order to indicate how rare/common these plants are in protected areas. Rare plants are defined as being either very rare and local throughout their range in south Florida (21-100 occurrences, or less than 10,000 individuals), or found locally in a restricted range. IRC only ranks those taxa as rare when there are fewer than 100,000 individuals. Imperiled plants are those that are imperiled in south Florida because of rarity (6-20 occurrences, or less than 3,000 individuals) or because of vulnerability to extinction. This can be due to some natural or human factors. IRC only ranks taxa as imperiled if there are fewer than 10,000 individuals. Critically Imperiled plants are defined as being either extremely rare (5 or fewer occurrences, or fewer than 1,000 individuals), or extremely vulnerable to extinction from natural or human factors. IRC only ranks those taxa as critically imperiled with 10,000 or fewer individuals.

In their book, (Gann 2002), the authors provide an entire chapter of recommendations to help restore south Florida's rare plant diversity. Several of these recommendations, particularly those that protect plants on the Preserves and relate to stewardship practices, will be followed. More information on the specific techniques used will be discussed in the Management Action Plan. The following list highlights IRC recommendations that will be incorporated into the management of PPP:

- Prohibit recreational activities such as off-road vehicle use to avoid impacts to rare plant populations.
- Prevent illegal poaching of rare plants.
- Prosecute poachers to the fullest extent of the law.
- Implement an ongoing exotic pest plant control program.
- Educate exotic plant control crews about the rare plants to ensure they avoid non-target damage.
- Trap wild hogs, which can completely destroy the above ground vegetation and disturb all the soil in an area where they are feeding.
- Initiate prescribed fire regimes in communities that are fire adapted since fire as a management tool is extremely critical for the protection of many rare plants.
- Divide the site so the entire area is not burned during the same year will also help protect these communities.

- Ensure that management activities do not negatively impact rare plant populations.

v. Biological Diversity

General information on biological diversity and measures used to help promote biological diversity can be found in the LSOM's Land Stewardship Plan Development and Supplemental Information section.

The integrity and diversity of each C20/20 preserve must be protected when and where possible. Where applicable and practical, Land Stewardship staff will perform the following actions in this regard:

- Control of invasive, exotic vegetation followed by regular maintenance to provide more suitable habitat for native aquatic and terrestrial species.
- Control invasive exotic animal populations to reduce their impacts on the herbaceous plants, native animals and soils.
- Maintain boundary signs to deter illegal access to the Preserve and protect fragile ecosystems. Continue to monitor the site for illegal off-road vehicle (ORV) use and install fencing or other barriers if necessary.
- Install and maintain "no berry picking" signs to inform palmetto pickers it is illegal to harvest them on the preserves.
- Implement a prescribed fire program/mechanical fuels management program to closely mimic the natural fire regimes for different plant communities to increase plant diversity and ensure the canopies remain open in the appropriate plant communities.
- Where necessary, install perimeter fire breaks to protect resources on the Preserve and surrounding neighbors in the event of wildfires.
- Remove any debris and prevent future dumping within the boundary line.
- Conduct on-going species surveys utilizing volunteers and staff to catalog and monitor the diversity that is present.
- Temporary closure of flooded trails to prevent soil disturbance and avoid plant damage.
- Reduce canopy cover in appropriate habitats to promote herbaceous plant diversity.
- Use adaptive management if monitoring of restoration techniques indicates a change may be necessary.

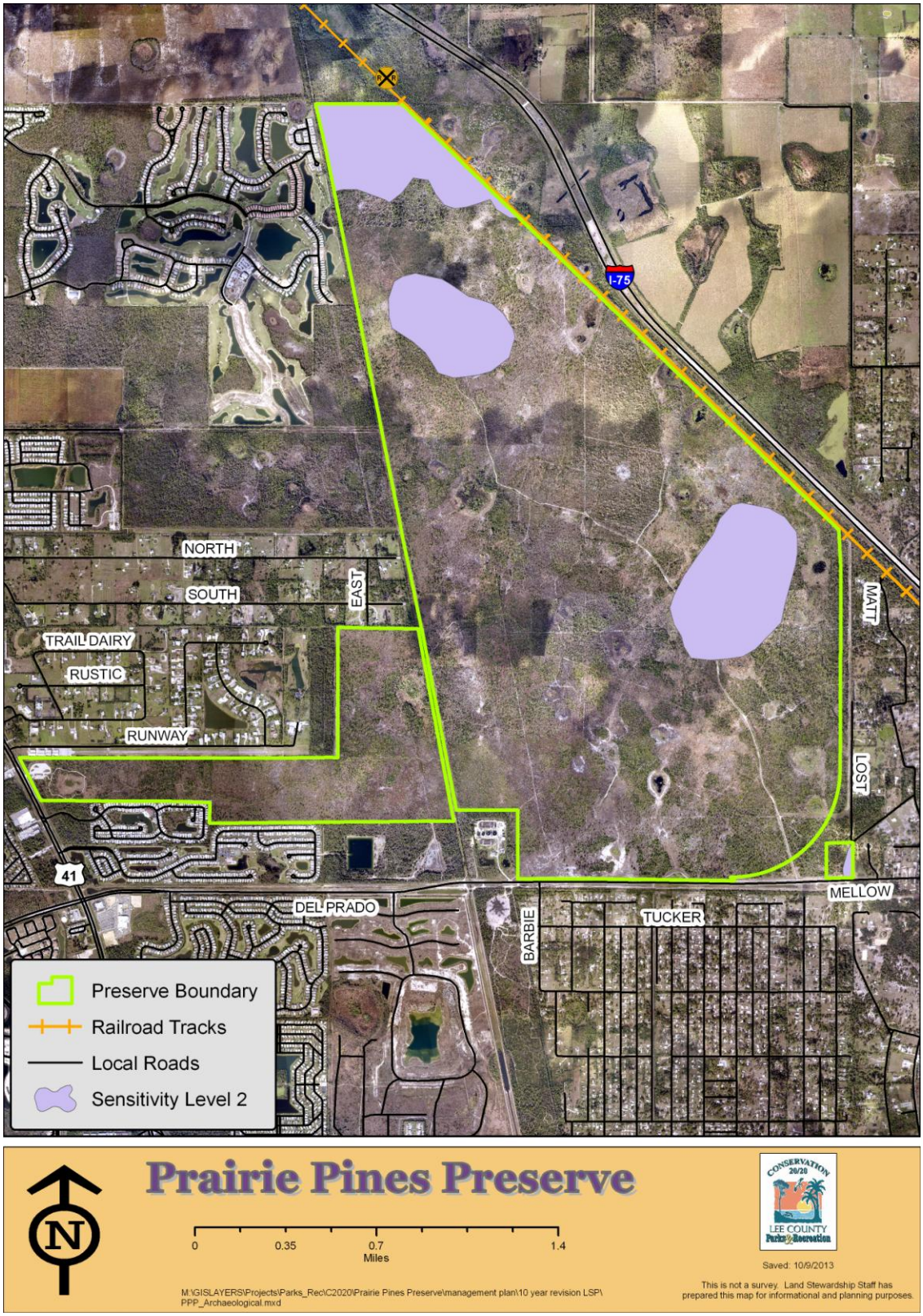
- Offer public access that allows citizens to enjoy the preserve while protecting sensitive plant communities and wildlife needs.
- Enhance hydrologic conditions with the goal of restoring as close to historic hydroperiods as current surrounding land use allows while protecting current upland communities.
- Prevent and prosecute poaching and removal activities (e.g. palmetto berry harvesting, illegal hunting, pine cone/straw removal and orchid collection).

C. Cultural Resources

i. Archaeological Features

There are three areas totaling 325 acres that are identified as “Sensitivity Level 2” (Figure 8). Staff reviewed two survey documents from the Florida Department of State Division of Historical Resources (DHR) pertaining to the area around PPP and did not find any specific references to the land which makes up the Preserve. General information on archeological features in Lee County can be found in the LSOM.

Figure 8: Archaeological Map



ii. Land Use History

Land use history for PPP is similar to much of the land in Lee County. C20/20 staff has reviewed available historical aerials; however, only a few representative ones are placed within this Land Management Plan (LMP). Prior to being owned by Lee County, PPP was known as the Little Ranches property, named for the company that owned it.

Logging of slash pine (*Pinus elliotti*) stumping for chemical extraction, row crop farming and cattle grazing occurred across what is now the Preserve. Intensive logging of slash pine from the late nineteenth century until the 1930s virtually eliminated all virgin stands of the southern mixed forest in south Florida. By 1944, both the active and now abandoned railroad beds were constructed adjacent to the Preserve's boundary, as well as U.S. 41 (Figure 9). Between 1944 and 1953 the large ditches mentioned in the hydrology section and some of the interior trails have been constructed (Figure 10). By 1958 buildings have been constructed on the arm, where the current public use facilities are located off of U.S. 41. These buildings were removed in either 1993 or 1994. Figure 11 shows the building in a 1968 aerial (the 1958 was not digitally available). Between 1970 and 1972 many stumps of the logged slash pines were removed from this property. This activity, referred to as stumping, was conducted to extract turpentine from the wood. Figure 12 shows a close up of the disturbed soil that looks like small white dots over most of the Preserve. There was also extensive clearing around the wetland near what is now the parking area and restroom building.

By 1979, the soil disturbance from the stumping is no longer apparent (Figure 13). Row crop farming for watermelons (Baum, pers. comm.) on PPP took place from 1981 to approximately 1986 in two separate farm fields on the north and central portions of PPP (Figure 14). By 1990 (Figure 15) only a small portion of the central field was still being used. Through natural succession, both fields have recovered with slash pine, saw palmetto (*Serenoa repens*), laurel (*Quercus laurifolia*) and live (*Quercus virginiana*) oak, wax myrtle (*Myrica cerifera*) and numerous species of native grasses, along with invasive exotic Brazilian pepper. The 1995 aerial (Figure 16) shows the final farm field is beginning to grow scattered native plants as well as Brazilian pepper and is no longer being used.

In the mid to late 1990s Curtis Skates, a local cattle rancher began grazing cattle throughout this property. Mr. Skates installed fencing on the perimeter and interior of the property for grazing management purposes. Grazing continued for a year after the acquisition of parcel 134 upon which time staff felt there were limited grazing opportunities on PPP due to the long hydroperiod and sensitivity of the herbaceous wetlands. The cattle were removed in 2002 (Figure 17).

The 2010 aerial (Figure 18) is included here to show the large swaths of melaleuca logging and some areas of pine thinning. This work began in 2009 and ended in 2011 and was done by Cooper Timber, a logging company from

Arcadia. The melaleuca was removed for free and the pine was harvested through a timber sale arranged with the FFS.

Figure 9: 1944 Aerial

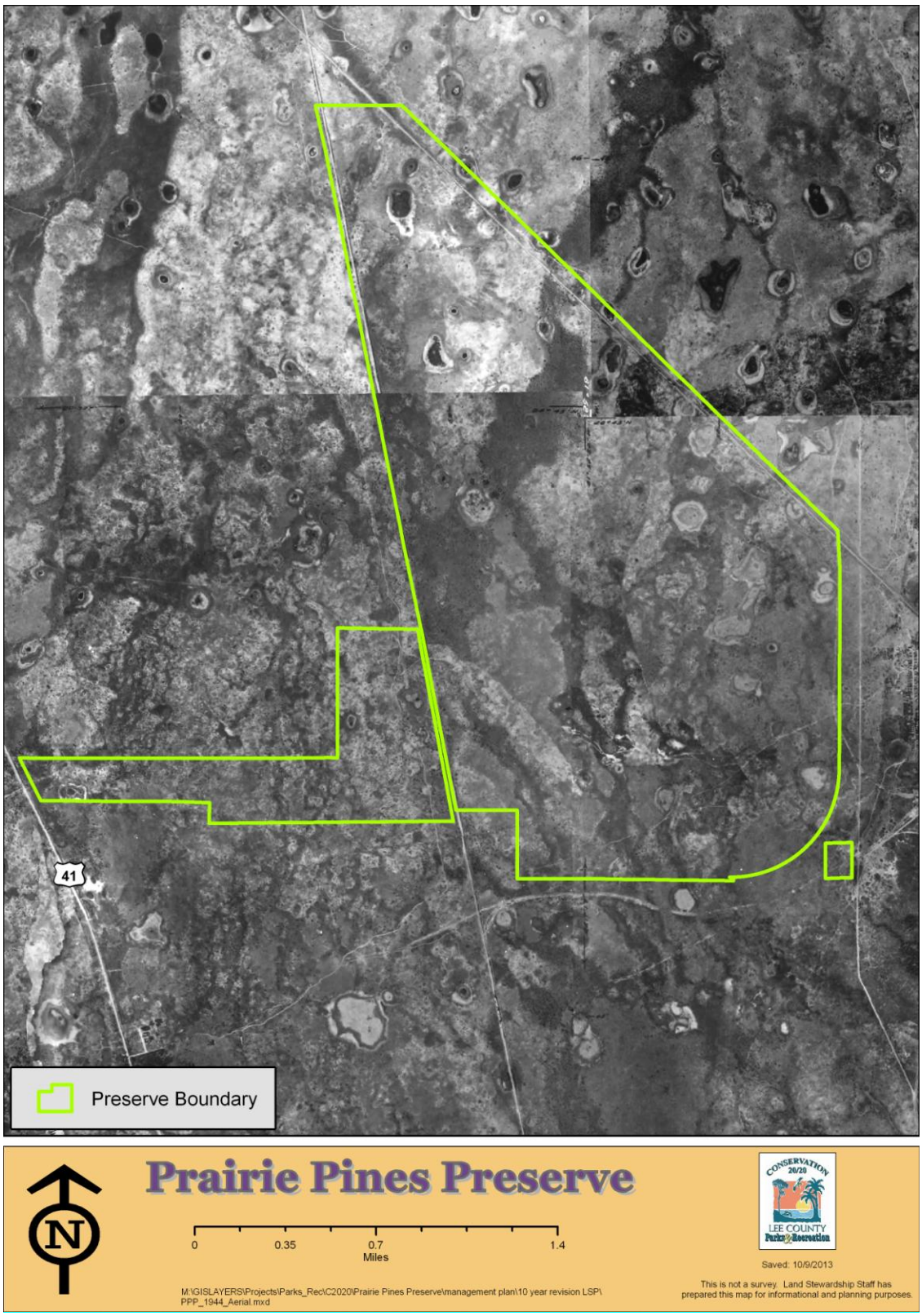


Figure 10: 1953 Aerial

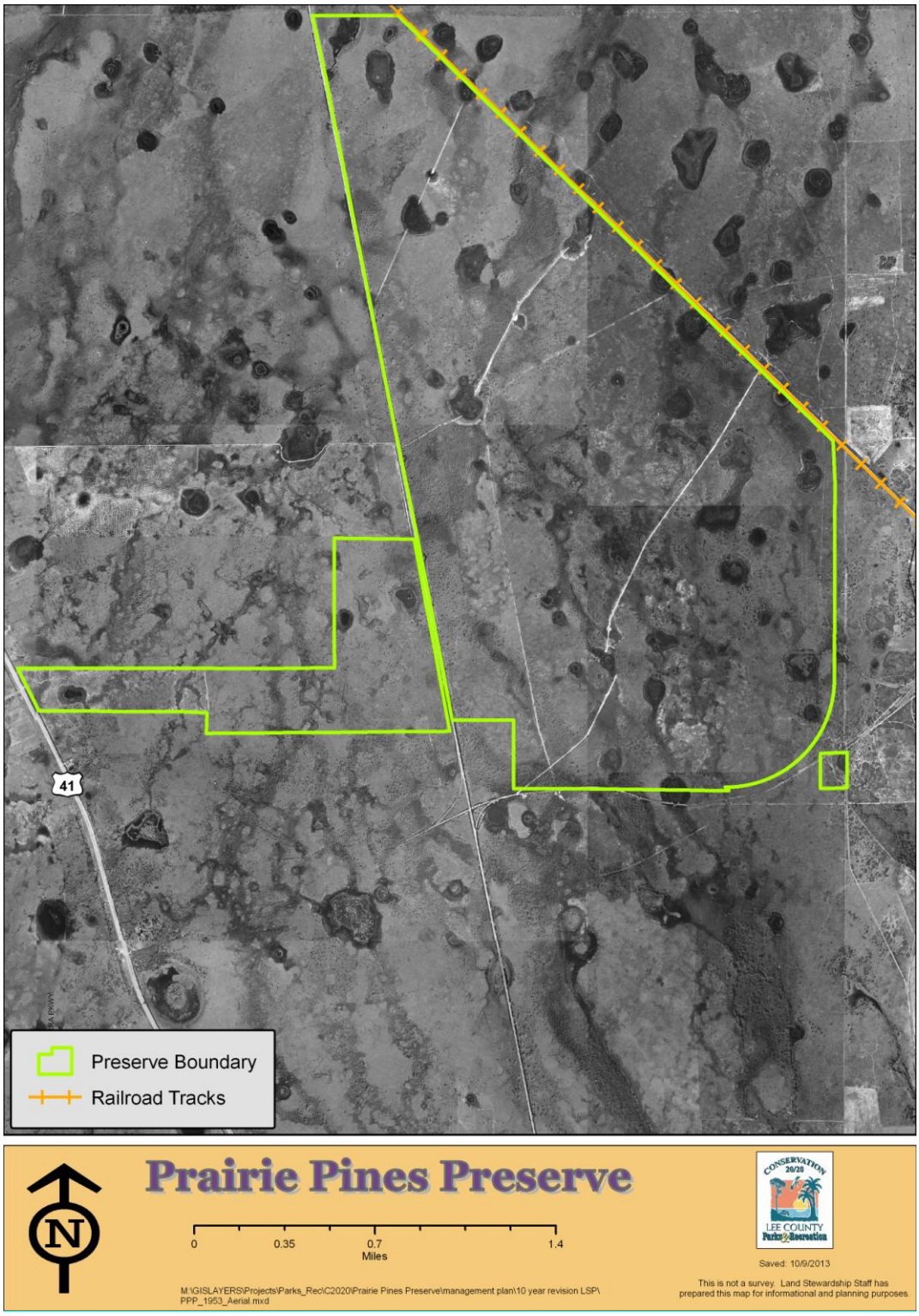


Figure 11: 1968 Aerial

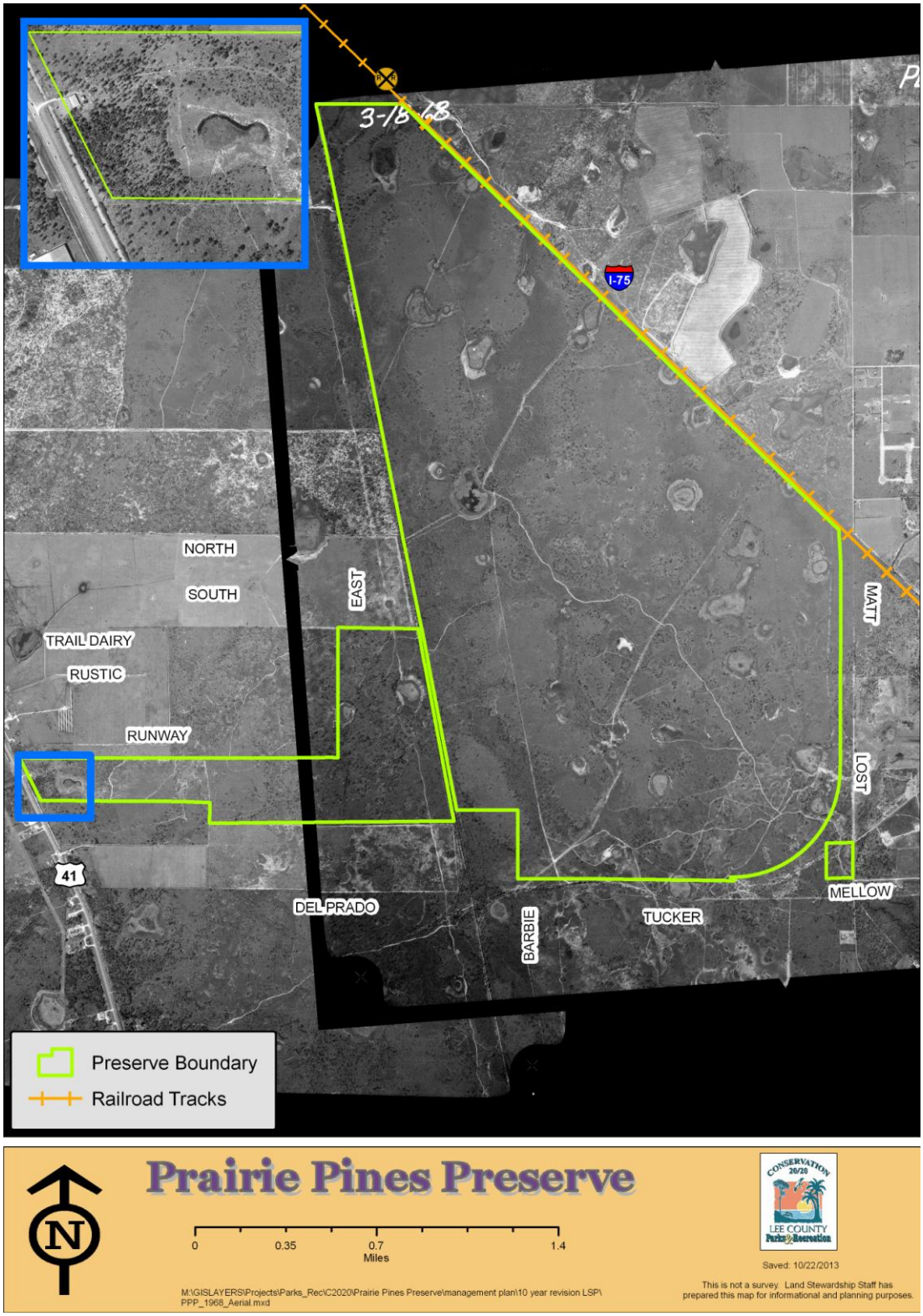


Figure 12: 1972 Aerial

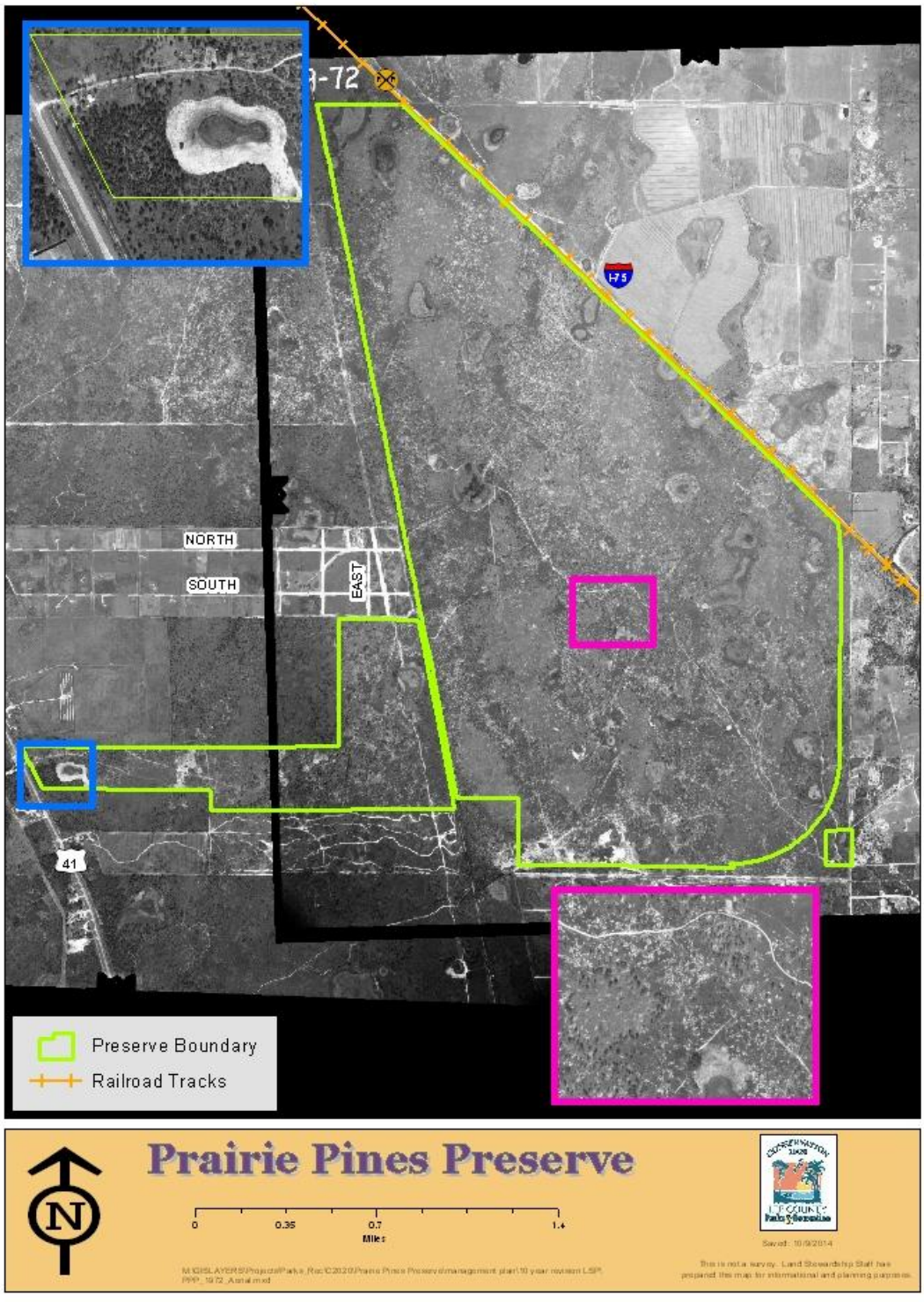


Figure 13: 1979 Aerial

Figure 14: 1986 Aerial

Figure 15: 1990 Aerial

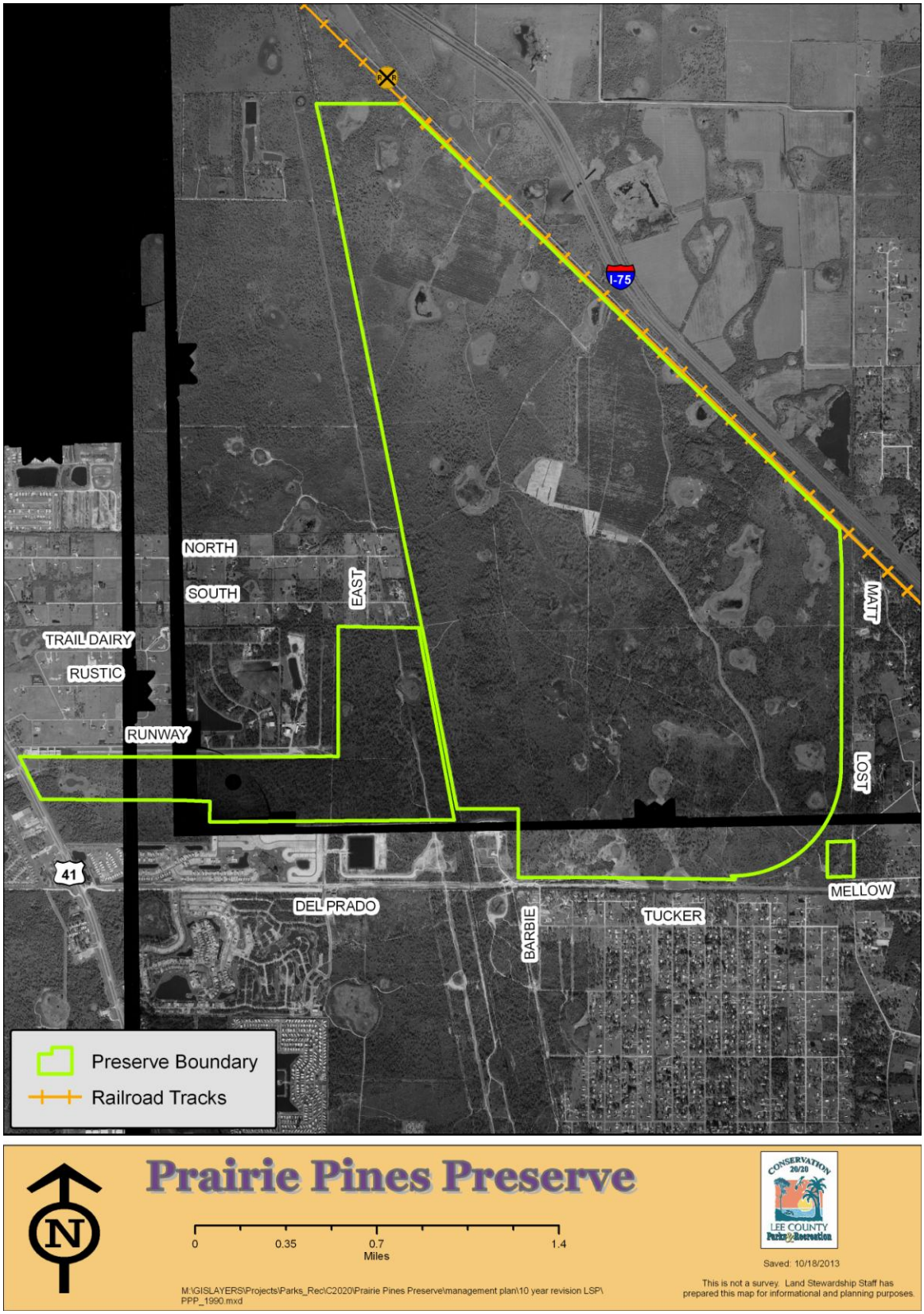


Figure 16: 1995 Aerial

Figure 17: 2002 Aerial

Figure 18: 2010 Aerial

iii. Public Interest

Historically, the Preserve was used as a cattle ranch and agricultural farm. The private property was completely fenced from the public. It was purchased for the preservation of environmentally sensitive lands, its high probability for listed species, and for the Preserve's groundwater recharging capability provided by its wetland communities and large sheet flow area.

Staff and volunteers have conducted numerous field trips with various community groups and general visitors, to educate the public on the importance of conservation, native plant communities, birding and other natural history topics. In 2011, volunteers began leading Saturday guided walks during the cooler dry season for the general public and tourists.

The Florida Trail Association annually holds several workdays on the Preserve and helped to remove 25,000 feet of interior barbed wire fencing. Other individuals and community groups have volunteered to help with trail trimming, amenities upkeep, invasive exotic plant control and wildlife monitoring.

Information concerning this and all C20/20 preserves can be found on the web site along with copies of their associated stewardship plans when available (www.conservation2020.org). Staff may mail newsletters when activities are scheduled to take place that the Preserve neighbors may be interested in.

V. FACTORS INFLUENCING MANAGEMENT

A. Natural Trends and Disturbances

Natural trends and disturbances can include hurricanes, flooding, wildfires, occasional freezes, and the pattern of wet and dry seasons. Implementation of the Management Action Plan will take all of these factors and their influence on projects at PPP into consideration. General information on natural trends and disturbances influencing native communities and stewardship at PPP can be found in the LSOM's Land Stewardship Plan Development and Supplemental Information section.

The invasive exotic plant monocultures at PPP established themselves in just over a decade. Figure 19 focuses in on the largest wetland located in the central portion of the preserve, that is representative of the entire site. Between 1979 and 1990 the area dramatically changed from an open habitat with a few scattered trees to areas covered in a thick forest of melaleuca trees. Another change shown between 1990 and 1995 is the increase in vegetation in this once open depression marsh.

In addition to the rapid colonization of invasive exotic plants, there have been four wildfires on the Preserve since being acquired by Lee County (Figure 20). Two, totaling 16 acres, were likely caused by lightening in May 2004. The 316 acre wildfire that burned in March 2009 started just south of Del Prado Blvd. to the south of the Preserve, crossed over Del Prado Extension and was finally stopped at our fenceline adjacent to the railroad along I-75. The Florida Forest Service (FFS) responded to both events and plowed containment lines. Damage from the 2004 wildfires was minimal. The 2009 wildfire left over 8 miles of plowline for staff to rehabilitate. In May of 2014 a 36 acre wildfire was started by lightning and minimal blading was done by FFS for containment lines. A few days later a ½ acre wildfire was also started by lightning. This fire did not require plow lines for containment.

Figure 19: Invasive Exotic Expansion

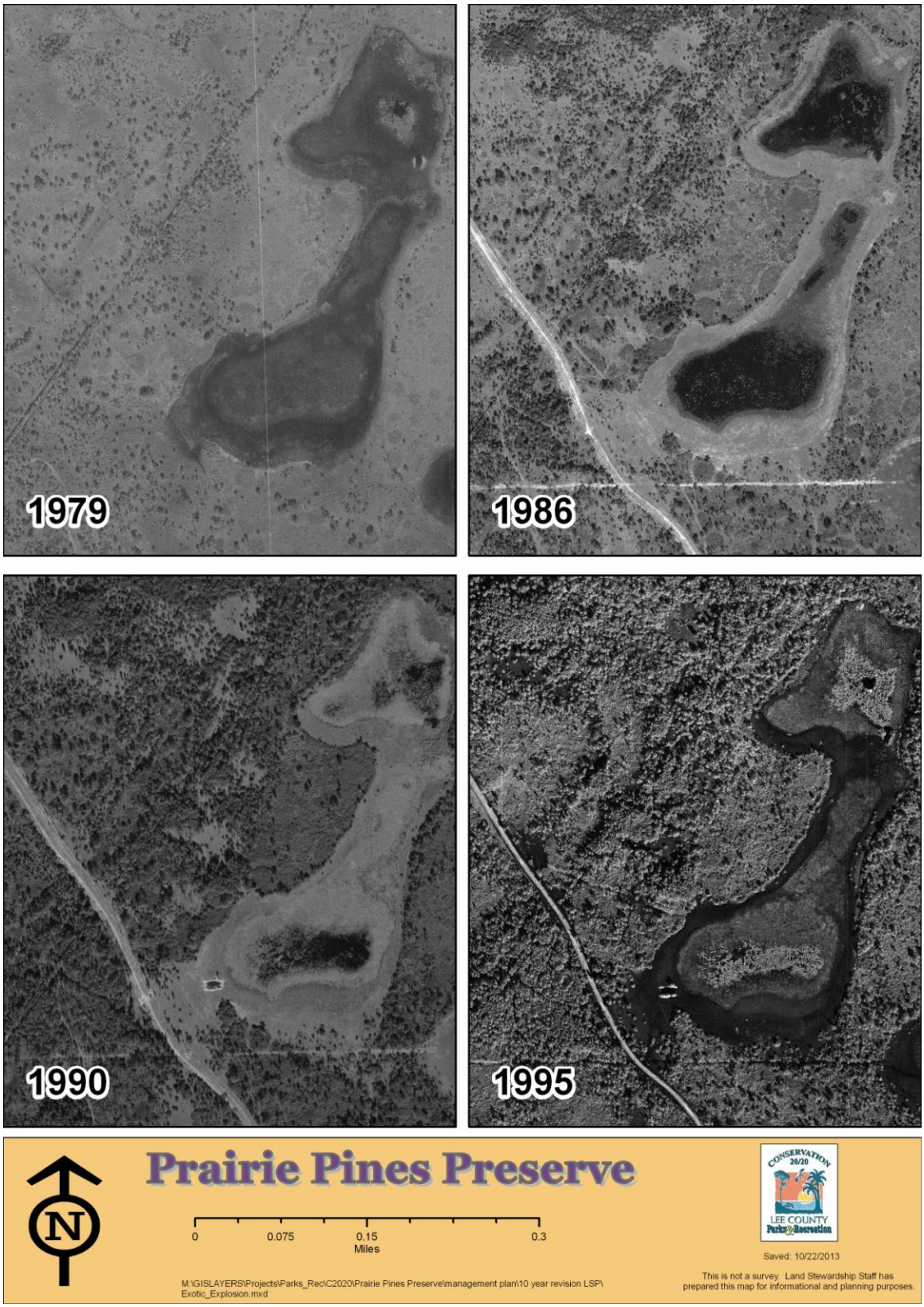
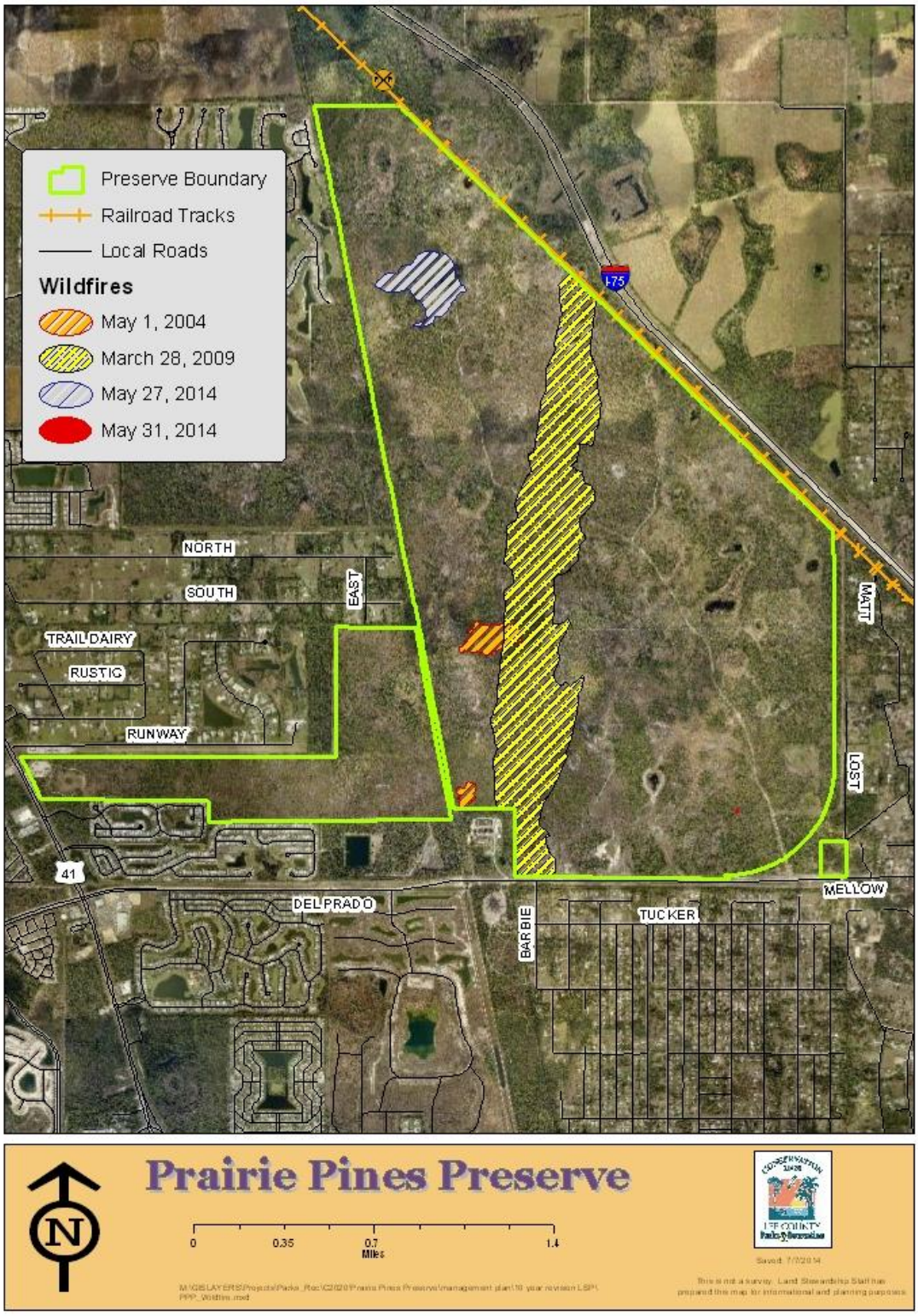


Figure 20: Wildfires



B. Internal Influences

Many alterations, mainly related to agricultural practices, were done on this site prior to acquisition. Ditches were dug to drain wetlands and channelize sheetflow, berms were built to keep water out of areas cleared for farming and cross fences and cattle pens were built. Further information on historic alterations is detailed in the Land Use History section of this plan. Figure 21 shows the location of the internal influences described below.

Staff and volunteers began removal of barbed wire cross fencing shortly after acquisition of 134. To date, 8.5 miles of 5 strand barbed wire has been removed. During land management activities staff continues to encounter scattered overgrown sections of barbed wire and removes it when found.

When Del Prado Extension was built in 2000 the historic water flow patterns were likely interrupted to a certain extent. Storm events on July 30 and 31 of 2001 created severe flooding in neighborhoods to the east of the Preserve. In 2006-2007 Lee County Public Works Department constructed a levy to alleviate the flooding problem. The levy was constructed with soil from on-site to reduce costs and therefore created an adjacent ditch, dug down to the cap rock in most places, the entire length of the levy. The levy ran 8,035 feet from the southern boundary of the Preserve along the old farm road on the eastern side of MU 12 and turned to the eastern boundary and then straight north to I-75.

The South Florida Water Management District granted an Emergency Surface Water Management Authorization and Order (SFWMD Order No. 2001-262 DAO0SWM) which allowed Lee County to alter a surface water management system to relieve flooding within the affected residential neighborhood. Permits for the work were issued after the ditch and levee were constructed.

A mitigation plan was required to propose wetland creation and enhancements to the levy/ditch to mitigate the hydrologic changes to the Preserve caused by the ditch digging. Several Lee County departments worked with the land stewardship staff to implement the mitigation as required by ERP permit conditions for the Lost Lane Levy construction project. As part of this work a SFWMD conservation easement was placed on approximately 144 acres, mostly within MU 11. Figure 21 shows the levy shows outside of the Preserve boundary due to the sale of land/easement swap to LCDOT which altered the boundary.

The old farm road was breached in several areas to allow sheet flow to continue across the road. These cuts were put in at the same time as the levy, the idea was that less water would be “impounded” to the east of this farm road. The farm road runs from the southeast boundary up through the middle of the Preserve in a northwest direction. There are shallow ditches on both sides of the road in

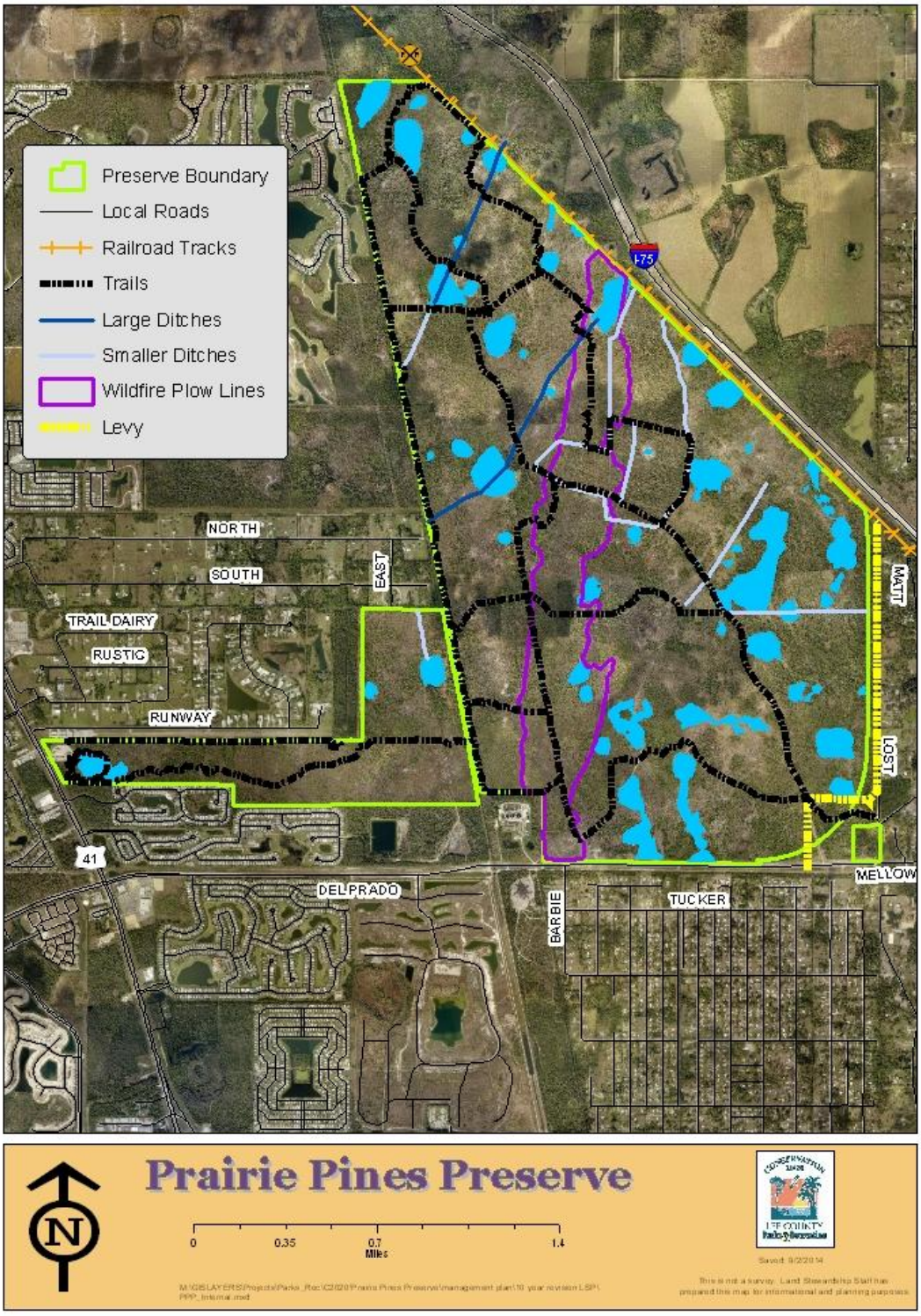
some areas. Historically this road was a barrier diverting sheetflow from traveling across the land to the wetlands in the southern portion of PPP.

The public use trails and perimeter firelines also influence the hydrology of the site. Water generally seeks the path of least resistance, and the mowing of trails and firelines, along with the wear of horse hooves and hikers breaks down palmetto roots and other vegetation in the trails. During rain events water flows along the trails in a shallow channelized fashion. Staff will not remove palmetto from the trails where it exists, and firelines are not disked to the edge of the wetlands along the perimeter in an attempt to mitigate this “ditching” effect. Staff also rerouted portions of trails into palmetto areas away from wetlands to provide rougher terrain for water to flow across along the trail. As more hydrologic restoration projects are completed, plugs in ditches and old two track paths will help slow water flowing along the public trails.

In March of 2009 a wildfire started southwest of PPP south of Del Prado and crossed onto PPP in the southwest corner of 134. High wind speeds pushed the fire in a northeasterly direction to the railroad line. During containment operations FFS used dozers to cut lines ahead of and around the fire in attempts to cut off the flames. C20/20 staff worked to rehab the smaller plow lines after the fire. The 6 miles of perimeter wildfire plow lines were not rehabbed because bringing in a lager dozer would have caused additional soil disturbance and plant community damage.

The large number of wetlands scattered across PPP are natural internal influences which limit public trail placement, vehicular access to areas, and the time we can do fence work and other management activities due to changes in water levels and soil conditions.

Figure 21: Internal Influences



C. External Influences

PPP is bordered by an active railroad track on the northeast boundary of 134. Sparks from trains along this line have caused wildfires north of the Preserve in the past and could easily spark a wildfire that could burn into PPP. The edge of the railroad property contains many large melaleuca and Brazilian pepper trees that not only provide a continual seed source into PPP, but also push on the preserves fence wire and require regular cutting back of branches to prevent damage to the fence. Although it is illegal to ride ORV's on the railroad, this linear path is used occasionally to reach our fence and cut it for access into PPP. This illegal activity has decreased drastically from the damage done in the first few years after acquisition. Installation of new fenceline along the active railroad included a middle strand of heavy gauge cable which makes it harder to cut the fence.

The east boundary of 134 contains residential "ranchettes" on both Matt Road and Lost Lane. The designated access gate, referred to as the Lost Lane gate, is a periodic dumping area for residential trash and animal carcasses. Occasionally this gate is smashed at night for vehicle access and neighbors report illegal hunting happening in this area. The pedestrian/equestrian portion of this entrance is not gated. This allows easy access for illegal activities after dark.

The western property line of 134 is bordered by the abandoned railroad grade, now owned by Lee County and managed by the Division of Utilities. This divides the two separate acquisitions, 134 and 194. During the spring of 2003, a water main was installed along this grade, turning west at Nalle Grade Extension. While this work was done, the Lee County Division of Natural Resources cleaned out the ditch on the east side of the berm as well as removed several discarded tire mounds. They also placed large concrete structures where the berm connects with Del Prado Extension, limiting vehicular access. North of Nalle Grade Extension the berm is still accessible and ORV's travel it on a regular basis to our gate. Occasionally dirt bikes are slid under the gate and ridden onto the Preserve.

The southwestern boundary of 134 borders the Florida Governmental Utility Authority (FGUA) water/wastewater plant. Some of their pipes are under the abandoned railroad between 194 and 134.

In 2013-14, just to the west of the abandoned railroad grade, LCEC constructed a new 138kV electrical transmission line on their easement to connect the North Trail Substation with the Littleton Road transmission line. The construction work is scheduled to be completed by April of 2018. Staff met with LCEC personnel to ensure the powerlines would not prohibit conducting prescribed burns near them. LCEC will use the railroad grade for access to do regular maintenance on the lines.

The western boundary of 134 abuts Gator Slough, which Lee County Division of Natural Resources has done flow way improvement work on. The headwaters of Gator Slough are located in the Babcock-Webb Wildlife Management Area in Charlotte County and the water flows southwest to Matlacha Pass Aquatic Preserve. The goals are to reduce the excessive flooding to the more northern portions of the watershed while slowing the flow of fresh water before reaching Matlacha Pass Aquatic Preserve. Fencing and barricades were installed to deter ORV access into Gator Slough, which in turn decreased access to PPP. As part of a separate Lee County Division of Natural Resources project an additional gate on the north boundary of Gator Slough was installed which provides another layer of protection for PPP.

The Heron's Glen development is to the west of the northern portion of 134. This development includes a golf course and conservation areas required through permitting for the development of the site. Additional residential homes will be added to this development in coming years.

Roadways can have a detrimental effect on wildlife. Some examples are direct habitat loss from road location, fragmentation of habitat, alteration of behavior by wildlife avoiding roads and surrounding lands. Road mortality is the number one cause of death to wildlife by humans in the US. Roads have a particularly significant impact on large carnivores with low reproductive rates, low population densities and large home ranges, such as black bears and Florida panthers. Quite often, roads and highways cut through their home range, fragmenting prime habitat and creating hazardous obstacles for migrating carnivores (American Wildlands 2002). PPP is bordered by 4 lane US 41 to the west of 194, 2 lane Del Prado/Mellow to the south of 134, and I-75 to the northeast of 134. The future alignment of the Del Prado extension will border the eastern edge of 134.

When constructed, the Del Prado extension will be another external influence. On October 3, 2006 the Lee County Board of County Commissioners adopted the current road alignment plan for Del Prado Extension along the southern portion of 134 and continuing north to the existing railroad (Blue Sheet No. 20061167). On December 4, 2007 the BOCC approved the swap of an existing Nalle Grade Roadway easement which bisected 194 for an equal amount of land also within the Preserve consistent with the Board approved alignment. (Blue Sheet No. 20072139). On September 22, 2009 the BOCC approved the transfer of land to Lee County DOT from Conservation 20/20 to complete the alignment. (Blue Sheet No. 20090911) As of the writing of this plan LCDOT has no designs, schedule for construction or funding designated for construction of this road through 2024. Staff continues to treat invasive exotic vegetation in this area to reduce seed source. Until road construction plans are in place, the perimeter fence location will remain on the "old" boundary so that money is not unnecessarily spent on installing a new fence until it is needed.

Prairie Pines Preserve is bordered by several smoke sensitive areas. During prescribed burns smoke cannot be put onto US 41 to the west and I-75 to the north and east. The residential community adjacent to the north boundary of 194, Pine Shadows Air Park, has an airstrip for residents. This airstrip is another location where smoke cannot be put during burning unless coordination with the airstrip operators allows.

The northern boundary, along the Lee/Charlotte County line, borders privately owned land with heavy fuels of palmetto and pine growing right up to the fence. In the event of a wildfire this heavy fuel situation will most likely burn our fence and depending on wind direction could feed a headfire onto the Preserve. Heavy fuels are present on many of the residential properties and vacant lands surrounding PPP. These areas could carry wildfire across them and onto the Preserve.

Two sets of double box culverts under I-75 allow storm water from a roughly 550 acre area to the northeast of PPP to flow into the Preserve. These culverts not only allow off-site water to flow onto PPP, but also bring seeds and plant material onto PPP. Water hyacinth was found for the first time on PPP in wetland 14 in 2012. Staff believes this invasive exotic plant was introduced through these culverts.

Figure 22: External Influences

D. Legal Obligations and Constraints

i. Permitting

Land stewardship activities at PPP may involve obtaining permits from regulatory agencies. Any proposed hydrologic improvements may require obtaining permits from the Florida Department of Environmental Protection (FDEP), the U.S. Army Corps of Engineers (USACOE) and SFWMD. Hydrological and/or habitat restoration projects requiring heavy equipment or tree removal will require notification to the Lee County Department of Community Development (LCDCD). Burn authorization from FFS is required for all prescribed burns conducted on PPP.

ii. Other Legal Constraints

When parcel 194 was purchased, the title commitment and policy omitted an FP&L/LCEC transmission line easement. A few years after the acquisition, LCEC notified staff they were ready to proceed with the installation of a transmission line within their easement, which bisected parcel 194. Years prior to the County's acquisition of the parcel, utility poles had been on what is now parcel 194, but had since been removed. The title company had concluded the easement was vacated. LCEC challenged the title company's determination and Lee County filed a title claim against the title company. A lawsuit was filed and the case proceeded to court. During the court ordered mediation, LCEC was able to demonstrate that it did have an easement. Lee County pursued damages from the title company and was successful in recovering $124,500 from the title company and LCEC in a settlement, together with an agreement whereby about half of the easement was relocated upon non-2020 County owned property, to reduce the affects of the easement upon Parcel 194.

As a result, there is a 20' access easement granted to the Lee County Electric Cooperative, Inc. (LCEC) located on the abandoned railroad bed between the two separate acquisitions of the Preserve (Appendix D). This easement allows access for LCEC and their contractors to construct and maintain electric utility lines. LCEC is also responsible for maintaining the primitive road and repairing any damage caused by their equipment. In addition to the access easement, LCEC is allowed to construct up to 10 lateral paths to connect with the 100' utility easement located to the west of the access easement (Appendix E). There are also provisions for fencing, gates, culverts, etc. to ensure that the Preserve's natural resources are protected. C20/20 staff is required to contact LCEC in the event that a prescribed fire is planned on the Preserve.

There are three conservation easements on PPP. A 143-acre easement was created as a result of permit requirements related to the construction of the levy by LCPWD in 2006-2007. This is discussed in the Internal Influences section

(Appendix F). Further north is a small, 8.4 conservation easement that protects a depression marsh (Appendix G). Restoration of this wetland, and the creation of the conservation easement were used to mitigate impacts on wetlands that were impacted with the construction of the parking area and restroom facilities. The purpose of both easements is to retain and maintain both the land and water areas in their natural, vegetative, hydrologic and scenic condition and to retain such areas as suitable habitat for fish, plants and wildlife.

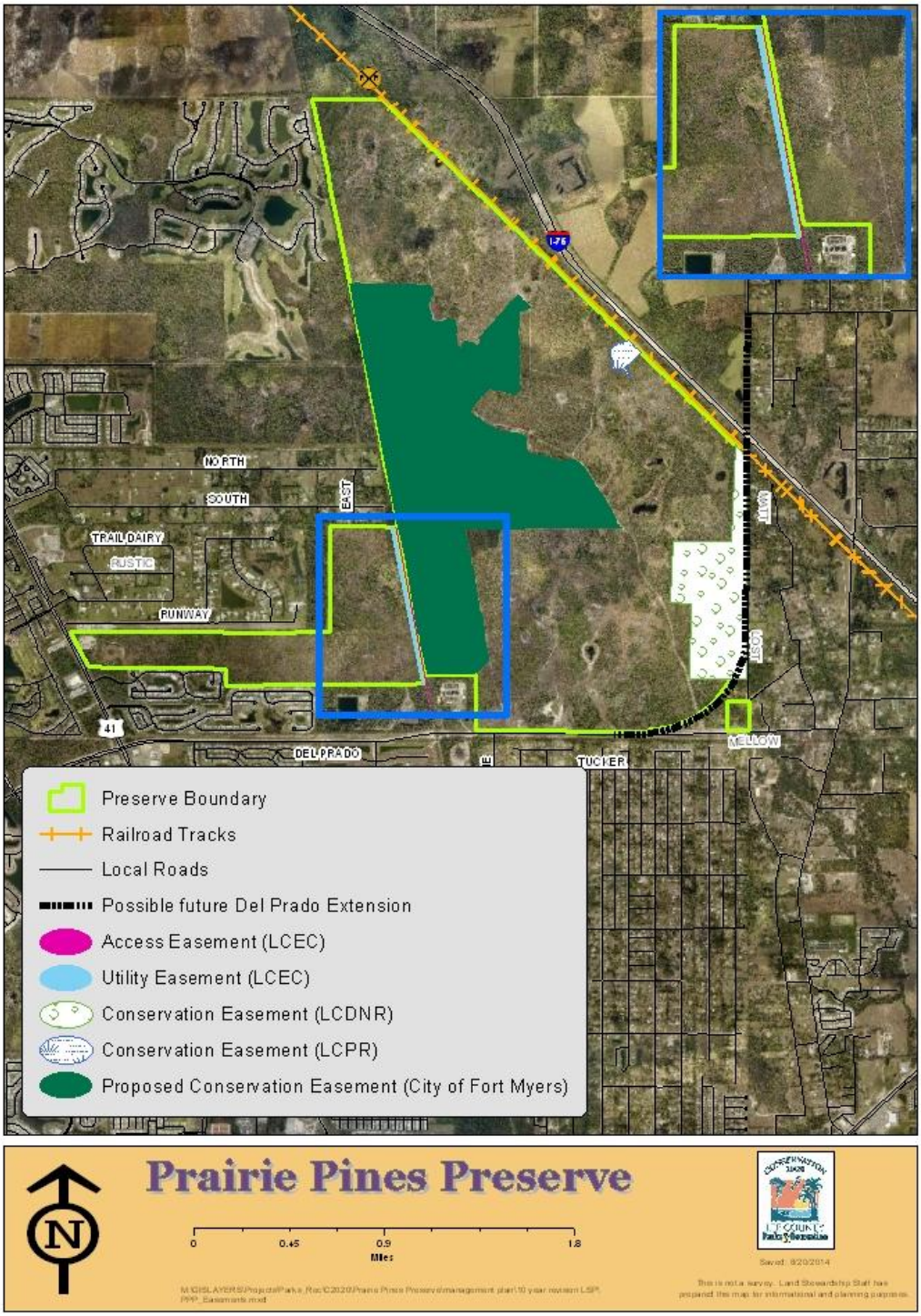
In June of 2005 the City of Fort Myers contacted LCPR requesting use of a portion of PPP for mitigation for their Eastwood Village redevelopment project located at the intersection of SR 82 and Ortiz Avenue (Bluesheet 20060688). In August of 2008 (Bluesheet 20080854) the SFWMD Conservation Easement for this acreage, totaling 672 acres, was approved by the BOCC. At the time of writing of this plan, this conservation easement has not been filed by the City with the Clerk of Courts. It is possible that this agreement will not come to fruition. Staff will reassess the easement over the next few years.

The owners of the 23 acre parcel bordering the north boundary of 134 agreed to a recorded access agreement in May of 2001. The land is in Charlotte County and was originally included in the nomination of parcel 134. Since C20/20 funding is specific to Lee County, this additional acreage was removed by the prior land owner from the nomination. This access agreement specifies that the owner at time of recording, agrees to indemnify Lee County from and against any actions to obtain access across or through 134 filed by future owners or successors (Appendix H).

Prohibited activities include items such as building roads and other structures, removing native plants and any activities that might interfere with drainage, water conservation and fish and wildlife habitat preservation. There are no conflicts with the easement and the restoration activities planned for the Preserve. LDOT will take this conservation easement and related permitting requirements into consideration once the Del Prado Extension goes into planning and design.

Refer to Figure 23 for location of the easements described above.

Figure 23: Easements Map



iii. Relationship to Other Plans

The Lee Plan, Lee County's comprehensive plan, is written to depict Lee County as it will appear in the year 2030. Several themes have been identified as having "great importance as Lee County approaches the planning horizon" (LCDCD 2011). These themes are:

- The growth patterns of the county will continue to be dictated by the Future Land Use map.
- The continued protection of the county's natural resource base.
- The diversification of the county's traditional economic base.
- The expansion of cultural, educational and recreational opportunities.
- A significant expansion in the county's physical and social infrastructure.

The entire Lee Plan is found on the Internet at: http://www.leegov.com/gov/dept/dcd/Planning/Documents/LeePlan/Leeplan.pdf. The sections of the Lee Plan which may pertain to Conservation 20/20 Preserves have been identified in the LSOM.

E. Management Constraints

The principle stewardship constraints for PPP include the Preserve's exceptionally wet conditions, limited funding, designated public use, and surrounding smoke sensitive areas. PPP received a grant from Florida Communities Trust to reimburse half of the cost of acquisition for parcel 194. These funds were used for the design and construction of public use facilities as well as some restoration activities. Although C20/20 has a management fund, it is inadequate to fulfill the restoration activities for this and the other preserves. Efforts to obtain additional funding through grants and/or monies budgeted for mitigation of public infrastructure projects will be pursued to supplement the operations budget to meet the restoration goals in a timely manner.

PPP is very wet most of the year; February through April is typically the driest months. Most restoration efforts will be limited to these months. If access is necessary for management when water levels are high, low-impact vehicles, such as ATVs, will be used. Vehicles and other motorized equipment are discouraged from driving through wetland communities. Mowing of trails and disking of firelines is not done when standing water is present across the site.

Urbanization pressures increasingly affect stewardship activities and boundary security. Fire management is a vital tool used to keep fuel loads down, to ensure biological diversity, to maintain functional habitat value for wildlife and to reduce the severity of wildfires. Smoke management will be one of the greatest factors in planning prescribed fires. Prescribed fire parameters become more restrictive

with expanding residential and commercial development, increased traffic on nearby roadways and surrounding airports.

When restoration activities and prescribed burns which could be dangerous to visitors are in progress, signs will be installed at designated entrance gates to warn the public that the area is temporarily closed. Staff is also required to contact LCEC when conducting any prescribed burns on the Preserve in accordance with the utility and access easements.

Finally, 824 acres of the Preserve are under conservation easements (see Other Legal Constraints Section for their locations). Under these conservation easements there are no restrictions that affect restoration activities or current public use for the Preserve. The 672 acres associated with the City of Fort Myers Wellfield mitigation work has not received exotics treatment work with the exception of melaleuca logging and spot treatment of lygodium and cogongrass. This area serves as an internal seed source until the mitigation work begins.

F. Public Access and Resource-Based Recreation

Before acquisition by Lee County, there was minimal recreational activity at Prairie Pines Preserve beyond neighborhood trail riding. The Preserve was utilized for both row crops and cattle ranching and the associated fencing prevented the general public from entering.

ORVs are not only prohibited by Ordinance 02-12, they are also extremely destructive to the sensitive habitats found at PPP, especially the wetlands. Several of the depressional marshes and portions of the wet flatwoods communities show the negative effects of this activity. The tracks left from vehicles can even be seen in the 2002 aerial photograph (Fig 17) of the Preserve. ORV traffic can impact the wetland communities in a number of different ways. The plants growing in these areas typically do not tolerate a large amount of soil disturbance and rapidly decline. Subsequently fire, which would normally carry through these areas, preventing shrubs from growing further into the wetland, is stopped. The turbidity in the water affects the phytoplankton at the base of the food chain and alters pond fauna. Additionally, the sedimentation degrades the fish habitat and causes a number of negative impacts including reduced reproductive success, gill damage and an impeded ability to detect prey. Amphibian larvae experience these same negative effects and their adult counterparts loose the edge habitats they often depend on for breeding purposes. Finally, the reduction of fish and amphibian species affect the numerous waterbirds and mammals that depend on these aquatic animals in their natural diets. (Defenders 2002).

Since Lee County has purchased the Preserve, evidence of hunting, dumping and ORV use continues to be a challenge but has declined in frequency. Staff

and volunteers regularly patrol the boundaries to look for and repair fence cuts. New perimeter fencing has been installed which includes a middle strand of heavy gauge cable along the active railroad. Land Stewardship staff is researching the possibility of partnering with FWC or private entities to conduct an occasional feral hog hunt, while closing the Preserve to all other public uses, during such special hunting events. With that possible exception, any other hunting activities would not be compatible with the protection of the Preserve or to the safety of its visitors.

PPP's size and location made it an ideal site to allow additional recreational activities beyond the hiking, bird watching, nature photography and nature study that are allowed at all Conservation 20/20 Preserves. Other recreational activities at PPP include horseback riding, on-leash dog walking, llama trekking and bicycle riding. These activities were all selected because of the strong public interest in PPP providing these recreational opportunities.

Llama and on-leash dog walking are both activities that are not traditionally permitted in Lee County Parks and Preserves. In the case of llamas, research conducted by USDA, the Aldo Leopold Wilderness Research Institute and several graduate students all show that the impact of llamas on both soils and vegetation is comparable to that of a hiker, due to their relatively light weight and padded, leathery feet (Cole 1998) (International 1997) (Schantz 1997) (Watson 1998).

A concern staff researched was the possibility that llamas or horses would spread exotic seeds in their manure while on the trails at PPP. The digestive systems of both of these animals are different from a cow's digestive tract. Horses have a single, stomach followed by a caecum (a specialized pouch for fermentation of ingested nutrients). A llama has 3 compartments instead of 4, as in a cow. Additionally, food is retained in the digestive tracts of these animals longer than cows. Scientific literature searches by staff did not discover any research specifically on llama manure, and very little on horse manure. Mary C. Benninger's 1989 master's thesis on how plant species are spread along trails found no documentation of manure being a major source of exotic species (1989). There was a study conducted in the 1930s that discovered that weed seeds were destroyed more thoroughly in chicken, sheep and horse digestive tracts as compared to calves and hogs (Harmon 1934). In a paper on seed dispersal by herbivores, the researcher found that the majority of seeds are dispersed by gravity, wind, surface water management, soil erosion, birds, ants, dung beetles and rodents (Janzen 1984).

Land Stewardship staff researched the possibility of allowing on-leash dog walking on the western arm of the Preserve. There are several criteria which staff has determined would NOT make on-leash dog walking compatible with the protection of the natural resources including preserves that:

- ✓ Have a large population of waterbirds or shorebirds
- ✓ Have large herpetofauna populations
- ✓ Have active gopher tortoise colonies
- ✓ Consist mainly of wetlands
- ✓ Have minimal staff or no volunteer presence
- ✓ Are adjacent to public lands that do not allow dogs

Although the larger portion of the Preserve meets most of these criteria, the western arm has only 3 wetlands that could easily be avoided to provide on-leash walking. Dog owners are required to pick up and dispose of their dog droppings, keeping their dogs leashed and staying on the trails on 134. Staff is having a difficult time enforcing this rule due to lack of staff presence. Too often visitors let their dog off-leash and owners continue walking their dogs past the "no dogs beyond this point" signs onto parcel 134 on a regular basis. Dogs are also brought in with horseback riders and allowed to run off-leash. Staff continues to educate dog walkers when off-leash dogs are encountered, and Rangers stop in during high use times to educate dog owners and enforce the rules when necessary.

A final recreational activity, bicycling, received some public support during the public meeting phase of the initial PPP Land Stewardship Plan. The Preserve is very wet and sandy for most of the year, but staff included a three mile bike trail as part of the grant proposal to FCT. After construction was completed residents near the Preserve requested raised paved bike paths more suitable to three-wheeled bikes. As a compromise bicycles are allowed on the ADA loop. During construction sidewalk was installed along US 41 between the north and south property line per code requirements. Adjacent properties do not have sidewalk connecting to this section. Once neighbors understood that Conservation 20/20 funding could not be used to construct the sidewalk connections, the requests for bicycle trails greatly decreased.

Trails were constructed after conducting a thorough survey for listed plants and animals. Efforts were made to place designated trails onto already established ATV/ two-track trails. Staff cut sections of trail through palmetto to divert them out of crossing wetland areas. Trails are also centralized to allow for buffers away from residences and to allow places for wildlife to rest undisturbed by public utilizing the Preserve.

Public use facilities at PPP were concentrated at the extreme west end, where it borders U.S. 41. Although the original LSP proposed an unpaved parking area, large enough to accommodate up to 24 horse trailers and 20 cars, to be constructed and for composting toilets. At time of design Lee County code required the plans changed to provide paved parking and a concrete block restroom building. Picnic tables, a water source/horse wash station, wildlife proof trash receptacles, a kiosk and wildlife blind were also installed per FCT grant requirements. An ADA compliant trail was constructed around a disturbed

wetland and includes an elevated boardwalk section. To provide connectivity between 134 and 194 a pedestrian/equestrian ditch crossing was installed. Staff provided some passive recreational opportunities for the public while balancing the lack of daily staff to protect and maintain public use amenities.

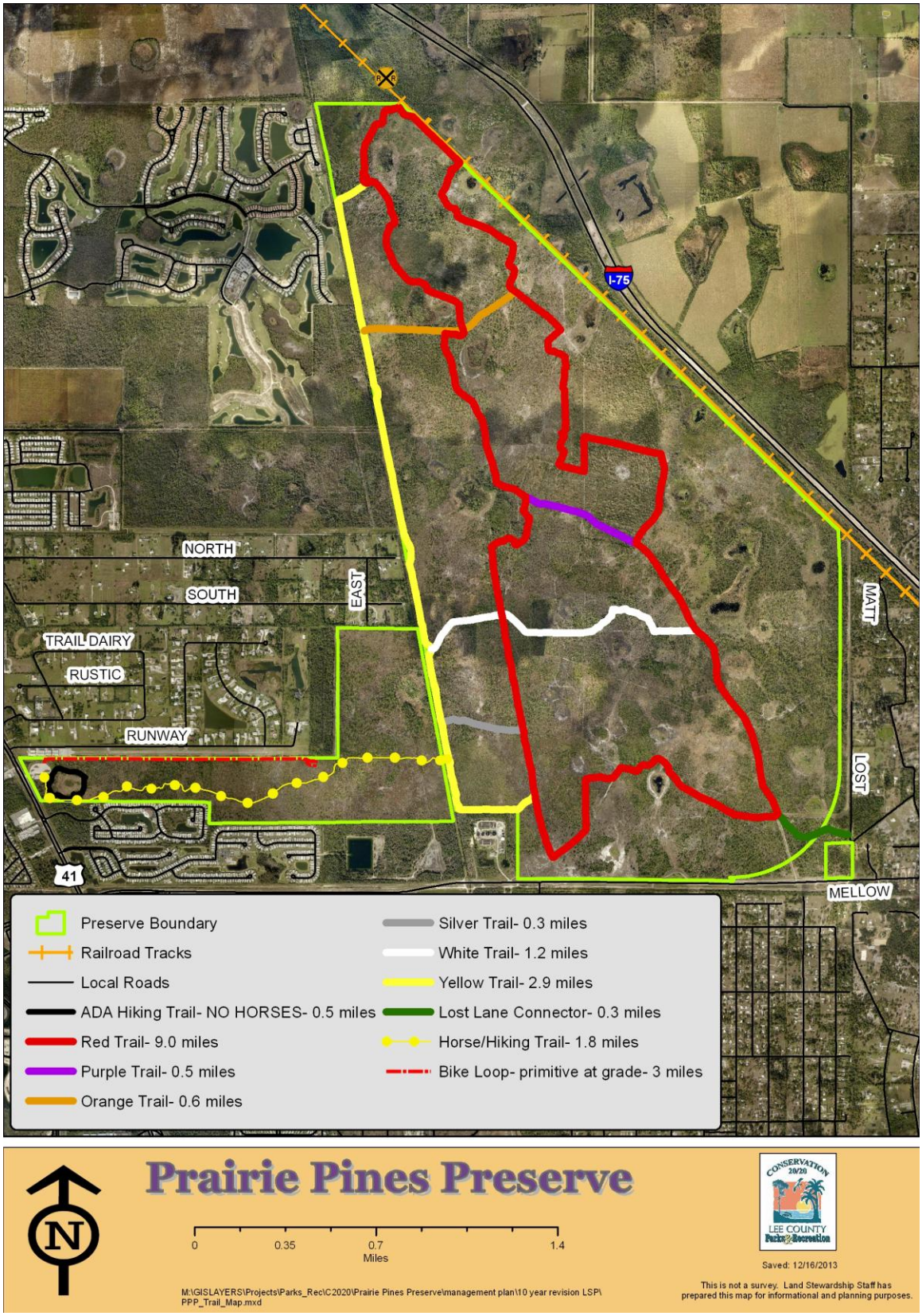
Trail marking went through several iterations at PPP. Staff and volunteers cut stencils out of milk jugs and spray painted color hashes on trees along trails. This turned out to be a messy, time consuming task which did not withstand wildfires so markers were switched to metal posts with colored tape wrapped at the top. The metal markers would survive a wildfire, are relatively easy to install, and stand out for easy following by trail users. Unfortunately trail markers continue to be a problem due to vandalism.

During the first year PPP was officially open to the public, several hikers and equestrians became “lost” within the Preserve. Staff installed “You Are Here” maps at all trail intersections. These signs also provide a latitude longitude coordinate for those with a GPS unit and for ease of giving location to 911 operators in the event of an incident.

Due to the large size of this Preserve and staff allowing public use to continue after acquisition and before public amenities were planned and constructed, two public access points were provided that otherwise would not have been part of the public use planning at time of construction. Since these access points have existed for over 8 years, staff has chosen not to close the pedestrian access gate located on the north side of 194 or the equestrian/pedestrian access gate off of Lost Lane/Matt Road. No trailhead parking or other amenities will be added to either access since all trails and public facilities originate at the main entrance off of US 41. The other access gates do not serve one specific development or community. No additional future access gates will be allowed.

No additional trails, recreational offerings or other public use activities will be added to PPP. Since formalizing the trail system and officially opening PPP, staff has had difficulty controlling equestrians riding through wetlands and off designated trails which were specifically routed to protect plant communities. Staff has met with the Calusa Saddle Club at their public meetings and on-site to evaluate trails and seek input on trail marking, installed signage, and built barriers to guide riders away from wetlands. Some riders continue to ride into wetlands and off-trail despite staff’s continued efforts. Figure 24 shows the current trail system.

Figure 24: Current Trail Map



G. Acquisition

PPP is comprised of two nominations. Nomination 194, totaling 320 acres, was purchased in April of 2003 for $5,440,530. Nomination 134, totaling 2334 acres was purchased in April of 2001 for $6,350,000. An additional 23 acres to the north of this portion of the Preserve was included in the original nomination. The property is in Charlotte County and Lee County was unable to purchase the land so it remains in private ownership. Efforts were made to donate this portion of the original nomination, but failed.

Figure 25 illustrates the nominated parcels to the C20/20 Program located near the Preserve. Three were withdrawn from the program. One was not selected by CLASAC, primarily due to access issues.

PPP consists of STRAPs 01-43-24-00-00002.0000, 02-43-24-00-00001.0000, 03-43-24-00-00003.0000, 12-43-24-00-00001.0000, 13-43-24-00-00001.0000, 14-43-24-00-00002.0000, 14-43-24-00-00005.0000, 15-43-24-00-00005.0000 and 16-43-24-00-00006.0000. Staff combined STRAPs after acquisition to ease tracking. Figure 26 shows each piece of the property identified by current STRAP number. The legal descriptions are located in Appendix I.

Future Land Use (FLU) categories for PPP are Conservation Lands Upland and Conservation Lands Wetland as shown on Figure 27.

Currently, PPP is zoned as agriculture “AG-2”, Mobile Home/RV, and Environmentally Critical (Figure 28). Land Stewardship staff will coordinate with LCDP to change the zoning to “Environmentally Critical” for the entire Preserve.

Figure 25: Acquisitions and Nominations Map

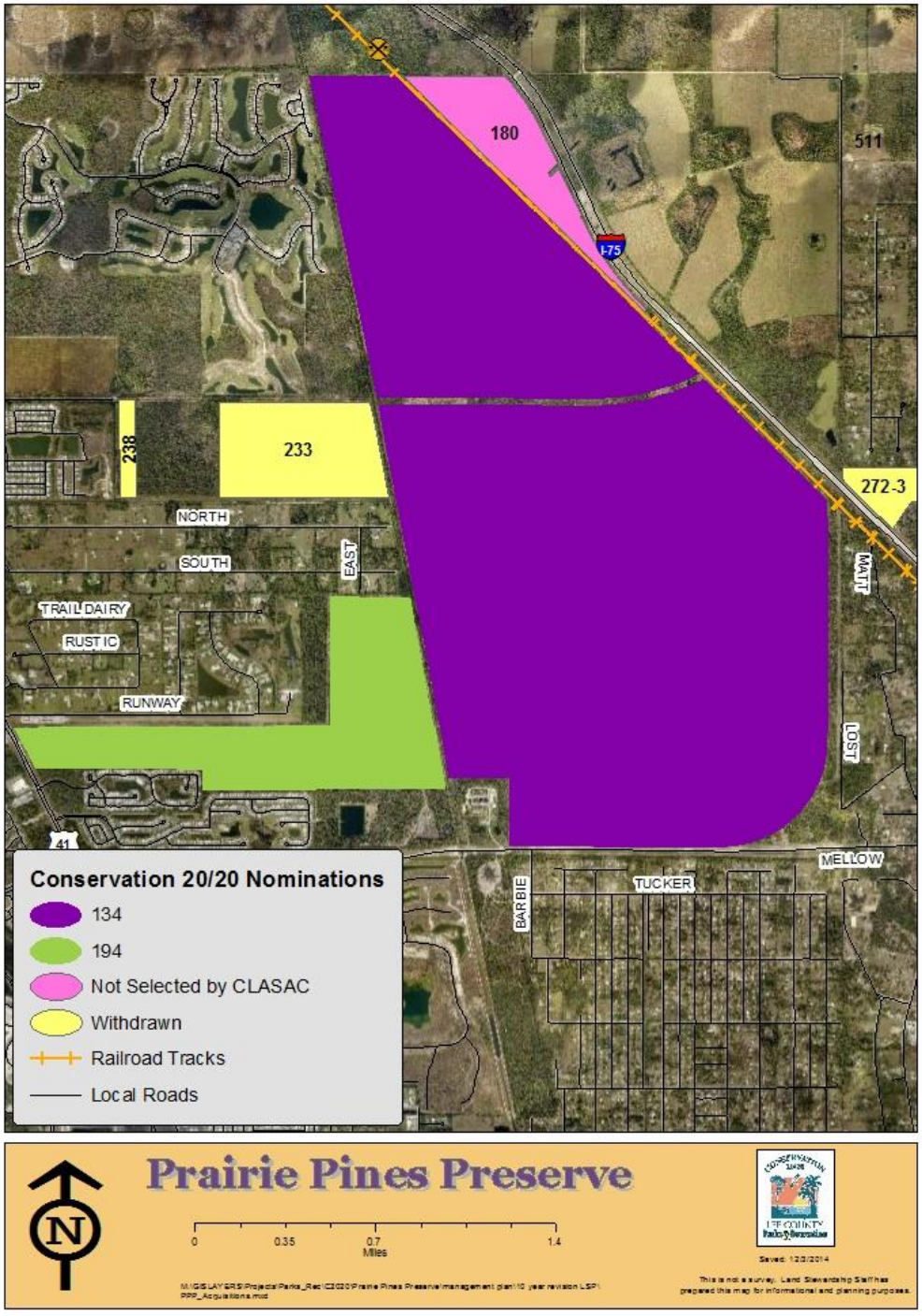


Figure 26: STRAP Map

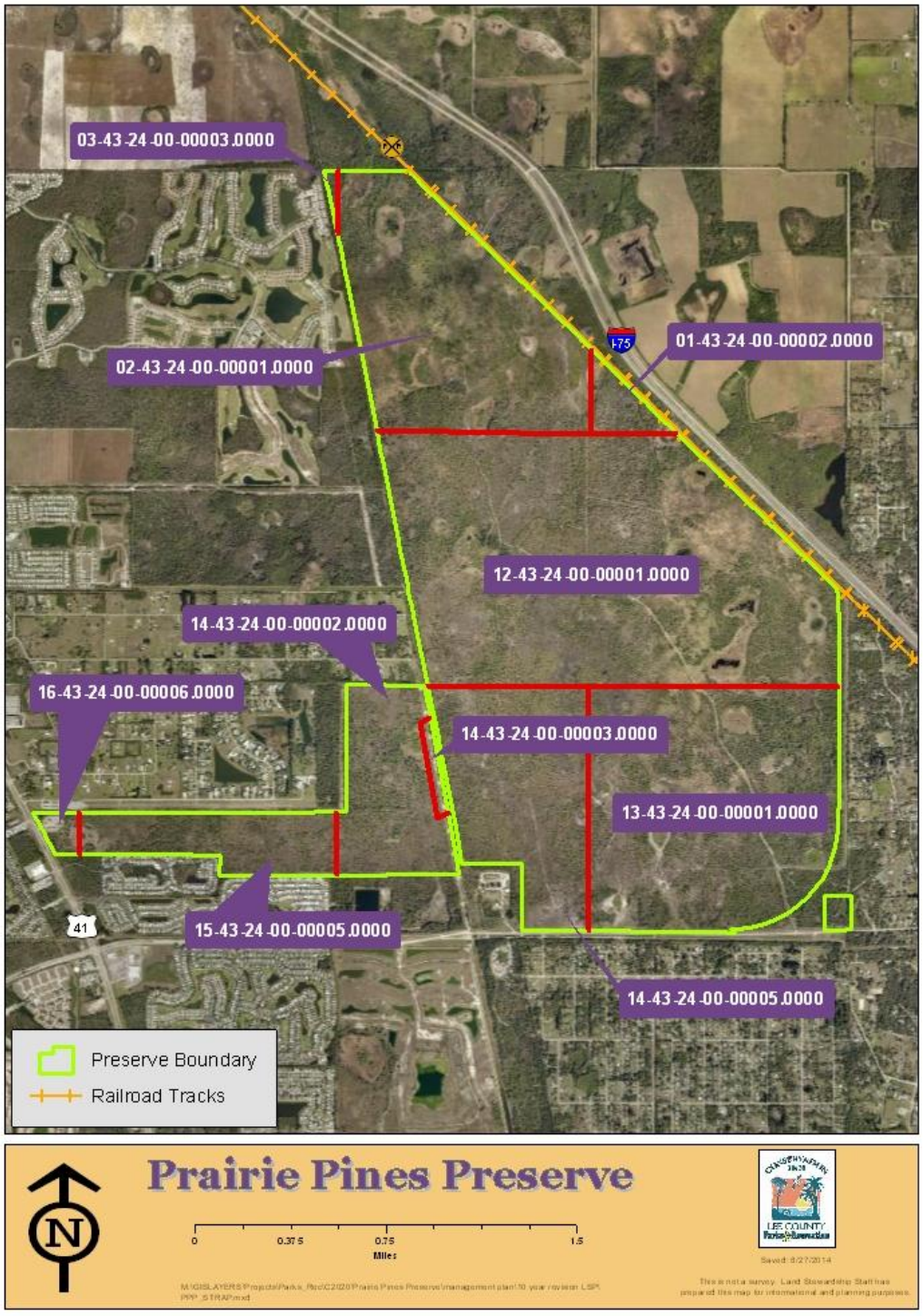


Figure 27: Future Land Use Map

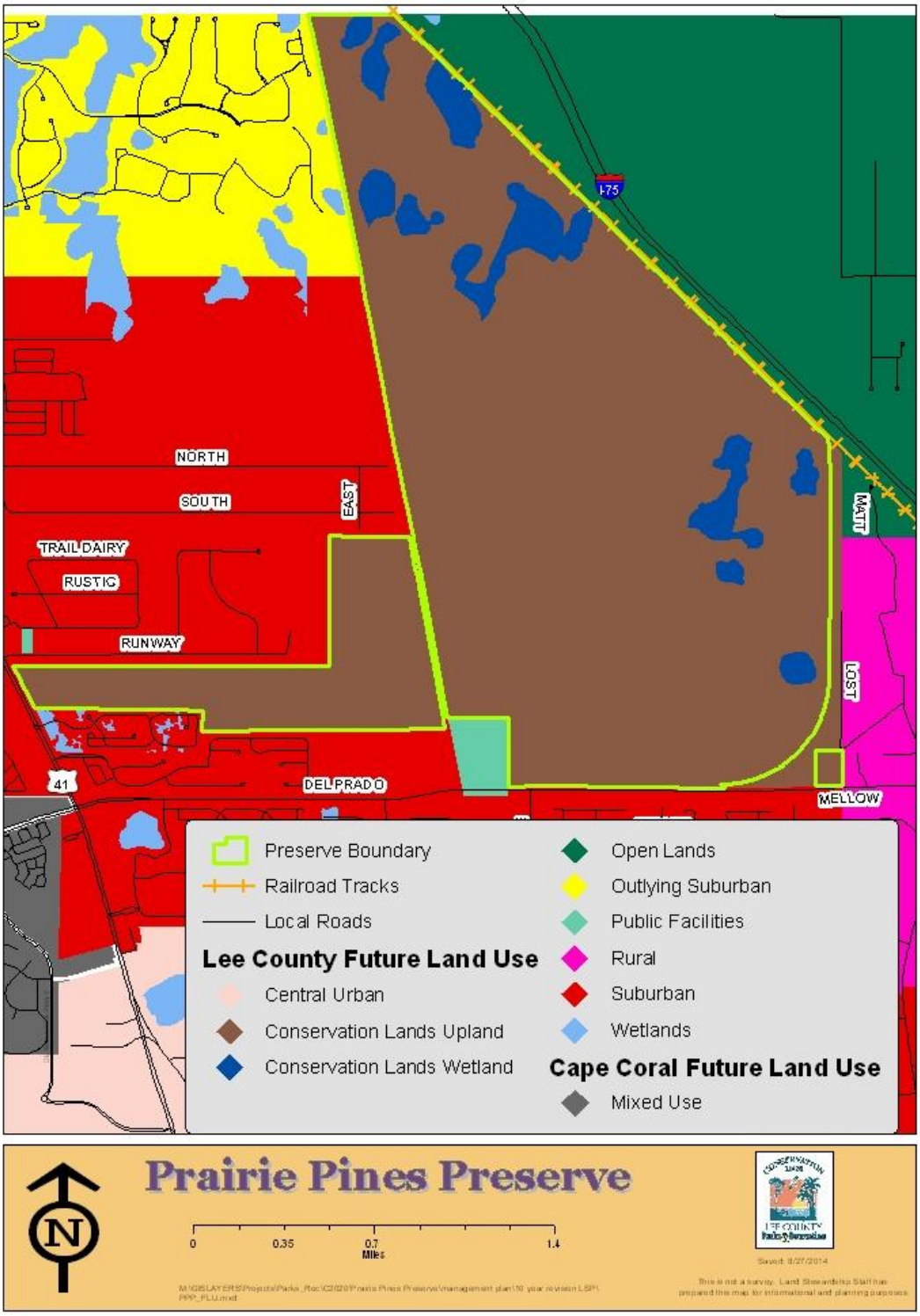
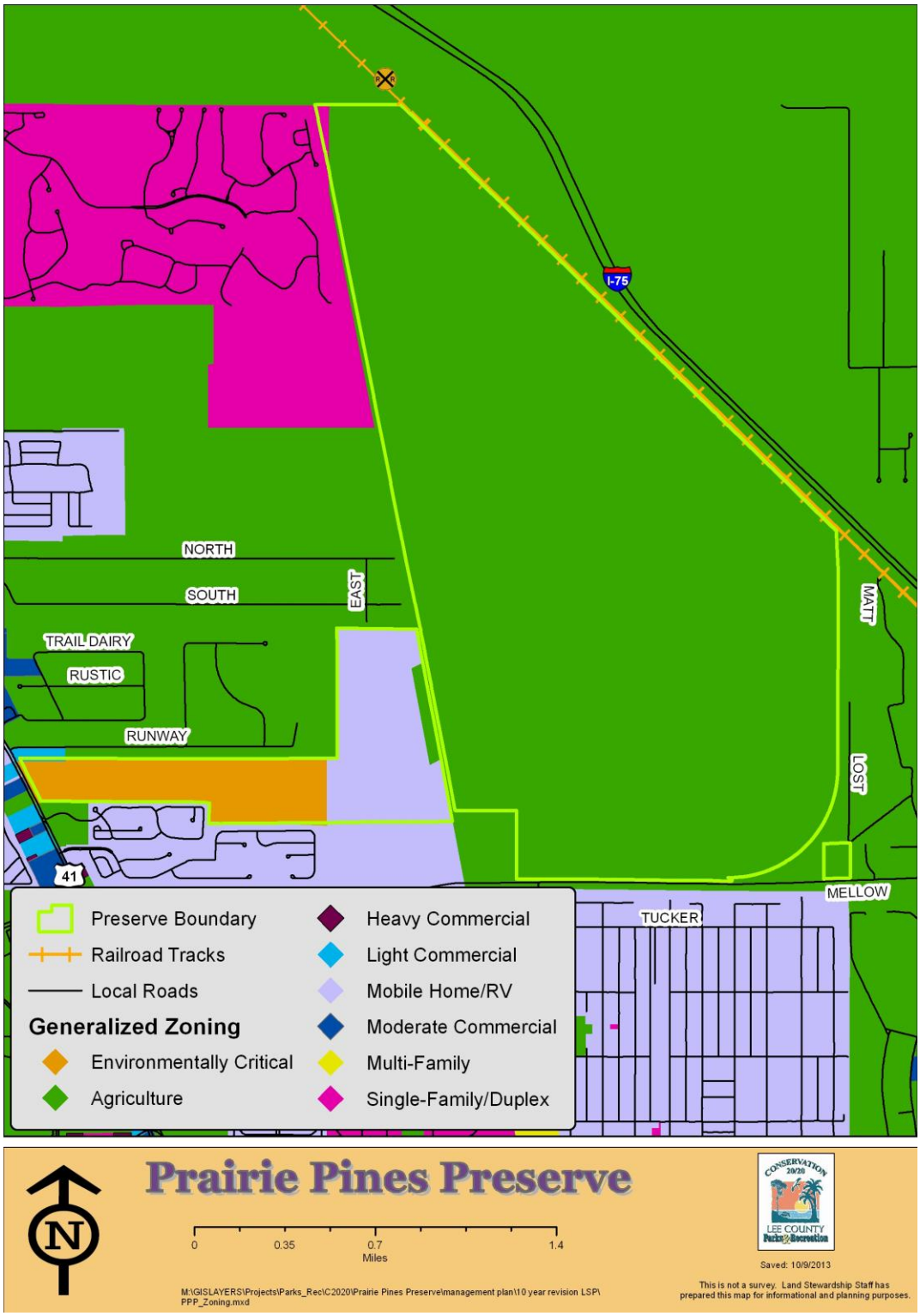


Figure 28: Zoning Map



VI. MANAGEMENT ACTION PLAN

A. Management Unit Descriptions

In the first edition PPP LSP management units were divided into 19 units. PPP is now divided into 17 management units (MU) to better organize and achieve management goals. Figure 29 outlines the MUs that were created based on existing trails, roads, ditches and plant communities. Acreage for all units has been rounded to the nearest tenth of an acre.

- MU 1 (39.5 acres) is located on the Lee/Charlotte County boundary, with the old railroad grade on the west, the “yellow” trail on the south and the “red trail” on the east boundary. It primarily consists of wet and mesic flatwoods and a large depression marsh.

  Melaleuca and slash pine were logged out of this MU in 2009/10 and it has had one additional invasive exotic plant treatment in 2010. In April of 2014 sixteen acres of this unit were roller chopped.

- MU 2 (85.4 acres) is located south of MU 1. It is bordered by the “yellow” trail on the west and north, the “red” trail on the east and the “orange” trail on the south. The three plant communities in this MU are wet and mesic flatwoods and a large depression marsh in the southeast corner. There is also a large ditch that enters the depression marsh on the northeast and exits on the southwest.

  In 2014 a wildfire burned part of this unit. Melaleuca and slash pine were logged out of the majority of this MU in 2009/10. No exotic plant treatment has been conducted in this area.

- MU 3 (156.1 acres) is located to the east of MU 1 and 2, with the “red” trail delineating all but the southern boundary, which is the “orange” trail. This MU contains several wetlands, wet and mesic flatwoods, and the majority of the abandoned field that has not been used since the 1980s. There is also a large ditch bisecting the MU, just north of the abandoned field.

  In 2014 a wildfire burned part of this unit. Melaleuca and slash pine were logged out of this MU in 2009/10 and it has had one additional invasive exotic plant treatment in 2010. In April of 2014 the uplands in this unit were roller chopped.

- MU 4 (276.6 acres) is bordered by the “orange” trail on the north, the “red” trail on the east, the “white” trail on the south and the “yellow” trail on the west. It primarily consists of wet and mesic flatwoods and several scattered depression marshes. There are portions of two large ditches that drain to the southwest in this MU.

In 2009 a wildfire burned a small portion of the eastern side of this MU. Melaleuca and slash pine were logged out of this MU in 2009/10. The City of Fort Myers has entered into agreement to use this portion of the Preserve as mitigation for their Wellfield Development Project. Exotic vegetation treatments will be the responsibility of the City of Fort Myers as part of the SFWMD permit conditions unless the agreement is terminated.

- MU 5 (229.5 acres) is an irregularly shaped unit bordered by the "red", "orange" and "purple" trails. This MU contains several wetlands, wet and mesic flatwoods and about half of the abandoned field that has not been used since the early 1990s. There is also a large ditch bisecting the MU.

  The 2009 wildfire burned through the middle of this MU. Melaleuca and slash pine were logged out of this MU in early 2012. The City of Fort Myers has entered into agreement to use this portion of the Preserve as mitigation for their Wellfield Development Project. Exotic vegetation treatments will be the responsibility of the City of Fort Myers as part of the SFWMD permit conditions unless the agreement is terminated.

- MU 6 (186.0 acres) is bordered by the active railroad grade to the northeast, a narrow spoil area and ditch on the east boundary of the abandoned field to the east and the "red" trail on the west. This MU has portions of both abandoned fields located on the north and south ends. Between these disturbed areas is a mosaic of wet and mesic flatwoods and scattered wetlands.

  The 2009 wildfire burned through the middle of this MU. Melaleuca and slash pine were logged out of this MU in 2011. Afterwards an exotics treatment was conducted across the unit. One hundred acres of uplands in the southern part of this MU were roller chopped in April of 2014. The City of Fort Myers has entered into an agreement to use a very small portion of this MU as mitigation for their Wellfield Development Project unless the agreement is terminated.

- MU 7 (162.7 acres) is bordered by the "purple" trail to the north, the "red" trail to the east and west and the "white" trail to the south. This MU contains small scattered wetlands, wet and mesic flatwoods and a small portion of the abandoned field that has not been used since the early 1990s including a ditch and berm.

  In 2009 a wildfire burned the eastern half of this MU. Melaleuca and slash pine were logged out of this MU in 2009/10. No exotic plant treatment has been conducted in this area The City of Fort Myers has entered into an agreement to use this portion of the Preserve as mitigation for their Wellfield Development Project. Exotic vegetation treatments will be the

responsibility of the City of Fort Myers as part of the SFWMD permit agreements unless the agreement is terminated.

- MU 8 (320.4 acres) is bordered by the active railroad and I-75 on the northeast, an old trail, no longer used, to the south, the “red” trail on the west as well as the ditch and berms bordering the abandoned field to the west. It primarily consists of wet and mesic flatwoods and numerous depression marshes and wet prairies.

  Melaleuca and slash pine were logged out of this MU in 2011/12. An exotics treatment on melaleuca occurred in 2012 after logging was completed. Wetland 14, which was used for mitigation for the construction of public facilities at the Preserve and now has a conservation easement from SFWMD, is located in this MU. Wetland 14 receives annual monitoring and exotics treatment through the end of 2014 per permit requirements. After this, exotics will need to be maintained at less than 5% coverage. There is also an additional portion of a conservation easement on the east boundary of this MU from the construction of a levy by the LCDNR. LCDNR staff contracts exotics treatment in this easement as part of permit requirements.

- MU 9 (142.5 acres) is bordered by the “white” trail to the north, the “red” trail to the east and the “yellow” trail to the south and west. Its two plant communities are wet and mesic flatwoods.

  There were two small wildfires (3 and 13 acres) in this MU. In 2009 a wildfire burned the eastern side of the MU. Melaleuca and slash pine were logged out of this MU in 2009/10. The City of Fort Myers has entered into agreement to use this portion of the Preserve as mitigation for their Wellfield Development Project. Exotic vegetation treatments will be the responsibility of the City of Fort Myers as part of the SFWMD permit agreement unless agreement is terminated.

- MU 10 (360.0 acres) is bordered by the “white” trail to the north and the “red” trail on the other boundaries. This MU contains numerous small wetlands and a mosaic of wet and mesic flatwoods.

  In 2009 a wildfire burned the western side of the MU. Melaleuca and slash pine were logged out of this MU in 2009/10. Melaleuca resprouts and trees too small to be logged out were treated in 2011.

- MU 11 (173.8 acres) is bordered by MU 8 to the north, the Preserve boundary to the east, the LCDNR levy to the south and the “red” trail to the west. This MU has wet, mesic and scrubby flatwoods as well as several large wetlands.

Melaleuca was logged from the northeast corner of this MU in 2012. The majority of this MU is under a conservation easement from the construction of a levy by the LCDNR. LCDNR is responsible for conducting exotic plant treatments and monitoring as part of the permit requirements.

- MU 12 (197.3 acres) is bordered by MU 9 and 10 to the north, the Preserve boundary to the west and south, and the "red" trail to the east. This MU contains wet, mesic and scrubby flatwoods as well as several large wetlands.

  In 2009 a wildfire burned the western side of the MU. Melaleuca and pines were logged from this MU in 2009/10. In addition to the logging, the entire MU has been treated for invasive exotic plants twice. In 2014 72 acres of uplands on the eastern side were roller chopped.

- MU 13 (11.5 acres) is bordered by the LCDNR levy to the north, the historic entrance road to the west and the Preserve boundary to the east. This MU is primarily mesic flatwoods with a small ditch on the south end.

  An initial sweep of invasive exotic plants was conducted in 2012.

- MU 14 (8.9 acres) is a rectangle separated from the rest of PPP. The land in between this isolated unit and the rest of the Preserve is slated to be an eventual road connecting Del Prado Extension to Interstate-75 This MU has mesic flatwoods and a small shrub bog.

  An initial sweep of invasive exotic plants was conducted in 2012.

- MU 15 (114.8 acres) is bordered by the "horse/hiking" trail to the south and the Preserve boundary. There is a 100' powerline easement along the eastern side of this MU. This MU has wet and mesic flatwoods as well as two depression marshes and a small hammock.

  Melaleuca was mulched in this unit in 2004 with funding from FWC's invasive plant management program. There have been several exotic treatments and the entire MU is at a maintenance level for exotics. The pines were thinned in this MU in 2009. In 2011 the southern half of this MU was roller chopped.

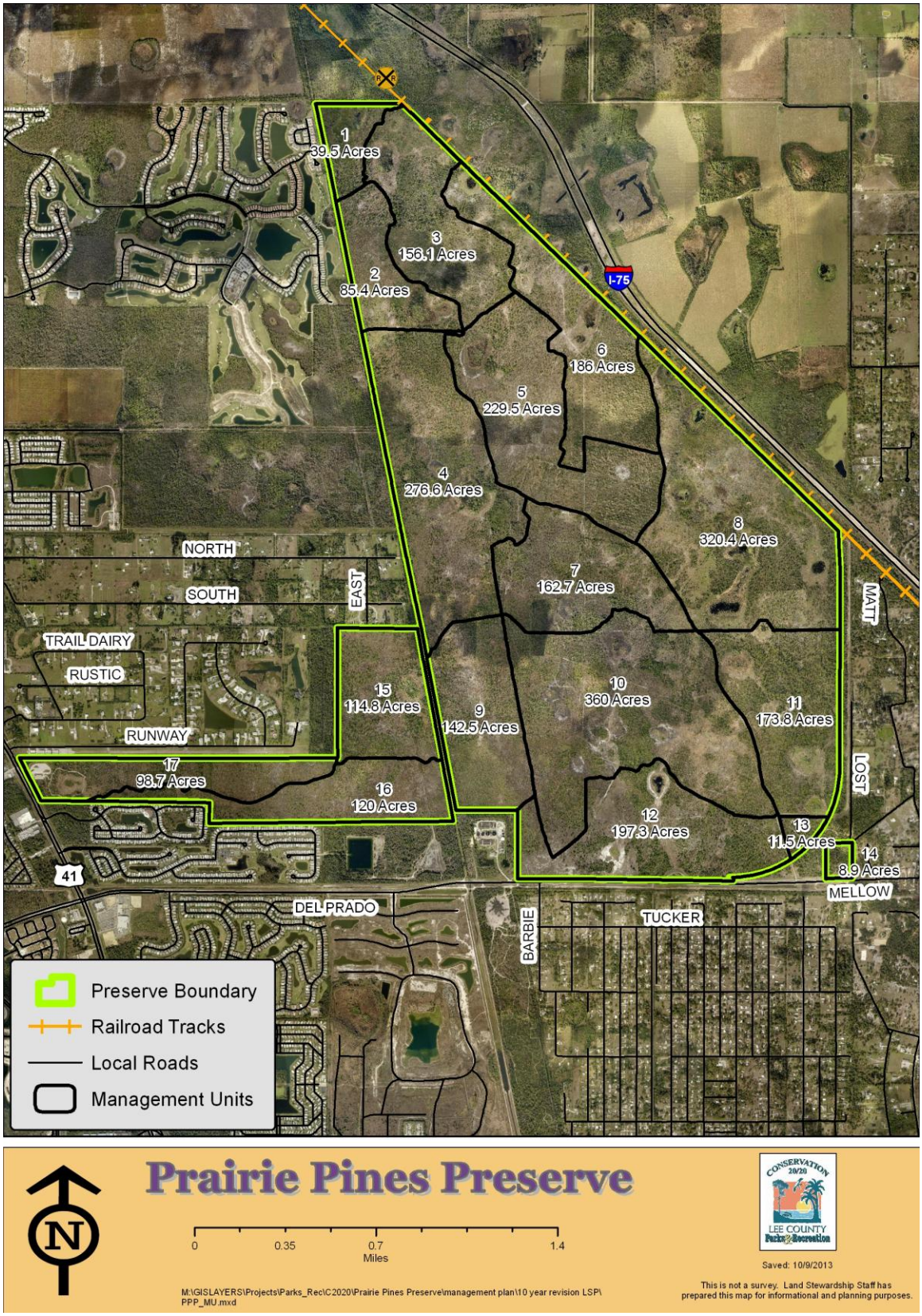
- MU 16 (120.0 acres) is bordered by the "horse/hiking" trail to the north and the Preserve boundary. There is a 100' powerline easement along the eastern side of this MU. This MU has wet and mesic flatwoods as well as a portion of a depression marsh.

Melaleuca was mulched in this unit in 2004 with funding from FWC's invasive plant management program. There have been several exotic treatments and the entire MU is at a maintenance level for exotics. The pines were thinned on the eastern half of this MU in 2009. In 2011 this MU was roller chopped.

- MU 17 (98.7 acres) is bordered by the "horse/hiking" trail to the south and the Preserve boundary. This MU contains successional hardwood forest, wet and mesic flatwoods and a depression marsh. This unit also contains the developed portion of the Preserve.

  Melaleuca was mulched in this unit in 2004 with funding from FWC's invasive plant management program. There have been several exotic treatments and the entire MU is at a maintenance level for exotics. The western half of this unit was roller chopped in 2011.

Figure 29: Management Unit Map



B. Goals and Strategies

The primary management objectives for PPP are natural community improvements, removal and continued treatment of invasive exotic plants and prescribed burning. Although funding is currently not available to conduct all of these stewardship activities, work at PPP will be prioritized in order of importance and ease of accomplishment and include the following tasks. Grants and/or monies budgeted to mitigate public infrastructure projects will be used to supplement the operations budget to meet our goals in a timely manner.

Natural Resource Management

- ✓ Exotic plant control/maintenance
- ✓ Prescribed fire management
- ✓ Mechanical brush reduction
- ✓ Monitor and protect listed species
- ✓ Exotic and feral animal removal

Overall Protection

- ✓ Install/maintain fire breaks
- ✓ Boundary fence installation and interior fence removal
- ✓ Boundary sign maintenance
- ✓ Change Zoning and Future Land Use categories
- ✓ Prevent dumping

Volunteers

- ✓ Assist volunteer group(s)

The following is a description of how each of these goals will be carried out, the success criteria used to measure accomplishment of each goal and a projected timetable outlining which units each activity will take place in and when.

Natural Resource Management

Exotic plant control and maintenance

The most current Florida Exotic Pest Plant Council's (FLEPPC) List of Invasive Species will be consulted in determining the invasive exotic plants to be controlled in each management unit. The goal is to remove/control these exotic species, followed with treatments of resprouts and new seedlings as needed. This goal will bring the entire Preserve to a maintenance level, defined as less than 5% invasive exotic plant coverage. Figure 30 shows areas at maintenance level for exotic plant control as of July 2014.

Prior to each invasive exotic plant control project at PPP performed by contractors, a Prescription Form (located in the LSOM) will be filled out by the

contractor(s), reviewed & approved by the C20/20 staff. Final project information will be entered into the GIS database.

- Uplands with light to moderate infestations:

  In areas where invasive plants are sporadic and below 50% of the vegetation cover, hand removal will be utilized for control, while heavy equipment may be used in more densely infested areas. Specific methodology will depend on stem size, plant type and season, but generally the stem will be cut near the ground and the stump will be sprayed with appropriate herbicide, or a foliar application will be applied to the entire plant. Hand pulling will be utilized when possible with appropriate species in order to minimize herbicide use. Basal bark treatment may be used at some locations. Areas that receive heavy equipment work will receive follow-up treatment that will include an application of an appropriate herbicide mixture to the foliage of any resprouts or seedlings. Cut stems may be piled to facilitate future potential burning, chipping or removal from site. No replanting will be needed due to significant presence of native vegetation and the native seed bank. No debris will be piled in such a way as to block established flowways.

- Uplands with moderate to heavy infestations:

  In areas where the exotics occur as monotypic stands or comprise more than 50% of the vegetation cover, the use of heavy equipment will be utilized in appropriate communities and during suitable season. Heavy equipment will be chosen so that soil disturbance and compaction are minimized. In areas along ditches where the hydric soils may not be conducive for heavy equipment, hand crews will be used to cut down and remove these plants. Tree debris will then either be pile burned or mulched. Mulching equipment may be used. Follow-up treatment of these areas will include an application of an appropriate herbicide mixture to the foliage of any resprouts or seedlings.

- Wetlands with moderate to heavy infestations:

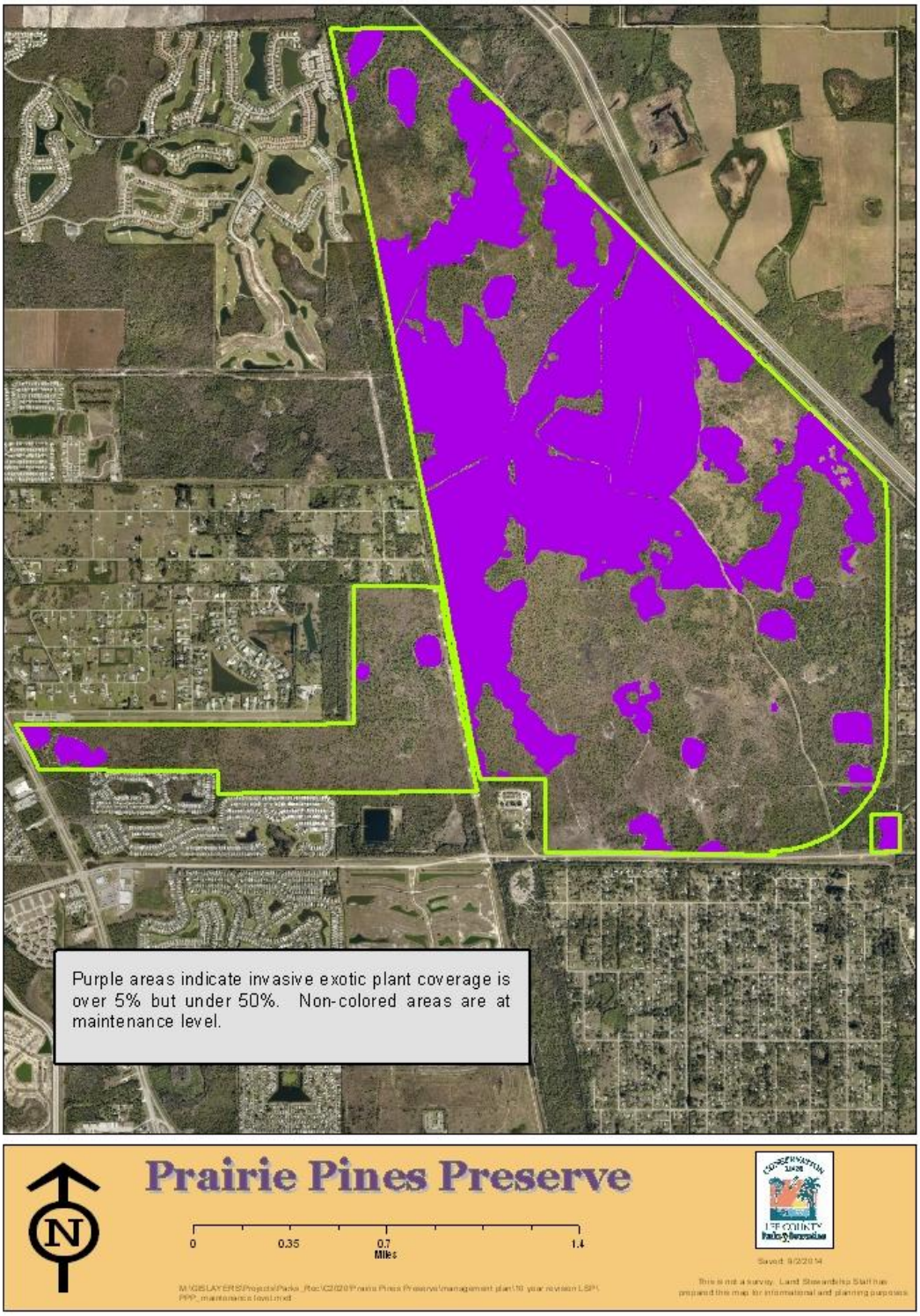
  At suitable locations such as seasonal ponds, lightweight equipment may be utilized during dry, winter periods or hand crews will need to hike in on foot and either foliar, girdle, basal bark, or cut-stump the exotics with the appropriate herbicide. Follow-up treatments will need to be conducted on at least an annual basis and may eventually decrease to every two years. Where feasible or necessary, biomass may be removed from sites to be piled and burned and/or mulched.

- Wetlands with light to moderate infestations:

  Hand crews will need to hike in and foliar, girdle, basal bark, or cut-stump treat the exotics with the appropriate herbicide. Follow-up treatments will need to be done on an annual basis and may eventually decrease to every two years. Where feasible or necessary, biomass may be removed from wetland sites to be piled and burned and/or mulched.

Since PPP is too wet during roughly half of the year for mechanical work, staff must take advantage of every opportunity during dry season.

Figure 30: Exotic Plants at Maintenance Level Map



Prescribed fire management

A prescribed fire program will be implemented that as closely as possible mimics the natural fire regimes for the different plant communities to increase plant diversity and ensure tree canopies remain open. Once restoration projects are completed in management units that contain fire dependent communities, prescribed burns will be performed after the creation of appropriate fire lines/breaks. Prescribed fire may be utilized for exotic plant control of seedling/sapling in areas previously treated.

Due to the close proximity of several smoke sensitive areas, including an airstrip and major roads, burning opportunities are very limited. When weather conditions are right, staff will shutdown the public use amenities with very short notice. All designated access gates will be closed during the burn and may remain closed for several days afterwards during mop-up to ensure the site is safe for visitors.

The timing of prescribed burning will be influenced by seasonal rain, staff and equipment availability, listed species requirements and wind patterns. The C20/20 Burn Team Coordinator has coordinated with the FFS and finalized the C20/20-wide Fire Management Plan that applies to all Preserves. C20/20 staff will inform adjacent neighbors of the possibility of burning each year in a neighbor letter prior to burn season.

Mechanical brush reduction

Lack of fire and high density of exotic vegetation across PPP allowed saw palmetto to become thick and high. The former agricultural fields are in early succession stage with wax myrtle dominating the area. Mechanical work, including roller chopping and mowing, will reduce vegetation height which in turn will reduce fuel loads across the site. Mechanical work will also encourage plant diversity. Areas of tall palmetto and myrtle will be left in each MU to provide cover for nesting turkeys, black bear and other fauna.

In the future as the slash pine density increases another timber harvest will be conducted to maintain open canopy. Funds from the timber sale will be used for management activities on the Preserve.

Monitor and protect listed species

There are several listed species that have been documented on the Preserve including gopher tortoise, Sherman’s fox squirrel, American alligator, and giant airplant. These species will benefit from exotic plant control, prescribed burns, and low impact hydrological restoration activities. During stewardship activities, efforts will be made to minimize negative impacts to listed species.

PPP is part of a countywide tri-annual site inspection program conducted for all C20/20 preserves. The site inspection spreadsheet is available on the LCPR's computer server ("S" drive). These inspections allow staff to monitor for impacts and/or changes to each preserve and includes lists of all animal sightings and plant species that are found. If, during these inspections, staff finds FNAI listed species not previously documented, they will be reported using the appropriate forms.

Exotic and feral animal removal

Fourteen exotic animal species have been recorded on PPP. Although melaleuca psyllids and weevils are non-native animals, they are beneficial biological control agents targeting the invasive melaleuca tree. C20/20 staff is primarily concerned with the feral hog (*Sus scrofa*). Currently, the only acceptable method of hog removal on C20/20 preserves is trapping, but more aggressive removal methods may be needed. Staff is exploring guided hunts in conjunction with FWC and hiring nuisance wildlife personal to shoot hogs at night. Removing all hogs is an unreasonable goal; therefore a control program will need to be continuous on a long-term basis. If practical, a methodology will be established and implemented against other unwanted exotic animal species.

This Preserve, like other C20/20 preserves, does not contain nor will it support feral cat colonies. FWC's Feral and Free Ranging Cats policy is *"To protect native wildlife from predation, disease, and other impacts presented by feral and free-ranging cats"* (FWC 2003). Any feral cats will be trapped and taken to Lee County Animal Services. C20/20 staff will work with the Animal Services staff to not locate feral cat colonies adjacent to preserves.

Overall Protection

Install/maintain fire breaks

Perimeter fire breaks have been installed and are maintained annually by staff. The current public use trails are mowed and serve as non-disked fire breaks. When burns are planned the burn boss will evaluate the need for disking temporary lines. Wherever possible firebreaks will be installed on existing trails or other disturbed areas to minimize impact to plant communities or alter water flow.

Boundary fence installation and interior fence removal

The perimeter of the Preserve is fenced to prevent activities such as dumping and the illegal use of motorized vehicles. As perimeter fence is replaced, new fence will include a middle strand of heavy gauge cable to deter fence cutting. The majority of interior fence has been removed. As land management activities occur, old fence is sometimes discovered and will be removed.

Boundary sign maintenance

Boundary signs have been installed along the entire perimeter boundary to further protect the Preserve. C20/20 rangers and staff will check for boundary signs during their patrols and replace missing ones. Boundary signs have been placed every 500 feet.

Change Zoning categories

Staff will coordinate with LCDP staff to finish changing the zoning categories for PPP. All zoning designations will be changed to "Environmentally Critical" from "Agriculture" or "Mobile Home/RV". Changing zoning to these designations is a requirement of the FCT grant. Portions of 194 were changed after purchase.

Prevent dumping

During tri-annual site inspections, any smaller objects that are encountered will be removed. C20/20 Rangers will also assist with removing small items when they are on patrol at the Preserve.

Volunteers

Assist volunteer group(s)

The LSOM identifies the Land Stewardship Volunteer Program's mission statement as:

> *To aid in the management and preservation of Lee County resource-based public parks and preserves and to provide volunteers with rewarding experiences in nature.*

Lee County Bird Patrol volunteer group perform bird monitoring surveys at PPP on a monthly basis.

If there is interest from the community to form a volunteer group, staff will work with them to assist with the many diverse stewardship activities that will be associated with this Preserve, such as wildlife monitoring and other land stewardship projects.

The following "Prioritized Projected Timetable for Implementation" is based on obtaining necessary funding for numerous land stewardship projects. Implementation of these goals may be delayed due to changes in staff, extreme weather conditions or a change in priorities on properties managed by Lee County.

VII. PROJECTED TIMETABLE FOR IMPLEMENTATION

Management Activity	Jan-15	April-15	July-15	Oct-15	Jan-16	April-16	July-16	Oct-16	Jan-17	April-17	July-17	Oct-17	Jan-18	April-18	July-18	Oct-18	Jan-19	April-19	July-19	Oct-19	2020 or later
Natural Resource Management																					
Mechanical tree and brush reduction																					
Mechanical brush reduction	X				X				X				X				X				X
Pine tree thinning																					X
Prescribed fire management																					
Improve perimeter firelines on 194	X																				
Conduct prescribed burning	On-going	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Exotic plant control/maintenance																					
Follow-up treatment	On-going	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Habitat restoration																					
Rehab wildfire plow lines																					
Maintenance (On-going/Annual)																					
Exotic animal removal	On-going	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Fire break mow/disk		X				X				X				X				X			X
Overall Protection																					
Trash removal	On-going	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Change Zoning categories									Zoning												
Volunteers																					
Assist volunteer group	On-going	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→

VIII. FINANCIAL CONSIDERATIONS

There is a management fund established in perpetuity for all C20/20 preserves. Monies from this fund primarily serve to meet the operational needs of the Management section of the C20/20 Program, but a certain amount of this fund will be set aside for planned restoration projects.

Some funding remains from the FCT grant. This money will be used towards cost of public amenity upkeep and maintenance and exotics treatment and mechanical fuels reduction work along trails.

Other possible funding for exotic plant removal and restoration projects may be requested through grants from agencies such as SFWMD, FDEP, FWC, and USFWS or include additional mitigation opportunities. Projected costs and funding sources are listed in Appendix J.

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X. APPENDICES

Appendix A: PPP Soils Chart

Appendix B: Wildlife Species List

Appendix C: Plant Species List

Appendix D: LCEC Access Agreement

Appendix E: LCEC Utility Easement

Appendix F: Natural Resources Conservation Easement

Appendix G: Wetland 14 Conservation Easement

Appendix H: Access Agreement

Appendix I: Legal Description

Appendix J: Expended and Projected Costs and Funding Sources

Appendix A: PPP Soils Chart

Appendix A: PPP Soils Chart

					Physical Attributes			*Biological Attributes*				
Soil Types	**Map Symbol**	**Total Acres**	**% of Preserve**	**Habitats (Range Site)**	**Wetland Class (1)**	**Hydrologic Group (2)**	**% Organic Matter**	**Potential as habitat for wildlife in--**				**Limitations for Recreational Paths & Trails**
								Openland	**Woodland**	**Wetland**	**Rangeland**	
Boca Fine Sand	13	15.1	0.57	South Florida flatwoods		B/D	1-3%	fair	poor	fair	good	Severe: wetness, too sandy
Boca Fine Sand, Slough	74	87.49	3.15	South Florida flatwoods	S	B/D	1-3%	poor	very poor	fair	fair	Severe: wetness, too sandy
Copeland Sandy Loam, Depressional	45	27.61	1.04	freshwater marshes/ponds	P	D *	2-6%	very poor	very poor	good	--	Severe: ponding
Felda Fine Sand, Depressional	49	4.28	0.16	freshwater marshes/ponds	P	B/D *	1-4%	very poor	very poor	good	--	Severe: wetness, too sandy
Hallandale Fine Sand	6	65.17	2.45	South Florida flatwoods		B/D	2-5%	poor	poor	fair	poor	Severe: wetness, too sandy
Isles Fine Sand, Depressional	39	39.29	1.5	freshwater marshes/ponds	P	D *	1-2%	very poor	very poor	good	--	Severe: wetness, too sandy
Malabar Fine Sand	34	305.88	11.40	slough	S	B/D	1-2%	poor	poor	fair	--	Severe: wetness, too sandy
Malabar Fine Sand, Depressional	44	21.58	0.80	freshwater marshes/ponds	P	B/D *	1-2%	very poor	very poor	good	--	Severe: ponding, too sandy
Oldsmar Sand	33	30.6	1.14	south Florida flatwoods		B/D	1-2%	fair	fair	poor	--	Severe: wetness, too sandy
Pineda Fine Sand	26	1021.55	38.07	slough	S	B/D	.5-6%	fair	poor	fair	--	Severe: wetness, too sandy
Pineda Fine Sand, Depressional	73	147.51	5.49	freshwater marshes/ponds	P	D *	.5-6%	very poor	very poor	good	--	Severe: ponding, too sandy
Pineda Fine Sand, limestone substratum	77	4.81	0.18	slough	S	B/D	1-2%	fair	poor	fair	--	Severe: wetness, too sandy
Wabasso Sand	35	268.36	9.99	South Florida flatwoods		B/D	1-4%	poor	fair	poor	--	Severe: wetness, too sandy
Wabasso Sand, Limestone Substratum	42	644.38	24.00	south Florida flatwoods		B/D	2-5%	poor	fair	poor	--	Severe: wetness, too sandy

Color Key:

Wetlands Rarely Present (Under 20%)
Wetlands Sometimes Present (20-40%)
Wetlands Often Present (75-95%)

(1) F - Flooding: The temporary inundation of an area caused by overflowing streams, runoff from adjacent slopes or tides.
S - Slough (sheet flow): A broad nearly level, poorly defined drainage way that is subject to sheet-flow during the rainy season.
P - Ponding: Standing water on soils in closed depressions. The water can be removed only by percolation or evapotranspiration.

(2) * Water table is above the surface of soil
B - Soils having a moderate infiltration rate (low to moderate runoff potential) when thoroughly wet.
C - Soils having a slow infiltration rate (moderate to high runoff potential) when thoroughly wet.
D - Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet.

Appendix B: Plant Species List

Appendix B: Plant list for Prairie Pines Preserve

(scientific and common names were obtained from Wunderlin and Hansen 2003)

Scientific Name	**Common Name**	**Native Status**	**FDACS**	**FNAI**	**IRC**	**EPPC**
Family: Azollaceae (mosquito fern)						
Azolla caroliniana	mosquito fern	native			R	
Family: Blechnaceae (mid-sorus fern)						
Blechnum serrulatum	swamp fern	native				
Woodwardia virginica	Virginia chain fern	native			R	
Family: Dennstaedtiaceae (cuplet fern)						
Pteridium aquilinum var. caudatum	lacy bracken fern	native				
Pteridium aquilinum var. pseudocaudatum	tailed bracken fern	native			R	
Family: Lycopodiaceae (club-moss)						
Lycopodiaceae cernua	nodding club-moss	native	T		I	
Family: Nephrolepidaceae (sword fern)						
Nephrolepis exaltata	sword fern	native				
Nephrolepis multiflora	Asian sword fern	exotic			I	
Family: Polypodiaceae (polypody)						
Phlebodium aureum	golden polypody	native				
Pleopeltis polypodioides	resurrection fern	native				
Family: Psilotaceae (whisk-fern)						
Psilotum nudum	whisk-fern	native				
Family: Pteridaceae (brake fern)						
Acrostichum danaeifolium	giant leather fern	native				
Ceratopteris thalictroides	watersprite	exotic				
Pteris vittata	Chinese ladder brake	exotic				I
Family: Salviniaceae (floating fern)						
Salvinia minima	water spangles	exotic				
Family: Schizaeaceae (curly-grass)						
Lygodium microphyllum	old world climbing fern	exotic				I
**Schizaea pennula*	ray fern	native	E	G5/S1	CI	
Family: Thelypteridaceae (marsh fern)						
Thelypteris dentata	downy maiden fern	exotic				
Thelypteris kunthii	widespread maiden fern	native				
Family: Vittariaceae (shoestring fern)						
Vittaria lineata	Virginia chain fern	native				
Family: Pinaceae (pine)						
Pinus elliottii var. densa	south Florida slash pine	native				
Family: Alismataceae (water plantain)						
Sagittaria isoetiformis	quillwort arrowhead	native			CI	
Sagittaria lancifolia	bulltongue arrowhead	native				
Family: Alliaceae (garlic)						
**Nothoscordum bivalve*	false-garlic, crowpoison	native			CI	
Family: Amaryllidaceae (amaryllis)						
Hymenocallis palmeri	alligatorlily	native				
Family: Araceae (arum)						
Lemna obscura	little duckweed	native			R	
Pistia stratiotes	water lettuce	exotic				I
Spirodela polyrhiza	common duckweed	native				
Syngonium podophyllum	American evergreen	exotic				I
Family: Arecaceae (palm)						
Phoenix reclinata	Senegal date palm	exotic				II
Sabal palmetto	cabbage palm	native				

Appendix B: Plant list for Prairie Pines Preserve

(scientific and common names were obtained from Wunderlin and Hansen 2003)

Scientific Name	**Common Name**	**Native Status**	**FDACS**	**FNAI**	**IRC**	**EPPC**
Serenoa repens	saw palmetto	native				
Family: Bromeliaceae (pineapple)						
Tillandsia balbisiana	northern needleleaf	native	T			
Tillandsia fasciculata var. densispica	cardinal airplant	native	E			
Tillandsia recurvata	ball-moss	native				
Tillandsia setacea	southern needleleaf	native				
Tillandsia usneoides	Spanish moss	native				
Tillandsia utriculata	giant airplant	native	E			
Family: Burmanniaceae (burmannia)						
Burmannia capitata	southern bluethread	native			R	
Family: Cannaceae (canna)						
Canna flaccida	bandana-of-the-everglades	native				
Family: Commelinaceae (spiderwort)						
Commelina diffusa	common dayflower	exotic				
Family: Cyperaceae (sedge)						
Carex longii	Long's sedge	native			I	
Carex vexans	Florida hammock sedge	native			I	
Cladium jamaicense	Jamaica swamp sawgrass	native				
Cyperus articulatus	jointed flatsedge	native			I	
Cyperus distinctus	swamp flatsedge	native			I	
Cyperus flavescens	yellow flatsedge	native			R	
Cyperus haspan	haspan flatsedge	native				
Cyperus ligularis	swamp flatsedge	native				
Cyperus polystachyos	manyspike flatsedge	native				
Cyperus surinamensis	tropical flatsedge	native				
Eleocharis baldwinii	Baldwin's spikerush	native			R	
Eleocharis cellulose	Gulfcoast spikerush	native				
Eleocharis geniculata	Canada spikerush	native				
Elocharis interstincta	knotted spikerush	native				
Fimbristylis cymosa	hurricanegrass	exotic				
Fimbristylis dichotoma	forked fimbry	native			R	
Fuirena breviseta	saltmarsh umbrellasedge	native			R	
Fuirena scirpoidea	southern umbrellasedge	native			R	
Kyllinga brevifolia	shortleaf spikesedge	exotic				
**Rhynchospora baldwinii*	Baldwin's beaksedge	native			CI	
Rhynchospora colorata	starrush whitetop	native				
Rhynchospora divergens	spreading beaksedge	native				
Rhynchospora fascicularis	fascicled beaksedge	native			R	
Rhynchospora inundata	narrowfruit horned beaksedge	native			R	
Rhynchospora latifolia	giant whitetop	native			R	
Rhynchospora microcarpa	southern beaksedge	native			R	
Rhynchospora nitens	shortbeak beaksedge	native			R	
Rhynchospora odorata	fragrant beaksedge	native			R	
Rhynchospora tracyi	Tracy's beaksedge	native			R	
Schoenus nigricans	black bogrush	native			R	
Scleria baldwinii	Baldwin's nutrush	native			I	
Scleria ciliata var. ciliata	fringed nutrush	native			R	
Scleria ciliata var. pauciflora	fewflower nutrush	native			CI	
Scleria Georgiana	slenderfruit nutrush	native			I	

Appendix B: Plant list for Prairie Pines Preserve

(scientific and common names were obtained from Wunderlin and Hansen 2003)

Scientific Name	**Common Name**	**Native Status**	**FDACS**	**FNAI**	**IRC**	**EPPC**
Scleria triglomerata	tall nutgrass, whip nutrush	native			R	
Scleria verticillata	low nutrush	native			R	
Family: Eriocaulaceae (pipewort)						
Eriocaulon compressum	flattened pipewort	native			R	
Eriocaulon decangulare	tenangle pipewort	native			R	
Lachnocaulon anceps	whitehead bogbutton	native			R	
Syngonanthus flavidulus	yellow hatpins	native			R	
Family: Haemodoraceae (bloodwort)						
Lachnanthes caroliana	Carolina redroot	native				
Family: Hydrocharitaceae (frog's-bit)						
Najas guadalupensis	southern waternymph	native			R	
Family: Hypoxidaceae (yellow stargrass)						
Hypoxis juncea	fringed yellow stargrass	native				
Family: Iridaceae (iris)						
Sisyrinchium nashii	Nash's blue-eyed grass	native			R	
Family: Juncaceae (rush)						
Juncus marginatus	shore rush, grassleaf rush	native			R	
Juncus megacephalus	bighead rush	native			R	
Juncus polycephalos	manyhead rush	native				
Juncus repens	lesser creeping rush	native			CI	
Juncus roemerianus	needle rush	native			R	
Juncus scirpoides	needlepod rush	native			I	
Family: Liliaceae (lily)						
Lilium catesbaei	Catesby's lily	native	T		I	
Family: Marantaceae (arrowroot)						
Thalia geniculata	alligatorflag	native				
Family: Nartheciaceae (bog asphodel)						
Aletris lutea	yellow colicroot	native			R	
Family: Orchidaceae (orchid)						
Calopogon pallidus	pale grasspink	native			I	
Eulophia alta	wild-coco	native				
Habenaria floribunda	toothpetal false reinorchid	native				
Habenaria quinqueseta	longhorn false reinorchid	native			R	
Spiranthes longilabris	longlip ladyiestresses	native	T		I	
Spiranthes praecox	green-lipped ladies'-tresses	native				
Spiranthes vernalis	spring Ladiestresses	native			R	
Zeuxine strateumatica	soldier orchid	exotic				
Family: Poaceae (grass)						
Amphicarpum muhlenbergianum	blue maidencane	native			R	
Andropogon glomeratus	hirsutior bushy bluestem	native				
Andropogon glomeratus var. glaucopsis	purple bluestem	native			R	
Andropogon glomeratus var. pumilus	common bushy bluestem	native				
Andropogon gyrans	Elliott's bluestem	native			I	
Andropogon ternarius	splitbeard bluestem	native				
Andropogon virginicus var. glaucus	chalky bluestem	native			R	
Aristida palustris	longleaf threeawn	native			I	
Aristida purpurascens	arrowfeather threeawn	native				
Aristida spiciformis	bottlebrush threeawn	native			R	
Aristida stricta var. beyrichiana	wiregrass	native				

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Scientific Name	**Common Name**	**Native Status**	**FDACS**	**FNAI**	**IRC**	**EPPC**
Axonopus fissifolius	common carpetgrass	native			R	
Axonopus furcatus	big carpetgrass	native				
Coelorachis rugosa	wrinkled jointtail grass	native			R	
Cynodon dactylon	Bermuda grass	exotic				
Dactyloctenium aegyptium	Durban crowfootgrass	exotic				
Dichanthelium aciculare	needleleaf witch grass	native				
Dichanthelium commutatum	variable witchgrass	native			R	
Dichanthelium dichotomum	cypress witchgrass	native			R	
Dichanthelium ensifolium	cypress witchgrass	native			I	
Dichanthelium ensifolium var. unciphyllum	cypress witchgrass	native			R	
Dichanthelium erectifolium	erectleaf witchgrass	native			R	
Dichanthelium leucothrix	rough witchgrass	native			I	
Dichanthelium portoricense	hemlock witchgrass	native				
Dichanthelium strigosum var. glabrescens	glabrescent roughhair witchgrass	native				
Echinochloa muricata	rough barnyardgrass	native			I	
Elionurus tripsacoides	Pan-American balsamscale	native			I	
Eragrostis atrovirens	thalia love grass	native				
Eragrostis elliottii	Elliott's love grass	native				
Eustachys glauca	saltmarsh fingergrass	native				
Eustachys petraea	pinewoods fingergrass	native				
Imperata brasiliensis	Brazilian satintail	native				
Imperata cylindrica	cogongrass	exotic				I
Hymenachne amplexicaulis	trompetilla	exotic				I
Leersia hexandra	southern cutgrass	native			R	
Leptochloa fusca subsp. fascicularis	bearded sprangletop	native			R	
Muhlenbergia capillaris	hairawn muhly	native				
Neyraudia reynaudiana	Burmareed, silkreed	exotic				I
Panicum dichotomiflorum	fall panicgrass	native			R	
Panicum hemitomon	maidencane	native				
Panicum hians	gaping panicum	native			R	
Panicum repens	torpedograss	exotic				I
Panicum rigidulum	redtop panicum	native				
Panicum tenerum	bluejoint panicum	native			R	
Panicum virgatum	switchgrass	native				
Paspalidium geminatum	Egyptian paspalidium	native			I	
Paspalum conjugatum	sour palpalum, hilograss	native				
Paspalum dissectum	mudbank crowngrass	exotic				
Paspalum monostachyum	gulfdune paspalum	native			R	
Paspalum notatum	bahiagrass	exotic				
Paspalum praecox	early paspalum	native				
Paspalum setaceum	thin paspalum	native				
Paspalum urvillei	vaseygrass	exotic				
Pennisetum purpureum	napiergrass, elephantgrass	exotic				I
Phragmites australis	common reed	native			R	
Rhynchelytrum repens	rose natalgrass	exotic				I
Sacciolepis indica	Indian cupscale	exotic				
Sacciolepis striata	American cupscale	native			R	
Schizachyrium scoparium var. scoparium	little bluestem	native			R	
Setaria parviflora	knotroot foxtail	native				

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Scientific Name	**Common Name**	**Native Status**	**FDACS**	**FNAI**	**IRC**	**EPPC**
Sorghastrum secundum	lopsided Indiangrass	native				
Spartina bakeri	sand cordgrass	native				
Sporobolus indicus var. pyramidalis	West Indian dropseed	native				
Sporobolus junceus	pineywoods dropseed	native				
Stenotaphrum secundatum	St. Augustine grass	exotic				
Tripsacum dactyloides	Fakahatcheegrass	native			R	
Urochloa mutica	Paragrass	exotic				I
Family: Pontederiaceae (pickerelweed)						
Pontederia cordata	pickerelweed	native				
Family: Smilacaceae (smilax)						
Smilax auriculata	earleaf greenbrier	native				
Smilax bona-nox	saw greenbriar	native			R	
Family: Typhaceae (cattail)						
Typha domingensis	southern cattail	native				
Family: Xyridaceae (yelloweyed grass)						
Xyris ambigua	coastalplain yelloweyed grass	native			R	
Xyris brevifolia	shortleaf yelloweyed grass	native			I	
Xyris calcicola	limestone yelloweyed grass	native				
Xyris caroliniana	Carolina yelloweyed grass	native			R	
Xyris elliottii	Elliott's yelloweyed grass	native			R	
Xyris flabelliformis	Savannah yelloweyed grass	native			I	
Xyris floridana	Florida yelloweyed grass	native				
Xyris jupicai	Richard's yelloweyed grass	native				
Xyris smalliana	Small's yelloweyed grass	native			I	
Family: Acanthaceae (acanthus)						
Blechum pyramidatum	Browne's blechum	exotic				II
Dyschoriste oblongifolia	oblongleaf twinflower	native			I	
Elytraria caroliniensis var. angustifolia	Carolina scalystem	native			CI	
Ruellia succulenta	thickleaf wild petunia	native			R	
Stenandrium dulce	sweet shaggytuft	native			R	
Family: Amaranthaceae (amaranth)						
Alternanthera philoxeroides	alligatorweed	exotic				II
Amaranthus australis	southern amaranth	native			R	
Amaranthus spinosus	spiny amaranth	exotic				
Chenopodium ambrosioides	Mexican tea	exotic				
Iresine diffusa	Juba's bush	native				
Family: Anacardiaceae (cashew)						
Rhus copallinum	winged sumac	native				
Schinus terebinthifolius	Brazilian pepper	exotic				I
Toxicodendron radicans	eastern poison ivy	native				
Family: Annonaceae (custard-apple)						
Annona glabra	pondapple	native				
Asimina reticulata	netted pawpaw	native				
Family: Apiaceae (carrot)						
Cyclospermum leptophyllum	marsh parsley	exotic				
Eryngium baldwinii	Baldwin's eryngo	native			R	
Eryngium yuccifolium	button rattlesnakemaster	native			R	
Oxypolis filiformis	water cowbane	native				
Family: Apocynaceae (dogbane)						

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Scientific Name	**Common Name**	**Native Status**	**FDACS**	**FNAI**	**IRC**	**EPPC**
Asclepias lanceolata	fewflower milkweed	native			R	
Asclepias longifolia	longleaf milkweed	native			R	
Asclepias tuberosa	butterflyweed, butterfly milkweed	native			R	
Catharanthus roseus	Madagascar-periwinkle	exotic				
Sarcostemma clausum	white twinevine	native				
Family: Aquifoliaceae (holly)						
Ilex cassine	dahoon	native				
Ilex glabra	gallberry	native				
Family Araliaceae (ginseng)						
Centella asiatica	spadeleaf	native				
Hydrocotyle umbellata	manyflower marshpennywort	native			R	
Family: Asteraceae (aster)						
Acmella oppositifolia var. repens	oppositeleaf spotflower	native			I	
Ambrosia artemisiifolia	common ragweed	native				
Baccharis glomeruliflora	silverling	native				
Baccharis halimifolia	groundsel tree	native				
Bidens alba var. radiata	beggerticks	native				
Bigelowia nudata subsp. australis	southern pineland rayless goldenrod	native			R	
Boltonia diffusa	smallhead doll'sdaisy	native			I	
Carphephorus carnosus	pineland chaffhead	native			I	
Carphephorus corymbosus	Florida paintbrush	native			R	
Carphephorus odoratissimus var. subtropicanus	vanillaleaf	native			I	
Chaptalia tomentosa	pineland daisy	native				
Cirsium horridulum	purple thistle	native				
Cirsium nuttallii	Nuttall's thistle	native			I	
Conyza canadensis var. pusilla	dwarf Canadian horseweed	native				
Coreopsis floridana	Florida tickseed	native			I	
Coreopsis leavenworthii	Leavenworth's tickseed	native				
Elephantopus elatus	tall elephantsfoot	native			R	
Emilia fosbergii	Florida tasselflower	exotic				
Emilia sonchifolia	lilac tasselflower	exotic				
Erechtites hieracifolia	American burnweed	native				
Erigeron quercifolius	oakleaf fleabane	native				
Erigeron vernus	early whitetop fleabane	native			R	
Eupatorium capillifolium	dog fennel	native				
Eupatorium leptophyllum	falsefennel	native			R	
Eupatorium mikanioides	semaphore thoroughwort	native			R	
Eupatorium mohrii	Mohr's thoroughwort	native			R	
Eupatorium rotundifolium	roundleaf thoroughwort	native			I	
Euthamia caroliniana	slender goldenrod	native				
**Euthamia graminifolia var. hirtipes*	flattop goldenrod	native			CI	
Flaveria linearis	narrowleaf yellowtops	native				
Gamochaeta falcata	narrowleaf purple everlasting	native			R	
Helenium pinnatifidum	southeastern sneezeweed	native			R	
Heterotheca subaxillaris	camphorweed	native				
Hieracium megacephalon	coastalplain hawkweed	native				
Iva microcephala	Piedmont marshelder	native				
Lactuca graminifolia	grassleaf lettuce	native			R	
Liatris tenuifolia	shortleaf gayfeather	native				

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Scientific Name	**Common Name**	**Native Status**	**FDACS**	**FNAI**	**IRC**	**EPPC**
Lygodesmia aphylla	Rose-rush	native			R	
Mikania cordifolia	Florida Keys hempvine	native			R	
Mikania scandens	climbing hempvine	native				
Pityopsis graminifolia	narrowleaf silkgrass	native				
Pluchea odorata	sweetscent	native				
Pluchea rosea	rosy camphorweed	native				
Pterocaulon pycnostachyum	blackroot	native				
Rudbeckia hirta	blackeyed susan	native			R	
Solidago fistulosa	Pinebarren goldenrod	native			R	
Solidago odora var. chapmanii	Chapman's goldenrod	native				
Solidago sempervirens	seaside goldenrod	native			R	
Solidago stricta	wand goldenrod	native				
Solidago tortifolia	twistedleaf goldenrod	native			I	
Sonchus asper	spiny sowthistle	exotic				
Symphyotrichum adnatum	scaleleaf aster	native				
Symphyotrichum carolinanum	climbing aster	native			R	
Symphyotrichum dumosum	rice button aster	native				
Symphyotrichum subulatum	annual saltmarsh aster	native				
Tridax procumbens	coatbuttons	exotic				
Verbesina virginica	frostweed, white crownbeard	native				
Vernonia blodgettii	Florida ironweed	exotic			R	
Vernonia cinerea	little ironweed	exotic				
Family: Boraginaceae (borage)						
Heliotropium polyphyllum	pineland heliotrope	native				
Family: Brassicaceae (mustard)						
Lepidium virginicum	Virginia pepperweed	native				
Family: Cactaceae (cactus)						
Opuntia ficus-indica	tuna cactus	exotic				
Family: Campanulaceae (bellflower)						
Lobelia feayana	Feayy's lobelia	native				
Lobelia glandulosa	glade lobelia	native				
Lobelia paludosa	white lobelia	native			I	
Family: Caryophyllaceae (pink)						
Drymaria cordata	drymary, West Indian chickweed	native				
Family: Casuarinaceae (sheoak)						
Casuarina equisetifolia	Australian-pine	exotic				I
Family: Celtidaceae (hackberry)						
Celtis laevigata	sugarberry, hackberry	native				
Family: Chrysobalanaceae (coco plum)						
Licania michauxii	gopher-apple	native				
Family: Cistaceae (rockrose)						
Lechea torreyi	Piedmont pinweed	native			R	
Family: Clusiaceae (mangosteen)						
Hypericum brachyphyllum	coastalplain St. John's-wort	native			R	
Hypericum cistifolium	roundpod St. John's-wort	native				
Hypericum fasciculatum	sandweed, peelbark St. John's-wort	native			R	
Hypericum hypericoides	St. Andrew's-cross	native				
Hypericum mutilum	dwarf St. John’s-wort	native			I	
Hypericum myrtifolium	myrtleleaf St. John's-wort	native			CI	

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Hypericum reductum	Atlantic St. John's-wort	native				
Hypericum tetrapetalum	fourpetal St. John's-wort	native				
Family: Convolvulaceae (morningglory)						
Evolvulus sericeus	silver dwarf morning-glory	native				
Ipomoea sagittata	saltmarsh morning-glory	native				
Family: Cucurbitaceae (gourd)						
Momordica charantia	balsampear	exotic				
Family: Droseraceae (sundew)						
Drosera brevifolia	dwarf sundew	native			I	
Drosera capillaris	pink sundew	native			R	
Family: Ebenaceae (ebony)						
Diospyros virginiana	common persimmon	native			R	
Family: Ericaceae (heath)						
Bejaria racemosa	tarflower	native			R	
Gaylussacia dumosa	dwarf huckleberry	native			R	
Lyonia fruticosa	coastalplain staggerbush	native				
Lyonia lucida	fetterbush	native				
Vaccinium myrsinites	shiny blueberry	native				
Family: Euphorbiaceae (spurge)						
Chamaesyce blodgettii	limestone sandmat	native				
Chamaesyce hirta	pillpod sandmat	native				
Chamaesyce hyssopifolia	hyssopleaf sandmat	native				
Euphorbia inundata	Florida pineland spurge	native			CI	
Euphorbia polyphylla	lesser Florida spurge	native				
Phyllanthus amarus	gale-of-wind, carry-me-seed	exotic				
Phyllanthus caroliniensis subsp. saxicola	rock Carolina leafflower	native			R	
Phyllanthus tenellus	Mascarene Island leafflower	exotic				
Stillingia aquatica	water toothleaf, corkwood	native			R	
Stillingia sylvatica	queensdelight	native			R	
Family: Fabaceae (pea)						
Abrus precatorius	rosary pea	exotic				I
Acacia auriculiformis	earleaf acacia	exotic				I
Aeschynomene americana	shyleaf	native				
Albizia lebbeck	woman's tongue	exotic				I
Chamaecrista fasciculata	partridge pea	native				
Chamaecrista nictitans var. aspera	Hairy partidge-pea	native				
Crotalaria pallida var. obovata	smooth rattlebox	exotic				
Crotalaria rotundifolia	rabbitbells	native				
Dalea carnea	whitetassels	native			R	
Desmodium incanum	zarzabacoa comun	native				
Desmodium triflorum	threeflower ticktrefoil	exotic				
Galactia elliottii	Elliott's milkpea	native			R	
Galactia regularis	eastern milkpea	native			R	
Galactia volubilis	downy milkpea	native				
Indigofera hirsuta	hairy indigo	exotic				
Indigofera spicata	trailing indigo	exotic				
Macroptilium lathyroides	wild bushbean	exotic				
Senna alata	candlestick plant	exotic				
Senna occidentalis	septicweed	exotic				

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Senna pendula var. glabrata	valamuerto	exotic				
Vicia acutifolia	fourleaf vetch	native				
Vigna luteola	hairypod cowpea	native				
Family: Fagaceae (beech)						
Quercus elliottii	running oak	native			R	
Quercus laurifolia	laurel oak, diamond oak	native				
Quercus minima	dwarf live oak	native			R	
Quercus myrtifolia	myrtle oak	native				
Quercus virginiana	Virginia live oak	native				
Family: Gentianaceae (gentian)						
Sabatia brevifolia	shortleaf rosegentian	native			I	
Sabatia calycina	coastal rosegentian	native				
Sabatia stellaris	rose-of-plymouth	native				
Family: Haloragaceae (watermilfoil)						
Proserpinaca palustris	marsh mermaidweed	native			R	
Proserpinaca pectinata	combleaf mermaidweed	native			R	
Family: Hydroleaceae (false fiddleleaf)						
Hydrolea corymbosa	skyflower	native			R	
Family: Lamiaceae (mint)						
Callicarpa americana	American beautyberry	native				
Hyptis alata	clustered bushmint, musky mint	native				
Physostegia purpurea	eastern false dragonhead	native			I	
Piloblephis rigida	wild pennyroyal	native				
Salvia azurea	azure blue sage	native			CI	
Family: Lauraceae (laurel)						
Cassytha filiformis	love vine	native				
Persea palustris	swamp bay	native				
Family: Lentibulariaceae (bladderwort)						
Pinguicula lutea	yellow butterwort	native	T		CI	
Pinguicula pumila	small butterwort	native			R	
Utricularia cornuta	horned bladderwort	native			R	
Utricularia foliosa	leafy bladderwort	native			R	
Utricularia gibba	humped bladderwort	native			I	
Utricularia purpurea	eastern purple bladderwort	native				
Utricularia simulans	fringed bladderwort	native			I	
Utricularia subulata	zigzag bladderwort	native			R	
Family: Linaceae (flax)						
Linum medium var. texanum	stiff yellow flax	native			R	
Family: Loganiaceae (logania)						
Mitreola petiolata	lax hornpod	native				
Mitreola sessilifolia	swamp hornpod	native			R	
Family: Lythraceae (loosestrife)						
Ammannia latifolia	Pink redstem, toothcups	native			R	
Cuphea carthagenensis	Columbian waxweed	exotic				
Lythrum alatum var. lanceolatum	winged loosestrife	native			R	
Rotala ramosior	lowland rotala, toothcup	native			I	
Family: Malvaceae (mallow)						
Melochia spicata	bretonica peluda	native			I	
Sida acuta	common wireweed	native				

Appendix B: Plant list for Prairie Pines Preserve

(scientific and common names were obtained from Wunderlin and Hansen 2003)

Scientific Name	**Common Name**	**Native Status**	**FDACS**	**FNAI**	**IRC**	**EPPC**
Sida rhombifolia	Cuban jute, Indian hemp	native				
Urena lobata	Caesarweed	exotic				II
Family: Melastomataceae (melastome)						
Rhexia cubensis	West Indian meadowbeauty	native			I	
Rhexia mariana	pale meadowbeauty	native			R	
Rhexia nuttallii	Nuttall's meadowbeauty	native			I	
Family: Menyanthaceae (bogbean)						
Nymphoides aquatica	big floatingheart	native				
Family: Myricaceae (bayberry)						
Myrica cerifera	southern bayberry, wax myrtle	native				
Family: Myrsinaceae (myrsine)						
Rapanea punctata	myrsine	native				
Family: Myrtaceae (myrtle)						
Melaleuca quinquenervia	punktree	exotic				I
Psidium cattleianum	strawberry guava	exotic				I
Rhodomyrtus tomentosa	rose myrtle	exotic				I
Syzygium cumini	Java plum	exotic				I
Family: Nymphaeaceae (waterlily)						
Nymphaea elegans	tropical royalblue waterlily	native			I	
Nymphaea mexicana	yellow waterlily	native			CI	
Family: Olacaceae (olax)						
Ximenia americana	tallow wood, hog plum	native				
Family: Onagraceae (eveningprimrose)						
Gaura angustifolia	southern beeblossum	native				
Ludwigia alata	winged primrosewillow	native			R	
Ludwigia curtissii	Curtiss's primrosewillow	native			R	
Ludwigia maritima	seaside primrosewillow	native			R	
Ludwigia microcarpa	smallfruit primrosewillow	native			R	
Ludwigia octovalvis	Mexican primrosewillow	native				
Ludwigia peruviana	Peruvian primrosewillow	exotic				
Ludwigia repens	creeping primrosewillow	native				
Family: Orobanchaceae (broomrape)						
Agalinis fasciculata	beach false foxglove	native			R	
Buchnera americana	American bluehearts	native				
Seymeria pectinata	Piedmont blacksenna	native			R	
Family: Oxalidaceae (woodsorrel)						
Oxalis corniculata	common yellow woodsorrel	native				
Family: Passifloraceae (passionflower)						
Passiflora incarnata	purple passionflower	native			I	
Passiflora suberosa	corkystem passionflower	native				
Family: Plantaginaceae (plantain)						
Plantago virginica	southern plantain, Virginia plantain	native				
Family: Polygalaceae (milkwort)						
Polygala balduinii	Baldwin's milkwort	native			R	
Polygala cymosa	tall pinebarren milkwort	native				
Polygala grandiflora	showy milkwort	native				
Polygala incarnata	procession flower	native			R	
Polygala lutea	orange milkwort	native			I	
Polygala nana	candyroot	native			R	

Appendix B: Plant list for Prairie Pines Preserve

(scientific and common names were obtained from Wunderlin and Hansen 2003)

Scientific Name	**Common Name**	**Native Status**	**FDACS**	**FNAI**	**IRC**	**EPPC**
Polygala ramosa	low pinebarren milkwort	native			I	
Polygala rugelii	yellow milkwort	native			I	
Polygala setacea	coastalplain milkwort	native			I	
Family: Polygonaceae (buckwheat)						
Polygonum densiflorum	denseflower knotweed	native				
Polygonum hydropiperoides	swamp smartweed	native			R	
Polygonum punctatum	dotted smartweed	native				
Family: Primulaceae (primrose)						
Anagallis minima	chaffweed	native			CI	
Samolus ebracteatus	water pimpernel	native				
Samolus valerandi subsp. parviflorus	pineland pimpernel	native			R	
Family: Ranunculaceae (buttercup)						
Clematis baldwinii	pine-hyacinth	native			R	
Family: Rosaceae (rose)						
Rubus trivialis	southern dewberry	native			R	
Family: Rubiaceae (madder)						
Cephalanthus occidentalis	common buttonbush	native				
Diodia virginiana	Virginia buttonweed	native			R	
Galium tinctorium	stiff marsh bedstraw	native			R	
Houstonia procumbens	innocence, roundleaf bluet	native			R	
Oldenlandia uniflora	clustered mille graine	native			I	
Richardia brasiliensis	tropical Mexican clover	exotic				
Spermacoce assurgens	woodland false buttonweed	native				
Spermacoce verticillata	shrubby false buttonweed	exotic				
Family: Salicaceae (willow)						
Salix caroliniana	Carolina willow, coastal plain willow	native				
Family: Sapindaceae (soapberry)						
Acer rubrum	red maple	native				
Cupaniopsis anacardioides	carrotwood	exotic				I
Family: Sapotaceae (sapodilla)						
Sideroxylon reclinatum subsp. reclinatum	recline Florida bully	native			R	
Family: Solanaceae (nightshade)						
Physalis walteri	Walter's groundcherry	native				
Solanum americanum	American black nightshade	native				
Solanum viarum	tropical sodaapple	exotic				I
Family: Tetrachondraceae (tetrachondra)						
Polypremum procumbens	rustweed, juniperleaf	native				
Family: Turneraceae (turnera)						
Piriqueta cistoides subsp. caroliniana	pitted stripeseed	native				
Family: Urticaceae (nettle)						
Parietaria floridana	Florida pellitory	native				
Family: Verbenaceae (vervain)						
Lantana camara	lantana, shrubverbena	exotic				I
Phyla nodiflora	turkey tangle fogfruit, capeweed	native				
Verbena scabra	harsh vervain, sandpaper vervain	native			R	
Family: Veronicaceae (speedwell)						
Bacopa caroliniana	lemon bacopa	native				
Bacopa monnieri	herb-of-grace	native				
Gratiola hispida	rough hedgehyssop	native			I	

Appendix B: Plant list for Prairie Pines Preserve

(scientific and common names were obtained from Wunderlin and Hansen 2003)

Scientific Name	**Common Name**	**Native Status**	**FDACS**	**FNAI**	**IRC**	**EPPC**
Gratiola ramosa	branched hedgehyssop	native			R	
Linaria canadensis	Canada toadflax	native			R	
Lindernia crustacea	Malaysian false-pimpernel	exotic				
Lindernia grandiflora	Savannah false-pimpernel	native			I	
Mecardonia acuminata subsp. peninsularis	axilflower	native				
Micranthemum glomeratum	manatee mudflower	native			I	
Scoparia dulcis	sweetbroom, licoriceweed	native				
Family: Violaceae (violet)						
**Viola palmata*	early blue violet	native			CI	
**Viola sororia*	common blue violet	native			I	
Family: Vitaceae (grape)						
Parthenocissus quinquefolia	Virginia creeper	native				
Vitis cinerea var. floridana	Florida grape	native				
Vitis rotundifolia	muscadine	native				

Key

Florida EPPC Status

I = species that are invading and disrupting native plant communities

II = species that have shown a potential to disrupt native plant communities

FDACS (Florida Department of Agriculture and Consumer Services)

E = Endangered

T = Threatened

CE = Commercially Exploited

IRC (Institute for Regional Conservation)

CI = Critically Imperiled

I = Imperiled

R = Rare

FNAI (Florida Natural Areas Inventory)

G= Global Status

T= Threatened

CE= Commercially Exploited

1= Critically imperiled because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerbility to extinction due to some natural or man-made factor.

2= Imperiled because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerbility to extinction due to some natural or man-made factor.

3= Either very rare and local throughout its range (21-200 occurences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.

4= Apparently secure

5= Demonstrably secure

Appendix C: Wildlife Species List

Appendix C: Wildlife Species List for Prairie Pines Preserve

		Designated Status		
Scientific Name	**Common Name**	**FWC**	**FWS**	**FNAI**
MAMMALS				
Family: Didelphidae (opossums)				
Didelphis virginiana	Virginia opossum			
Family: Dasypodidae (armadillos)				
Dasypus novemcinctus	nine-banded armadillo *			
Family: Sciuridae (squirrels and their allies)				
Sciurus carolinensis	eastern gray squirrel			
Sciurus niger shermani	Sherman's fox squirrel	SSC		G5T3/S2
Family: Muridae (mice and rats)				
Peromyscus gossypinus	cotton mouse			
Sigmodon hispidus	hispid cotton rat			
Family: Leporidae (rabbits and hares)				
Sylvilagus palustris	marsh rabbit			
Sylvilagus floridanus	eastern cottontail			
Family: Felidae (cats)				
Lynx rufus	bobcat			
Family: Canidae (wolves and foxes)				
Canis latrans	coyote			
Family: Ursidae (bears)				
Ursus americanus floridanus	Florida black bear	T		G5T2/S2
Family: Procyonidae (raccoons)				
Procyon lotor	raccoon			
Family: Mephitidae (skunks)				
Spilogale putorius	eastern spotted skunk			
Family: Mustelidae (weasels, otters and relatives)				
Lutra canadensis	northern river otter			
Family: Suidae (old world swine)				
Sus scrofa	feral hog *			
Family: Cervidae (deer)				
Odocoileus virginianus	white-tailed deer			
BIRDS				
Family: Anatidae (swans, geese and ducks)				
Subfamily: Dendrocygninae				
Dendrocygna autumnalis	black-bellied whistling duck			
Subfamily: Anatinae				
Aix sponsa	wood duck			
Anas stepera	gadwall			
Anas americana	American wigeon			
Anas platyrhynchos	mallard			
Anas fulvigula	mottled duck			
Anas discors	blue-winged teal			
Anas clypeata	northern shoveler			
Anas acuta	northern pintail			
Anas crecca carolinensis	green-winged teal			
Aythya collaris	ring-necked duck			
Lophodytes cucullatus	hooded merganser			
Mergus serrator	red-breasted merganser			
Family: Odontophoridae (new world quails)				
Colinus virginianus	northern bobwhite			
Family: Phasianidae (pheasant, grouse, turkeys and their allies)				
Subfamily: Meleagridinae (turkeys)				
Meleagris gallopavo	wild turkey			
Family: Podicipedidae (grebes)				
Podilymbus podiceps	pied-billed grebe			
Family: Ciconiidae (storks)				

Appendix C: Wildlife Species List for Prairie Pines Preserve

		Designated Status		
Scientific Name	**Common Name**	**FWC**	**FWS**	**FNAI**
Mycteria americana	wood stork	T	T	G4/S2
Family: Fregatidae (frigatebirds)				
Fregata magnificens	magnificent frigatebird			G5/S1
Family: Phalacrocoracidae (cormorants)				
Phalacrocorax auritus	double-crested cormorant			
Family: Anhingidae (anhingas)				
Anhinga anhinga	anhinga			
Family: Pelecanidae (pelicans)				
Pelecanus erythrorhynchos	American white pelican			
Family: Ardeidae (herons, egrets, bitterns)				
Botaurus lentiginosus	American bittern			
Ixobrychus exilis	least bittern			G5/S4
Ardea herodius	great blue heron			
Ardea alba	great egret			G5/S4
Egretta thula	snowy egret	SSC		G5/S3
Egretta caerulea	little blue heron	SSC		G5/S4
Egretta tricolor	tricolored heron	SSC		G5/S4
Bubulcus ibis	cattle egret			
Butorides virescens	green heron			
Nycticorax nycticorax	black-crowned night heron			G5/S3
Nyctanassa violacea	yellow-crowned night heron			G5/S3
Family: Threskiornithidae (ibises and spoonbills)				
Subfamily: Threshiornithinae				
Eudocimus albus	white ibis	SSC		G5/S4
Plegadis falcinellus	glossy ibis			G5/S3
Subfamily: Plataleinae				
Platalea ajaja	roseate spoonbill	SSC		G5/S2
Family: Cathartidae (new world vultures)				
Coragyps atratus	black vulture			
Cathartes aura	turkey vulture			
Family: Pandionidae (ospreys)				
Pandion haliaetus	osprey			G5/S3S4
Family: Accipitridae (hawks, kites, accipiters, harriers, eagles)				
Elanoides forficatus	swallow-tailed kite			G5/S2
Rostrhamus sociabilis plumbeus	everglades snail kite	E	E	G4G5T3Q/S2
Circus cyaneus	northern harrier			
Accipiter striatus	sharp-shinned hawk			
Accipiter cooperii	Cooper's hawk			G5/S3
Hailaeetus leucocephalus	bald eagle	T		G5/S3
Buteo lineatus	red-shouldered hawk			
Buteo swainsoni	Swainson's hawk			
Buteo jamaicensis	red-tailed hawk			
Family: Rallidae (coots and gallinules)				
Porphyrula martinica	purple gallinule			
Gallinula chloropus	common moorhen			
Fulica americana	American coot			
Family: Aramidae (limpkins)				
Aramus guarauna	limpkin	SSC		G5/S3
Family: Gruidae (cranes)				
Subfamily: Gruinae				
Grus canadensis pratensis	Florida sandhill crane	T		G5T2T3/S2S3
Family: Recurvirostridae (avocets and stilts)				
Himantopus mexicanus	black-necked stilt			
Family: Haematopodidae (oystercatchers)				
Haematopus palliatus	American oystercatcher	SSC		G5/S2

Appendix C: Wildlife Species List for Prairie Pines Preserve

		Designated Status		
Scientific Name	**Common Name**	**FWC**	**FWS**	**FNAI**
Family: Charadriidae (plovers)				
Subfamily: Charadriinae				
Charadrius semipalmatus	semipalmated plover			
Charadrius vociferus	killdeer			
Family: Scolopacidae (sandpipers and phalaropes)				
Subfamily: Scolopacinae				
Actitis macularia	spotted sandpiper			
Tringa solitaria	solitary sandpiper			
Tringa melanoleuca	greater yellowlegs			
Tringa flavipes	lesser yellowlegs			
Calidris alba	sanderling			
Calidris minutilla	least sandpiper			
Limnodromus scolopaceus	long-billed dowitcher			
Gallinago delicata	Wilson's snipe			
Family: Laridae (gulls)				
Subfamily: Larinae				
Larus atricilla	laughing gull			
Subfamily: Sterninae (terns)				
Sterna antillarum	least tern	T		G4/S3
Family: Columbidae (pigeons and doves)				
Columba livia	rock pigeon*			
Streptopelia decaocto	Eurasian collared-dove *			
Zenaida macroura	mourning dove			
Columbina passerina	common ground-dove			
Family: Cuculidae (cuckoos and their allies)				
Subfamily: Cuculinae				
Coccyzus americanus	yellow-billed cuckoo			
Family: Tytonidae (barn owls)				
Tyto alba	barn owl			
Family: Caprimulgidae (goatsuckers)				
Subfamily: Chordeilinae				
Chordeiles minor	common nighthawk			
Subfamily: Caprimulginae				
Caprimulgus carolinensis	chuck-will's-widow			
Family: Apodidae (swifts)				
Subfamily: Chaeturinae				
Chaetura pelagica	chimney swift			
Family: Alcedinidae (kingfishers)				
Ceryle alcyon	belted kingfisher			
Family: Picidae (woodpeckers)				
Subfamily: Picinae				
Melanerpes erythrocephalus	red-headed woodpecker			
Melanerpes carolinus	red-bellied woodpecker			
Sphyrapicus varius	yellow-bellied sapsucker			
Picoides pubescens	downy woodpecker			
Picoides villosus	hairy woodpecker			G5/S3
Picoides borealis	red-cockaded woodpecker	SSC	E	
Colaptes auratus	northern flicker			
Dryocopus pileatus	pileated woodpecker			
Family: Falconidae (falcons)				
Subfamily: Falconinae (falcons)				
Falco sparverius	American kestrel			
Falco peregrinus	peregrine falcon	E		G4/S2
Family: Tyrannidae (tyrant flycatchers)				
Subfamily: Fluvicolinae				

Appendix C: Wildlife Species List for Prairie Pines Preserve

		Designated Status		
Scientific Name	**Common Name**	**FWC**	**FWS**	**FNAI**
Contopus virens	eastern wood-pewee			
Sayornis phoebe	eastern phoebe			
Myiarchus crinicensis	great-crested flycatcher			
Tyrannus verticalis	western kingbird			
Family: Laniidae (shrikes)				
Lanius ludovicianus	loggerhead shrike			
Family: Vireonidae (vireos)				
Vireo griseus	white-eyed vireo			
Vireo flavifrons	yellow-throated vireo			
Vireo solitarius	blue-headed vireo			
Vireo olivaceus	red-eyed vireo			
Family: Corvidae (crows, jays, etc.)				
Cyanocitta cristata	blue jay			
Corvus brachyrhyncos	American crow			
Corvus ossifragus	fish crow			
Family: Hirundinidae (swallows)				
Subfamily: Hirundinidae				
Progne subis	purple martin			
Tachycineta bicolor	tree swallow			
Hirundo rustica	barn swallow			
Stelgidopteryx serripennis	northern rough-winged swallow			
Family: Paridae (chickadees and titmice)				
Baeolophus bicolor	tufted titmouse			
Family: Troglodytidae (wrens)				
Troglodytes aedon	house wren			
Cistothorus palustris	marsh wren			
Thryothorus ludovicianus	Carolina wren			
Family: Polioptilidae				
Polioptila caerulea	blue-gray gnatcatcher			
Family: Regulidae (kinglets)				
Regulus calendula	ruby-crowned kinglet			
Family: Turdidae (thrushes)				
Sialia sialis	eastern bluebird			
Catharus guttatus	hermit thrush			
Turdus migratorius	American robin			
Family: Mimidae (mockingbirds and thrashers)				
Dumetella carolinensis	gray catbird			
Toxostoma rufum	brown thrasher			
Mimus polyglottos	northern mockingbird			
Family: Sturnidae (starlings)				
Sturnus vulgaris	European starling *			
Acridotheres tristis	common myna *			
Family: Parulidae (wood-warblers)				
Seiurus noveboracensis	northern waterthrush			
Mniotilta varia	black-and-white warbler			
Protonotaria citrea	prothonotary warbler			
Vermivora celata	orange-crowned warbler			
Geothlypis tristis	common yellowthroat			
Setophaga ruticilla	American redstart			
Parula americana	northern parula			
Dendroica palmarum	palm warbler			
Dendroica pinus	pine warbler			
Dendroica coronata	yellow-rumped warbler			
Dendroica dominica	yellow-throated warbler			
Dendroica discolor	prairie warbler			

Appendix C: Wildlife Species List for Prairie Pines Preserve

		Designated Status		
Scientific Name	**Common Name**	**FWC**	**FWS**	**FNAI**
Dendroica virens	black-throated green warbler			
Oporornis agilis	Connecticut warbler			
Dendroica tigrina	Cape May warbler			
Family: Emberizine (sparrows and their allies)				
Pipilo erythrophthalmus	eastern towhee			
Spizella passerina	chipping sparrow			
Passerculus sandwichensis	Savannah sparrow			
Ammodramus savannarum	grasshopper sparrow			
Aimophila aestivalis	Bachman's sparrow			G3/S3
Melospiza georgiana	swamp sparrow			
Family: Cardinalidae (cardinals, some grosbeaks, new world buntings, etc.)				
Piranga rubra	summer tanager			
Cardinalis cardinalis	northern cardinal			
Pheucticus ludovicianus	rose-breasted grosbeak			
Passerina cyanea	indigo bunting			
Family: Icteridae (blackbirds, orioles, etc.)				
Dolichonyx oryzivorus	bobolink			
Agelaius phoeniceus	red-winged blackbird			
Sturnella magna	eastern meadowlark			
Quiscalus quiscula	common grackle			
Quiscalus major	boat-tailed grackle			
Molothrus ater	brown-headed cowbird			
Family: Fringillidae				
Subfamily: Carduelinae				
Carduelis tristis	American goldfinch			
Family: Passeridae (old world sparrows)				
Passer domesticus	house sparrow *			
REPTILES				
Family: Alligatoridae (alligator and caiman)				
Alligator mississippiensis	American alligator	SSC		G5/S4
Family: Kinosternidae (musk and mud turtles)				
Kinosternon baurii	striped mud turtle			
Family: Emydidae (box and water turtles)				
Terrapene carolina bauri	Florida box turtle			
Pseudemys floridana peninsularis	peninsula cooter			
Pseudemys nelsoni	Florida redbelly turtle			
Deirochelys reticularia	chicken turtle			
Family: Testudinidae (gopher tortoises)				
Gopherus polyphemus	gopher tortoise	T		G3/S3
Family: Trionychidae (softshell turtles)				
Apalone ferox	Florida softshell			
Family: Polychridae (anoles)				
Anolis carolinensis	green anole			
Anolis sagrei	brown anole *			
Family: Iguanidae (iguanas and spinytail iguanas)				
Iguana iguana	green iguana *			
Family: Teiidae (whiptails)				
Cnemidophorus sexlineatus sexlineatus	six-lined racerunner			
Family: Scincidae (skinks)				
Eumeces inexpectatus	southeastern five-lined skink			
Family: Anguidae (glass and alligator lizards)				
Ophisaurus ventralis	eastern glass lizard			
Family: Colubridae (harmless egg-laying snakes)				
Coluber constrictor priapus	southern black racer			
Masticophis flagellum flagellum	eastern coachwhip			

Appendix C: Wildlife Species List for Prairie Pines Preserve

		Designated Status		
Scientific Name	**Common Name**	**FWC**	**FWS**	**FNAI**
Pantherophis guttatus	eastern corn snake			
Scotophis alleghaniensis	eastern rat snake			
Family: Crotalidae (pitvipers)				
Sistrurus miliarius barbouri	dusky pygmy rattlesnake			
Crotalus adamanteus	eastern diamondback rattlesnake			G4/S3
Family: Dipsadidae (rear-fanged snakes)				
Diadophis punctatus punctatus	southern ringneck snake			
Family Natricidae (harmless live-bearing snakes)				
Nerodia fasciata pictiventris	Florida water snake			
Thamnophis sauritus sackenii	peninsula ribbon snake			
Thamnophis sirtalis sirtalis	eastern garter snake			
AMPHIBIANS				
Family: Bufonidae (toads)				
Anaxyrus quercicus	oak toad			
Anaxyrus terrestris	southern toad			
Family: Leptodactylidae (tropical frogs)				
Eleutherodactylus planirostris	greenhouse frog *			
Family: Hylidae (treefrogs and their allies)				
Acris gryllus dorsalis	Florida cricket frog			
Hyla cinerea	green treefrog			
Hyla gratiosa	barking treefrog			
Hyla femoralis	pine woods treefrog			
Hyla squirella	squirrel treefrog			
Osteopilus septentrionalis	Cuban treefrog *			
Pseudacris nigrita	southern chorus frog			
Pseudacris ocularis	little grass frog			
Family: Microhylidae (narrowmouth toads)				
Gastrophryne carolinensis	eastern narrowmouth toad			
Family: Ranidae (true frogs)				
Lithobates grylio	pig frog			
Lithobates sphenocephalus sphenocepha	Florida leopard frog			
FISHES				
Family: Lepisosteidae (gar fish)				
Lepisosteus platyrhincus	Florida gar			
Family: Callichthyidae (callichthyid armored catfishes)				
Hoplosternum littorale	brown hoplo *			
Family: Cyprinodontidae (pupfishes)				
Jordanella floridae	American flagfish			
Family: Poeciliidae (livebearers)				
Gambusia spp.	mosquitofish			
Family: Centrarchidae (sunfishes and basses)				
Lepomis macrochirus	bluegill			
Lepomis microlophus	redear sunfish			
Family: Cichlidae (cichlids)				
Oreochromis aureus	blue tilapia *			
SPONGES				
Family: Spongillidae (spongillid sponges)				
Ephydatia fluviatilis	fresh-water sponge			
MILLIPEDES				
Family: Spirobolidae (millipedes)				
Chicobolus spinigerus	Florida ivory millipede			
INSECTS				
Family: Psyllidae (psyllids)				
Boreioglycaspis melaleucae	melaleuca psyllid *			

Appendix C: Wildlife Species List for Prairie Pines Preserve

		Designated Status		
Scientific Name	**Common Name**	**FWC**	**FWS**	**FNAI**
Family: Curculionidae (true weevils)				
Oxyops vitiosa	melaleuca weevil *			
Family: Papilionidae (swallowtails)				
Papilio polyxenes	black swallowtail			
Papilio palamedes	palamedes swallowtail			
Family: Pieridae (whites and sulphurs)				
Subfamily: Coliadinae (sulphurs)				
Phoebis philea	orange-barred sulphur			
Eurema daira	barred yellow			
Family: Lycaenidae (gossamer-wings)				
Subfamily: Theclinae (hairstreaks)				
Calycopis cecrops	red-banded hairstreak			
Family: Nymphalidae (brushfoots)				
Subfamily: Heliconiinae (longwings)				
Agraulis vanillae	gulf fritillary			
Euptoieta claudia	variegated fritillary			
Subfamily: Nymphalinae (brushfoots)				
Phyciodes phaon	phaon crescent			
Phyciodes tharos	pearl crescent			
Junonia coenia	common buckeye			
Junonia genoveva	tropical buckeye			
Anartia jatrophae	white peacock			
Subfamily: Limenitidinae (admirals)				
Limenitis archippus	viceroy			
Subfamily: Danaidae (milkweed butterfiles)				
Danaus gilippus	queen			
Family: Hesperiidae (skippers)				
Subfamily: Hesperlinae (grass skippers)				
Hylephila phyleus	fiery skipper			
Wallengrenia otho	Southern broken-dash skipper			
Polites vibex	whirlabout skipper			
Subfamily: Pyrginae (open-winged skippers)				
Urbanus proteus proteus	long-tailed skipper			
Calpodes ethlius	Brazilian skipper			
ARACHNIDS				
Family: Araneidae (orb weavers)				
Argiope aurantia	black and yellow argiope			
Gasteracantha elipsoides	crablike spiny orb weaver			
Family: Oxyopidae (lynx spiders)				
Peucetia viridans	green lynx spider			
GASTROPODS				
Family: Ampullariidae (apple snails)				
Pomaceae paludosa	Florida apple snail			

KEY:

FWC = Florida Fish & Wildlife Conservation Commission
FWS = U.S. Fish & Wildlife Service
E - Endangered
T - Threatened
SSC - Species of Special Concern

FNAI = Florida Natural Areas Inventory
G - Global rarity of the species

Appendix C: Wildlife Species List for Prairie Pines Preserve

		Designated Status		
Scientific Name	**Common Name**	**FWC**	**FWS**	**FNAI**

S - State rarity of the species
T - Subspecies of special population
1 - Critically imperiled
2 - Imperiled
3 - Rare, restricted or otherwise vulnerable to extinction
4 - Apparently secure
5 - Demonstratebly secure

*** = Non-native**

Appendix D: LCEC Access Agreement

INSTR # 2012000093339, Doc Type EAS, Pages 12, Recorded 04/26/2012 at 02:09 PM, Charlie Green, Lee County Clerk of Circuit Court, Deed Doc. D $0.70 Rec. Fee $103.50 Deputy Clerk LAMBROSIO

RECORD AND RETURN TO:

DENIS H. NOAH, ESQ.
POST OFFICE BOX 280
FORT MYERS, FL 33902-0280

CORRECTIVE ACCESS EASEMENT
and
GRANTEE'S ACCEPTANCE AND CONSENT TO TERMS OF EASEMENT

THIS ACCESS EASEMENT and GRANTEE'S ACCEPTANCE AND CONSENT TO TERMS OF EASEMENT ("Easement") is made this 13 day of March, 2012, by and between **LEE COUNTY**, a political subdivision of the State of Florida ("*Grantor*"), whose mailing address is P.O. Box 398, Fort Myers, FL 33902-0398 and **LEE COUNTY ELECTRIC COOPERATIVE, INC.**, a Florida non-profit corporation ("*Grantee*"), whose mailing address is P.O. Box 3455, North Fort Myers, FL 33918.

WHEREAS, Grantor is the owner of that certain property located in Lee County, Florida, being more particularly described in Exhibit "A" attached hereto and incorporated herein by reference ("*County's Property*"); and

WHEREAS, there is an existing unimproved access road ("*Access Road*") located on the County's Property; and

WHEREAS, Grantee holds a utility easement over that certain real property located in Lee County, Florida, being more particularly described in Exhibit "B" attached hereto and incorporated herein by reference ("*Co-Op Utility Easement*"); and

WHEREAS, the Co-Op Utility Easement overlaps the westerly twenty (20) feet of the County's Property; and

WHEREAS, Grantee seeks to travel over the Access Road located on County's Property to access the Co-Op Utility Easement; and

WHEREAS, Grantor is willing to grant to Grantee an easement for ingress and egress over the Access Road located on the County's Property to reach the Co-Op Utility Easement in accordance with the terms and provisions hereinafter set forth.

NOW, THEREFORE, in consideration of the payment of Ten Dollars ($10.00) and other good and valuable consideration, the adequacy and sufficiency of said consideration having been acknowledged by both parties hereto, the parties do hereby grant, covenant and agree as follows:

1. Recitals true and correct: The foregoing recitals are true and correct and are incorporated herein by this reference.

2. Non-exclusive Access Easement: Grantor hereby grants and conveys to Grantee a non-exclusive Access Easement ("*Access Easement*") for ingress and egress over and across the Access Road located on the County's Property in accordance with the following:

   A. This Access Easement will be appurtenant to the Grantee's use of the Co-Op Utility Easement and will run with the Grantee's interest in that easement.

   B. This Access Easement may be used by the Grantee, its contractors and subcontractors, for ingress and egress with vehicles and equipment for the purpose of constructing and maintaining electric utility lines and facilities on or within the Co-Op Utility Easement by the Grantee.

   C. The Grantee acknowledges this Access Easement is a non-exclusive easement and the Grantor has the right to grant additional and further easements over the Access Easement provided; however, such additional easements do not materially interfere with the easement rights granted to Grantee hereunder.

3. Use of the Access Road: In utilizing the Access Road located on the County's Property, the Grantee agrees to the following:

   A. The Access Road located on the County's Property is approximately 20 feet in width.

   B. To the extent as may be reasonably possible, the Grantee agrees to stay within and upon the existing unimproved

Access Road and will not expand or increase the width of the Access Road beyond 20 feet in width.

C. The Grantee, at its own expense, may improve the surface of Access Road as may be reasonably necessary to facilitate the passage of its vehicles and equipment. The Grantee is also responsible for repairing any damage done by Grantee to the Access Road as a result of Grantee's use.

4. Lateral Paths to reach the Co-Op Utility Easement: Notwithstanding the requirement for the Grantee to stay within and upon the existing unimproved Access Road, the Grantee may construct certain accesses ("*Lateral Paths*") over the County's Property to facilitate the passage of vehicles and equipment to reach the Co-Op Utility Easement.

A. Lateral Paths may be constructed over the County's Property to deviate from the Access Road and proceed westerly, perpendicular from the Access Road to reach Co-Op Utility Easement where electrical utility poles and facilities are to be installed.

B. The Grantee may not construct or install more than Ten Lateral Paths.

C. The width of any Lateral Path may not exceed 20 feet, except that Grantee shall have the right to provide a reasonable radius for turns off of the Access Road.

D. If, at any Lateral Path, the Grantee is required to cross a ditch or other flow-way for the conveyance of surface water drainage, the Grantee must install and maintain such culverts or drainage pipes as may be necessary so that the flow or drainage of surface water will not be materially impeded.

E. The Grantee must obtain all permits necessary for the placement of fill or the installation of any culverts or drainage pipes. Grantor will cooperate with Grantee in connection with obtaining permits.

F. The Grantee will be responsible for all fees and costs to receive permits, as well as to construct and maintain all Lateral Paths and crossings.

G. The Grantee agrees that the Grantor may use any constructed Lateral Path provided that the Grantor causes no unnecessary damage and repairs any damage that does occur.

H. The Grantor has the right, but not the obligation to repair and maintain the Grantee's permitted improvements and storm water drainage, provided Grantor first notifies Grantee in writing of any deficiencies and gives Grantee a reasonable period of time to resolve the repair or maintenance issue. If Grantee fails to effectuate necessary repairs and maintenance within a reasonable time after written notice, Grantee agrees to reimburse the Grantor for any such costs incurred in connection with Grantor correcting maintenance or repair deficiencies.

5. Water Lines and Sewer Lines within the County's Property: The Grantee is advised and acknowledges that there are water lines owned and maintained by Lee County Utilities within the County's Property, including within or under the Access Road ("*Water Lines*"). Additionally, there are sewer lines owned and maintained by the Florida Governmental Utility Authority within that portion of the County's Property lying between the westerly extent of the Access Road and the westerly boundary of this Easement ("*Sewer Lines*").

A. Water Lines and Sewer Lines within the County's Property may be supplemented and/or relocated at any time, and the Grantee agrees to use all due care to prevent damage to all Water Lines and Sewer Lines when utilizing the Access Road and the Lateral Paths within the County's Property. If any utility lines are relocated or supplemented, Grantor shall require the utility companies to minimize interference with Grantee's use of the Access Easement and restore the surface of the Access Easement upon completion of any relocation or supplementation.

B. The Grantee is also advised and acknowledges that it is believed the Water Lines and/or Sewer Lines are covered with approximately twenty-four inches (24") of fill; however, the presence of any amount of fill or cover is not guaranteed. As such, it is recommended in installing any improvement or performing maintenance of the Access Road, or in the construction and subsequent maintenance of any Lateral Path, the Grantee should maintain not less than a total of thirty inches (30") of properly compacted, clean fill over any Water Line and/or Sewer Line to avoid damage to the lines.

C. In all events, Grantee will be responsible for any repairs to Water Lines and/or Sewer Lines as a result of damage caused by Grantee's use of the Access Road or any Lateral Path.

6. Grantor's Right to Fence the County Property: Grantor reserves the right to install fencing along the boundaries of the County's Property.

A. With respect to any fence on the westerly side of the County's Property (or the easterly boundary of the Co-Op Utility Easement):

1. Where a Lateral Path seeks to pass through a fenced location of the County's Property, the Grantee must install and maintain a gate(s) coinciding with the width of each Lateral Path.

2. Installed gates at Lateral Paths must remain closed and locked when not in immediate use.

3. The Grantee must provide the Grantor with keys for all locks on all gates, without limitation. If Grantor places any locks on any gates, Grantor shall provide Grantee with keys for all locks, without limitation.

B. With respect to any gate at the intersection of the Access Road and the north side of the right-of-way for Del Prado Boulevard Extension:

1. An installed gate at this location must remain closed and locked when not in immediate use.

2. The Grantor will provide the Grantee with a key for any lock on a gate at this location.

7. Controlled Burns of the Grantor's Property: The Grantor will notify Grantee, either by phone call or in writing, of the date and time of any controlled burns planned for the Grantor's Property and its parent parcel or tract. Grantee will reasonably cooperate with Grantor for such controlled burns.

8. Entire Agreement: This Easement sets forth the entire agreement between Grantor and Grantee and supersedes all prior and contemporaneous negotiations, understandings and agreements, written or oral, between the parties with regard to the rights granted to Grantee hereunder.

NOTE: This ACCESS EASEMENT and GRANTEE'S ACCEPTANCE AND CONSENT TO TERMS OF EASEMENT is being re-executed and re-recorded in order to include Exhibit "B" which was erroneously omitted from the Instrument

dated March 13, 2012, and recorded March 23, 2012, under Instrument Number 2012000064620, Public Records of Lee County, Florida.

[End of provisions.]

IN WITNESS WHEREOF the COUNTY has caused this Easement to be executed in its name by its Board of County Commissioners, acting by the Chair or Vice-Chair of said Board, the day and year first written above.

(OFFICIAL SEAL)
ATTEST:
CHARLIE GREEN, CLERK

By: Marcia Wilson
Deputy Clerk

LEE COUNTY, FLORIDA, BY ITS
BOARD OF COUNTY COMMISSIONERS

By: J Manning
Chair/Vice Chair

APPROVED AS TO LEGAL FORM:

Office of County Attorney
Jack N. Peterson
Assistant County Attorney

GRANTEE'S ACCEPTANCE
AND
CONSENT TO TERMS OF EASEMENT

The Grantee herein, for itself, its successors and assigns, acknowledges and accepts the conveyance and consents to all of the recited terms contained herein.

IN WITNESS WHEREOF, the Grantee herein has caused its corporate hand to be affixed intending to be bound as of date first written above.

Signed, Sealed and Delivered in the Presence of:

John A. Noland
Witness #1 Signature

John A. Noland
Witness #1 Typed/Printed Name

Nickie L Stewart
Witness #2 Signature

Nickie L. Stewart
Witness #2 Typed/Printed Name

LEE COUNTY ELECTRIC COOPERATIVE, INC

By: William D. Hamilton
Signature

Printed Name: William D. Hamilton

Title: Executive Vice President and CEO

STATE OF FLORIDA:
COUNTY OF LEE :

The foregoing was acknowledged before me this 13th day of April, 2012, by WILLIAM D. HAMILTON, the Executive Vice President and CEO of Lee County Electric Cooperative, Inc., a Florida non profit Corporation, on behalf of the Corporation. He is personally known to me or he has produced _____ as identification.

Nickie L Stewart
[Signature of Notary]
Nickie L. Stewart
[Typed or printed name]

Stamp or seal

METRON
SURVEYING & MAPPING, LLC

LAND SURVEYORS • PLANNERS

LEGAL DESCRIPTION
OF A PARCEL LYING IN
SECTION 14, TOWNSHIP 43 SOUTH, RANGE 24 EAST,
LEE COUNTY, FLORIDA

(100 FOOT INGRESS/EGRESS EASEMENT)

AN EASEMENT LYING IN THE STATE OF FLORIDA, COUNTY OF LEE, IN SECTION 14, TOWNSHIP 43 SOUTH, RANGE 24 EAST BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 14; THENCE S.88°53'43"E. ALONG THE NORTH LINE OF SECTION 14 FOR A DISTANCE OF 1,805.12 FEET AN INTERSECTION WITH THE WESTERLY LINE OF THE FORMER SEABOARD COASTLINE RAILROAD RIGHT–OF-WAY AND THE **POINT OF BEGINNING**; THENCE CONTINUE S.88°53'43"E. ALONG SAID NORTH LINE FOR A DISTANCE OF 102.34 FEET TO AN INTERSECTION WITH THE EASTERLY RIGHT-OF-WAY OF SAID FORMER SEABOARD COASTLINE RAILROAD RIGHT-OF-WAY; THENCE S.11°10'55"E LEAVING SAID NORTH LINE AND ALONG SAID EASTERLY LINE OF SAID FORMER SEABOARD COASTLINE RAILROAD RIGHT-OF-WAY FOR A DISTANCE OF 5,189.74 FEET TO AN INTERSECTION WITH THE NORTHERLY RIGHT-OF-WAY LINE OF DEL PRADO BOULEVARD; THENCE S.89°55'39"W. ALONG SAID NORTHERLY RIGHT-OF-WAY LINE FOR A DISTANCE OF 79.58 FEET TO THE BEGINNING OF A CURVE TO THE LEFT HAVING A RADIUS OF 2,531.06 FEET; THENCE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 00°30'18", A CHORD BEARING OF S.89°40'31"W., A CHORD DISTANCE OF 22.31 FEET, AN ARC LENGTH OF 22.31 FEET TO AN INTERSECTION WITH THE SAID WESTERLY LINE OF THE FORMER SEABOARD COASTLINE RAILROAD RIGHT–OF-WAY; THENCE N.11°10'55"W. ALONG SAID WESTERLY LINE FOR A DISTANCE OF 5,191.98 FEET TO AN INTERSECTION WITH THE NORTH LINE OF SAID SECTION 14 AND THE **POINT OF BEGINNING**.

EASEMENT CONTAINS 11.9 ACRES, MORE OR LESS.

BEARINGS ARE BASED ON THE NORTH LINE OF SECTION 14, TOWNSHIP 43 SOUTH, RANGE 24 EAST AS BEARING S.88°53'43"E.

METRON SURVEYING & MAPPING, LLC
FLORIDA CERTIFICATE OF AUTHORIZATION LB# 7071

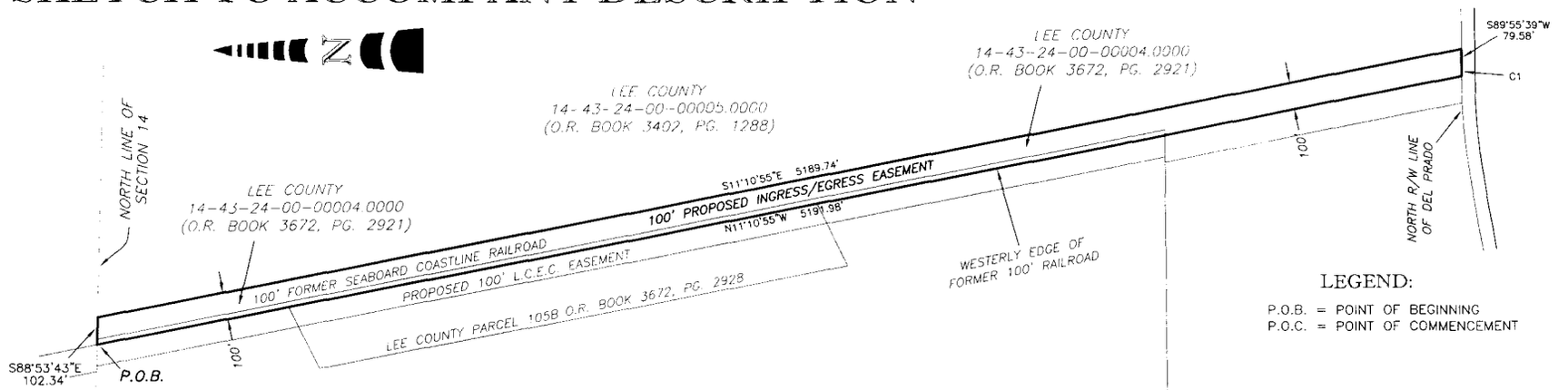
TIMOTHY LEE MANN
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATE NO. 5838

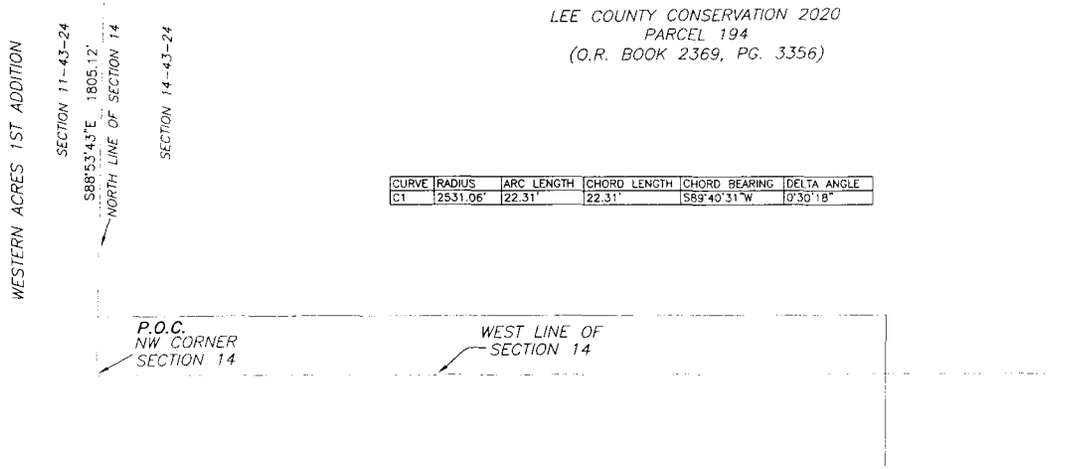
11828SK-INGRESS.dwg

10970 S. CLEVELAND AVE., SUITE #605 • FORT MYERS, FLORIDA 33907 • PHONE (239) 275-8575 • FAX (239) 275-8457
www.metronfl.com

EXHIBIT "A" TO
ACCESS EASEMENT

SKETCH TO ACCOMPANY DESCRIPTION





CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	2531.06'	22.31'	22.31'	S89°40'31"W	0°30'18"

LEGEND:

P.O.B. = POINT OF BEGINNING
P.O.C. = POINT OF COMMENCEMENT

* THIS IS NOT A SURVEY *

BY: _____
TIMOTHY LEE MANN
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATE NO. LS# 5838

DATE SIGNED: _____

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

* SEE SHEET 1 OF 2 FOR LEGAL DESCRIPTION *

TITLE: SKETCH OF DESCRIPTION

METRON
SURVEYING & MAPPING
LAND SURVEYORS·PLANNERS
LB# 7071

10970 SOUTH CLEVELAND
AVENUE, UNIT #605
FORT MYERS, FLORIDA 33907
PHONE: (239) 275-8575
FAX: (239) 275-8457

www.metronfl.com

FILE NAME:	PROJECT NO.:	SHEET:
11828SK-INGRESS.dwg	11828	2 OF 2

SKETCH DATE:	DRAWN BY:	SCALE:	CHECKED BY:	(S-T-R)
3-7-11	RY	1"= 500'	TLM	14-43-24

METRON
SURVEYING & MAPPING, LLC

LAND SURVEYORS • PLANNERS

LEGAL DESCRIPTION
OF A PARCEL LYING IN
SECTION 14, TOWNSHIP 43 SOUTH, RANGE 24 EAST,
LEE COUNTY, FLORIDA

(100 FOOT LEE COUNTY COOPERTIVE EASEMENT)

A PARCEL OF LAND LYING IN THE STATE OF FLORIDA, COUNTY OF LEE, IN SECTION 14, TOWNSHIP 43 SOUTH, RANGE 24 EAST BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 14; THENCE S.88°53'43"E. ALONG THE NORTH LINE OF SECTION 14 FOR A DISTANCE OF 1,723.24 FEET TO THE **POINT OF BEGINNING**; THENCE CONTINUE S.88°53'43"E. FOR A DISTANCE OF 102.34 FEET; THENCE S.11°10'55"E. LEAVING SAID NORTH LINE FOR A DISTANCE OF 4,055.97 FEET; THENCE S.89°28'33"W. FOR A DISTANCE OF 101.76 FEET; THENCE N.11°10'55"W. FOR A DISTANCE OF 4,058.93 FEET TO AN INTERSECTION WITH THE NORTH LINE OF SAID SECTION 14 AND THE **POINT OF BEGINNING**.

PARCEL CONTAINS 9.3 ACRES, MORE OR LESS.

BEARINGS ARE BASED ON THE NORTH LINE OF SECTION 14, TOWNSHIP 43 SOUTH, RANGE 24 EAST AS BEARING S.88°53'43"E.

METRON SURVEYING & MAPPING, LLC
FLORIDA CERTIFICATE OF AUTHORIZATION LB# 7071

TIMOTHY LEE MANN
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATE NO. 5838

SHEET 1 OF 2

11828SK.dwg

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EXHIBIT "B" TO
ACCESS EASEMENT

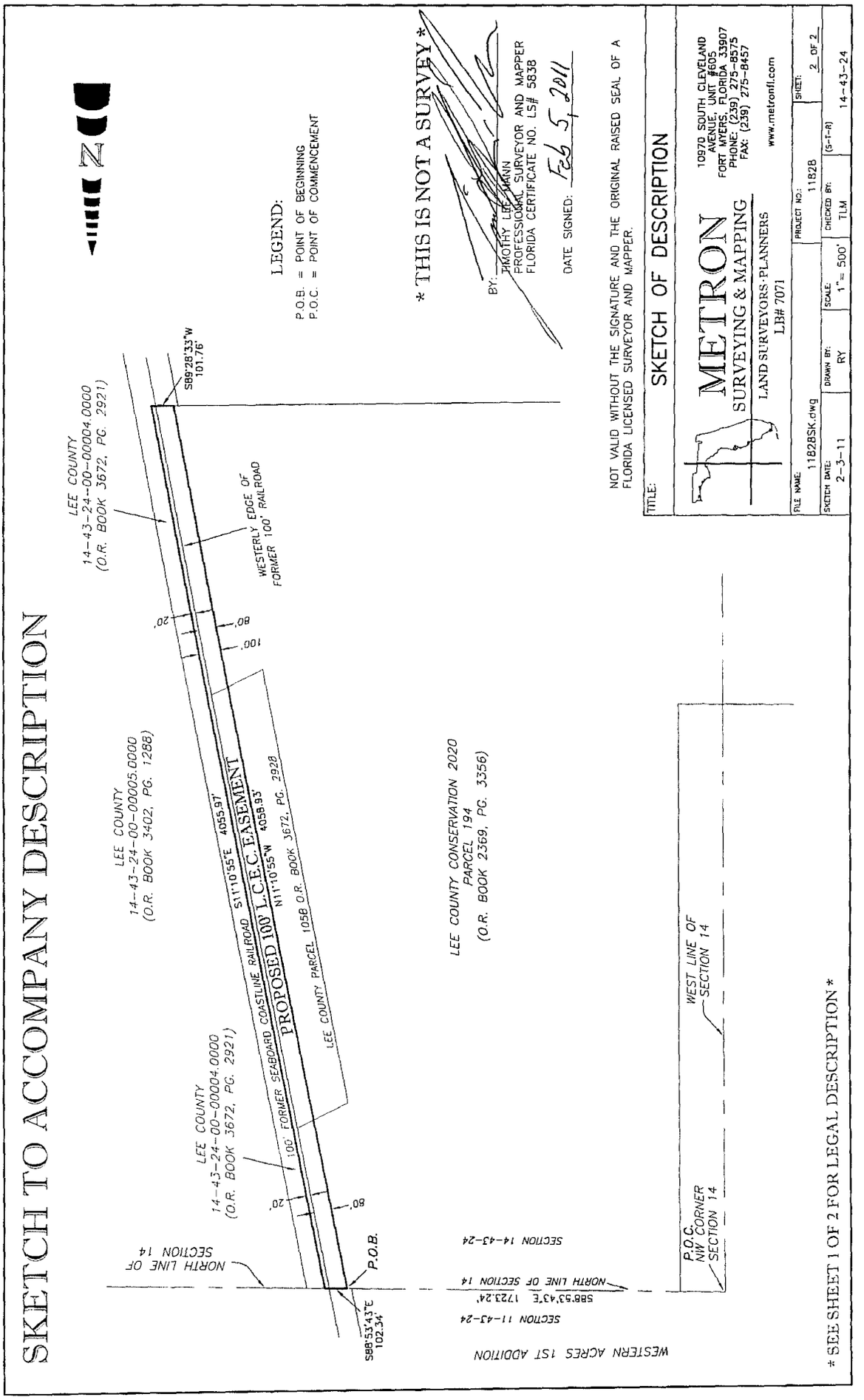


EXHIBIT "B" TO
ACCESS EASEMENT

Appendix E: LCEC Utility Easement

INSTR # 2012000093338, Doc Type EAS, Pages 6, Recorded 04/26/2012 at 02:09 PM, Charlie Green, Lee County Clerk of Circuit Court, Deed Doc. D $0.70 Rec. Fee $52.50 Deputy Clerk LAMBROSIO

RECORD AND RETURN TO:

DENIS H. NOAH, ESQ.
POST OFFICE BOX 280
FORT MYERS, FL 33902-0280

CORRECTIVE UTILITY EASEMENT
and
GRANTEE'S ACCEPTANCE AND CONSENT TO TERMS OF EASEMENT

THIS UTILITY EASEMENT and GRANTEE'S ACCEPTANCE AND CONSENT TO TERMS OF EASEMENT is given this 13 day of March, 2012, by and between **LEE COUNTY**, a political subdivision of the State of Florida ("*Grantor*"), whose mailing address is P.O. Box 398, Fort Myers, FL 33902-0398 and **LEE COUNTY ELECTRIC COOPERATIVE, INC.**, a Florida non profit corporation ("*Grantee*"), whose mailing address is P.O. Box 3455, North Fort Myers, FL 33918.

IN CONSIDERATION of the Grantee's payment of Ten Dollars ($10.00) and other good and valuable consideration, the adequacy and sufficiency of said consideration having been acknowledged by both parties hereto, the Grantor does hereby grant to the Grantee the following:

A One Hundred foot (100') wide non-exclusive and perpetual easement over, under, in, on, upon and across lands of the Grantor situate in the County of Lee and State of Florida, being more particularly described in attached Exhibit "A," which legal description is incorporated herein by reference ("*Easement*"), which Easement is to be used for the construction, operation and maintenance of one or more overhead and/or underground electric distribution and/or transmission lines, including, but not limited to, wires, poles, cables, conduits, anchors, guys, and roads, trails, and equipment associated therewith, attachments and appurtenant equipment for fiber optic telecommunications and television purposes ("*Facilities*").

Together with the right and privilege from time to time to reconstruct, inspect, alter, improve, enlarge, add to, change the voltage, as well as the nature or physical characteristics of, replace, remove, or relocate such Facilities, or any part of them upon, across, over, or under the Easement described herein, with all rights and privileges necessary or convenient for the full enjoyment or the use thereof for the purposes described herein, including, but not limited to, the right to trim, spray, cut and keep clear all trees and undergrowth and other obstructions within said Easement that may interfere with the proper construction, operation and maintenance of such Facilities or

any part of them, including the right to mark the location of any underground facilities by above-ground markers and other suitable markers, and the right of ingress and egress for personnel and equipment of the Grantee, its contractors, agents, invitees, successors or assigns for the purpose of exercising and enjoying the rights granted by this Easement and any or all of the rights granted hereunder.

Notwithstanding the foregoing, this Easement is subject to the following:

1. The Grantee may not construct berms or change the existing land elevation or grade within the Easement unless such construction is first approved in writing by the Grantor in the Grantor's sole discretion. The foregoing prohibition notwithstanding, Grantee shall be entitled to construct unpaved roads within the easement, including Lateral Paths as defined in the Access Easement from Grantor recorded simultaneously herewith.

2. The Grantee may not construct any ground-originating vertical, surficial or subsurface improvements within the easterly Twenty feet (20') of the Easement; however, the Grantee may stabilize the surface and construct unpaved roadways to facilitate the ingress and egress of Grantee's personnel and equipment as provided in Paragraph 1 above. This limitation is necessitated because of the possible existence of subsurface water, sewer and other utility lines within the easterly Twenty feet of the Easement herein.

3. This conveyance is made subject to the retained right of the Grantor, for itself, its successors and assigns, to use and occupy the surface of the Easement area for any purpose consistent with the right and privileges granted herein, and which will not endanger or interfere with the Grantee's construction, maintenance, and operation or reconstruction of the Grantee's Facilities. The Grantor's reserved rights include the right to permit and allow passive recreational activities on the surface of the Easement area that do not interfere with the Grantee's Facilities or permitted uses.

4. The Grantee agrees to cooperate and coordinate with the Grantor in periodic controlled burns of the Easement area, and abutting property of the Grantor, for land management purposes.

5. The Grantee agrees it will not fence or otherwise obstruct or prevent passage of the Grantor, its agents, employees, assigns, invitees or successors across or over the Easement, except as provided in the Access Easement recorded simultaneously herewith.

6. The Grantee must obtain all permits necessary for their use of the Easement and will also be responsible for all fees and costs to receive permits, as well as to construct and maintain any improvements thereon. Grantor agrees to cooperate with Grantee in connection with obtaining necessary permits.

NOTE: This UTILITY EASEMENT and GRANTEE'S ACCEPTANCE AND CONSENT TO TERMS OF EASEMENT is being re-executed and re-recorded in order to correct Exhibit "A" which was erroneously described in the Instrument dated March 13, 2012, and recorded March 23, 2012, under Instrument Number 2012000064621, Public Records of Lee County, Florida.

[End of provisions.]

IN WITNESS WHEREOF the COUNTY has caused this Easement to be executed in its name by its Board of County Commissioners, acting by the Chair or Vice-Chair of said Board, the day and year first written above.

ATTEST:
CHARLIE GREEN, CLERK

By: Marcia Wilson
Deputy Clerk

SEAL

LEE COUNTY, FLORIDA, BY ITS
BOARD OF COUNTY COMMISSIONERS

By: _____
Chair/Vice Chair

APPROVED AS TO LEGAL FORM:

_____
Office of County Attorney
Jack N. Peterson
Assistant County Attorney

GRANTEE'S ACCEPTANCE
AND
CONSENT TO TERMS OF EASEMENT

The Grantee herein, for itself, its successors and assigns, acknowledges and accepts the conveyance and consents to all of the recited terms contained herein.

IN WITNESS WHEREOF, the Grantee herein has caused its corporate hand to be affixed intending to be bound as of date first written above.

Signed, Sealed and Delivered in the Presence of:

Witness #1 Signature

John A. Noland
Witness #1 Typed/Printed Name

Witness #2 Signature

Nickie L. Stewart
Witness #2 Typed/Printed Name

LEE COUNTY ELECTRIC COOPERATIVE, INC

By: _____
Signature

Printed Name: William D. Hamilton

Title: Executive Vice President and CEO

STATE OF FLORIDA:
COUNTY OF LEE :

The foregoing was acknowledged before me this 13th day of April, 2012, by WILLIAM D. HAMILTON, the Executive Vice President and CEO of Lee County Electric Cooperative, Inc., a Florida non profit Corporation, on behalf of the Corporation. He is personally known to me or he has produced _____ as identification.

Stamp or seal:
NICKIE L. STEWART
Commission DD 825430
Expires November 6, 2012
Bonded Thru Troy Fain Insurance 800-385-7019

[Signature of Notary]
Nickie L. Stewart
[Typed or printed name]

::ODMA\PCDOCS\DOCS\1920748\4 le 1/23/12

METRON
SURVEYING & MAPPING, LLC

LAND SURVEYORS • PLANNERS

LEGAL DESCRIPTION
OF A PARCEL LYING IN
SECTION 14, TOWNSHIP 43 SOUTH, RANGE 24 EAST,
LEE COUNTY, FLORIDA

(100 FOOT LEE COUNTY COOPERTIVE EASEMENT)

A PARCEL OF LAND LYING IN THE STATE OF FLORIDA, COUNTY OF LEE, IN SECTION 14, TOWNSHIP 43 SOUTH, RANGE 24 EAST BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 14; THENCE S.88°53'43"E. ALONG THE NORTH LINE OF SECTION 14 FOR A DISTANCE OF 1,723.24 FEET TO THE **POINT OF BEGINNING**; THENCE CONTINUE S.88°53'43"E. FOR A DISTANCE OF 102.34 FEET; THENCE S.11°10'55"E. LEAVING SAID NORTH LINE FOR A DISTANCE OF 4,055.97 FEET; THENCE S.89°28'33"W. FOR A DISTANCE OF 101.76 FEET; THENCE N.11°10'55"W. FOR A DISTANCE OF 4,058.93 FEET TO AN INTERSECTION WITH THE NORTH LINE OF SAID SECTION 14 AND THE **POINT OF BEGINNING**.

PARCEL CONTAINS 9.3 ACRES, MORE OR LESS.

BEARINGS ARE BASED ON THE NORTH LINE OF SECTION 14, TOWNSHIP 43 SOUTH, RANGE 24 EAST AS BEARING S.88°53'43"E.

METRON SURVEYING & MAPPING, LLC
FLORIDA CERTIFICATE OF AUTHORIZATION LB# 7071

TIMOTHY LEE MANN
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATE NO. 5838

11828SK.dwg

10970 S. CLEVELAND AVE., SUITE #605 • FORT MYERS, FLORIDA 33907 • PHONE (239) 275-8575 • FAX (239) 275-8457
www.metronfl.com

EXHIBIT "A" TO
UTILITY EASEMENT

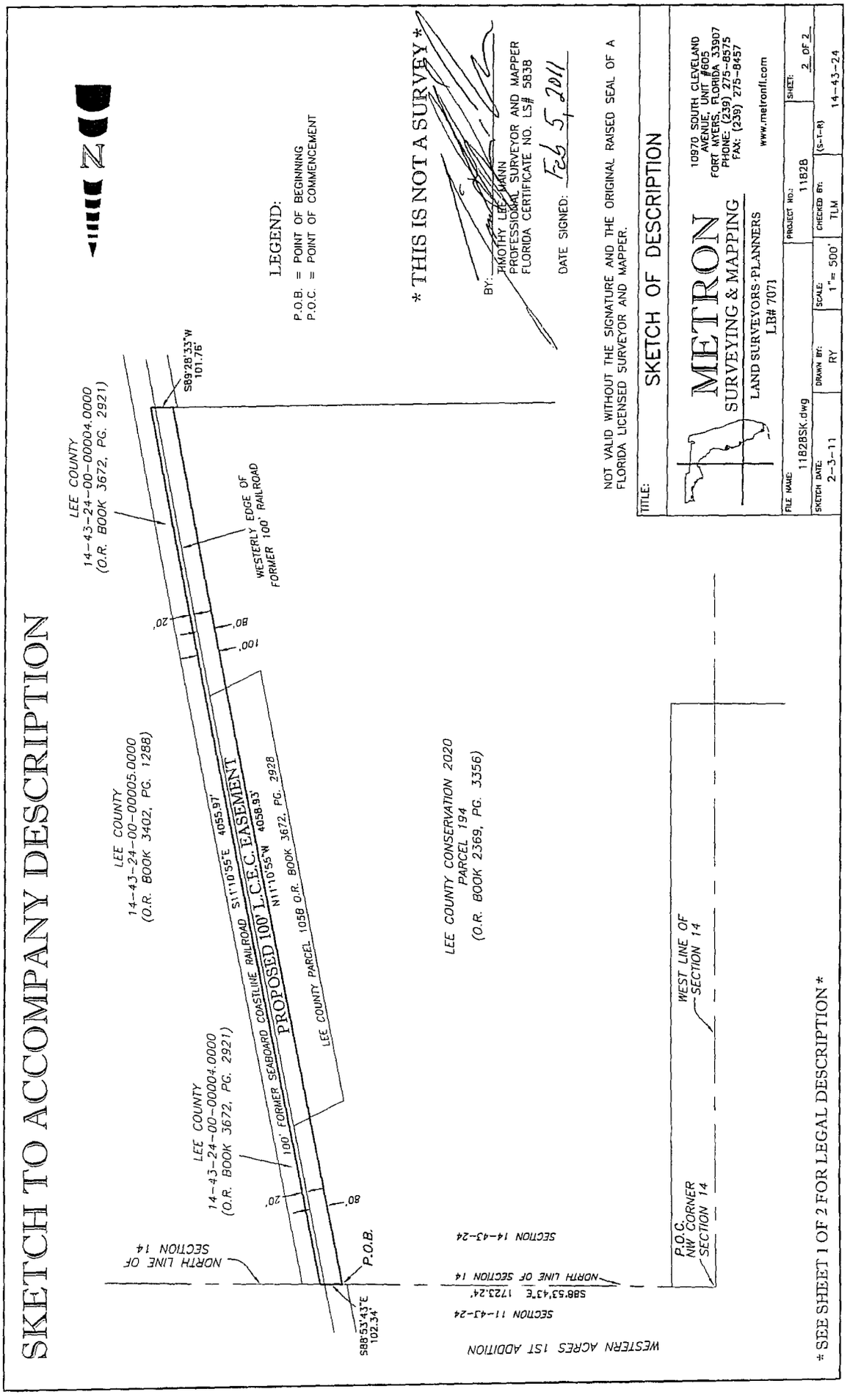


EXHIBIT "A" TO
UTILITY EASEMENT

Appendix F: Natural Resources Conservation Easement

INSTR # 2008000094580, Doc Type EAS, Pages 10, Recorded 04/09/2008 at 03:06 PM, Charlie Green, Lee County Clerk of Circuit Court, Deed Doc. D $0.70 Rec. Fee $86.50 Deputy Clerk GGARCIA

Document prepared by:

Return recorded document to:
South Florida Water Management District
3301 Gun Club Road, MSC _____
West Palm Beach, FL 33406

DEED OF CONSERVATION EASEMENT

THIS DEED OF CONSERVATION EASEMENT is given this 20th day of February, 2007, by Lee County, ("Grantor") whose mailing address is P.O Box 398, Fort Myers, FL 33902, to the South Florida Water Management District ("Grantee"). As used herein, the term "Grantor" shall include any and all heirs, successors or assigns of the Grantor, and all subsequent owners of the "Property" (as hereinafter defined) and the term "Grantee" shall include any successor or assignee of Grantee.

WITNESSETH

WHEREAS, the Grantor is the owner of certain lands situated in Lee County, Florida, and more specifically described in Exhibit "A" attached hereto and incorporated herein ("Property"); and

WHEREAS, the Grantor desires to construct the North Fort Myers Surface Water Restoration ("Project") at a site in Lee County, which is subject to the regulatory jurisdiction of South Florida Water Management District ("District"); and

WHEREAS, District Permit No. 36-05574-P ("Permit") authorizes certain activities which affect surface waters in or of the State of Florida; and

WHEREAS, this Permit requires that the Grantor preserve, enhance, restore and/or mitigate wetlands and/or uplands under the District's jurisdiction; and

WHEREAS, the Grantor has developed and proposed as part of the Permit conditions a conservation tract and maintenance buffer involving preservation of certain wetland and/or upland systems on the Property; and

WHEREAS, the Grantor, in consideration of the consent granted by the Permit, is agreeable to granting and securing to the Grantee a perpetual Conservation Easement as defined in Section 704.06, Florida Statutes, over the area described on Exhibit "B" ("Conservation Easement").

NOW, THEREFORE, in consideration of the issuance of the Permit to construct and operate the permitted activity, and as an inducement to Grantee in issuing the Permit, together with other good and valuable consideration, the adequacy and receipt of which are hereby

acknowledged, Grantor hereby grants, creates, and establishes a perpetual Conservation Easement for and in favor of the Grantee upon the property described on Exhibit "B" which shall run with the land and be binding upon the Grantor, and shall remain in full force and effect forever.

The scope, nature, and character of this Conservation Easement shall be as follows:

1. Recitals. The recitals hereinabove set forth are true and correct and are hereby incorporated into and made a part of this Conservation Easement.

2. Purpose. It is the purpose of this Conservation Easement to retain land or water areas in their natural, vegetative, hydrologic, scenic, open, agricultural or wooded condition and to retain such areas as suitable habitat for fish, plants or wildlife. Those wetland and/or upland areas included in the Conservation Easement which are to be enhanced or created pursuant to the Permit shall be retained and maintained in the enhanced or created conditions required by the Permit.

To carry out this purpose, the following rights are conveyed to Grantee by this easement:

a. To enter upon the Property at reasonable times with any necessary equipment or vehicles to enforce the rights herein granted in a manner that will not unreasonably interfere with the use and quiet enjoyment of the Property by Grantor at the time of such entry; and

b. To enjoin any activity on or use of the Property that is inconsistent with this Conservation Easement and to enforce the restoration of such areas or features of the Conservation Easement that may be damaged by any inconsistent activity or use.

3. Prohibited Uses. Except for restoration, creation, enhancement, maintenance and monitoring activities, or surface water management improvements, or other activities described herein that are permitted or required by the Permit, the following activities are prohibited in or on the Conservation Easement:

a. Construction or placing of buildings, roads, signs, billboards or other advertising, utilities, or other structures on or above the ground;

b. Dumping or placing of soil or other substance or material as landfill, or dumping or placing of trash, waste, or unsightly or offensive materials;

c. Removal or destruction of trees, shrubs, or other vegetation, except for the removal of exotic or nuisance vegetation in accordance with a District approved maintenance plan;

d. Excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substance in such manner as to affect the surface;

e. Surface use except for purposes that permit the land or water area to remain in its natural or enhanced condition;

f. Activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation including, but not limited to, ditching, diking and fencing;

g. Acts or uses detrimental to such aforementioned retention of land or water areas;

h. Acts or uses which are detrimental to the preservation of the structural integrity or physical appearance of sites or properties having historical, archaeological, or cultural significance.

4. Passive Recreational Facilities. Grantor reserves all rights as owner of the Property, including the right to engage in uses of the Property that are not prohibited herein and that are not inconsistent with any District rule, criteria, the Permit and the intent and purposes of this Conservation Easement. Passive recreational uses that are not contrary to the purpose of this Conservation Easement may be permitted upon written approval by the District.

a. The Grantor may conduct limited land clearing for the purpose of constructing such pervious facilities as docks, boardwalks or mulched walking trails.

b. The construction and use of the approved passive recreational facilities shall be subject to the following conditions:

i. Grantor shall minimize and avoid, to the fullest extent possible, impact to any wetland or upland buffer areas within the Conservation Easement Area and shall avoid materially diverting the direction of the natural surface water flow in such area;

ii. Such facilities and improvements shall be constructed and maintained utilizing Best Management Practices;

iii. Adequate containers for litter disposal shall be situated adjacent to such facilities and improvements and periodic inspections shall be instituted by the maintenance entity, to clean any litter from the area surrounding the facilities and improvements;

iv. This Conservation Easement shall not constitute permit authorization for the construction and operation of the passive recreational facilities. Any such work shall be subject to all applicable federal, state, District or local permitting requirements.

5. No Dedication. No right of access by the general public to any portion of the Property is conveyed by this Conservation Easement.

6. Grantee's Liability. Grantee shall not be responsible for any costs or liabilities related to the operation, upkeep or maintenance of the Property.

7. Property Taxes. Grantor shall keep the payment of taxes and assessments on the Easement Parcel current and shall not allow any lien on the Easement Parcel superior to this Easement. In the event Grantor fails to extinguish or obtain a subordination of such lien, in addition to any other remedy, the Grantee may, but shall not be obligated to, elect to pay the lien on behalf of the Grantor and Grantor shall reimburse Grantee for the amount paid by Grantee, together with Grantee's reasonable attorney's fees and costs, with interest at the maximum rate allowed by law, no later than thirty days after such payment. In the event Grantor does not so reimburse the Grantee, the debt owed to Grantee shall constitute a lien against the Easement Parcel which shall automatically relate back to the recording date of this Easement. Grantee may foreclose this lien on the Easement Parcel in the manner provided for mortgages on real property.

8. Enforcement. Enforcement of the terms, provisions and restrictions of this Conservation Easement shall be at the reasonable discretion of Grantee, and any forbearance on behalf of Grantee to exercise its rights hereunder in the event of any breach hereof by Grantor, shall not be deemed or construed to be a waiver of Grantee's rights hereunder.

9. Assignment. Grantee will hold this Conservation Easement exclusively for conservation purposes. Grantee will not assign its rights and obligations under this Conservation Easement except to another organization or entity qualified to hold such interests under the applicable state laws.

10. Severability. If any provision of this Conservation Easement or the application thereof to any person or circumstances is found to be invalid, the remainder of the provisions of this Conservation Easement shall not be affected thereby, as long as the purpose of the Conservation Easement is preserved.

11. Terms, Conditions, Restrictions, Purpose. The terms, conditions, restrictions and purpose of this Conservation Easement shall be inserted by Grantor in any subsequent deed or other legal instrument by which Grantor divests itself of any interest in the Conservation Easement. Any future holder of the Grantor's interest in the Property shall be notified in writing by Grantor of this Conservation Easement.

12. Written Notice. All notices, consents, approvals or other communications hereunder shall be in writing and shall be deemed properly given if sent by United States certified mail, return receipt requested, addressed to the appropriate party or successor-in-interest.

13. Modifications. This Conservation Easement may be amended, altered, released or revoked only by written agreement between the parties hereto or their heirs, assigns or successors-in-interest, which shall be filed in the public records in Lee County.

TO HAVE AND TO HOLD unto Grantee forever. The covenants, terms, conditions, restrictions and purposes imposed with this Conservation Easement shall be binding up on Grantor, and shall continue as a servitude running in perpetuity with the Property.

Grantor hereby covenants with said Grantee that Grantor is lawfully seized of said Property in fee simple; that the Conservation Easement is free and clear of all encumbrances that are inconsistent with the terms of this Conservation Easement; and all mortgages and liens on the Conservation Easement area, if any, have been subordinated to this Conservation Easement; and that Grantor has good right and lawful authority to convey this Conservation Easement; and that it hereby fully warrants and defends the title to the Conservation Easement hereby conveyed against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF, Lee County (Grantor) has hereunto set its authorized hand this 20th day of February, 2007.

Lee County, Florida

By: _____

Print Name: Robert Janes

Title: Chairman, Lee County Board of County Commissioners

APPROVED AS TO FORM

OFFICE OF COUNTY ATTORNEY

Signed, sealed and delivered in our presence as witnesses:

By: Lisa L Pierce

Print Name: Lisa L Pierce

By: Kathleen A. Motz

Print Name: KATHLEEN A. MOTZ

STATE OF FLORIDA

) ss:

COUNTY OF LEE

On this 20th day of February 2007 before me, the undersigned notary public, personally appeared Robert Janes, the person who subscribed to the foregoing instrument, as the Chairman (title), of Board County Commissioners (corporation), a Florida corporation, and acknowledged that he/she executed the same on behalf of said corporation and that he/she was duly authorized to do so. He/She is personally know to me or has produced a _____ (state) driver's license as identification.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

NOTARY PUBLIC/STATE OF FLORIDA

Georgia Sekulski

Print Name:

GEORGIA SEKULSKI
MY COMMISSION # DD 458556
EXPIRES: September 9, 2009
Bonded Thru Notary Public Underwriters

My Commission Expires:

EXHIBIT "A"

Legal Description of
LITTLE RANCHES EAST PARCEL
(Description as Prepared by Surveyor)
(Lee County Parcel)

A TRACT OR PARCEL OF LAND LYING IN SECTION 35, TOWNSHIP 42 SOUTH, RANGE 24 EAST, CHARLOTTE COUNTY, FLORIDA AND SECTIONS 1, 2, 3, 11, 12, 13 AND 14, TOWNSHIP 43 SOUTH, RANGE 24 EAST, LEE COUNTY, FLORIDA BEING DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SECTION 12, TOWNSHIP 43 SOUTH, RANGE 24 EAST, THENCE RUN ALONG THE EAST LINE OF THE SOUTHEAST ONE-QUARTER (1/4) OF SAID SECTION, NORTH 00°09'53" EAST, A DISTANCE OF 1742.12 FEET TO A POINT WHICH LIES ON THE WESTERLY RIGHT OF WAY LINE OF THE SEABOARD COASTLINE (120' R/W), THENCE; NORTH 45°45'18" WEST, A DISTANCE OF 4003.52 FEET ALONG SAID RIGHT OF WAY TO A POINT ON THE SOUTH RIGHT OF WAY OF LINE OF NALLE GRADE ROAD RIGHT OF WAY (O.R. 1096, PAGE 1769); THENCE CONTINUE ALONG SAID RAILROAD RIGHT OF WAY NORTH 45°45'18" WEST, A DISTANCE OF 134.19 FEET TO A POINT ON THE NORTH RIGHT OF WAY LINE OF NALLE GRADE ROAD; THENCE CONTINUE ALONG SAID RAILROAD RIGHT OF WAY NORTH 45°45'18" WEST, A DISTANCE OF 10692.00 FEET TO A POINT MARKING THE INTERSECTION OF THE WEST RIGHT OF WAY OF SEABOARD COASTLINE RAILROAD LINE AND THE WEST LINE OF THE SOUTHWEST ONE-QUARTER (1/4) OF SECTION 35, TOWNSHIP 42 SOUTH, RANGE 24 EAST; THENCE ALONG SAID WEST LINE OF THE SOUTHWEST ¼, SOUTH 01°19'59" WEST, A DISTANCE OF 1392.01 FEET TO THE NORTHEAST CORNER OF SECTION 3, TOWNSHIP 43 SOUTH, RANGE 24 EAST; THENCE WITH THE NORTH LINE OF THE NORTHEAST ONE-QUARTER OF SAID SECTION 3, NORTH 89°58'36" WEST, A DISTANCE OF 253.03 FEET TO A POINT ON THE EAST RIGHT OF WAY LINE OF THE FORMER SEABOARD AIRLINE RIGHT OF WAY (100'); THENCE WITH THE EAST LINE OF SAID RIGHT OF WAY, SOUTH 11°11°01' EAST, A DISTANCE OF 6702.45 FEET TO A POINT ON THE NORTH RIGHT OF WAY OF NALLE GRADE ROAD (125' R/W); THENCE CONTINUE ALONG SAID SEABOARD AIRLINE RIGHT OF WAY, SOUTH 11°11'01" EAST, A DISTANCE OF 127.47 FEET TO A POINT ON THE SOUTH RIGHT OF WAY OF SAID NALLE GRADE ROAD; THENCE CONTINUE ALONG SAID SEABOARD AIRLINE RIGHT OF WAY, SOUTH 11°11'01" EAST, A DISTANCE OF 7829.85 FEET TO A POINT MARKING THE NORTHWEST CORNER OF THE NORTH FORT MYERS UTILITY COMPANY PARCEL AS RECORDED IN O.R. BOOK 1820, PAGES 3899-3900; THENCE WITH SAID PARCEL, NORTH 89°55'40" EAST, A DISTANCE OF 1241.53 FEET TO THE NORTHEAST CORNER OF SAID PARCEL; THENCE CONTINUE WITH PARCEL BOUNDARY, SOUTH 00°11'15" EAST, A DISTANCE OF 1400.10 FEET TO A POINT; THENCE NORTH 89°55'40" EAST 11.72 FEET TO THE NORTHWEST CORNER OF AN 18.147 ACRE PARCEL; THENCE WITH THE NORTH LINE OF SAID PARCEL, NORTH 89°55'40" EAST 1387.30 FEET TO A POINT; THENCE SOUTH 89°11'50" EAST, A DISTANCE OF 2709.48 FEET TO A POINT; THENCE S 89°11'50" EAST, A DISTANCE OF 229.05 FEET TO A POINT; THENCE AROUND A CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 02°27'42", HAVING A RADIUS OF 11397.00 FEET, AN ARC DISTANCE OF 489.68 FEET, A CHORD BEARING OF NORTH 89°34'19" EAST, A DISTANCE OF 489.64 FEET TO A POINT; THENCE NORTH 88°20'28" EAST, A DISTANCE OF 1974.97 FEET TO A POINT; THENCE NORTH 87°29'24" EAST, A DISTANCE OF 18.44 FEET TO A POINT ON THE EAST LINE OF THE SOUTHEAST ONE-QUARTER OF SECTION 13, TOWNSHIP 43 SOUTH, RANGE 24 EAST; THENCE WITH SAID FRACTION LINE, NORTH 00°03'28" WEST, A DISTANCE OF 5060.10 FEET TO THE BEGINNING.

LESS THE AREA FOR NALLE GRADE ROAD AS DESCRIBED IN O.R. BOOK 1096, PAGE 1769.

CONTAINING 2411.56 ACRES AS DESCRIBED.

AND ... LESS AND EXCEPT THE FOLLOWING:

A TRACT OR PARCEL OF LAND LYING IN SECTION 35, TOWNSHIP 42 SOUTH, RANGE 24 EAST, CHARLOTTE COUNTY, FLORIDA BEING DESCRIBED AS FOLLOWS:

EXHIBIT "A" Cont'd

BEGINNING AT THE SOUTHWEST CORNER OF SECTION 35, TOWNSHIP 42 SOUTH, RANGE 24 EAST, SAID POINT ALSO BEING ON THE SOUTH LINE OF CHARLOTTE COUNTY AND ON THE NORTH LINE OF LEE COUNTY, FLORIDA. THENCE ALONG THE WEST LINE OF SAID SECTION 35, NORTH 01°19'59" EAST, A DISTANCE OF 1392.01 FEET TO A POINT ON THE WEST RIGHT-OF-WAY OF SEABOARD COASTLINE RAILROAD; THENCE ALONG SAID RAILROAD RIGHT-OF-WAY, SOUTH 45°45'18" EAST, A DISTANCE OF 1993.53 FEET TO A POINT ON THE SOUTH LINE OF SAID SECTION 35 AND ON THE LEE/CHARLOTTE COUNTY LINE; THENCE ALONG THE SOUTH LINE OF SECTION 35, SAID LINE ALSO BEING THE LEE/CHARLOTTE COUNTY LINE, SOUTH 89°58'23" WEST, A DISTANCE OF 1460.47 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINING 23.329 ACRES MORE OR LESS.

Exhibit "B"

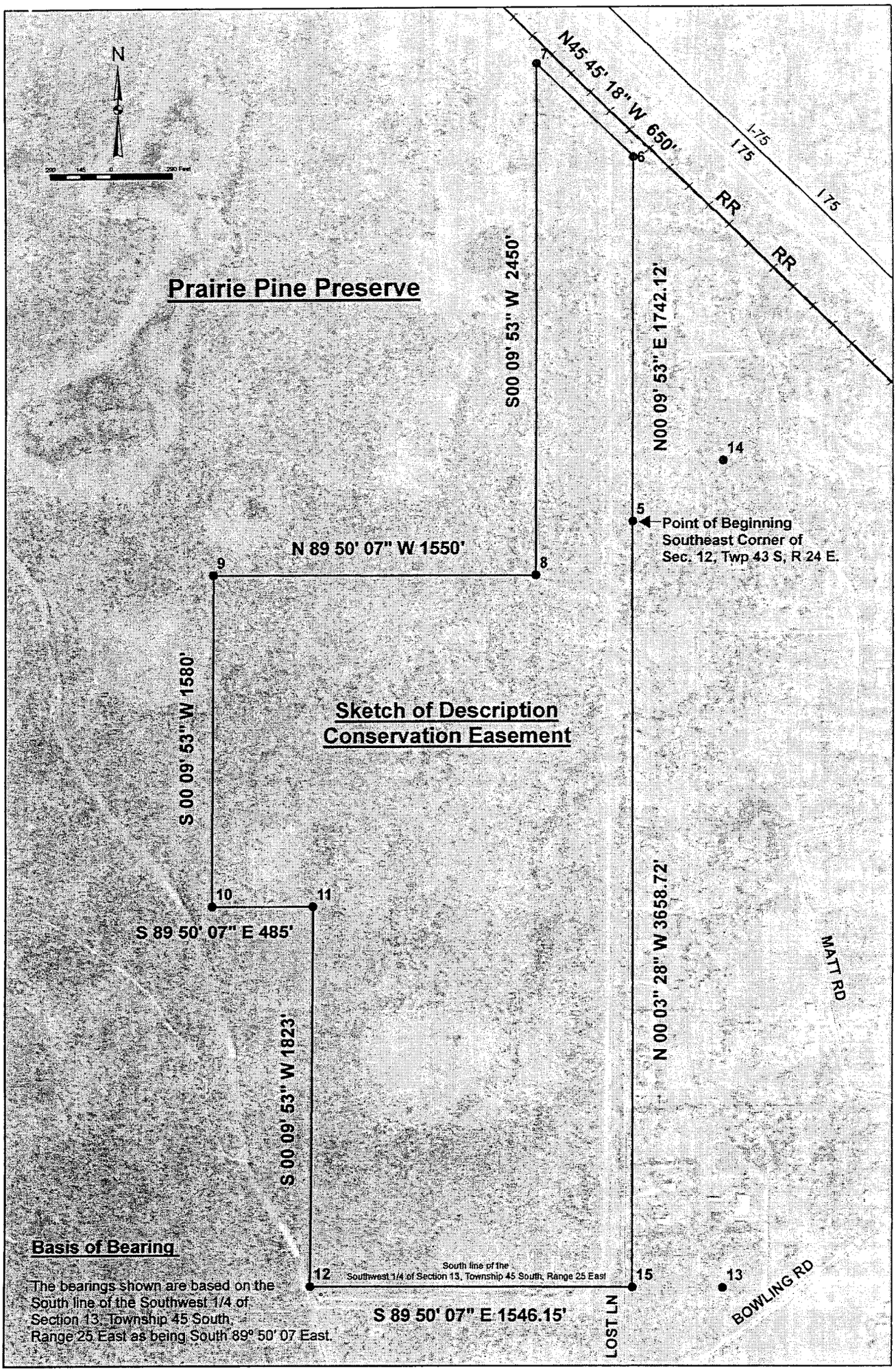
North Fort Myers Surface Water Restoration Project
SFWMD Application No. 011130-16
Prairie Pines Conservation Easement

Legal Description:

The point of beginning being at the southeast corner Section 12, Township 43 South, Range 24 East, thence run along the East Line of the Southeast one-quarter (1/4) at said section North 00°09'53" E a distance of 1742.12 feet to a point which lies on the westerly right-of-way line of the Seaboard Coastline (120' right-of-way) thence,

North 45° 45' 18" West a distance of 650 feet to a point, thence
South 00° 09' 53" West a distance of 2,450 feet to a point, thence
North 89° 50' 07" West a distance of 1,550 feet to a point, thence
South 00° 09' 53" West a distance of 1,580 feet to a point, thence
South 89° 50' 07" East a distance of 485 feet to a point, thence
South 00° 09' 53" West a distance of 1,823 feet to a point, thence
South 89° 50' 07" East a distance of 1,546.15 feet more or less to a point on the easterly line of Section 13, Township 43 South, Range 24 East, thence North 00° 03' 28" West a distance of 3,658.72 feet to the point of beginning, and containing 161.7 acres, more or less.

The bearings shown are based on the South line of the Southwest 1/4 of Section 13, Township 45 South, Range 25 East as being South 89° 50' 07 East.


N
290 145 0 290 Feet
Prairie Pine Preserve
N45 45' 18" W 650'
I-75
I 75
I 75
RR
RR
S00 09' 53" W 2450'
N00 09' 53" E 1742.12'
7
6
14
5
Point of Beginning
Southeast Corner of
Sec. 12, Twp 43 S, R 24 E.
N 89 50' 07" W 1550'
9
8
S 00 09' 53" W 1580'
Sketch of Description
Conservation Easement
10
11
S 89 50' 07" E 485'
S 00 09' 53" W 1823'
N 00 03' 28" W 3658.72'
MATT RD
Basis of Bearing
The bearings shown are based on the South line of the Southwest 1/4 of Section 13, Township 45 South, Range 25 East as being South 89° 50' 07 East.
12
South line of the
Southwest 1/4 of Section 13, Township 45 South, Range 25 East
15
13
S 89 50' 07" E 1546.15'
LOST LN
BOWLING RD

Appendix G: Wetland 14 Conservation Easement

INSTR # 2008000217224, Doc Type EAS, Pages 11, Recorded 08/13/2008 at 02:25 PM, Charlie Green, Lee County Clerk of Circuit Court, Rec. Fee $95.00 Deputy Clerk DMAYS

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

DEED OF CONSERVATION EASEMENT

Return recorded document to:
South Florida Water Management District
3301 Gun Club Road, MSC 4210
West Palm Beach, FL 33406

THIS DEED OF CONSERVATION EASEMENT is given this 22nd day of April, 2008, by Lee County ("Grantor") whose mailing address is 3410 Palm Beach Boulevard, Fort Myers, Florida 33916 to the South Florida Water Management District ("Grantee"). As used herein, the term "Grantor" shall include any and all heirs, successors or assigns of the Grantor, and all subsequent owners of the "Property" (as hereinafter defined) and the term "Grantee" shall include any successor or assignee of Grantee.

WITNESSETH

WHEREAS, the Grantor is the owner of certain lands situated in Lee County, Florida, and more specifically described in Exhibit "A" attached hereto and incorporated herein ("Property"); and

WHEREAS, the Grantor desires to construct Prairie Pines Preserve ("Project") at a site in Lee County, which is subject to the regulatory jurisdiction of South Florida Water Management District ("District"); and

WHEREAS, District Permit No. _____ ("Permit") authorizes certain activities which affect waters in or of the State of Florida; and

WO#1
4-22-08

sfwmd.gov

WHEREAS, this Permit requires that the Grantor preserve, enhance, restore and/or mitigate wetlands and/or uplands under the District's jurisdiction; and

WHEREAS, the Grantor, in consideration of the consent granted by the Permit, is agreeable to granting and securing to the Grantee a perpetual Conservation Easement as defined in Section 704.06, Florida Statutes, over the area described on Exhibit "B" ("Conservation Easement").

NOW, THEREFORE, in consideration of the issuance of the Permit to construct and operate the permitted activity, and as an inducement to Grantee in issuing the Permit, together with other good and valuable consideration, the adequacy and receipt of which are hereby acknowledged, Grantor hereby grants, creates, and establishes a perpetual Conservation Easement for and in favor of the Grantee upon the property described on Exhibit "B" which shall run with the land and be binding upon the Grantor, and shall remain in full force and effect forever.

The scope, nature, and character of this Conservation Easement shall be as follows:

1. Recitals. The recitals hereinabove set forth are true and correct and are hereby incorporated into and made a part of this Conservation Easement.

2. Purpose. It is the purpose of this Conservation Easement to retain land or water areas in their natural, vegetative, hydrologic, scenic, open, agricultural or wooded condition and to retain such areas as suitable habitat for fish, plants or wildlife. Those wetland and/or upland areas included in this Conservation Easement which are to be enhanced or created pursuant to the Permit shall be retained and maintained in the enhanced or created conditions required by the Permit.

To carry out this purpose, the following rights are conveyed to Grantee by this easement:

a. To enter upon the Property at reasonable times with any necessary equipment or vehicles to enforce the rights herein granted in a manner that will not unreasonably interfere with the use and quiet enjoyment of the Property by Grantor at the time of such entry; and

b. To enjoin any activity on or use of the Property that is inconsistent with this Conservation Easement and to enforce the restoration of such areas or features of the Conservation Easement that may be damaged by any inconsistent activity or use.

3. Prohibited Uses. Except for restoration, creation, enhancement, maintenance and monitoring activities, or surface water management improvements, or other activities described herein that are permitted or required by the Permit, the following activities are prohibited in or on the Conservation Easement:

a. Construction or placing of buildings, roads, signs, billboards or other advertising, utilities, or other structures on or above the ground;

b. Dumping or placing of soil or other substance or material as landfill, or dumping or placing of trash, waste, or unsightly or offensive materials;

c. Removal or destruction of trees, shrubs, or other vegetation, except for the removal of exotic or nuisance vegetation in accordance with a District approved maintenance plan;

d. Excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substance in such manner as to affect the surface;

e. Surface use except for purposes that permit the land or water area to remain in its natural or enhanced condition;

f. Activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation including, but not limited to, ditching, diking and fencing;

g. Acts or uses detrimental to such aforementioned retention of land or water areas;

h. Acts or uses which are detrimental to the preservation of the structural integrity or physical appearance of sites or properties having historical, archaeological, or cultural significance.

4. Grantor's Reserved Rights. Grantor reserves all rights as owner of the Property, including the right to engage in uses of the Property that are not prohibited herein and which are not inconsistent with any District rule, criteria, permit and the intent and purposes of this Conservation Easement.

5. No Dedication. No right of access by the general public to any portion of the Property is conveyed by this Conservation Easement.

6. Grantee's Liability. Grantee shall not be responsible for any costs or liabilities related to the operation, upkeep or maintenance of the Property.

7. Property Taxes. Grantor shall keep the payment of taxes and assessments on the Easement Parcel current and shall not allow any lien on the Easement Parcel superior to this Easement. In the event Grantor fails to extinguish or obtain a subordination of such lien, in addition to any other remedy, the Grantee may, but shall not be obligated to, elect to pay the lien on behalf of the Grantor and Grantor shall reimburse Grantee for the amount paid by the Grantee, together with Grantee's reasonable attorney's fees and costs, with interest at the maximum rate allowed by law, no later than thirty days after such payment. In the event the Grantor does not so reimburse the Grantee, the debt owed to Grantee shall constitute a lien against the Easement Parcel which shall automatically relate back to the recording date of this

Easement. Grantee may foreclose this lien on the Easement Parcel in the manner provided for mortgages on real property.

8. Enforcement. Enforcement of the terms, provisions and restrictions of this Conservation Easement shall be at the reasonable discretion of Grantee, and any forbearance on behalf of Grantee to exercise its rights hereunder in the event of any breach hereof by Grantor, shall not be deemed or construed to be a waiver of Grantee's rights hereunder.

9. Assignment. Grantee will hold this Conservation Easement exclusively for conservation purposes. Grantee will not assign its rights and obligations under this Conservation Easement except to another organization or entity qualified to hold such interests under the applicable state laws.

10. Severability. If any provision of this Conservation Easement or the application thereof to any person or circumstances is found to be invalid, the remainder of the provisions of this Conservation Easement shall not be affected thereby, as long as the purpose of the Conservation Easement is preserved.

11. Terms and Restrictions. Grantor shall insert the terms and restrictions of this Conservation Easement in any subsequent deed or other legal instrument by which Grantor divests itself of any interest in the Conservation Easement.

12. Written Notice. All notices, consents, approvals or other communications hereunder shall be in writing and shall be deemed properly given if sent by United States certified mail, return receipt requested, addressed to the appropriate party or successor-in-interest.

13. Modifications. This Conservation Easement may be amended, altered, released or revoked only by written agreement between the parties hereto or their heirs, assigns or successors-in-interest, which shall be filed in the public records in Lee County.

TO HAVE AND TO HOLD unto Grantee forever. The covenants, terms, conditions, restrictions and purposes imposed with this Conservation Easement shall be binding upon Grantor, and shall continue as a servitude running in perpetuity with the Property.

Grantor hereby covenants with said Grantee that Grantor is lawfully seized of said Property in fee simple; that the Conservation Easement is free and clear of all encumbrances that are inconsistent with the terms of this Conservation Easement; and all mortgages and liens on the Conservation Easement area, if any, have been subordinated to this Conservation Easement; and that Grantor has good right and lawful authority to convey this Conservation Easement; and that it hereby fully warrants and defends the title to the Conservation Easement hereby conveyed against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF,
Lee County

(Grantor) has hereunto set its authorized hand this 22nd day of April, 20 08.

a Florida corporation

By: Ray Judah
(Signature)

Name: ~~Bob Janes~~ Ray Judah
(Print)

Title: Chairman, Lee County Board of County Commissioners

APPROVED AS TO FORM
OFFICE OF COUNTY ATTORNEY

Signed, sealed and delivered in our presence as witnesses:

By: CRaDonna
(Signature)

Name: CHRISTINE VALENCIA
(Print)

By: Patricia H. Wesemen
(Signature)

Name: PATRICIA H. WESEMEN
(Print)

STATE OF FLORIDA
) ss:
COUNTY OF Lee

On this _____ day of _____, 20_____ before me, the undersigned notary public, personally appeared _____, the person who subscribed to the foregoing instrument, as the _____ (title), of _____ (corporation), a Florida corporation, and acknowledged that he/she executed the same on behalf of said corporation and the he/she was duly authorized to do so. He/She is personally known to me or has produced a _____ (state) driver's license as identification.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

NOTARY PUBLIC, STATE OF FLORIDA

_____
(Signature)

Name: _____
(Print)

My Commission Expires: _____

MORTGAGEE JOINDER, CONSENT AND SUBORDINATION

For Ten Dollars ($10.00) and other good and valuable consideration, the adequacy and receipt of which are hereby acknowledged, _____, the owner and holder of a mortgage dated _____, in the original principal amount of $_____, given by _____ _____ ("Grantor") to _____ ("Mortgagee"), encumbering the real property described on Exhibit "A" attached hereto ("Property"), which is recorded in Official Records Book _____, at Page _____, (together with that certain Assignment of Leases and Rents recorded in Official Records Book _____, at Page _____ and those certain UCC-1 Financing Statement(s) recorded in Official Records Book _____, at Page _____), all of the Public Records of _____ County, Florida (said mortgage, assignment of leases and rents, and UCC-1 Financing Statements, as modified, are hereinafter referred to as the "Mortgage"), hereby joins in, consents to and subordinates the lien of its Mortgage, as it has been, and as it may be, modified, amended and assigned from time to time, to the foregoing Conservation Easement, executed by _____, in favor of the South Florida Water Management District applicable to the Conservation Easement, as said Conservation Easement may be modified, amended and assigned from time to time, with the intent that the Mortgage shall be subject and subordinate to the Conservation Easement.

IN WITNESS WHEREOF, this Mortgagee Joinder, Consent and Subordination is made this _____ day of _____, 20_____.

By: _____ _____
(Signature) (Mortgagee)

Name: _____
(Print)

Title: _____

WITNESSES:

By: _____ By: _____
(Signature) (Signature)

Name: _____ Name: _____
(Print) (Print)

STATE OF FLORIDA
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 20_____, by _____ (print name), as _____ (title) of _____ (Grantor of Mortgage), on behalf of the _____ (Mortgagee, Grantor of the Conservation Easement). He/She is personally known to me or has produced a _____ (state) driver's license as identification.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

NOTARY PUBLIC, STATE OF FLORIDA

_____
(Signature)

Name: _____
(Print)

My Commission Expires: _____

EXHIBIT A

[DESCRIPTION OF PROPERTY]

Bean, Whitaker, Lutz & Kareh, Inc.
13041 McGregor Boulevard
Fort Myers, Florida 33919-5910
email – fmoffice@bwlk.net
(Ph) 239-481-1331 (Fax) 239-481-1073

Description of a Parcel of Land
Lying in
Section 12, Township 43 South, Range 24 East
Lee County, Florida
(Prairie Pines Preserve - Wetland 14)

A tract or parcel of land situated in the State of Florida, County of Lee, lying in Section 12, Township 43 South, Range 24 East and further described as follows:

Commencing at a 4"x4" concrete monument per Certified Corner Record #90465 marking the northeast corner of the Southeast One Quarter (SE 1/4) of Section 12, Township 43 South, Range 24 East; thence S00°10'25"W along the east line of said Southeast One Quarter (SE 1/4) for 760.25 feet (760.39 feet record) to an intersection with the northeasterly right-of-way line of the Seaboard Coastline Railroad (120 feet wide) per the State of Florida Department of Transportation Right-of-Way Map of State Road No. 93 (I-75), Section 12075-2406 dated April, 1974; thence N45°46'03"W, along said northeasterly right-of-way line for 293.15 feet (293.35 feet record) to a bearing change in said right-of-way line; thence N45°45'20"W along said northeasterly right-of-way line for 3377.29 feet; thence S44°14'40"W for 120.00 feet to an intersection with the southwesterly right-of-way line of said Seaboard Coastline Railroad and the Point of Beginning; thence continue S44°14'40"W for 345.97 feet; thence S42°20'37"W for 182.08 feet; thence S20°12'26"E for 258.30 feet; thence N41°22'07"W for 262.34 feet; thence N76°18'35"W for 49.27 feet; thence N87°58'21"W for 77.03 feet; thence S75°32'55"W for 81.97 feet; thence N81°31'05"W for 29.52 feet; thence N56°33'50"W for 25.90 feet; thence N22°16'25"W for 34.53 feet; thence N23°11'56"E for 35.15 feet; thence N22°34'40"E for 65.05 feet; thence N09°40'14"W for 66.29 feet; thence N26°49'30"W for 115.92 feet; thence N38°22'59"W for 42.91 feet; thence N00°23'10"W for 93.01 feet; thence N25°21'36"E for 72.77 feet; thence N50°55'22"E for 242.00 feet; thence N73°24'41"E for 89.09 feet; thence N79°29'21"E for 115.20 feet; thence N65°12'02"E for 55.46 feet to an intersection with the aforesaid southwesterly right-of-way line of the Seaboard Coastline Railroad; thence S45°45'20"E along said southwesterly right-of-way line for 419.05 feet to the Point of Beginning.

Parcel contains 8.39 acres, more or less.

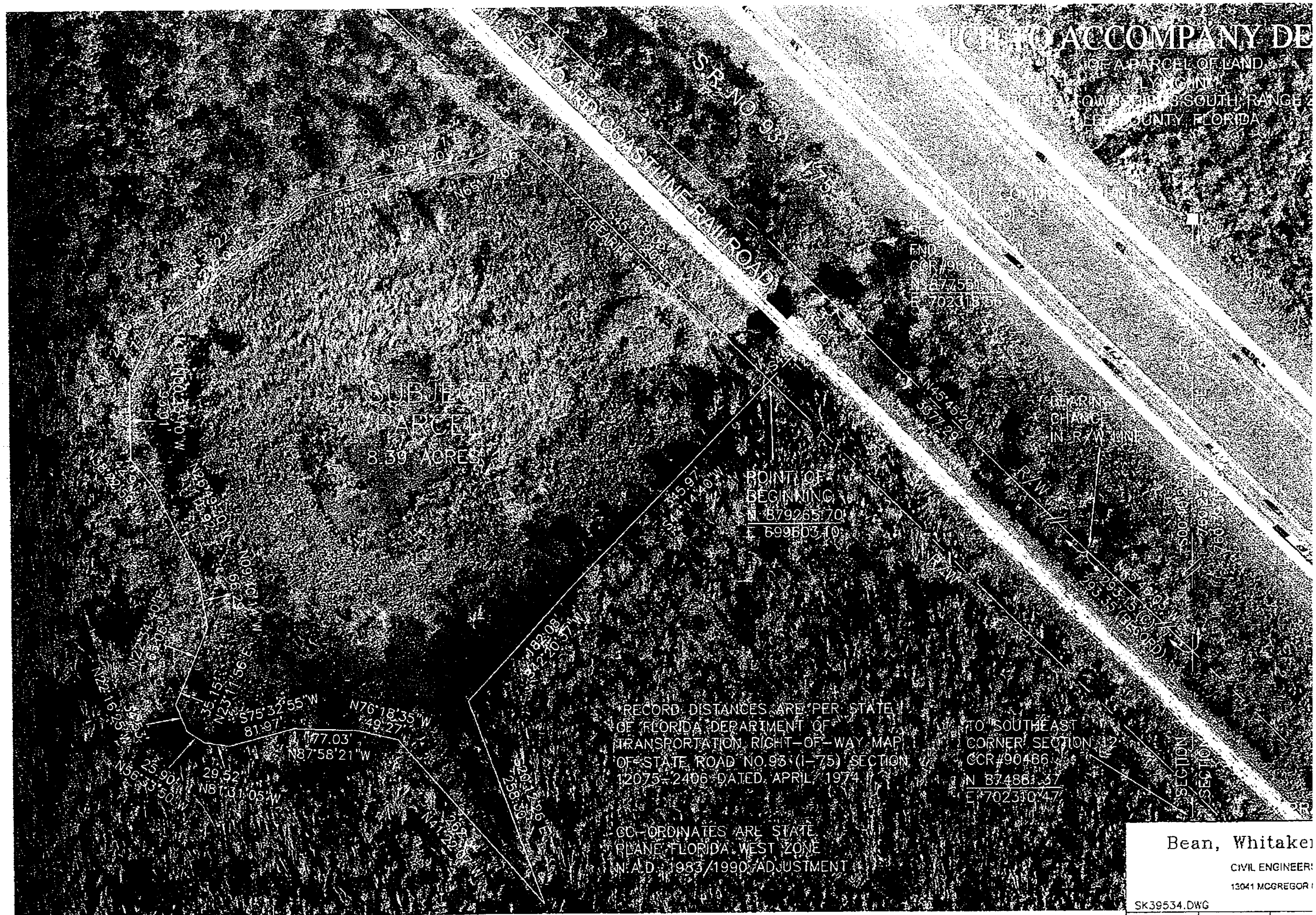
Bearings are based on the southwesterly right-of-way line of the Seaboard Coastline Railroad per State of Florida Department of Transportation Right-of-Way Map of State Road No. 93 (I-75), Section 12075-2406 dated April, 1974 as bearing S45°45'20"E.

Subject to easements, restrictions, reservations and rights-of-way (recorded and unrecorded, written and unwritten).

Bean, Whitaker, Lutz & Kareh, Inc. (LB 4919)

Scott C. Whitaker, P.S.M. 4324

39534_WETLAND#14 - 1 4/8/08



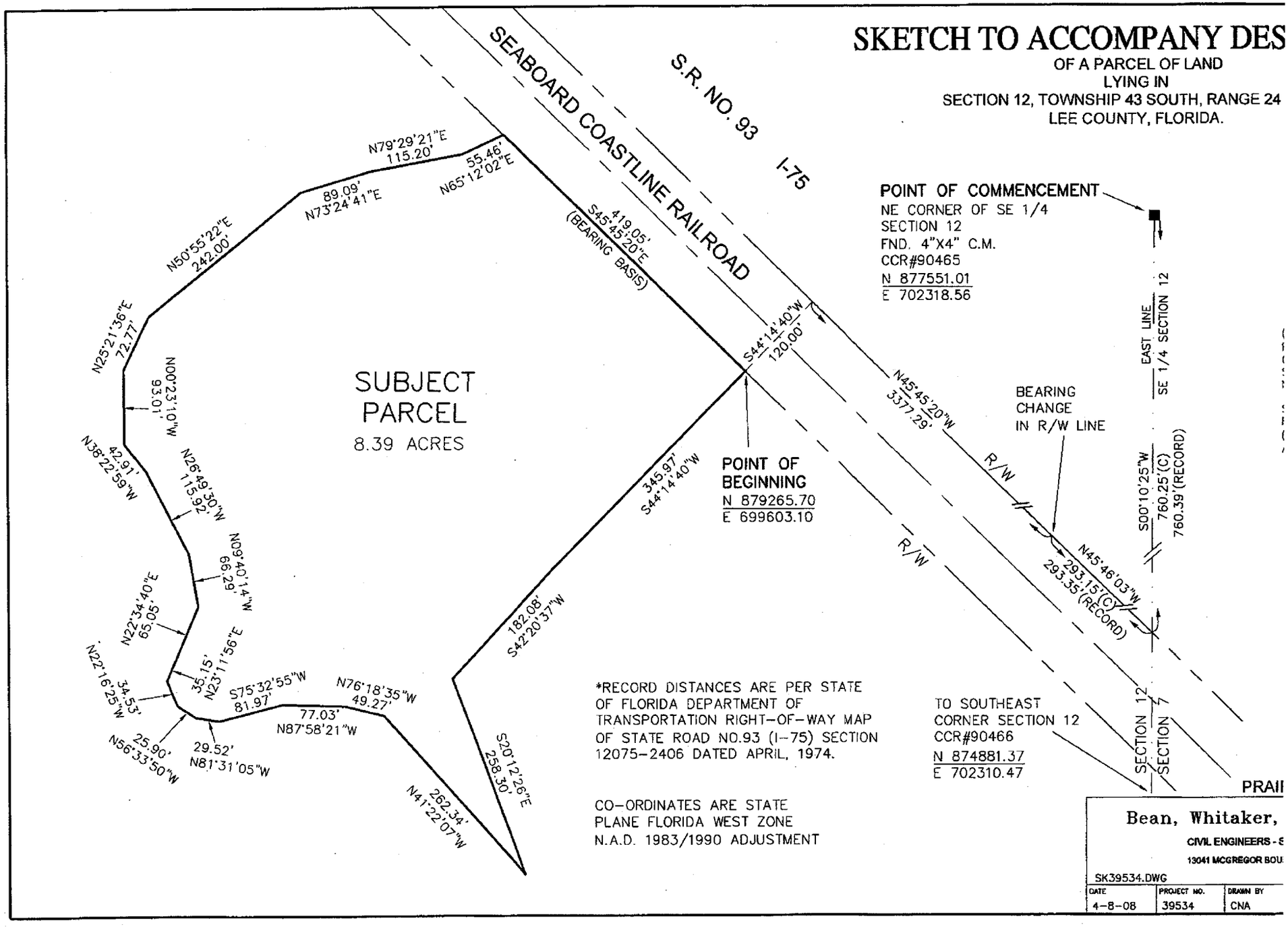
Bean, Whitaker

CIVIL ENGINEERS

13041 MCGREGOR

SK39534.DWG

DATE	PROJECT NO.	DRAWN BY
4-8-08	39534	CNA


SKETCH TO ACCOMPANY DES
OF A PARCEL OF LAND
LYING IN
SECTION 12, TOWNSHIP 43 SOUTH, RANGE 24
LEE COUNTY, FLORIDA.
SEABOARD COASTLINE RAILROAD
S.R. NO. 93 I-75
SUBJECT PARCEL
8.39 ACRES
POINT OF COMMENCEMENT
NE CORNER OF SE 1/4
SECTION 12
FND. 4"X4" C.M.
CCR#90465
N 877551.01
E 702318.56
POINT OF BEGINNING
N 879265.70
E 699603.10
BEARING CHANGE IN R/W LINE
EAST LINE SE 1/4 SECTION 12
N79°29'21"E 115.20'
55.46' N65°12'02"E
89.09' N73°24'41"E
N50°55'22"E 242.00'
S45°45'20"E 419.05' (BEARING BASIS)
N25°21'36"E 72.77'
N00°23'10"W 93.01'
N38°22'59"W 42.91'
N26°49'30"W 115.92'
N09°40'14"W 99.29'
N22°34'40"E 65.05'
N23°11'56"E 35.15'
N22°16'25"W 34.53'
S75°32'55"W 81.97'
N76°18'35"W 49.27'
77.03' N87°58'21"W
N56°33'50"W 25.90'
29.52' N81°31'05"W
S44°14'40"W 120.00'
N45°45'20"W 337.29'
345.97' S44°14'40"W
182.08' S42°20'37"W
S20°12'26"E 258.30'
N41°22'07"W 262.34'
R/W
R/W
S00°10'25"W 760.25'(C) 760.39'(RECORD)
N45°46'03"W 293.15'(C) 293.35'(RECORD)
*RECORD DISTANCES ARE PER STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY MAP OF STATE ROAD NO.93 (I-75) SECTION 12075-2406 DATED APRIL, 1974.
CO-ORDINATES ARE STATE PLANE FLORIDA WEST ZONE N.A.D. 1983/1990 ADJUSTMENT
TO SOUTHEAST CORNER SECTION 12
CCR#90466
N 874881.37
E 702310.47
SECTION 12
SECTION 7
PRAI
Bean, Whitaker,
CIVIL ENGINEERS - S
13041 MCGREGOR BOU
SK39534.DWG
DATE 4-8-08
PROJECT NO. 39534
DRAWN BY CNA

Appendix H: Access Agreement

LEE COUNTY
SOUTHWEST FLORIDA

Department of Public Works
Division of County Lands

BOARD OF COUNTY COMMISSIONERS

Writer's Direct Dial Number: (941) 479-8505
FAX (941) 479-8391

Bob Janes
District One

Douglas R. St. Cerny
District Two

Ray Judah
District Three

Andrew W. Coy
District Four

John E. Albion
District Five

Donald D. Stilwell
County Manager

James G. Yaeger
County Attorney

Diana M. Parker
County Hearing Examiner

May 22, 2001

Law Offices of Martin G. Brooks, P.A.
Martin G. Brooks
Union Planters Bank Building
450 North Park Road
Suite 400
Hollywood, FL 33021-6918

RE: Recorded Access Agreement
Parcel: 134
Project: Conservation Lands Program, No. 8800

Dear Attorney Brooks:

Enclosed is a copy of the Access Agreement recorded in the Official Records of Charlotte County at OR Book 1894 Page 1334 for your records.

Sincerely,

Paul R. Ehrnfelt
Property Acquisition Assistant

Enclosure as stated

Copy to: Anik Smith, Parks/Rec

S:\POOL\CONS8800\CORR\134 Access Agreement to Attorney Brooks.wpd
revised msl 5/25/00

BARBARA T. SCOTT, CLERK
CHARLOTTE COUNTY
OR BOOK 1894 PAGE 1334
RECORDED 05/14/01 @ 02:58 PM
FILE NUMBER 812548
RECORDING FEE 19.50
DEED DOC 0.70

This document prepared by
Lee County Public Works
County Lands Division

Account Number 0073870-000000-4

ACCESS AGREEMENT

1. Fort Myers Little Ranches Company is the owner of the subject property described in attached Exhibit A ("subject property").

2. Fort Myers Little Ranches Company is also the owner of a 23 acre parcel adjoining the subject property on the north side, which is more particularly described as follows:

   All that certain parcel of land lying and being in Charlotte County, Florida, more particularly described as follows: Those ceratin lands lying and being between the right-of-ways of the Atlantic Coast Line Railroad and the former Seaboard Air Line Railway (now abandoned) North of the Lee County, Florida line in Section 35, Township 42 South, Range 24 East

3. Fort Myers Little Ranches Company understands and agrees that the sale of the subject property to Lee County leaves the 23 acre parcel without legal access rights over, across and through the subject parcel such that the 23 acre parcel will be considered landlocked.

4. Fort Myers Little Ranches Company, it successors and assigns agree not to seek future access rights over, across or through the subject property; and will transfer the subject parcel to Lee County with a notation in the deed to this effect.

5. Fort Myers Little Ranches Company agrees to indemnify Lee County from and against any actions to obtain access applicable to the 23 acre parcel over, across or through the subject property filed by future owners, or successors in interest to the 23 acre parcel.

6. Fort Myers Little Ranches Company agrees to pay the property taxes on the 23 acre parcel for as long as they hold title. In the event the taxes are not paid and tax certificates are issued, Seller or their successor agrees to provide notice to Lee County.

7. Fort Myers Little Ranches Company agrees to include a clause in any transfer of the title to the 23 acre parcel indicating that the parcel does not have existing legal access over, across or through the subject property; and that Grantee is prohibited from seeking access through the subject property.

8. The above provisions with respect to access or pursuit of access over, across or through the subject parcel will survive the closing of this transaction.

RETURN TO: DIVISION OF COUNTY LANDS
P O BOX 398
FORT MYERS FL 33902-0398

IMAGED
KB

Exhibit "B"

OR BOOK 1894 PAGE 1335

WITNESSES:

Robert Clemens

Mike J. O'Hare

BOARD OF COUNTY COMMISSIONERS LEE COUNTY, FL

By: Michele B. Leisner 2/20/01
Deputy Clerk (Date)

SELLER:
Fort Myers Little Ranches Company
A Florida General Partnership by:

Alan J. Baum 1/5/2001
Alan J. Baum, Managing Partner (Date)

BUYER:
Lee County, Florida, By Its Board of County Commissioners

By: _____
Chairman or Vice Chairman

APPROVED AS TO LEGAL FORM
AND SUFFICIENCY

Dawn E. Perry-Lehnert 3/21/01
County Attorney (Date)

STATE OF FLORIDA

COUNTY OF Lee

The foregoing instrument was acknowledged before me this 5TH day of January, 2001

by ALAN J. BAUM who is personally known to me or who has
(name of person acknowledged)

produced PERSONALLY KNOWN as identification.
(type of identification)

_____
(Signature of Notary Public)

OFFICIAL NOTARY SEAL
MICHAEL J O'HARE
NOTARY PUBLIC STATE OF FLORIDA
COMMISSION NO. CC901104
MY COMMISSION EXP. JAN. 30,2004

_____
(Name typed, printed or stamped)
(Title or Rank)
(Serial Number, if any)

EXHIBIT "A"

Legal Description of
LITTLE RANCHES EAST PARCEL
(Description as Prepared by Surveyor)
(Lee County Parcel)

A TRACT OR PARCEL OF LAND LYING IN SECTION 35, TOWNSHIP 42 SOUTH, RANGE 24 EAST, CHARLOTTE COUNTY, FLORIDA AND SECTIONS 1, 2, 3, 11, 12, 13 AND 14, TOWNSHIP 43 SOUTH, RANGE 24 EAST, LEE COUNTY, FLORIDA BEING DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SECTION 12, TOWNSHIP 43 SOUTH, RANGE 24 EAST, THENCE RUN ALONG THE EAST LINE OF THE SOUTHEAST ONE-QUARTER (1/4) OF SAID SECTION, NORTH 00°09'53" EAST, A DISTANCE OF 1742.12 FEET TO A POINT WHICH LIES ON THE WESTERLY RIGHT OF WAY LINE OF THE SEABOARD COASTLINE (120' R/W), THENCE; NORTH 45°45'18" WEST, A DISTANCE OF 4003.52 FEET ALONG SAID RIGHT OF WAY TO A POINT ON THE SOUTH RIGHT OF WAY OF LINE OF NALLE GRADE ROAD RIGHT OF WAY (O.R. 1096, PAGE 1769); THENCE CONTINUE ALONG SAID RAILROAD RIGHT OF WAY NORTH 45°45'18" WEST, A DISTANCE OF 134.19 FEET TO A POINT ON THE NORTH RIGHT OF WAY LINE OF NALLE GRADE ROAD; THENCE CONTINUE ALONG SAID RAILROAD RIGHT OF WAY NORTH 45°45'18" WEST, A DISTANCE OF 10692.00 FEET TO A POINT MARKING THE INTERSECTION OF THE WEST RIGHT OF WAY OF SEABOARD COASTLINE RAILROAD LINE AND THE WEST LINE OF THE SOUTHWEST ONE-QUARTER (1/4) OF SECTION 35, TOWNSHIP 42 SOUTH, RANGE 24 EAST; THENCE ALONG SAID WEST LINE OF THE SOUTHWEST ¼, SOUTH 01°19'59" WEST, A DISTANCE OF 1392.01 FEET TO THE NORTHEAST CORNER OF SECTION 3, TOWNSHIP 43 SOUTH, RANGE 24 EAST; THENCE WITH THE NORTH LINE OF THE NORTHEAST ONE-QUARTER OF SAID SECTION 3, NORTH 89°58'36" WEST, A DISTANCE OF 253.03 FEET TO A POINT ON THE EAST RIGHT OF WAY LINE OF THE FORMER SEABOARD AIRLINE RIGHT OF WAY (100'); THENCE WITH THE EAST LINE OF SAID RIGHT OF WAY, SOUTH 11°11°01' EAST, A DISTANCE OF 6702.45 FEET TO A POINT ON THE NORTH RIGHT OF WAY OF NALLE GRADE ROAD (125' R/W); THENCE CONTINUE ALONG SAID SEABOARD AIRLINE RIGHT OF WAY, SOUTH 11°11'01" EAST, A DISTANCE OF 127.47 FEET TO A POINT ON THE SOUTH RIGHT OF WAY OF SAID NALLE GRADE ROAD; THENCE CONTINUE ALONG SAID SEABOARD AIRLINE RIGHT OF WAY, SOUTH 11°11'01" EAST, A DISTANCE OF 7829.85 FEET TO A POINT MARKING THE NORTHWEST CORNER OF THE NORTH FORT MYERS UTILITY COMPANY PARCEL AS RECORDED IN O.R. BOOK 1820, PAGES 3899-3900; THENCE WITH SAID PARCEL, NORTH 89°55'40" EAST, A DISTANCE OF 1241.53 FEET TO THE NORTHEAST CORNER OF SAID PARCEL; THENCE CONTINUE WITH PARCEL BOUNDARY, SOUTH 00°11'15" EAST, A DISTANCE OF 1400.10 FEET TO A POINT; THENCE NORTH 89°55'40" EAST 11.72 FEET TO THE NORTHWEST CORNER OF AN 18.147 ACRE PARCEL; THENCE WITH THE NORTH LINE OF SAID PARCEL, NORTH 89°55'40" EAST 1387.30 FEET TO A POINT; THENCE SOUTH 89°11'50" EAST, A DISTANCE OF 2709.48 FEET TO A POINT; THENCE S 89°11'50" EAST, A DISTANCE OF 229.05 FEET TO A POINT; THENCE AROUND A CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 02°27'42", HAVING A RADIUS OF 11397.00 FEET, AN ARC DISTANCE OF 489.68 FEET, A CHORD BEARING OF NORTH 89°34'19" EAST, A DISTANCE OF 489.64 FEET TO A POINT; THENCE NORTH 88°20'28" EAST, A DISTANCE OF 1974.97 FEET TO A POINT; THENCE NORTH 87°29'24" EAST, A DISTANCE OF 18.44 FEET TO A POINT ON THE EAST LINE OF THE SOUTHEAST ONE-QUARTER OF SECTION 13, TOWNSHIP 43 SOUTH, RANGE 24 EAST; THENCE WITH SAID FRACTION LINE, NORTH 00°03'28" WEST, A DISTANCE OF 5060.10 FEET TO THE BEGINNING.

LESS THE AREA FOR NALLE GRADE ROAD AS DESCRIBED IN O.R. BOOK 1096, PAGE 1769.

CONTAINING 2411.56 ACRES AS DESCRIBED.

AND ... LESS AND EXCEPT THE FOLLOWING:

A TRACT OR PARCEL OF LAND LYING IN SECTION 35, TOWNSHIP 42 SOUTH, RANGE 24 EAST, CHARLOTTE COUNTY, FLORIDA BEING DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SECTION 35, TOWNSHIP 42 SOUTH, RANGE 24 EAST, SAID POINT ALSO BEING ON THE SOUTH LINE OF CHARLOTTE COUNTY AND ON THE NORTH LINE OF LEE COUNTY, FLORIDA. THENCE ALONG THE WEST LINE OF SAID SECTION 35, NORTH 01°19'59" EAST, A DISTANCE OF 1392.01 FEET TO A POINT ON THE WEST RIGHT-OF-WAY OF SEABOARD COASTLINE RAILROAD; THENCE ALONG SAID RAILROAD RIGHT-OF-WAY, SOUTH 45°45'18" EAST, A DISTANCE OF 1993.53 FEET TO A POINT ON THE SOUTH LINE OF SAID SECTION 35 AND ON THE LEE/CHARLOTTE COUNTY LINE; THENCE ALONG THE SOUTH LINE OF SECTION 35, SAID LINE ALSO BEING THE LEE/CHARLOTTE COUNTY LINE, SOUTH 89°58'23" WEST, A DISTANCE OF 1460.47 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINING 23.329 ACRES MORE OR LESS.

(See attached boundary survey as referenced)

Surveyor and Mapper in Responsible Charge:
Roger H. Harrah, LS #5294
Professional Surveyor and Mapper
Community Engineering Services, Inc.
9200 Bonita Beach Road, Suite 213
Bonita Springs, FL 34135
LB #6572

Seal:

Signed: _____
Roger H. Harrah, P.L.S.

Date Signed: 4-25-07

Appendix I: Legal Description

LEGAL DESCRIPTION & SKETCH
OF A PORTION OF PRAIRIE PINES PRESERVE
SECTIONS 1, 2, 3, 11, 12, 13, 14, 15 & 16
TOWNSHIP 43 SOUTH, RANGE 24 EAST
LEE COUNTY, FLORIDA

DESCRIPTION:

A TRACT OF LAND LYING IN SECTIONS 1, 2, 3, 11, 12, 13, 14, 15 & 16 TOWNSHIP 43 SOUTH, RANGE 24 EAST, LEE COUNTY, FLORIDA, BEING A PORTION OF THE LANDS DESCRIBED IN OFFICIAL RECORD BOOK 3402, PAGE 1288 AND OFFICIAL RECORD BOOK 3888, PAGE 1655, PUBLIC RECORDS OF LEE COUNTY, FLORIDA BEING DESCRIBED AS FOLLOWS:

PARCEL I:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 14; THENCE RUN S 88° 53' 57" E ALONG THE NORTH LINE OF THE NORTHWEST ONE-QUARTER (NW 1/4) OF SAID SECTION 14 FOR 202.05 FEET TO THE INTERSECTION OF SAID NORTH LINE AND A LINE THAT IS PARALLEL WITH AND 202.00 FEET EAST OF THE WEST LINE OF SAID NW 1/4; SAID POINT BEING THE **POINT OF BEGINNING;** THENCE CONTINUING ALONG SAID NORTH LINE S 88° 53' 57" E FOR 1603.46 FEET TO THE WESTERLY RIGHT-OF-WAY LINE OF THE FORMER SEABOARD AIR LINE RAILROAD (100-FEET WIDE) AS DESCRIBED IN OFFICIAL RECORD BOOK 3672, PAGE 2921 OF THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA; THENCE RUN S 11° 10' 42" E ALONG SAID WESTERLY RIGHT-OF-WAY LINE FOR 730.80 FEET; THENCE LEAVING SAID WESTERLY RIGHT-OF-WAY LINE AND RUNNING ALONG THE NORTHERLY, WESTERLY AND SOUTHERLY LINES OF PARCEL 105B AS DESCRIBED IN SAID OFFICIAL RECORD BOOK 3672, PAGE 2921 FOR THE FOLLOWING THREE (3) CALLS: S 63° 49' 18" W FOR 258.80 FEET; (2) S 11° 10' 42" E ALONG A LINE PARALLEL WITH THE WESTERLY LINE OF SAID RIGHT-OF-WAY FOR 2000.00 FEET; AND (3) N 63° 49' 18" E FOR 258.80 FEET TO SAID WESTERLY RIGHT-OF-WAY LINE; THENCE RUN S 11° 10' 42" E ALONG SAID WESTERLY RIGHT-OF-WAY LINE FOR 1264.67 FEET TO A 4"X4" CONCRETE MONUMENT WITH NO IDENTIFICATION MARKING THE INTERSECTION OF THE WESTERLY LINE OF SAID RIGHT-OF-WAY WITH THE NORTH LINE OF A PARCEL DESCRIBED IN OFFICIAL RECORD BOOK 4105, PAGE 4503 OF THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA; THENCE RUN S 89° 33' 16" W ALONG THE NORTH LINE OF SAID PARCEL FOR 4773.43 FEET TO A 4"X4" CONCRETE MONUMENT STAMPED LB 4919 MARKING THE INTERSECTION WITH THE SOUTH LINE OF A PARCEL DESCRIBED IN OFFICIAL RECORD BOOK 2369 AT PAGE 3356; THENCE N 89° 39' 22" W ALONG THE SOUTH LINE OF SAID PARCEL DESCRIBED IN OFFICIAL RECORD BOOK 2369 AT PAGE 3356 FOR 199.43 FEET TO A 5/8" IRON ROD WITH YELLOW CAP BEARING CORPORATION NO. LB4919 MARKING THE EAST LINE OF A QUIT CLAIM PARCEL DESCRIBED IN OFFICIAL RECORD BOOK 3034 AT PAGE 3859; THENCE N 02° 28' 28" E ALONG THE EAST LINE OF SAID QUIT CLAIMED PARCEL FOR 447.62 FEET TO A 4"X4" CONCRETE MONUMENT WITH A NAIL IN TOP MARKING THE NORTHEAST CORNER OF SAID QUIT CLAIM PARCEL; THENCE S 89° 49' 34" W ALONG THE NORTH LINE OF SAID QUIT CLAIM PARCEL FOR 969.35 FEET TO A 5/8" IRON ROD WITH YELLOW CAP BEARING CORPORATION NO. LB4919 MARKING AN INTERSECTION WITH THE SOUTH LINE OF SAID PARCEL DESCRIBED IN OFFICIAL RECORD BOOK 2369 AT PAGE 3356; THENCE N 89° 40' 33" W ALONG SAID SOUTH LINE FOR 2484.05 FEET TO AN INTERSECTION WITH THE NORTHEASTERLY RIGHT-OF-WAY LINE OF U.S. 41 (WIDTH VARIES) PER STATE OF FLORIDA D.O.T. RIGHT OF WAY MAP, SECTION 12010-2511, DATED AUGUST 17, 1971 AND LAST REVISED MARCH 22, 1982; THENCE RUN N 26° 07' 24" W ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE FOR 580.87 FEET TO STATE D.O.T. STATION 219+00; THENCE N 27° 33' 19" W ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE FOR 393.04 FEET TO THE SOUTHWEST CORNER OF PINE SHADOWS AIR PARK ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 34 PAGES 66 AND 67 OF THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA; SAID POINT LYING ON THE NORTHEASTERLY RIGHT-OF-WAY LINE OF U.S. 41 AT A POINT 7.09 FEET SOUTHEAST OF STATE D.O.T. RIGHT-OF-WAY MARKER FOR STATION 223+00; THENCE RUN S 89° 38' 06" E ALONG THE EAST-WEST QUARTER SECTION LINE OF SAID SECTION 16 (SAID LINE BEING THE SOUTH LINE OF SAID PLAT OF PINE SHADOWS AIR PARK) FOR 939.55 FEET TO THE EAST QUARTER CORNER OF SAID SECTION 16; THENCE RUN N 89° 57' 53" E ALONG THE EAST-WEST QUARTER SECTION LINE OF SAID SECTION 15 FOR 5331.27 FEET TO THE WEST QUARTER CORNER OF SAID SECTION 14; THENCE RUN S 89° 37' 02" E ALONG THE EAST-WEST QUARTER SECTION LINE OF SAID SECTION 14 FOR 202.00 FEET TO SAID LINE THAT IS PARALLEL WITH AND 202 FEET EAST OF THE WEST LINE OF THE AFORESAID NW 1/4 OF SECTION 14; THENCE N 00° 08' 03" W ALONG SAID PARALLEL LINE FOR 2662.14 FEET TO THE NORTH LINE OF SAID NW 1/4 AND THE **POINT OF BEGINNING**.

SAID PARCEL I CONTAINING 320.05 ACRES, MORE OR LESS.

TOGETHER WITH

CONTINUED ON SHEET 2 OF 5

PREPARED BY: AIM ENGINEERING AND SURVEYING, INC.

DARREN TOWNSEND, P.S.M.
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATE. NO. 6476

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

NOT VALID WITHOUT ALL SHEETS

J:\Active\14-0290 Prairie Pines Preserve Lee Co\CIVIL 3D AutoCAD\14-0290-LEGAL.dwg 1/26/2015 11:30:31 AM

AIM Engineering & Surveying, Inc.
5300 LEE BOULEVARD
POST OFFICE BOX 1235
LEHIGH ACRES, FLORIDA 33971
E-Mail: engineering@aimengr.com
LEHIGH ACRES 239-332-4569
FAX 239-332-8734
LICENSE BUSINESS No. 3114

THIS IS NOT A SURVEY — SHEET 1 OF 5
PRAIRIE PINES PRESERVE
DESCRIPTION OF ENV. LANDS - PARCELS I & II

DRAWN	CHECKED	CLIENT:
DT 01/08/2015	BP 01/12/2015	LEE COUNTY

FILE NAME:	SECTION:	TOWNSHIP:	RANGE:	COUNTY:	PROJECT NO.
14-0290-LEGAL	1-3,11-16	43 S	24 E	LEE	14-0290

CONTINUED FROM SHEET 1 OF 5

PARCEL II:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 14; THENCE RUN SOUTH 88° 53' 57" EAST ALONG THE NORTH LINE OF THE NORTHWEST ONE-QUARTER (NW 1/4) OF SAID SECTION 14 FOR 1805.51 FEET TO THE WESTERLY RIGHT OF WAY LINE OF THE FORMER SEABOARD AIR LINE RAILROAD (100-FEET WIDE) AS DESCRIBED IN OFFICIAL RECORD BOOK 3672, PAGE 2921 OF THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA; THENCE CONTINUING ALONG SAID NORTH LINE SOUTH 88° 53' 57" EAST FOR 102.34 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY OF SAID FORMER RAILROAD; SAID POINT BEING THE **POINT OF BEGINNING**; THENCE SOUTH 11°10'42" EAST, A DISTANCE OF 3764.93 FEET ALONG THE EASTERLY LINE OF SAID RIGHT-OF-WAY TO A POINT MARKING THE NORTHWEST CORNER OF THE NORTH FORT MYERS UTILITY COMPANY PARCEL AS RECORDED IN O.R. BOOK 1820, PAGES 3899-3900 OF THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA; THENCE WITH SAID PARCEL, NORTH 89°55'59" EAST, A DISTANCE OF 1241.53 FEET TO THE NORTHEAST CORNER OF SAID PARCEL; THENCE CONTINUE WITH PARCEL BOUNDARY, SOUTH 00°10'56" EAST, A DISTANCE OF 1400.10 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF DEL PRADO BOULEVARD - MELLOW DRIVE (125-FEET WIDE) PER LEE COUNTY DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY MAP, COUNTY PROJECT NUMBER 4013, DATED JULY 31, 1998 BY AIM ENGINEERING AND SURVEYING, INC.; THENCE WITH THE NORTH LINE OF SAID RIGHT OF WAY FOR THE FOLLOWING FIVE (5) CALLS: 1) NORTH 89°55'59" EAST, A DISTANCE OF 1399.02 FEET AND 2) SOUTH 89°11'31" EAST, A DISTANCE OF 2938.53 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE NORTH, HAVING A RADIUS OF 11397.00 FEET, A CENTRAL ANGLE OF 02°27'42", AND WHOSE LONG CHORD BEARS NORTH 89°34'38" EAST FOR A CHORD DISTANCE OF 489.64 FEET; 3) THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT FOR A DISTANCE OF 489.68 FEET;
4) NORTH 88°20'47" EAST, A DISTANCE OF 1974.97 FEET; AND 5) NORTH 87°29'43" EAST, A DISTANCE OF 18.44 FEET TO A POINT ON THE EAST LINE OF THE SOUTHEAST ONE-QUARTER OF SECTION 13, TOWNSHIP 43 SOUTH, RANGE 24 EAST; THENCE WITH SAID FRACTION LINE, NORTH 00°03'06" WEST A DISTANCE OF 717.97 FEET TO THE INTERSECTION OF SAID FRACTION LINE AND THE SOUTH LINE OF THE PROPOSED RIGHT OF WAY OF THE DEL PRADO CORRIDOR PER SKETCH AND DESCRIPTION PROVIDED TO LEE COUNTY BY AIM ENGINEERING & SURVEYING, INC., PROJECT NUMBER 07-9390, DATED NOVEMBER 21, 2007; THENCE WITH THE SOUTH LINE OF SAID PROPOSED RIGHT OF WAY LINE FOR THE FOLLOWING FIVE (5) CALLS: 1) SOUTH 88°20'47" WEST, A DISTANCE OF 542.33 FEET; 2) SOUTH 00°02'50" EAST, A DISTANCE OF 646.22 FEET; 3) SOUTH 88°20'47" WEST, A DISTANCE OF 1453.03 FEET TO BEGINNING OF A TANGENT CURVE CONCAVE TO THE NORTH, HAVING A RADIUS OF 11325.00 FEET, A CENTRAL ANGLE OF 02°27'42", AND WHOSE LONG CHORD BEARS SOUTH 89°34'38" WEST FOR A CHORD DISTANCE OF 486.55 FEET; 4) THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 486.58 FEET; AND
5) NORTH 89°11'31" WEST, A DISTANCE OF 13.93 FEET TO A POINT ON THE WESTERLY LINE OF SAID PROPOSED RIGHT OF WAY LINE; SAID POINT ALSO BEING THE BEGINNING OF A NON-TANGENT CURVE CONCAVE TO THE NORTHWEST, HAVING A RADIUS OF 2206.00 FEET, A CENTRAL ANGLE OF 90°37'33", AND WHOSE LONG CHORD BEARS NORTH 45°29'42" EAST FOR A CHORD DISTANCE OF 3136.75 FEET; THENCE WITH SAID PROPOSED WESTERLY RIGHT OF WAY LINE AND ALONG THE ARC OF SAID CURVE TO THE LEFT FOR A DISTANCE OF 3489.28 FEET; THENCE CONTINUING WITH SAID PROPOSED RIGHT OF WAY LINE FOR THE FOLLOWING TWO (2) CALLS: 1) NORTH 00°10'55" EAST, A DISTANCE OF 4044.51 FEET AND 2) NORTH 02°49'19" WEST, A DISTANCE OF 828.23 FEET TO A POINT WHICH LIES ON THE SOUTHWESTERLY RIGHT OF WAY LINE OF THE SEABOARD COASTLINE (120 FEET WIDE); THENCE
NORTH 45°44'59" WEST, A DISTANCE OF 12,436.12 FEET ALONG SAID SOUTHWESTERLY RIGHT OF WAY LINE TO A POINT MARKING THE INTERSECTION OF THE SOUTHWESTERLY RIGHT OF WAY OF SEABOARD COASTLINE RAILROAD LINE AND THE NORTH LINE OF SAID SECTION 2; SAID POINT ALSO BEING ON THE SOUTH LINE OF CHARLOTTE COUNTY AND THE NORTH LINE OF LEE COUNTY, FLORIDA; THENCE ALONG THE NORTH LINE OF SECTION 2; SAID LINE ALSO BEING THE LEE / CHARLOTTE COUNTY LINE,
SOUTH 89°58'42" WEST, A DISTANCE OF 1460.48 FEET TO THE NORTHEAST CORNER OF SECTION 3, THENCE NORTH 89°58'17" WEST, A DISTANCE OF 253.03 FEET ALONG THE NORTH LINE OF THE NORTHEAST ONE-QUARTER (1/4) OF SAID SECTION 3 TO A POINT ON THE AFOREMENTIONED EASTERLY RIGHT OF WAY LINE OF THE FORMER SEABOARD AIR LINE RAILROAD; THENCE SOUTH 11°10'42" EAST, A DISTANCE OF 10,894.84 FEET ALONG SAID EASTERLY RIGHT OF WAY LINE TO THE **POINT OF BEGINNING.**

SAID PARCEL II CONTAINING 2353.02 ACRES, MORE OR LESS.

TOTAL OF PARCELS I & II CONTAINING 2673.07 ACRES, MORE OR LESS.

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NOT VALID WITHOUT ALL SHEETS

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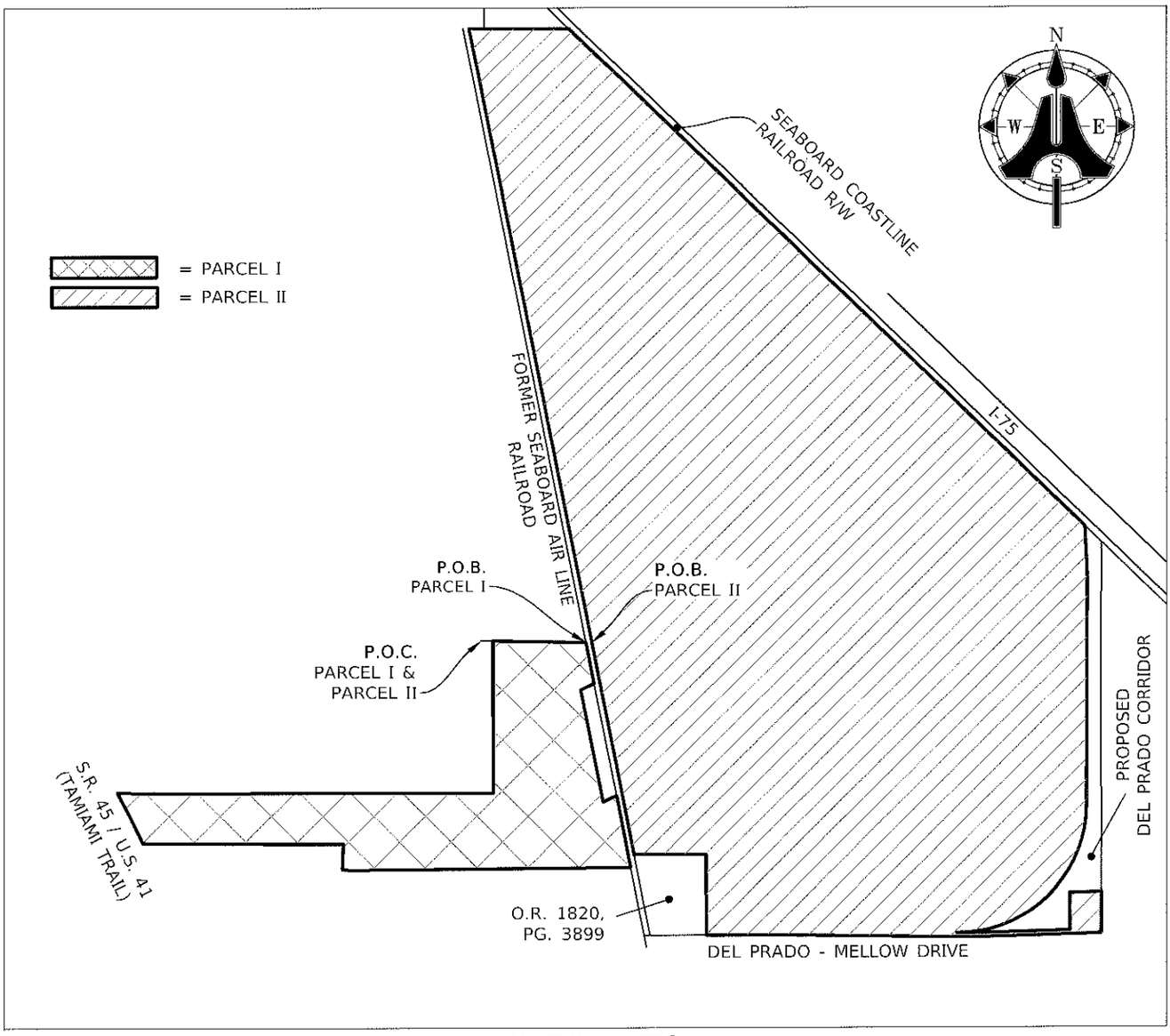
THIS IS NOT A SURVEY SHEET 2 OF 5
PRAIRIE PINES PRESERVE
DESCRIPTION OF ENV. LANDS - PARCELS I & II

DRAWN	CHECKED	CLIENT:
DT 01/08/2015	BP 01/12/2015	LEE COUNTY

FILE NAME:	SECTION:	TOWNSHIP:	RANGE:	COUNTY:	PROJECT NO.
14-0290-LEGAL	1-3,11-16	43 S	24 E	LEE	14-0290



LOCATION SKETCH

(NOT TO SCALE)

SOURCES:

1. SURVEY PLAT OF PINES PRAIRIE PRESERVE / LEE COUNTY CONSERVATION 2020 PROJECT #8800-PARCEL 194, BY BWLK, INC. DATED 02-19-09.
2. BOUNDARY SURVEY FOR LITTLE RANCHES ALSO KNOWN AS THE BAUM PARCEL BY CES, INC. DATED 02/11/2000 AND LAST REVISED 04-25-01.
3. BOUNDARY SURVEY OF THE FORMER SEABOARD AIR LINE RAIL ROAD BY DENI & ASSOCIATES, INC. DATED 01-18-02
4. O.R. BOOK 388, PG. 1655; O.R. 2369, PG. 3356; O.R. 3034, PG. 3859; O.R. 4105, PG. 4503; O.R. 689, PG. 699; O.R. 3672, PG. 2921; INST. NO. 2008000014553; O.R. 3042, PG. 1288; O.R. 767, PG. 159; O.R. 1820, PG. 3899; O.R. 2324, PG. 409
5. PLAT OF PINE SHADOWS AIRPARK, PLAT BOOK 34, PG. 66
6. THE RESORT OF CAREFREE BOULEVARD, PLAT BOOK 59, PG. 39
7. STATE OF FLORIDA, D.O.T. RIGHT OF WAY MAP OF S.R. 45, U.S. 41, SECTION 12010-2511, DATED 8-17-71, LAST REVISED 3-22-82.
8. LEE COUNTY DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP, COUNTY PROJECT NUMBER 4013, DEL PRADO-MELLOW DRIVE, DATED JULY 31, 1998 BY THIS FIRM.
9. PROPOSED DEL PRADO CORRIDOR PER SKETCH AND DESCRIPTION PROVIDED TO LEE COUNTY BY AIM ENGINEERING & SURVEYING, INC., PROJECT NUMBER 07-9390, DATED NOVEMBER 21, 2007.

LEGEND:

BWLK	= BEAN, WHITAKER, LUTZ & KAREH	LB	= LICENSED BUSINESS NUMBER
CB	= CHORD BEARING	No.	= NUMBER
CES	= COMMUNITY ENGINEERING SERVICES	O.R.	= OFFICIAL RECORD BOOK
CH	= CHORD DISTANCE	PG.	= PAGE
CL	= CENTERLINE	P.O.B.	= POINT OF BEGINNING
CO.	= COUNTY	P.O.C.	= POINT OF COMMENCEMENT
COR.	= CORNER	PSM	= PROFESSIONAL SURVEYOR & MAPPER
D.O.T.	= DEPARTMENT OF TRANSPORTATION	R	= RADIUS
E'LY	= EASTERLY	RR	= RAILROAD
ENV.	= ENVIRONMENTAL	R/W	= RIGHT OF WAY
FCM	= FOUND CONCRETE MONUMENT	SEC.	= SECTION
FIRC	= FOUND IRON ROD & CAP	S.R.	= STATE ROAD
ID.	= IDENTIFICATION	W'LY	= WESTERLY
INC.	= INCORPORATION	Δ	= DELTA
INST.	= INSTRUMENT	#	= NUMBER
L	= ARC LENGTH		

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THIS IS NOT A SURVEY — SHEET 3 OF 5

PRAIRIE PINES PRESERVE

LOCATION SKETCH OF ENV. LANDS - PARCELS I & II

DRAWN	CHECKED	CLIENT:
DT 01/08/2015	BP 01/12/2015	LEE COUNTY

FILE NAME:	SECTION:	TOWNSHIP:	RANGE:	COUNTY:	PROJECT NO.
14-0290-LEGAL	1-3,11-16	43 S	24 E	LEE	14-0290

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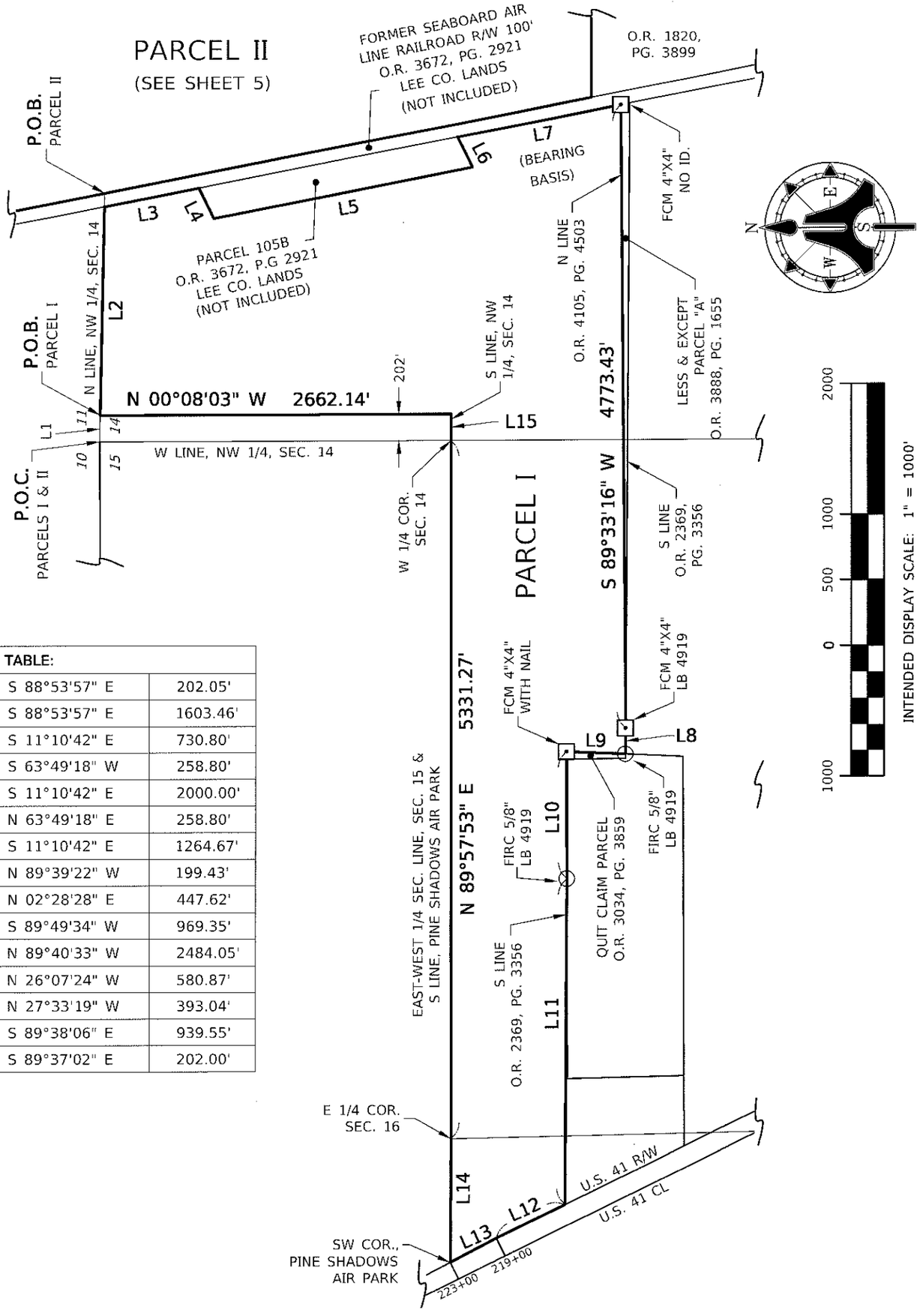

LINE TABLE:		
L1	S 88°53'57" E	202.05'
L2	S 88°53'57" E	1603.46'
L3	S 11°10'42" E	730.80'
L4	S 63°49'18" W	258.80'
L5	S 11°10'42" E	2000.00'
L6	N 63°49'18" E	258.80'
L7	S 11°10'42" E	1264.67'
L8	N 89°39'22" W	199.43'
L9	N 02°28'28" E	447.62'
L10	S 89°49'34" W	969.35'
L11	N 89°40'33" W	2484.05'
L12	N 26°07'24" W	580.87'
L13	N 27°33'19" W	393.04'
L14	S 89°38'06" E	939.55'
L15	S 89°37'02" E	202.00'

NOTES:

1. BEARINGS BASED ON THE WESTERLY RIGHT-OF-WAY LINE OF THE FORMER SEABOARD AIR LINE RAILROAD (100-FEET WIDE) AS DEPICTED ON SURVEY PLAT OF PINES PRAIRIE PRESERVE / LEE COUNTY CONSERVATION 2020 PROJECT #8800-PARCEL 194, BY BWLK, INC., DATED 02-19-09. SAID LINE HAVING A BEARING OF S 11°10'42" E.
2. ALL SOURCE DOCUMENTS UTILIZED IN THIS DESCRIPTION WERE ROTATED TO THIS BEARING BASIS TO CREATE A UNIFYING DESCRIPTION FOR PARCELS I & II.
3. ALL REFERENCES ARE RECORDED IN THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA.
4. NOT VALID WITHOUT ALL FIVE (5) SHEETS.
5. ALL DIMENSIONS IN U.S. SURVEY FEET OR DECIMALS THEREOF.
6. **THIS IS NOT A SURVEY.**

NOT VALID WITHOUT ALL SHEETS

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LICENSE BUSINESS No. 3114

THIS IS NOT A SURVEY — SHEET 4 OF 5

PRAIRIE PINES PRESERVE
SKETCH OF ENV. LANDS - PARCEL I

DRAWN	CHECKED	CLIENT:
DT 01/08/2015	BP 01/12/2015	LEE COUNTY

FILE NAME:	SECTION:	TOWNSHIP:	RANGE:	COUNTY:	PROJECT NO.
14-0290-LEGAL	1-3,11-16	43 S	24 E	LEE	14-0290

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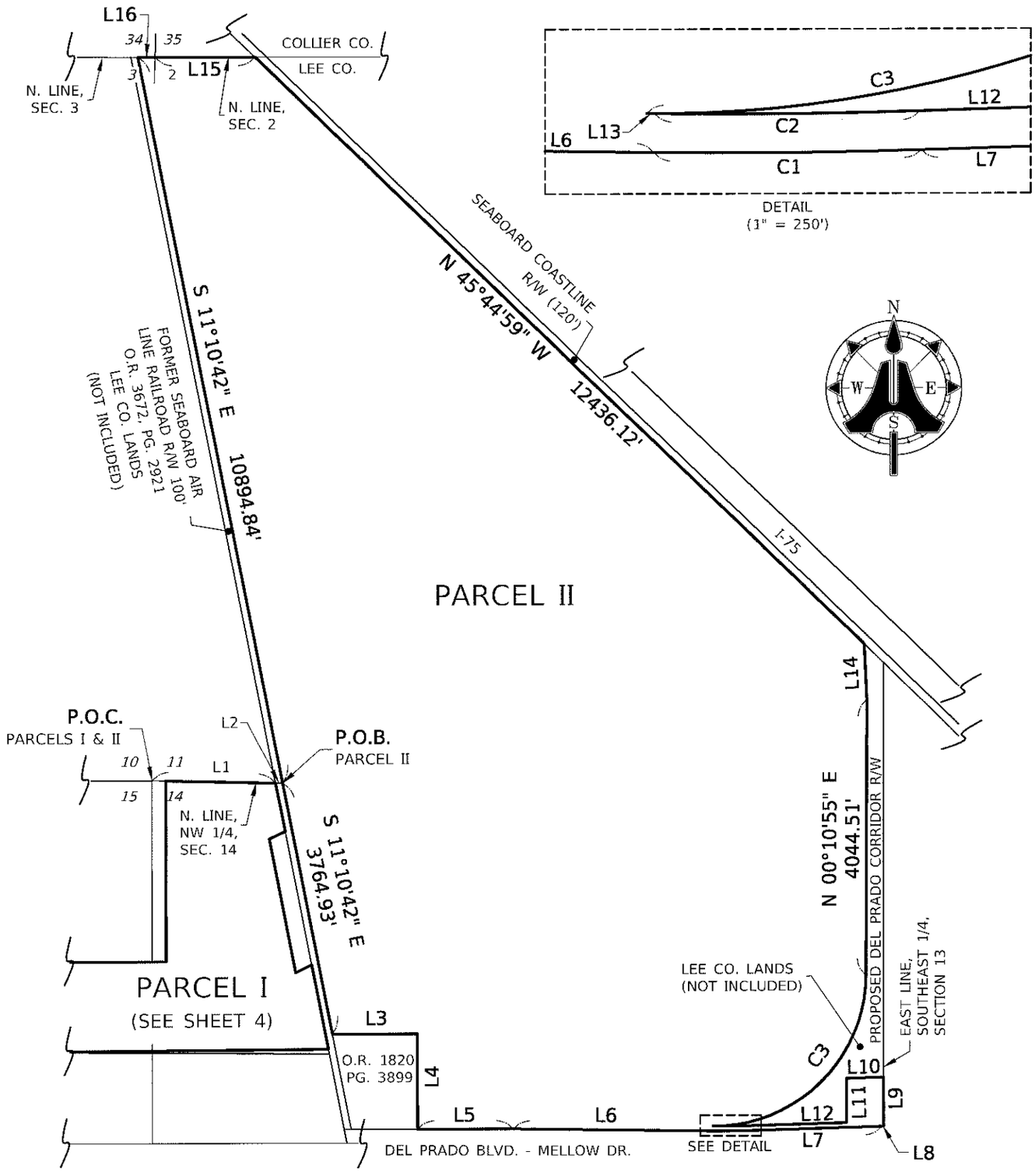

C1:
L = 489.68'
R = 11397.00'
Δ = 02°27'42" LEFT
CB = N 89°34'38" E
CH = 489.64'

C2:
L = 486.58'
R = 11325.00'
Δ = 02°27'42" RIGHT
CB = S 89°34'38" W
CH = 486.55'

C3:
L = 3489.28'
R = 2206.00'
Δ = 90°37'33" LEFT
CB = N 45°29'42" E
CH = 3136.75'

LINE TABLE:					
L1	S 88°53'57" E	1805.51'	L9	N 00°03'06" W	717.97'
L2	S 88°53'57" E	102.34'	L10	S 88°20'47" W	542.33'
L3	N 89°55'59" E	1241.53'	L11	S 00°02'50" E	646.22'
L4	S 00°10'56" E	1400.10'	L12	S 88°20'47" W	1453.03'
L5	N 89°55'59" E	1399.02'	L13	N 89°11'31" W	13.93'
L6	S 89°11'31" E	2938.53'	L14	N 02°49'19" W	828.23'
L7	N 88°20'47" E	1974.97'	L15	S 89°58'42" W	1460.48'
L8	N 87°29'43" E	18.44'	L16	N 89°58'17" W	253.03'

2000 0 500 2000 4000

INTENDED DISPLAY SCALE: 1" = 2000'

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THIS IS NOT A SURVEY — SHEET 5 OF 5

PRAIRIE PINES PRESERVE
SKETCH OF ENV. LANDS - PARCEL II

DRAWN	CHECKED	CLIENT:
DT 01/08/2015	BP 01/12/2015	LEE COUNTY

FILE NAME:	SECTION:	TOWNSHIP:	RANGE:	COUNTY:	PROJECT NO.
14-0290-LEGAL	1-3,11-16	43 S	24 E	LEE	14-0290

Appendix J: Expended and Projected Costs and Funding Source

Appendix J - Expended and Projected Costs and Funding Sources

EXPENDED $

Public Amenities and Facility Maintenance

Item	Funding Source	Costs
Construction of parking area, restrooms, ADA trail, wildlife blind, boardwalk; clearing and grading, fill, sod and landscaping, surveying and monitoring	FCT	$1,311,391
	LWCF	$195,218
Trail marker posts and signage	FCT	$709
	C20/20	$3,174
Water/sewer (2009-2014)	C20/20	$10,841
	FCT	$1,721
Electric (2009-2014)	C20/20	$1,795
	FCT	$1,135
Sod mowing (2011-2014)	C20/20	$2,536
Lift station repair/maintenance (2010-2014)	C20/20	$1,513
	FCT	$5,605
Pest control (2009-2014)	FCT	$1,631
	C20/20	$475
Maintenance/janitorial supplies (2009-2014)	FCT	$11,106
	C20/20	$5,571
Permitting	C20/20	$558
	FCT	$6,088
Well drilling	FCT	$9,896
Trash/recycling receptacle	LWCF	$1,229
Picnic tables	LWCF	$2,273
Benches	LWCF	$1,280
Trail UTAP	FCT	$5,425
Storage shed	FCT	$3,709
Equipment repair	C20/20	$673
	FCT	$545
Split rail/chain link fence	FCT	$7,041
Facility repair/maintenance (2011-2014)	FCT	$6,834
	C20/20	$2,808
total		**$1,602,780**

Resource Enhancement and Protection

Item	Funding Source	Costs
Exotic Plant Control	Pine/Melaleuca Sale Income	$42,688
	FDEP IPM/FWC BIPM grants	$1,789,747
	FCT	$1,091,479
	DOC labor crew	equivalent to $21000
	C20/20	$109,925
Wetland fauna survey	CHNEP grant	$8,625
Rollerchopping	C20/20	$31,141
Repair of Fecon mower	Pine/Melaleuca Sale Income	$21,391
Feral hog trapping (2006-2012)	FCT	$180
	C20/20	$50,900
total		**$3,146,076**

Overall Protection

Item	Funding Source	Costs
Perimeter fence/line clearing	FCT	$158,600
	C20/20	$84,661
Remove interior fence	C20/20 & volunteers	in-house
Tire and trash disposal	FCT	$15
	C20/20	$1,345
Boundary signs (~ miles)	C20/20	$827
LCSO off-duty officer patrolling	C20/20	$1,002
Management plan writing-contracted out	C20/20	$9,550
Survey	FCT	$5,675
Archaeological/Cultural Resource Survey	FCT	$2,300
total		**$263,975**

TOTAL COST TO DATE	**$5,012,831**

Grant	Date of Grant	Type	Purpose	Amount
CHNEP	November 2001	labor and monetary	biological survey of wetland vertebrates and invertebrates conducted by grant partners	$8,625
USDA - TAME	May 2002	labor	melaleuca control	in-kind services
FCT	November 2003	monetary	management activities &	$2,727,024
DEP - BIPM	September 2004	monetary	exotic plant removal	$153,000
DEP - BIPM	June 2006	monetary	exotic plant removal	$693,300
DEP - BIPM	March 2007	monetary	exotic plant removal	$245,178.70
LWCF	October 2008	monetary	construction of amentities	$200,000
FWC-BIPM	May 2009	money- state paid contractor	exotic plant control	$207,578
DOC	February 2009	labor- DOC crew	exotic plant control	$12,600
DOC	May 2010	labor- DOC crew	exotic plant treatments	$8,400