Pop Ash Creek Preserve Land Management Plan

Second Edition

9451 Nalle Grade Road
North Fort Myers, FL 33917

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

Approved by the Lee County Board of County Commissioners: 9/2/2016

Acknowledgements

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Laura Jewell
Lee Waller

Table of Contents

List of Exhibits

List of Acronyms

BIPM	Bureau of Invasive Plant Management
BOCC	Board of County Commissioners
CHNEP	Charlotte Harbor National Estuary Program
C20/20	Conservation 20/20
CLASAC	Conservation Lands Acquisition and Stewardship Advisory Committee
FDACS	Florida Department of Agriculture and Consumer Services
FDEP	Florida Department of Environmental Protection
FFS	Florida Forest Service
FNAI	Florida Natural Areas Inventory
FPL	Florida Power and Light
FWC	Florida Fish and Wildlife Conservation Commission
IRC	Institute for Regional Conservation
LCDCD	Lee County Department of Community Development
LCDNR	Lee County Division of Natural Resources
LCPR	Lee County Parks and Recreation
LiDAR	Light Detecting and Ranging
LSOM	Land Stewardship Operations Manual
MU	Management Unit
ORV	Off-road Vehicle
PACP	Pop Ash Creek Preserve
PARI	Piper Archaeological Research, Inc.
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 Pop Ash Creek Preserve to a productive, functional, and viable ecosystem. The primary management objective for the Preserve will be to continue exotic plant control maintenance and prescribed burning which benefit the natural plant communities and listed species utilizing the site. The Preserve will continue to provide the resource-based recreation with its current amenities.

I. EXECUTIVE SUMMARY

Pop Ash Creek Preserve (PACP) is located in northern Lee County adjacent to the Lee-Charlotte County boundary line, 3 miles north of Bayshore Road and less than 4 miles east of I-75. The 307.5-acre Preserve was acquired in 2003 through the Conservation 20/20 (C20/20) Program for $1,561,846. The C20/20 Program was established in 1996 when Lee County voters approved a referendum to increase property taxes by up to .5 mil for the purpose of purchasing and protecting environmentally sensitive lands. In 2015, the Board of County Commissioners began annually funding the program from the County's general fund.

PACP lies on the boundary between two lithostratigraphic units, the Tamiami Formation and the Tertiary-Quaternary Sediments. The southern third of the Preserve is located on the Tamiami Formation, which was created during the Pliocene Epoch between 5.3 and 1.8 million years ago. The Tamiami Formation contains a mix of fine to coarse-grained sand, sandy clay, fossiliferous sand and fossiliferous limestone. During the excavation of the borrow pit lakes in the late 1970s, numerous mounds of spoil were left onsite. Those piles remain today and contain abundant marine fossils. Natural elevations at PACP range from 26' at the northeast corner and slope in a general southwesterly direction to 22' in the natural flatwoods in the center of the Preserve. Further south, the elevations, especially around the man-made ponds, are elevated from the development activities that took place in the 1970s.

Four different soil types are found at the Preserve. All of the soil types are nearly level and poorly drained with moderate to rapid permeability at the surface. The majority of the Preserve (77%) consists of Pineda Fine Sand, which is found in hydric areas of the Preserve. The man-made soil, Matlacha Gravelly Fine Sand, is found on over 20% of the Preserve and was brought in during the 1970's. All of the soil types have severe limitations on urban development due to either the high water table or sandy soils. The Preserve mainly consists of wet and mesic flatwoods. Other natural communities include black water stream (Popash Creek) and wet/dry prairies. Man-made or disturbed communities include the borrow ponds, filter marshes, berms and ditches.

Historically, Pop Ash Creek Preserve contained various wetland ecosystems that were part of the Popash Creek Watershed. These ecosystems have been impacted by numerous alterations that affect the Preserve's hydroperiod and southerly sheet flow across the property. Impacts include borrow pits, a canal, ditches and their associated berms. A primary consideration for acquiring Pop Ash Creek Preserve was the potential for additional flood management and/or water storage for this flood prone-area, which has historically been inundated with heavy sheet flow from Charlotte County rains. In 2011, Lee County Division of Natural Resources and Conservation 20/20 staff worked with environmental consultants and engineers to create filter marshes and berm breaks that allow

the water to flow in a more historic pattern through the Preserve while helping with the flood management by keeping the water in the Preserve instead of channelizing it to the perimeter ditches.

Pop Ash Creek Preserve has undergone alterations for many years. An historical aerial from 1944 identified several agricultural fields and the existing Nalle and Nalle Grade Roads as dirt trails. By 1958, the Florida Power and Light power line was completed. A mosquito control ditch was constructed during the 1960s along the Preserve's western boundary. During the 1970s and early 1980s, an extensive amount of work was performed to create lakes, install ditches, alter Popash Creek's flow way and elevate areas by bringing in fill dirt for a failed waterfront mobile home community (Chateau Estates). A caretaker occupied a mobile home in the southeastern corner of the site from the middle 1970s until 2000.

Restoration activities over the past 10 years have been implemented to improve the hydrologic regime, remove invasive exotic plants and reduce pine tree densities. Continuing exotic plant maintenance treatments and regular prescribed burns are critical to the plant communities at Pop Ash Creek Preserve. One disturbance that will remain is a number of spoil piles. The majority of the piles have established large shrubs and trees and the potential damage to the Preserve by bringing in heavy equipment to remove the spoil would be costly and provide no significant ecological benefit.

In preparation for restoration activities, the fence on Nalle Grade Road was moved back approximately 300 feet to allow space for logging trucks to access the Preserve during melaleuca (*Melaleuca quinquenervia*) removal and pine tree thinning in 2009. This also created a primitive, at grade, trailhead where visitors can safely park vehicles and horse trailers. One year later, excess fill from the hydrologic restoration work was placed in the trailhead, which created a better surface for parking that was less prone to flooding. In addition to the restoration work, some minor trail changes were made to adjust for the created filter marshes and burn units. There are no plans to add or reroute any additional trails or add any additional public use activities.

In 2011, a partnership between Conservation 20/20 and the Lee County Division of Natural Resources resulted in the creation of filter marshes in the southern half of the Preserve. Water was re-routed out of ditches and across the Preserve and into a network of existing borrow ponds. This allows the Preserve to both improve water quality and hold more water in a flood-prone area of the County. After the filter marshes were installed, the cattle lease was restricted to the northern half, where there are no conservation easements. There was already a fence separating the halves of the Preserve, but two additional gates were installed for visitors to access the northern half.

The goal of this land management plan is to identify Preserve resources, develop strategies to protect those resources and continue with restoration activities to maintain Pop Ash Creek Preserve as a productive, functional and viable ecosystem while insuring the Preserve will be managed in accordance with Lee County Parks and Recreation's Land Stewardship Operations Manual. Management activities at Pop Ash Creek Preserve will focus on continued control of invasive exotic plant and animal species, continuing to provide public access and resource-based recreational opportunities and maintaining ecosystems with prescribed fire. A Management Action Plan that outlines restoration and management goals has been developed. This plan outlines these goals and strategies, explains how to accomplish these goals, and provides a timetable for completion. This land management plan will be revised in 10 years.

II. INTRODUCTION

Pop Ash Creek Preserve (PACP) was acquired as a single 307.5-acre parcel in the summer of 2003 through Lee County's Conservation 20/20 (C20/20) program for just over 1.56 million dollars. The C20/20 Program was established in 1996 after Lee County voters approved a referendum that allowed for the use of property taxes to purchase and protect environmentally sensitive lands. The site consists primarily of a mixture of wet and mesic pine flatwoods communities with a blackwater stream (Popash Creek) on the northern portion of the Preserve. There are a number of man-made modifications throughout the Preserve that have altered the natural ecosystems.

Many changes have taken place on PACP since completion of the first management plan. Invasive exotic plants are at a maintenance level. South Florida slash pine trees (*Pinus elliottii* var. *densa*) have been thinned and snags were removed from portions of the Preserve that could be accessed by logging equipment. Lee County Division of Natural Resources (LCDNR) conducted a hydrological restoration project that now allows water to sheet flow through the Preserve instead of quickly draining off site through ditches. A primitive trailhead has been installed to allow visitors to access the Preserve. During the next 10 years, periodic exotic plant treatments will be conducted to maintain the Preserve at a maintenance level for exotic plants, prescribed burning will be continued and, if possible, increased in frequency.

The purpose of this management plan is to define conservation goals for PACP that will address the above concerns. It will serve as a guide for Lee County's Department of Parks and Recreation (LCPR) and Conservation 20/20 program 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

PACP is located at 9451 Nalle Grade Road, North Fort Myers, in northern Lee County, about 3 miles north of Bayshore Road and less than 4 miles east of I-75. It is in the western half of Section 03, Township 43 South, Range 25 East. The site is bordered by Nalle Grade Road to the south, Nalle Road to the east, Lee-Charlotte County boundary line to the north and a drainage canal adjacent to numerous 5-acre ranchettes to the west.

The Preserve consists of STRAP # 03-43-25-00-00004.0000. The Preserve totals 307.5 acres and is located on the northwest corner of the Nalle Road and Nalle Grade Road intersection (Figures 1 and 2).

The Preserve consists of both human-altered and natural plant communities that are mostly wet or mesic flatwoods and a portion of a blackwater stream (Popash Creek). Past land uses and hydrologic modifications have disturbed the majority of the Preserve.

FIGURE 1: LOCATION

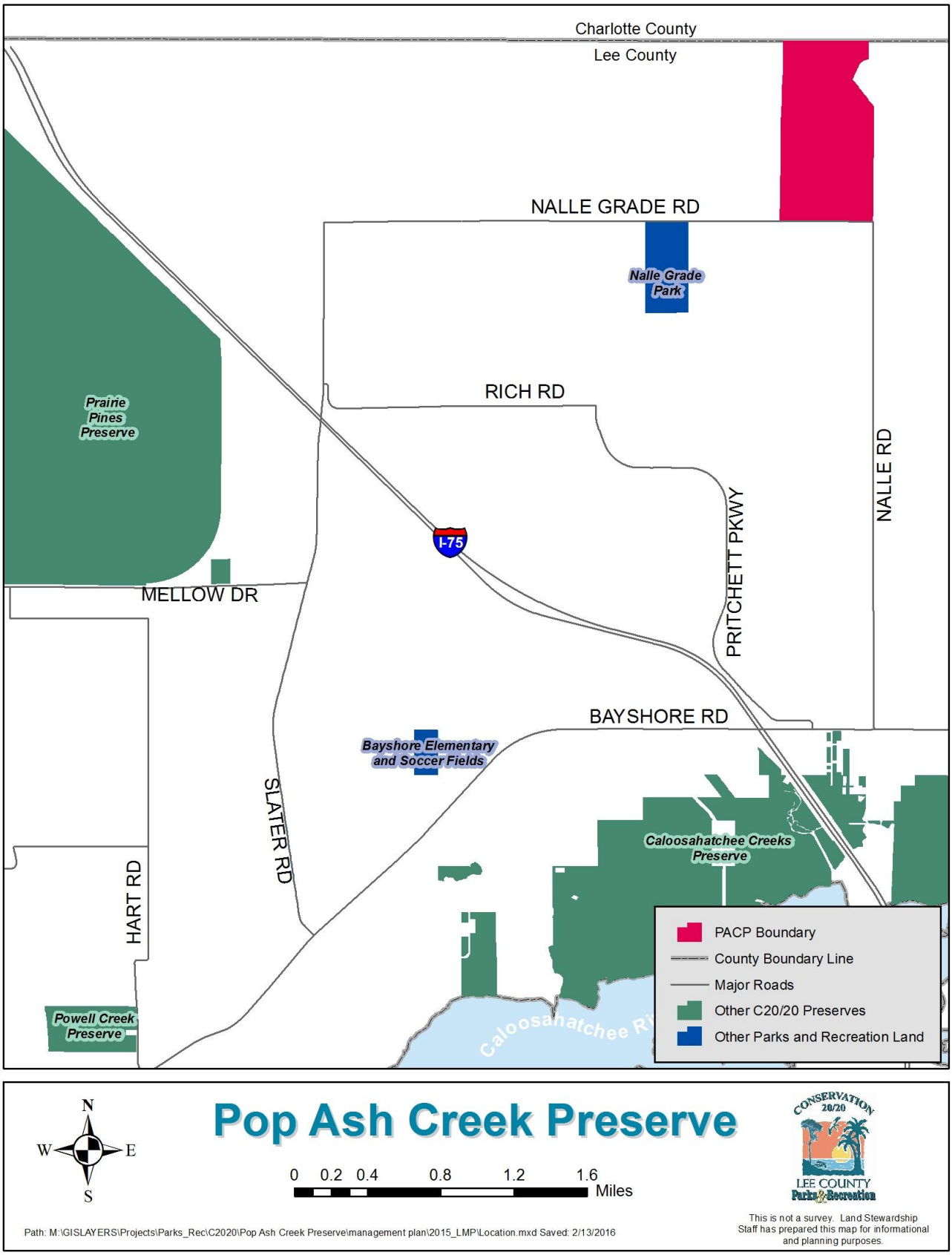
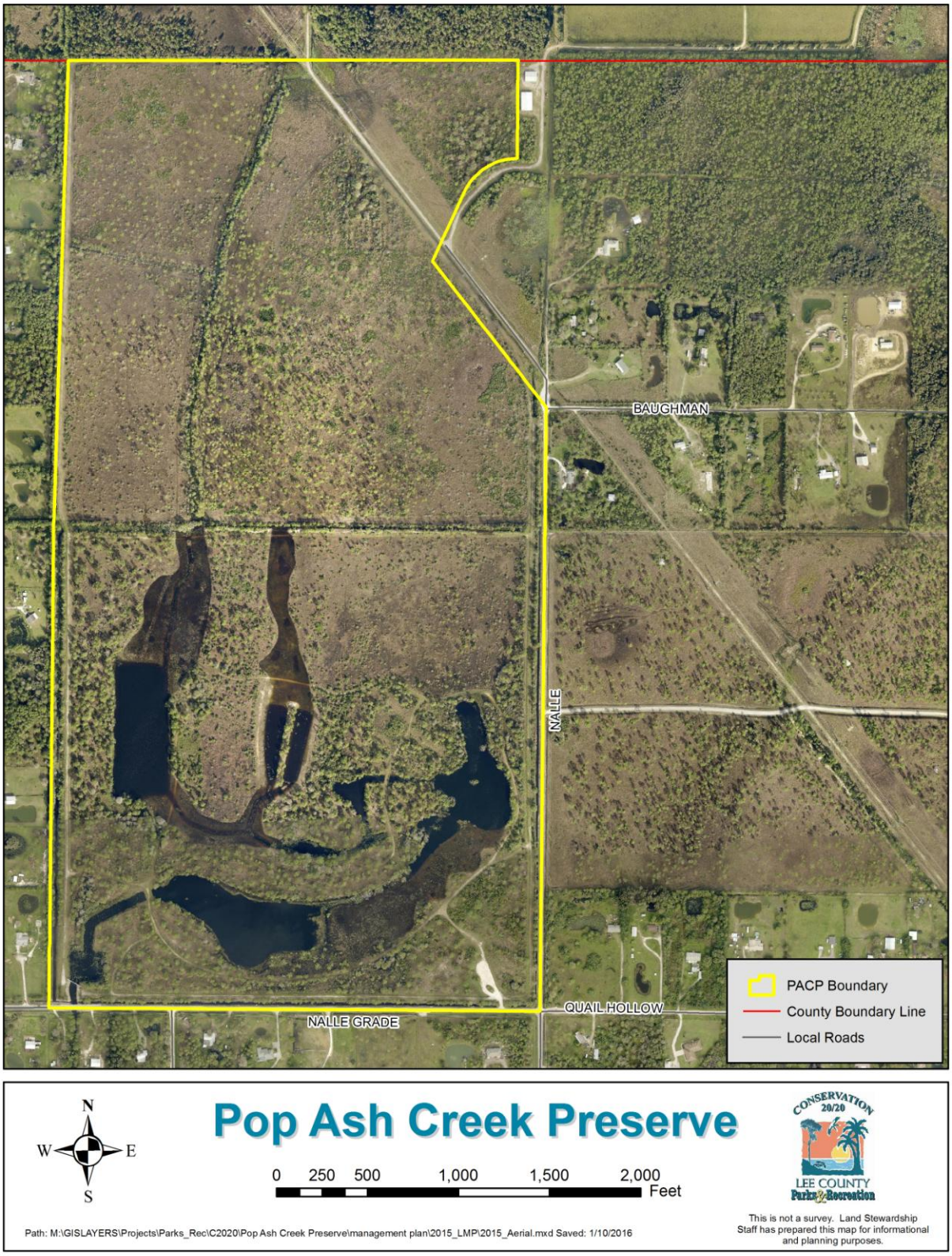


FIGURE 2: 2016 AERIAL



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

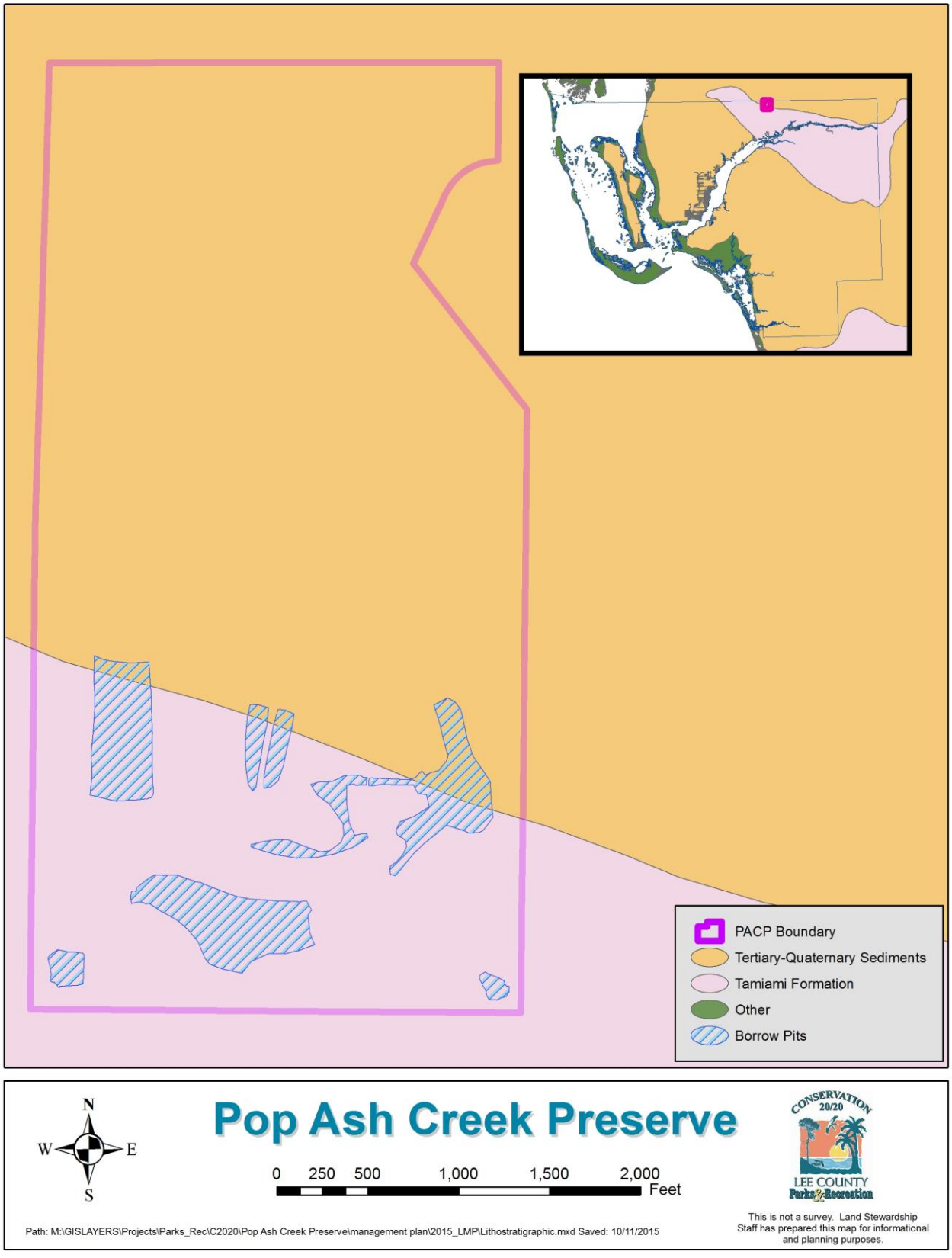
PACP lies on the boundary between two lithostratigraphic units, the Tamiami Formation and the Tertiary-Quaternary Sediments (Figure 3). Lithostratigraphic units are differentiated by the conditions under which they were formed and are formed during a specific interval of geologic time.

The southern third of the Preserve is located on the Tamiami Formation, which was created during the Pliocene Epoch between 5.3 and 1.8 million years ago. The Tamiami Formation contains a mix of fine to coarse-grained sand, sandy clay, fossiliferous sand and fossiliferous limestone. Phosphate is present throughout as are fossils, particularly barnacles, mollusks, corals, sea urchins, and smaller marine life. During the excavation of the borrow pits in the late 1970s, numerous mounds of spoil were placed near the ponds. Those piles remain and contain many marine fossils.

The rest of the Preserve was created during the Pleistocene Epoch between 1.8 million to 10,000 years ago. This period is also known as the Ice Age, where huge ice sheets formed across Canada and the northern United States. When these ice sheets were formed, they consumed large quantities of seawater, dropping the current sea level 300 or more feet, which greatly increased the land area of Florida.

Additional 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.

FIGURE 3: LITHOSTRATIGRAPHIC UNITS



iii. Topography

The following topographic map (Figure 4) 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. These data were collected in 2007 and represent the published 5 foot digital elevation model. The change in color gradient visually demonstrates the change in elevation.

Natural elevations at PACP range from 26 foot at the northeast corner and slope in a general southwesterly direction to 22 foot in the natural flatwoods in the center of the Preserve. Further south the elevations, especially around the man-made ponds, are elevated from the development activities that took place in the 1970s. Ditches, including the channelization of Pop Ash Creek are apparent on the northern half of the Preserve in dark blue. The southern half of PACP has numerous man-made disturbances, including ditches, berms and spoil piles. The solid yellow and brown portions show disturbance to the soils from the excavation of the borrow ponds.

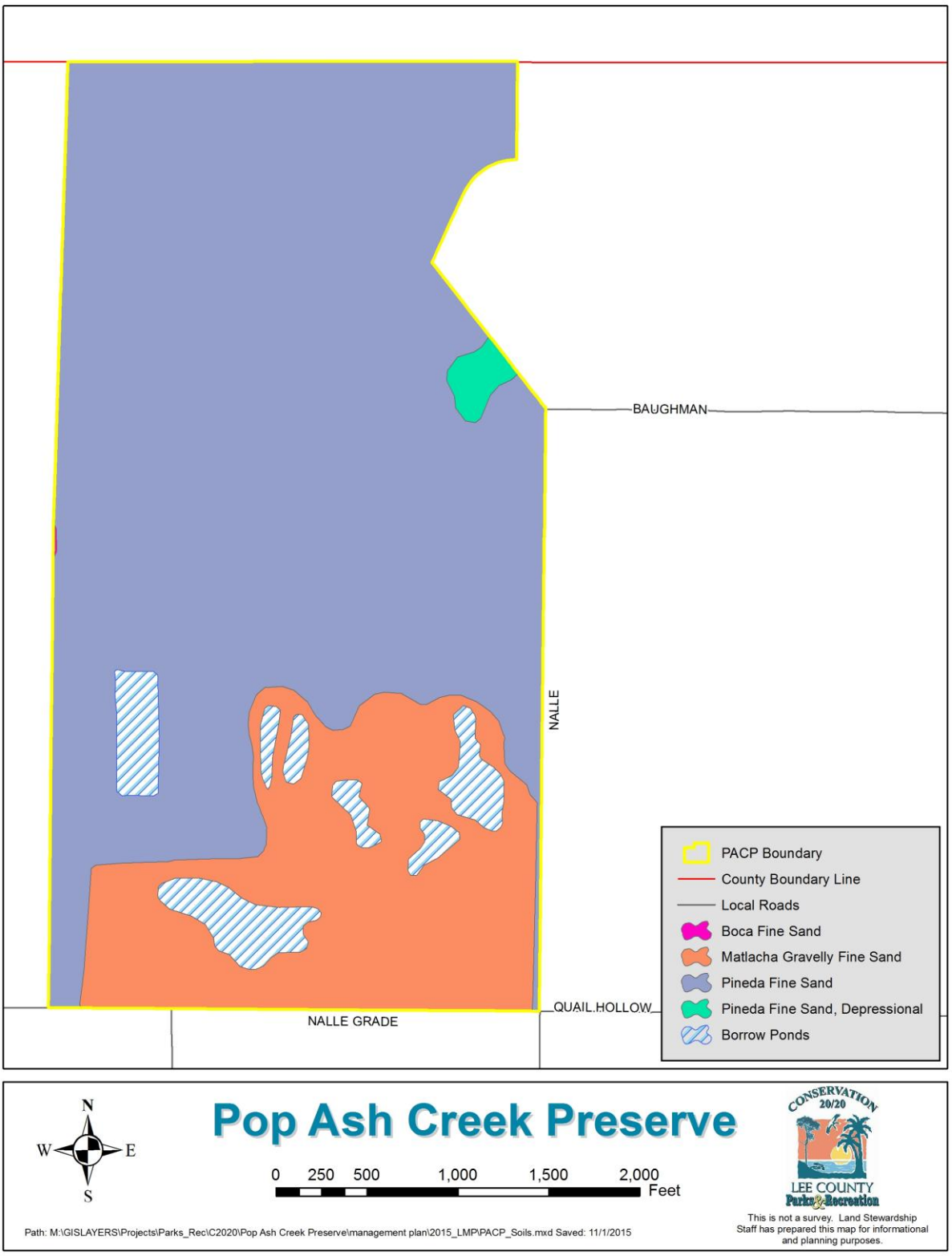
LCDNR completed a large restoration project in 2011. At that time, a berm was constructed on the south, east and west boundaries of the Preserve that is approximately 26 feet in elevation. Shallow filter marshes were also dug to reestablish flowways between the two halves of the Preserve and between the existing borrow ponds. The marshes were dug to approximately 1-2 feet below natural grade at the center and gradually sloping up to the natural elevation. Two of these marshes have a deeper channel to direct waterflow through the ponds. Additionally, numerous “fish ponds” were dug throughout the marshes, creating places that would store ponded water during the dry season, providing wading birds and other wildlife with a food source. See the Hydrological Components and Watershed section for more information on this restoration project and Appendix A for the As-Built Survey.

FIGURE 4: TOPOGRAPHY

iv. Soils

There are four different soil types found at PACP (Figure 5 and Appendix B). A common relationship for all of these soil types is that their slopes range from 0-2%. The majority of the Preserve consists of Pineda Fine Sand, a soil most common in slough habitats that will typically have standing water during the wet season. The Matlacha Gravelly Fine Sand is found in areas with manmade disturbances and is unlikely to be saturated for long periods of time. The trails at PACP were already established when the property was purchased and no additional trails are proposed due to the soil sensitivity and established burn units. The berm that was constructed for the LCDNR restoration project on the boundary of the majority of the Preserve allows staff to access the site in the wet season while minimizing any impacts to the soil. Refer to the LSOM's Land Stewardship Plan Development and Supplemental Information section for additional information on soil types and limitations.

FIGURE 5: SOILS



v. Hydrologic Components and Watershed

PACP is within both the South Florida Water Management District (SFWMD) and LCDNR's Popash Creek Watershed (Figure 6). General information on hydrology and watershed is located in the LSOM Land Stewardship Plan Development and Supplemental Information section.

There are numerous hydrological alterations that affect the Preserve's hydroperiod and southerly sheet flow across the property. At the time the Preserve was purchased by the County, the impacts included borrow ponds, ditches and their associated berms. The ditches and berms directed sheet flow to enter a ditch that bisects the property and rapidly exit the Preserve to ditches on the east and western boundaries (Figure 7).

When acquiring PACP, the site was noted as being a good candidate for projects that could create additional flood management and/or water storage for this flood prone area, which has historically been inundated with heavy sheet flow from Charlotte County rains. LCDNR and C20/20 staff worked with environmental consultants to create filter marshes and berm breaks that allow the water to flow in a more historic pattern through the Preserve (Figure 8) while helping with the flood management by keeping the water in the Preserve instead of channelizing it to the perimeter ditches. Additionally, a weir was installed in the southwest corner of the Preserve by LCDNR to allow the water to be released in a controlled manner.

FIGURE 6: WATERSHED

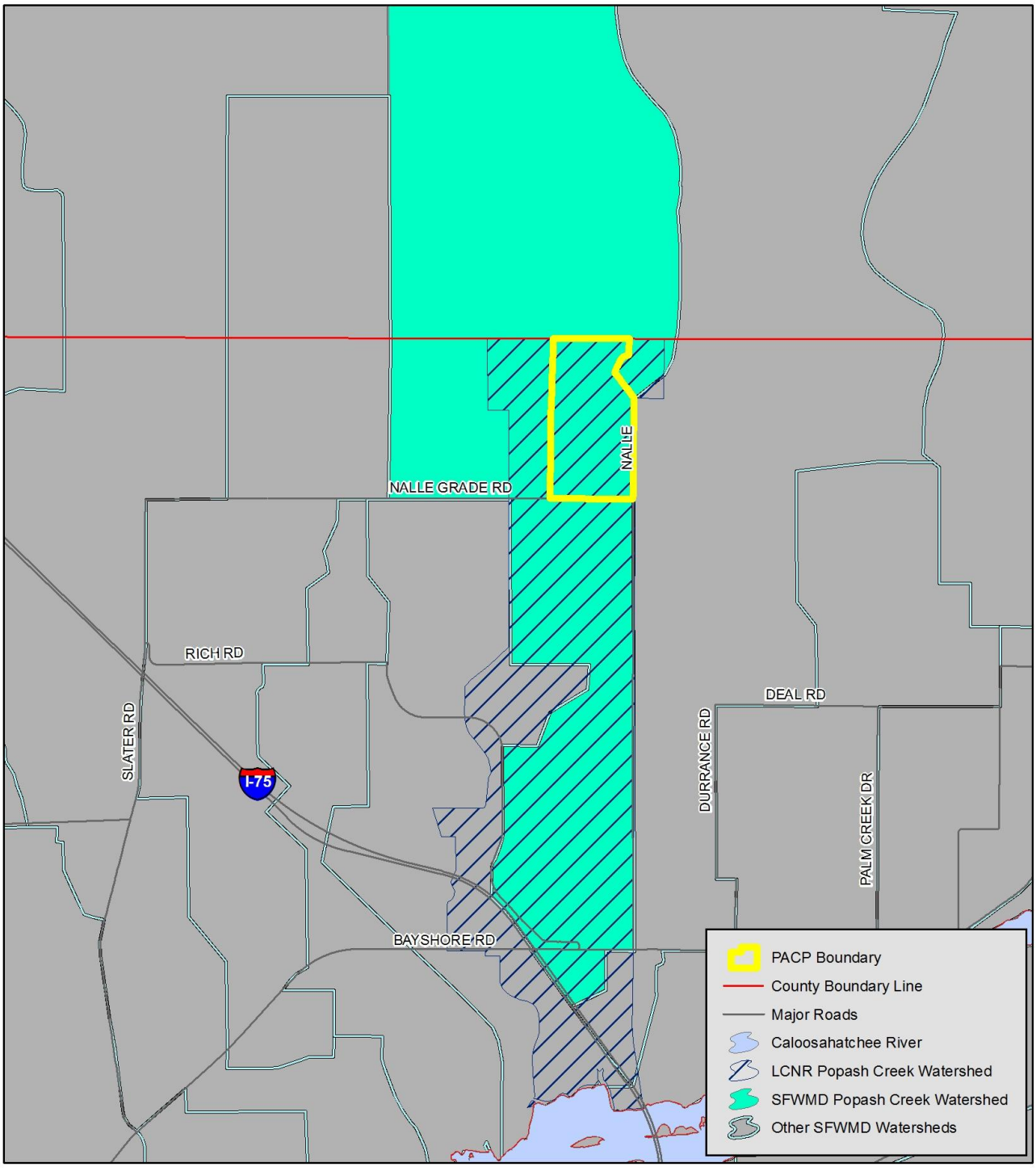


FIGURE 7: HYDROLOGIC FEATURES PRE 2011

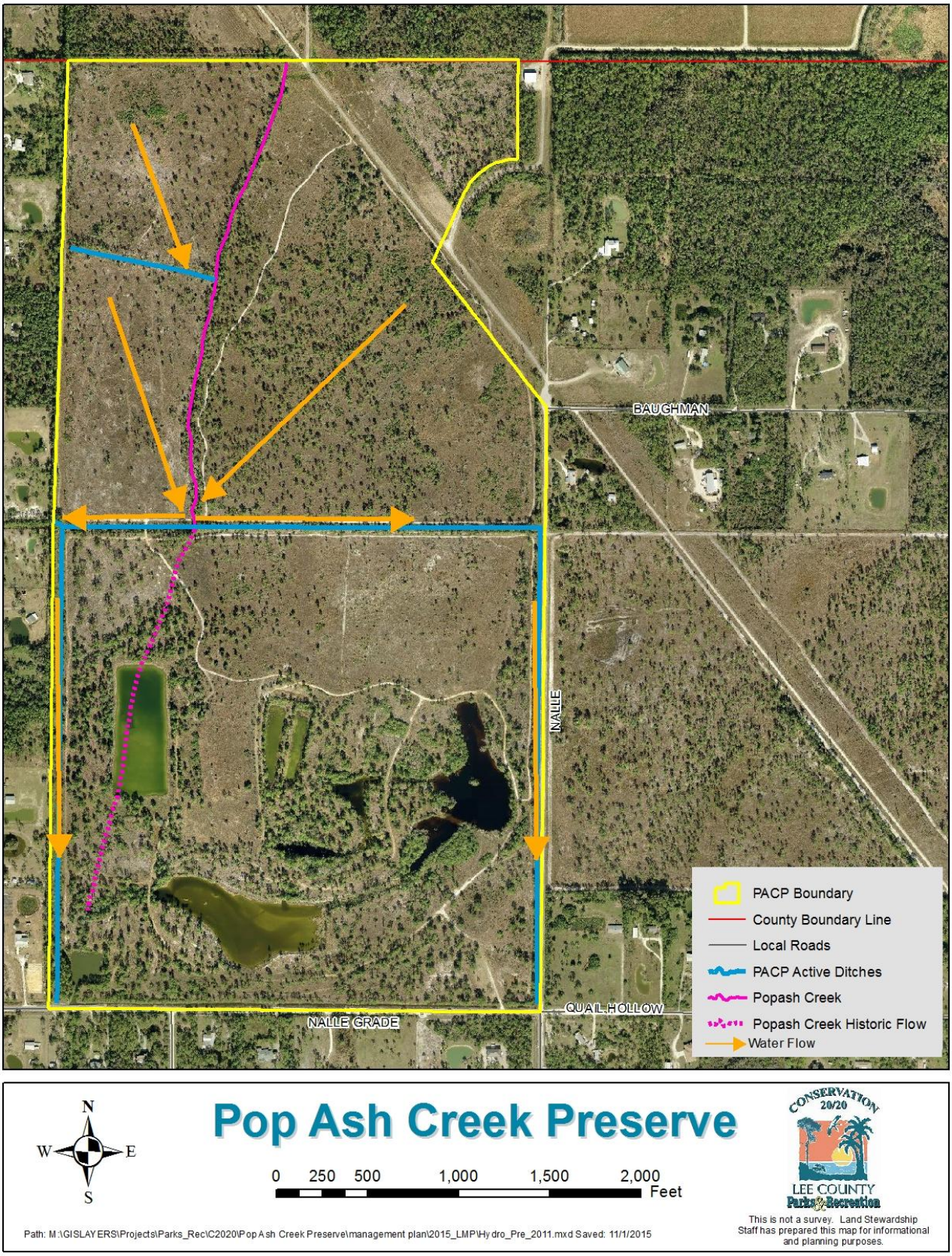
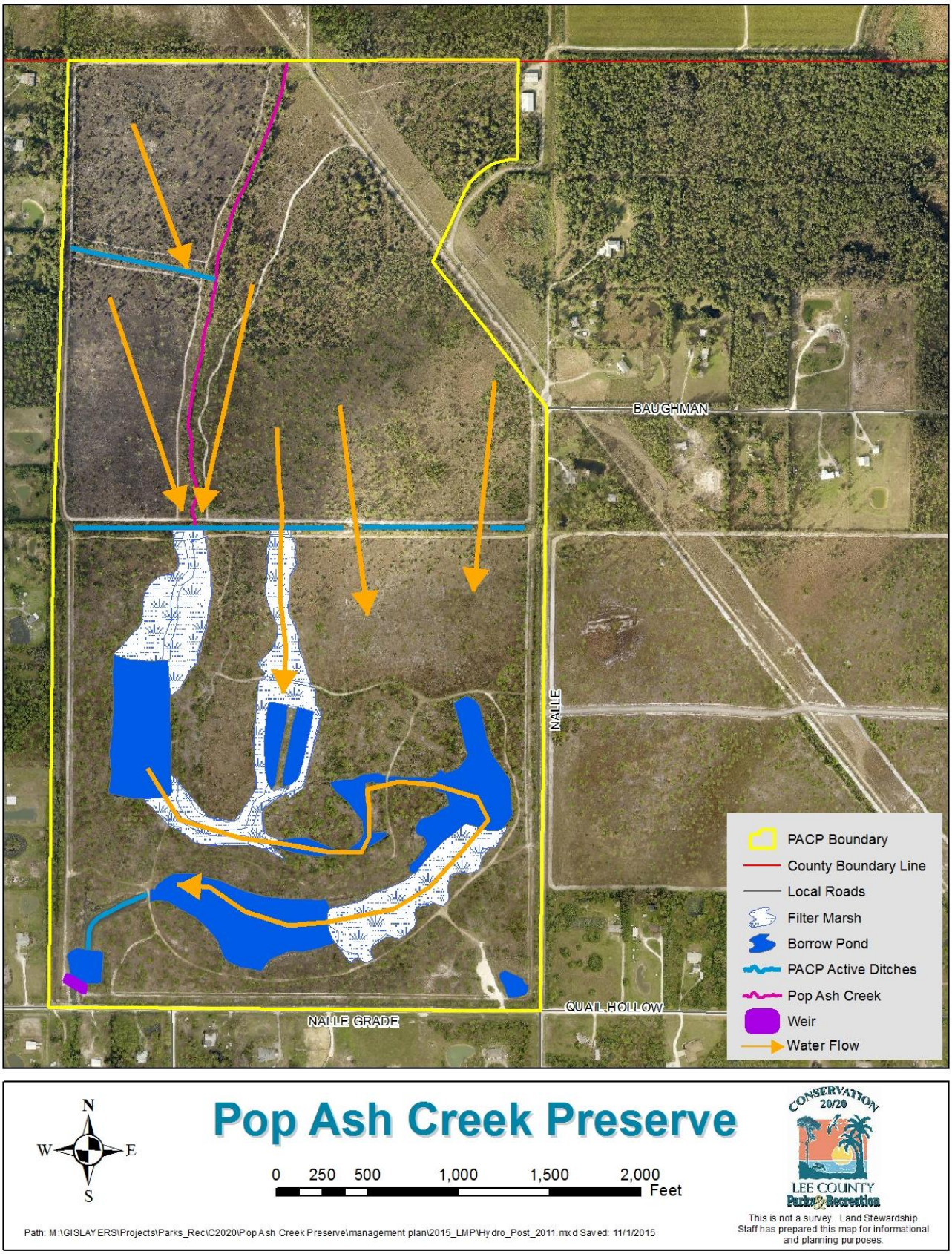


FIGURE 8: HYDROLOGIC FEATURES POST 2011



B. Biological Resources

i. Ecosystem Function

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 couperi*) and Florida black bear (*Ursus americanus floridanus*). Birds find shelter in the palmetto (*Serenoa repens*) understory, nest in the tall pines and forage in the grasses. Oak toads (*Bufo 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 part 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.

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 these wetlands. 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 (*Mycteria americana*) 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

PACP contains a combination of wetland and upland communities that serve as important habitat for a variety of wildlife. The Preserve consists of 13 natural or altered plant communities described by the Florida Natural Areas Inventory (FNAI). Wet and mesic flatwoods are the most common plant communities (65%) and 70% of the Preserve is classified as wetlands. Almost 21% of the Preserve consists of altered communities. Figure 9 shows the location of the plant communities found at PACP. Boylan Environmental Consultants mapped the plant communities in 2009 with subsequent minor adjustments made by C20/20 staff. 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. A complete list of plant species identified during site inspections to PACP can be found in Appendix C. This list will be updated on a seasonal basis to identify plants in their inflorescence phase.

Natural Plant Communities

Wet Flatwoods – 106.2 acres, 34.5% coverage

Mesic Flatwoods – 92.4 acres, 30.1% coverage

Wet Prairie – 22.0 acres, 7.1% coverage

Basin Marsh (Disturbed) – 16.5 acres, 5.4% coverage

The filter marshes created by LCDNR have been categorized as basin marshes.

Dry Prairie – 5.3 acres, 1.7% coverage

Blackwater Stream Community – 1.1 acres, <1% coverage

Depression Marsh – 0.7 acres, <1% coverage

Altered Landcover Types

Impoundment/Artificial Pond – 21.8 acres, 7.1% coverage

Spoil Area – 13.5 acres, 4.4% coverage

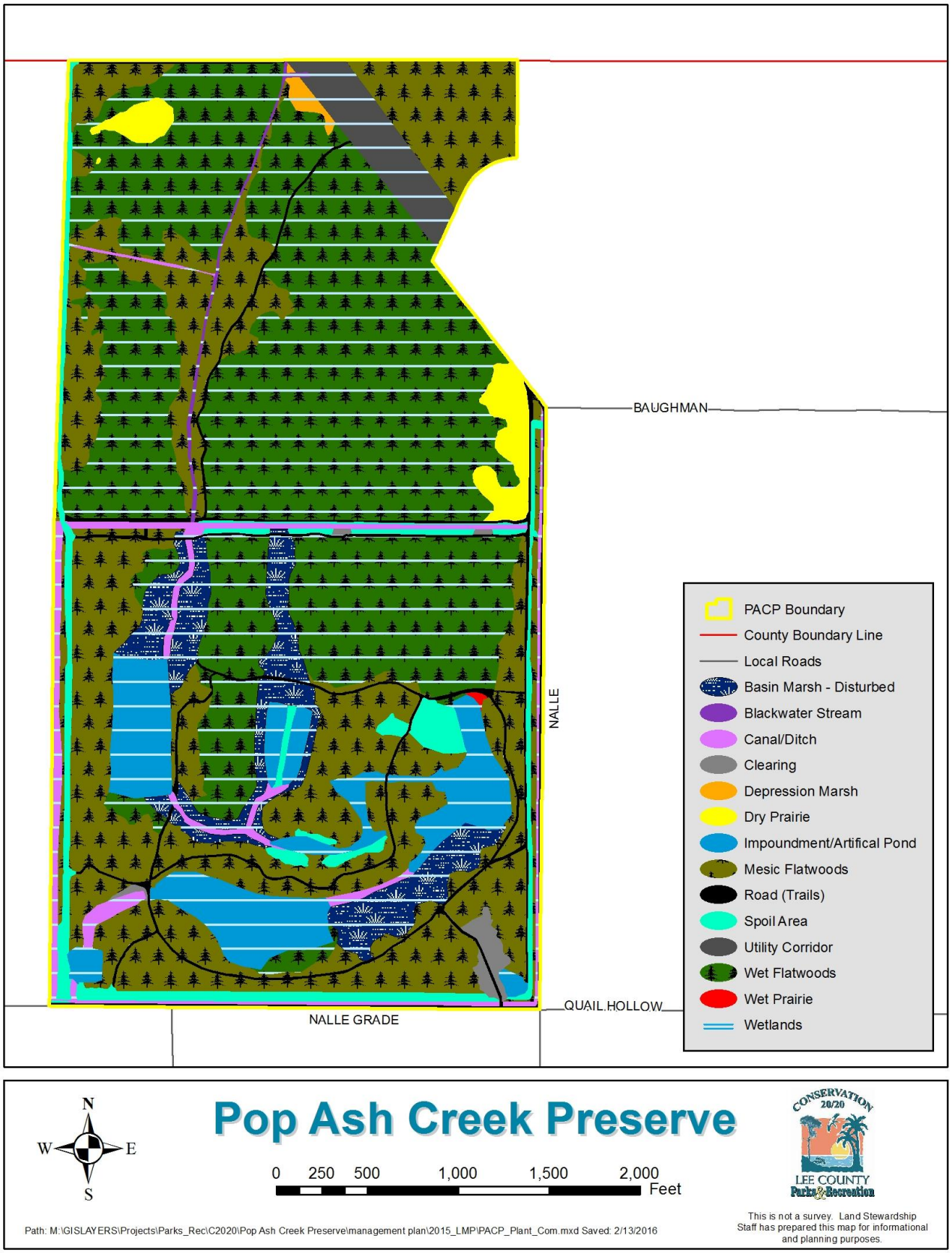
Canal/Ditch – 9.9 acres, 3.2% coverage

Road – 9.7 acres, 3.2% coverage

Utility Corridor – 6.4 acres, 2.1% coverage

Clearing – 1.7 acres, <1% coverage

FIGURE 9: PLANT COMMUNITIES



iii. Fauna

PACP provides a variety of habitats for wildlife, including those that are state and federally listed. Seventeen exotic wildlife species have been documented at the Preserve. Appendix D has the complete list of wildlife seen at the Preserve at the time of writing this Land Management Plan; as recorded by staff during field work and site inspections, as well as by Lee County Bird Patrol volunteers and other Preserve visitors.

Stewardship goals will focus on maintaining healthy, functioning ecosystem processes to provide optimal habitat for native wildlife (including listed species). Prescribed burning and continued 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 PACP. 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 determining recreation and hydrological projects. If additional listed species are documented on the Preserve, they will be added to the lists in Appendices C or D.

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 for this species. When the first edition of the PACP management plan was written in 2006, this species had not been observed on the property. After the melaleuca removal and pine tree

thinning projects, Sherman's fox squirrels have been documented on the Preserve several times.

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.

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 continued invasive exotic plant control in the numerous wetlands and prescribed fires. This includes burning both the uplands that the birds forage in and occasionally allowing the fires to burn into the wetlands to reduce brush encroachment. The installation of the weir in the southwest corner of the Preserve allows water levels to slowly drop during the dry season and the deeper "fish holes" in the created filter marshes provide foraging opportunities further into the dry season.

Herons, Egrets, Ibises and Spoonbills

Population decline for the little blue heron (*Egretta caerulea*) and tricolored heron (*Egretta tricolor)* is 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 these species. 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.

The roseate spoonbill (*Platalea ajaja*) 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 eight of these species of wading birds are seen regularly at the Preserve. The management practices that benefit wood storks and Florida sandhill cranes will also benefit these species.

Swallow-tailed 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 as a result of development and conversion to agriculture are the major threats to this species.

Swallow-tailed kites are seen regularly, but have not been spotted nesting at PACP. If they do nest 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. Continued invasive exotic plant removal and regular prescribed fires will 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. Loss of habitat and human disturbance due to development remain 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… They breed in deciduous, mixed, and coniferous forests. Although documentation of breeding in south Florida is scant, they are becoming more common in suburban and urban areas. The Cooper’s hawk appears to be adapting to breeding in urban areas, which may help increase populations” (CLOa 2003).

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.

Neither species has been documented utilizing the Preserve 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.

Limpkin

The limpkin (*Aramus guarauna*) is a large, long-billed, long-legged wading bird of swamps and marshes. Its bill is heavy and slightly decurved, allowing easy access to its preferred food, the apple snail. Pollution, hydrological disruptions, and an increase in invasive plants threaten the health of the apple snail population and, as a result, the limpkin.

While limpkin sightings at PACP are uncommon, management recommendations for the wading birds will benefit the occasional limpkin that uses the Preserve.

Hairy Woodpecker

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 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" (CLOb 2003).

This is another species that is only occasionally seen at the Preserve. Prescribed fire and continued invasive exotic plant control will benefit this species.

Crested Caracara

The crested caracara's (*Caracara cheriway)* range has contracted and become more fragmented because its habitat is threatened primarily by residential development and conversion to more intensive agricultural (e.g., citrus) uses. The crested caracara's large habitat requirements makes land acquisition and/or development of incentives (e.g., cooperative agreements, conservation easements, tax breaks) for private landowners to maintain their ranch lands for their long-term security an important task.

According to eBird, a pair of caracaras was seen at the Preserve in 1977. At that time, the area would have been less developed and more appropriate habitat for

the species. Caracaras have been seen in 2013 near the corner of Bayshore and Nalle Roads and at the nearby Caloosahatchee Creeks Preserve by birders active in Lee County's Bird Patrol program. In addition to these observations approximately 2-3 miles south of the Preserve, caracaras are regularly seen at Babcock Ranch and on North River Road, located southeast of PACP. If seen at PACP, staff and volunteers will record any sightings to FNAI and on eBird.

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 at PACP benefit this species.

Gopher Tortoise

Gopher tortoises are in decline throughout their range due to loss and degradation of habitat. As a species dependent 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.

There has only been one documented sighting of a gopher tortoise at PACP. Prescribed burning and continued exotic plant control benefit this species.

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 by people as a result of fear, as well as for trade, and being struck by vehicles.

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

Plant Species

In addition to designated wildlife, PACP provides 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.

Giant Airplants

Endangered 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).

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. Like many plants found in fire dependent communities, this species generally benefits from occasional fire and reduced palmetto cover (Sommers 2011).

Continued removal of invasive exotic plants and utilizing prescribed burning, as a management tool, will benefit the species.

Leafless Beaked Ladiestresses

Leafless beaked ladies'-tresses (*Sacoila lanceolata*) is a state threatened species found in swamps and hydric hammocks. The variety (*lanceolata*) seen at PACP is more common and is found in open roadsides and other open, moist habitats.

Management activities that benefit the Catesby's lily will also benefit this species.

The majority of the designated plant species at PACP have been listed by IRC, which is not a regulatory agency. IRC's designation was obtained from their book Rare Plants of South Florida: Their History, Conservation and Restoration, (Gann 2002) or website regionalconservation.org. Scientists working for this Institute have conducted a tremendous amount of fieldwork 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 PACP:

- 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.
- 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 saw palmetto pickers it is illegal to harvest them on the Preserve.
- Implement prescribed fire and 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.

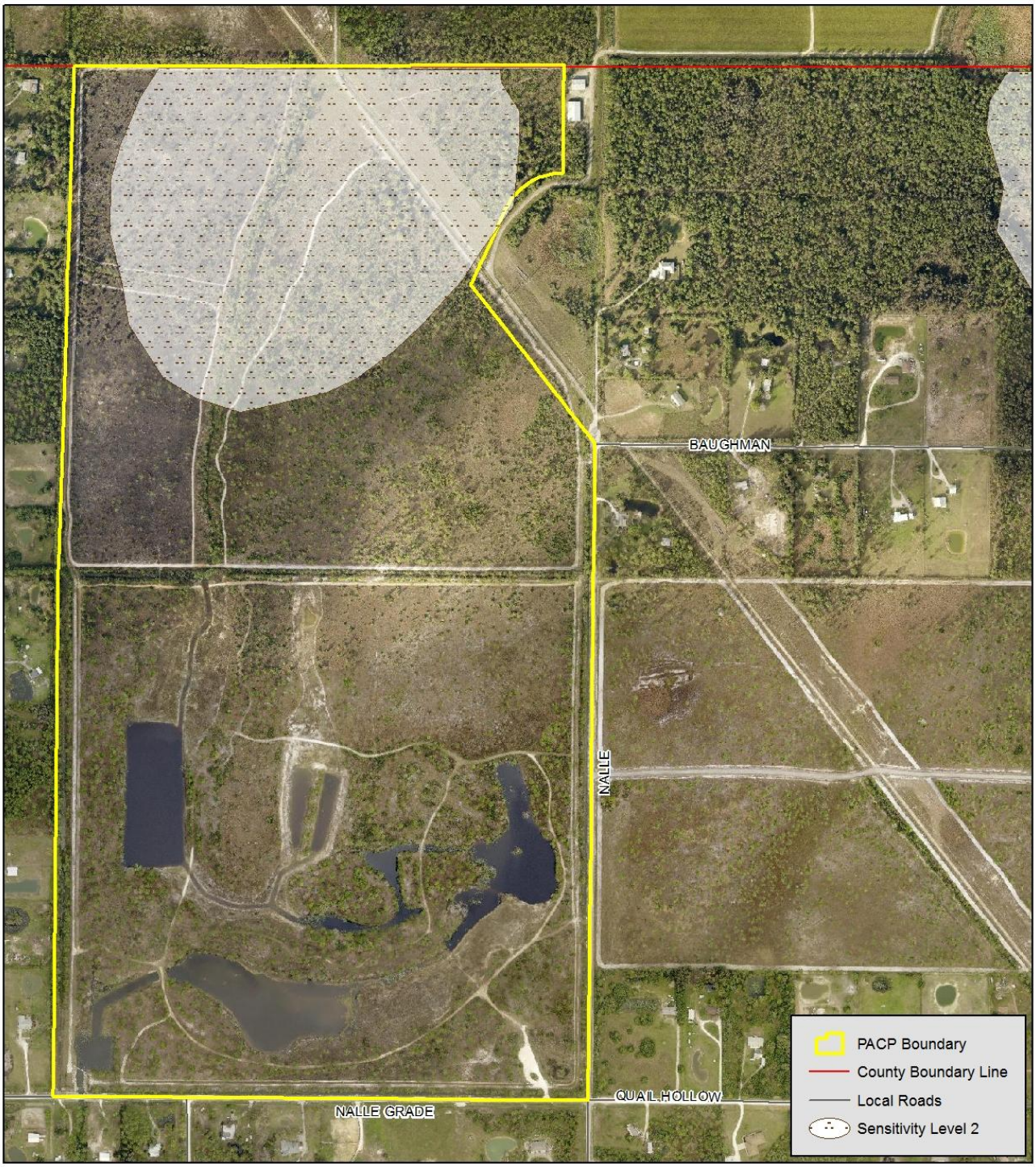
- Prevent and prosecute poaching and removal activities (e.g. palmetto berry harvesting, illegal hunting, pine cone/straw removal and orchid collection).

C. Cultural Resources

i. Archaeological Features

In 1987, Piper Archaeological Research, Inc. (PARI) conducted an archaeological site inventory of Lee County. They were able to identify an additional 53 sites increasing the total number of known archaeological sites in Lee County to 204. PARI created a site predictive model and archaeological sensitivity map for the county that highlighted potential areas likely to contain additional archaeological sites. Approximately 66 acres of PACP lies within the study's "Sensitivity Level 2" area (Figure 10). There are no restoration activities planned that would disturb the soils in this portion of the Preserve. General information on archaeological features in Lee County is located in the LSOM Land Stewardship Plan Development and Supplemental Information section.

FIGURE 10: ARCHAEOLOGICAL FEATURES



ii. Land Use History

Over the last 100 years, ecosystem manipulation on PACP has occurred. Intense logging of slash pine in the late nineteenth century through the 1930s virtually eliminated all virgin stands of the southern mixed forest in south Florida. Additional activities were derived from historical aerial photography, speaking with the prior property owner (Carter 2005), and the Phase I Environmental Site Assessment report (WRS 2003).

According to interpretations based on aerial photography dating back to 1944 (Figure 11), land use may have included agricultural activities. Three patches of abandoned row crop farming are evident on the parcel. These activities likely reduced slash pine densities throughout the Preserve and explains the lack of old growth pine trees found on the site. Besides the original flow-way of Popash Creek, the photograph also illustrates Nalle and Nalle Grade Roads as dirt trails. Between 1953 and 1958 the power-line road had been completed in the northeast corner of the Preserve (Figure 12).

In 1966, a mosquito control ditch was installed along three quarters of the western boundary and one half of the northern boundary, west of the FPL power line easement. Evidence of stumping and the dredging of Popash Creek were also observed on the aerials.

"Several lakes were constructed on the southern portion of the site in an attempt to construct a waterfront mobile home community (Chateau Estates) during the early 1970s" (WRS 2003). During 1970, the south central lake was under excavation in the largest onsite seasonal wetland and a welcome center with mobile homes appear in the southeast corner. In 1972, the southeast portion of the Preserve was landscaped near the welcome center (Figure 13). The development began to take shape with evidence of a construction trailer located north of the south central lake. By 1975 (Figure 14), additional lakes were constructed along with two percolation ponds in the central area, and two years later the middle ditch (east of creek) was constructed.

By 1980, most of the southern section of the site was cleared and filled. Small disturbed patches of vegetation in north and south portions had been removed. The southern section of Popash Creek was removed and a rectangular lake was excavated along the old creek bed. Additionally, a square lake in the southwest portion of the site was present, the last quarter of the western ditch was completed along the boundary, and the middle ditch (west of creek) was completed. By 1985, the welcome center and one mobile home was removed (Figure 15).

A caretaker occupied the remaining mobile home in the southeastern corner of the site from the middle 1970s until 2000.

The last owners held the property for nearly ten years and requested a rezoning for a soil excavation mine. The project had received opposition from neighbors and was cancelled. During this time period, the owners continued to graze cattle and mowed the aggressive melaleuca trees that began overtaking the flatwoods. Most of the northern section was included in a prescribed burn two years prior to C20/20 acquisition (Carter 2005).

The final two aerials (Figures 16 and 17) show the Preserve before and after Cooper Timber was contracted in 2009 to remove snags and thin pine trees on the Preserve.

FIGURE 11: 1944 AERIAL

FIGURE 12: 1958 AERIAL

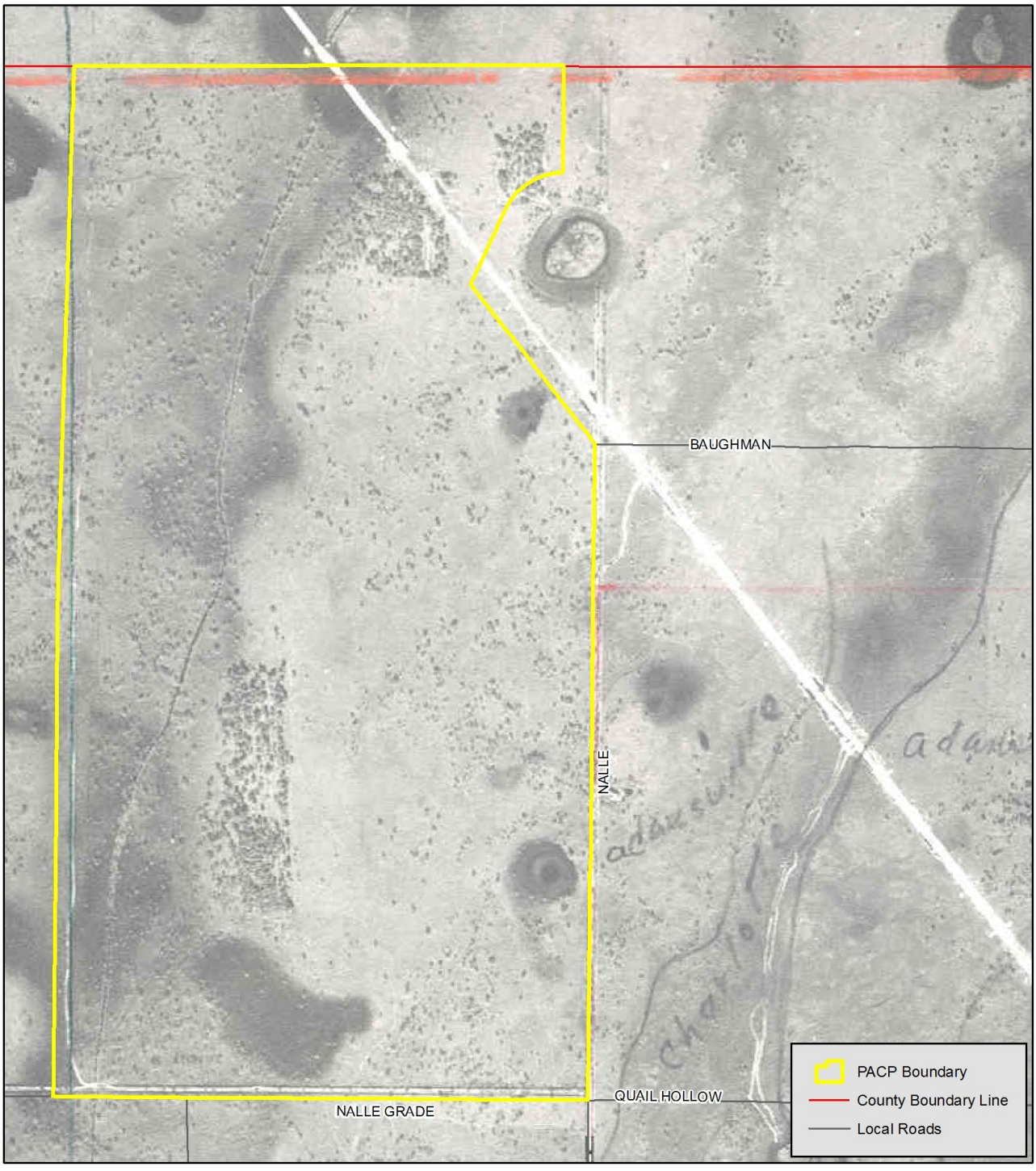


FIGURE 13: 1974 AERIAL

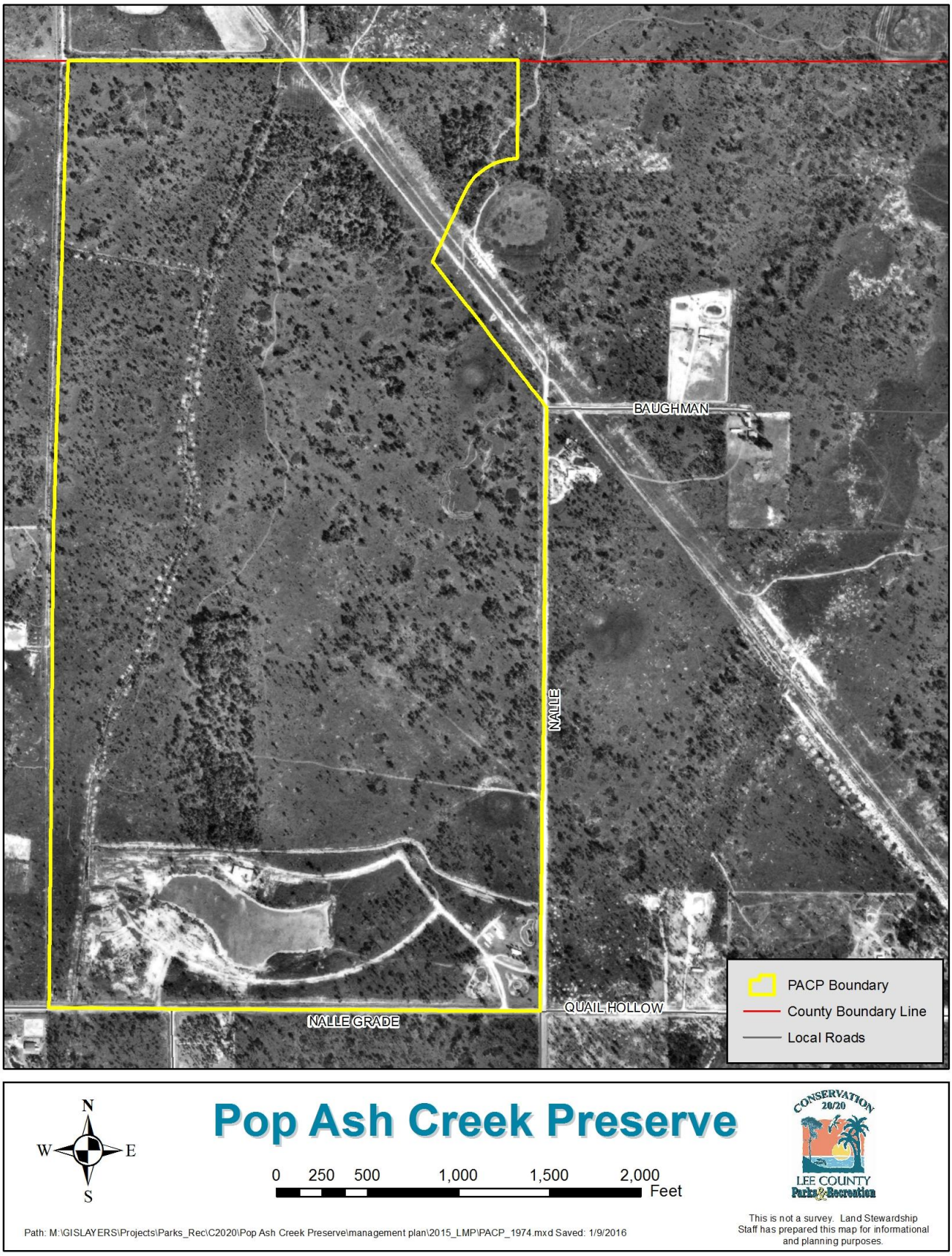


FIGURE 14: 1975 AERIAL

N
W E
S

Pop Ash Creek Preserve

0 250 500 1,000 1,500 2,000 Feet

CONSERVATION 20/20
LEE COUNTY Parks & Recreation

Path: M:\GISLAYERS\Projects\Parks_Rec\C2020\Pop Ash Creek Preserve\management plan\2015_LMP\PACP_1975.mxd Saved: 1/9/2016

This is not a survey. Land Stewardship Staff has prepared this map for informational and planning purposes.

FIGURE 15: 1985 AERIAL

N
W E
S

Pop Ash Creek Preserve

0 250 500 1,000 1,500 2,000 Feet

CONSERVATION 20/20
LEE COUNTY Parks & Recreation

Path: M:\GISLAYERS\Projects\Parks_Rec\C2020\Pop Ash Creek Preserve\management plan\2015_LMP\PACP_1985.mxd Saved: 1/9/2016

This is not a survey. Land Stewardship Staff has prepared this map for informational and planning purposes.

FIGURE 16: 2009 AERIAL

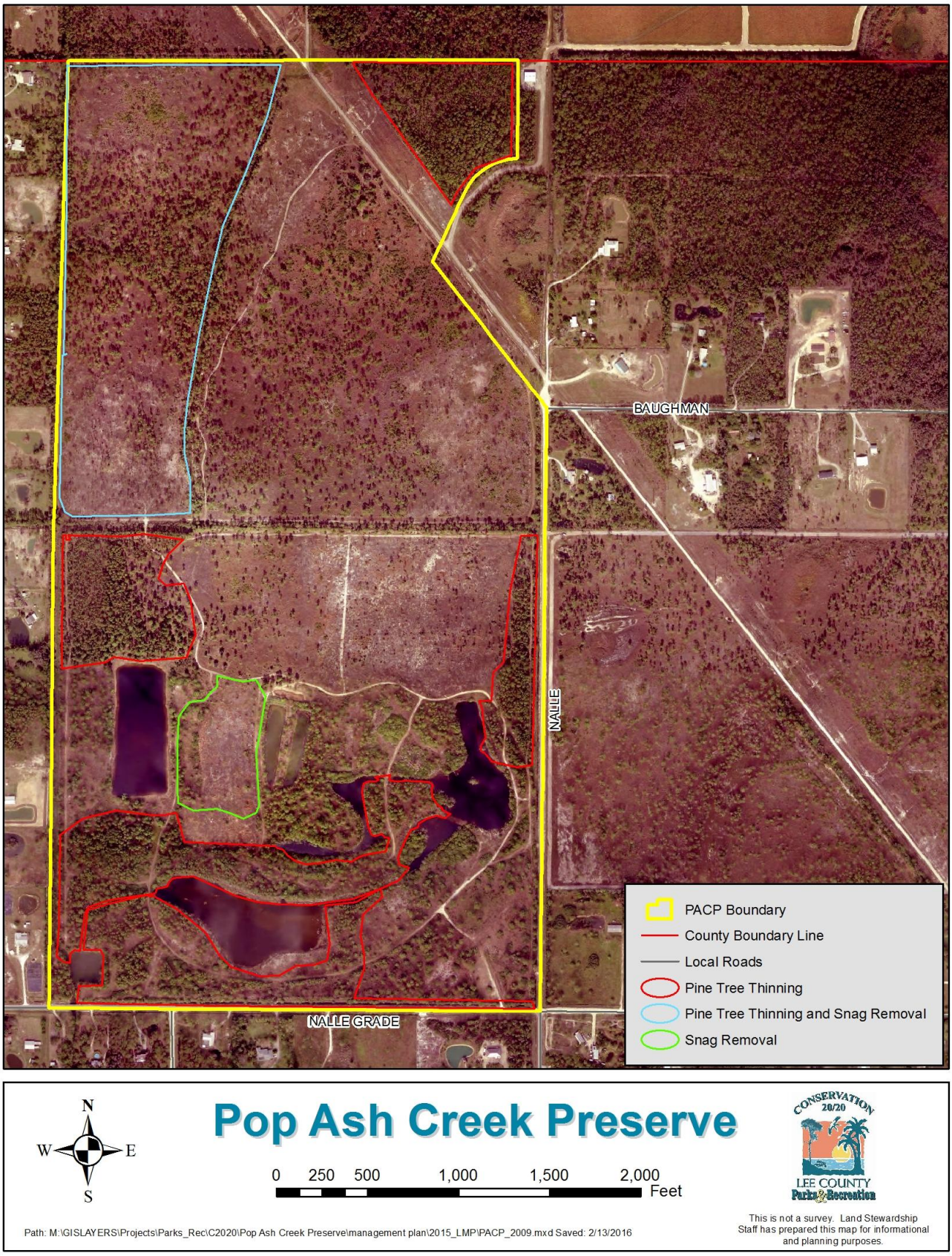
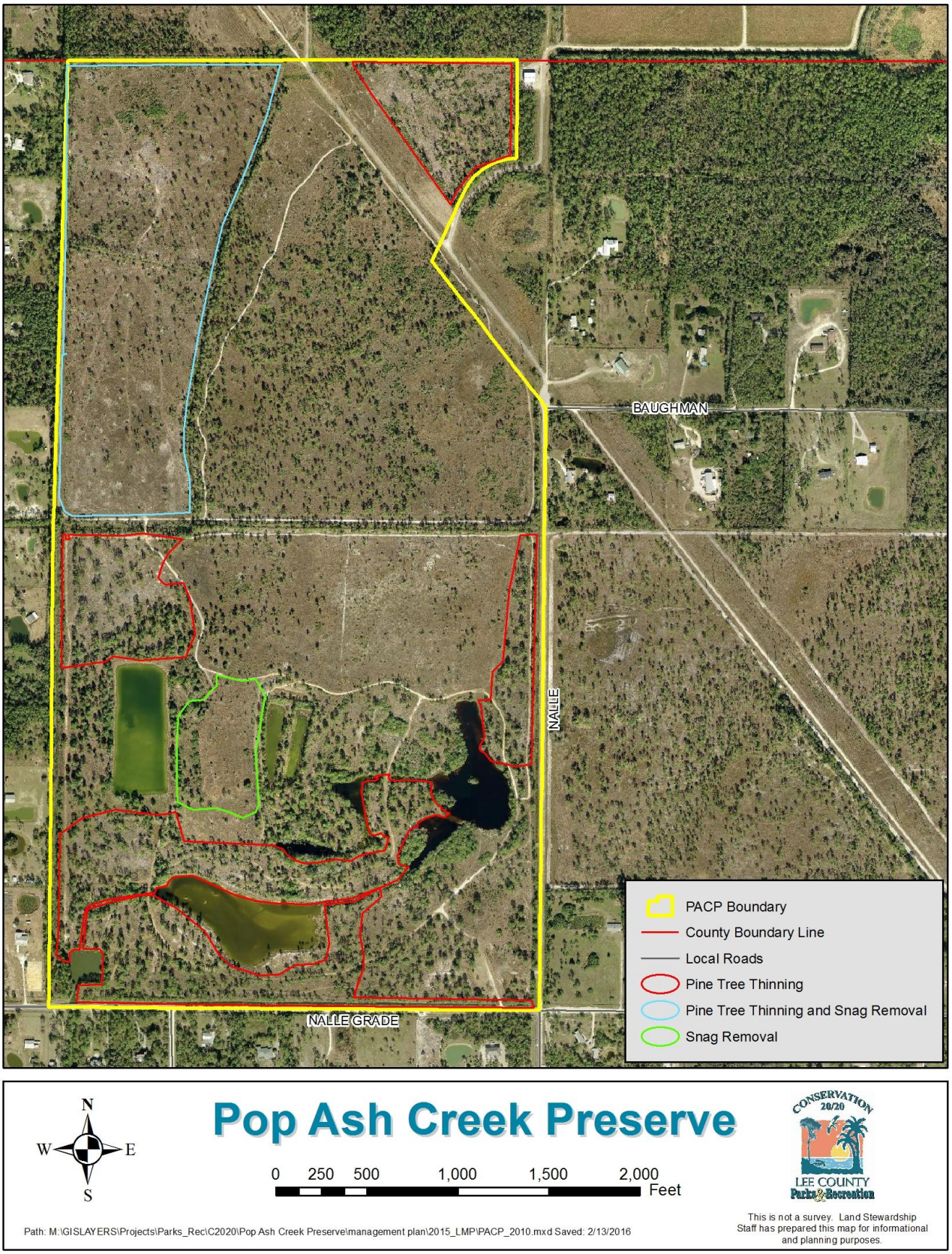


FIGURE 17: 2010 AERIAL



iii. Public Interest

PACP has had strong public interest since it was first nominated to C20/20 in 2001. During the two-tiered review process, County Staff received 104 letters in support and 75 people attend the CLASAC meetings to discuss the property. The majority of these contacts identified themselves as members of the "Bayshore Community." They supported the C20/20 property purchase for a nature preserve, wildlife refuge and for water management and sheetflow protection. Many of the residents also wanted the property to provide hiking and equestrian trails.

BOCC Commissioner Andrew Coy was interested in examining the Preserve's potential to help alleviate the flooding problems in the area. Initially, C20/20 and LCDNR staff implemented an invasive exotic plant removal plan for the plants growing on the channelized bank of Popash Creek located on the west boundary, as well as the ditch that bisects the preserve from west to east. The large hydrologic project that completed in 2011 by LCDNR (and discussed in several other sections of this plan) included public meetings, field trips and a webpage to allow for dialog with neighbors and others interested in the PACP project and the surrounding area's issues with seasonal high water. C20/20 staff sent distributed educational materials to neighbors of the Preserve when additional large-scale restoration activities have taken place, including exotic plant removal, pine tree thinning and prescribed burning.

Staff and volunteers have led periodic field trips to the Preserve to educate the public on the importance of conservation, restoration activities, birding, native plant communities and other natural history topics. There have also been numerous workdays scheduled with volunteers, including neighbors of the Preserve, Boy Scout troops and equestrian clubs. The Preserve is also very popular for people interested in hiking, fishing and horseback riding.

Information about the Preserve and all C20/20 preserves can be found on the web site along with copies of the management plans when available at Conservation2020.org. Staff may continue to 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 PACP into consideration. General information on natural trends and disturbances influencing native communities and stewardship at PACP can be

found in the LSOM's Land Stewardship Plan Development and Supplemental Information section.

The primary impact to PACP was the rapid colonization of invasive exotic plants in the 1980s and 1990s. Melaleuca (*Melaleuca quinquenervia*) was maintained by previous landowners with periodic mowing, resulting in a dog hair thick stand of small diameter trees covering over 138 acres of wet flatwoods.

Between 2006 and 2008, C20/20 staff worked with contractors to remove and chemically treat invasive exotic plants on the northern half of the Preserve and in the wet flatwoods on the southern half of the Preserve. Much of this work was funded by grants from the Charlotte Harbor National Estuary Program (CHNEP) and the Bureau of Invasive Plant Management (BIPM). The following picture was taken in 2009 on the same trail as shown above.

Additional grants through BIPM in 2008 and 2009 provided funding and crews to concentrate on removing other invasive exotic species in the areas where melaleuca had been removed. The final initial invasive exotic plant removal around the borrow ponds was conducted as part of the LCDNR hydrologic restoration project in 2011. The entire Preserve is now at a maintenance level for invasive exotic plants and contractors conduct periodic sweeps to remove any seedling and sapling exotics.

B. Internal Influences

There are numerous human influences that have impacted PACP. Hydrological impacts include drainage and flood control measures, the creation of local roadways and utility infrastructures and a failed mobile home development. See Figure 18 for their locations.

Restoration activities over the past 10 years have been implemented to improve the hydrologic regime, remove invasive exotic plants and reduce pine tree densities. Continuing exotic plant maintenance treatments and regular prescribed burns are critical to the plant communities at PACP. There are still some remaining spoil piles that at this time will not be removed. The majority have established large shrubs and trees and the potential damage to the

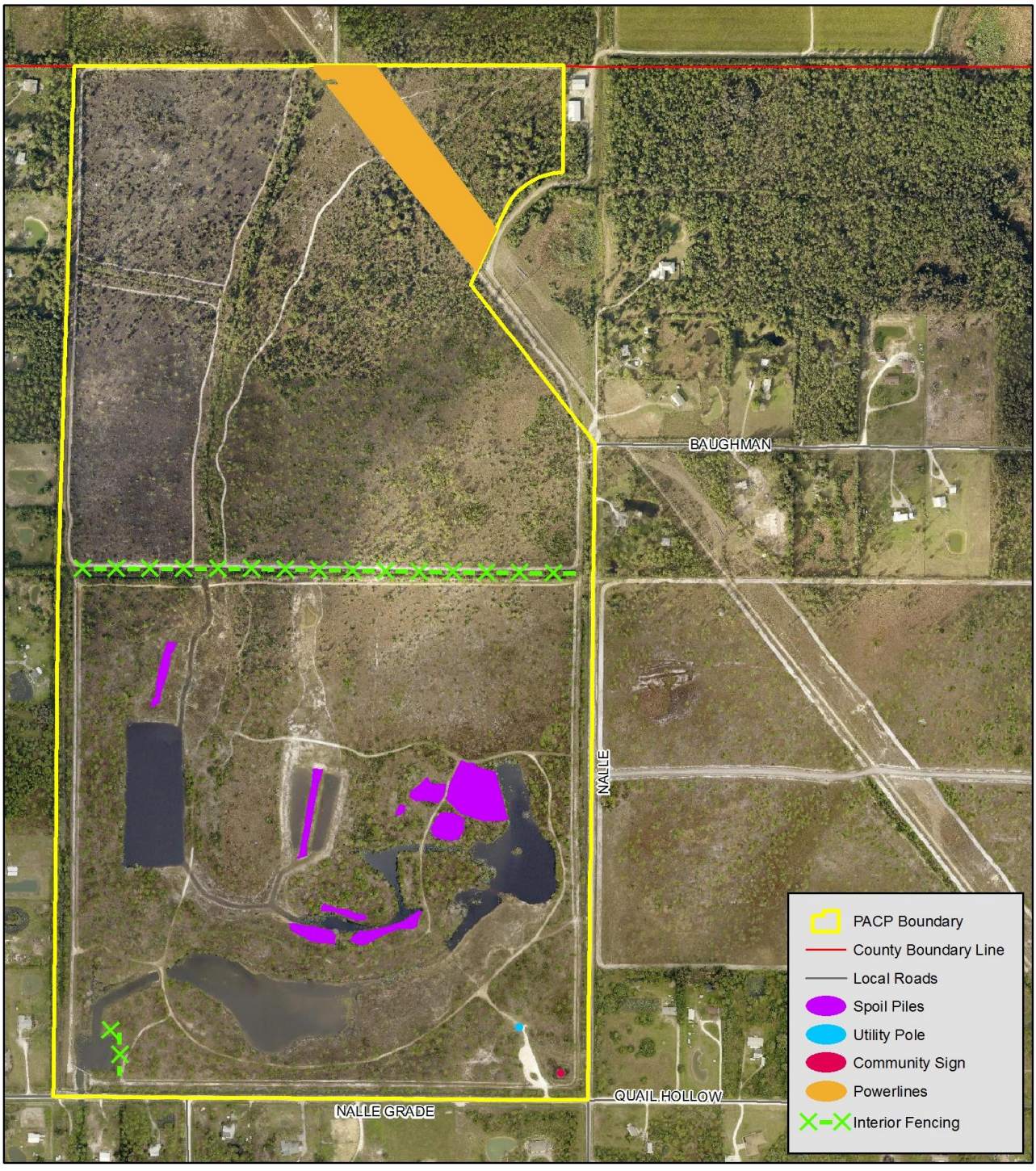
Preserve by bringing in heavy equipment to remove the spoil would be costly and serve little, if any, ecological benefit.

Exotic animals can have a detrimental effect on native flora and fauna. For example, feral hogs (*Sus scrofa*) consume ground-nesting bird eggs and disturb soil and sensitive vegetation during rutting activities, which can provide optimal substrate for invasive exotic plant growth. Exotic fish and amphibians can compete with native fauna for habitat and food. A range of removal methods will be considered for problematic invasive exotic animals found on the Preserve, especially to control problems with feral hogs.

The power line on the northeast corner of the Preserve must be considered when conducting prescribed burns in the adjacent burn units. It is critical that wind direction is considered to avoid smoke impacting the power lines. When planning prescribed fires in the north half of the preserve, C20/20 burn bosses are required to contact FPL in advance of the burn.

A final internal influence that was listed in the first edition of this plan was internal fencing. The portion on the southwest corner of the Preserve has been removed. The internal fence that bisects the Preserve prevents cattle from entering the portion of PACP not under the cattle lease. At this time, there are no plans to end cattle grazing on the Preserve, but in the future if there is no longer a cattle lease C20/20 staff may consider removing this fence.

FIGURE 18: INTERNAL INFLUENCES



C. External Influences

PACP is located within the Bayshore Community, an area designated by the Lee County BOCC as one of the 25 planning communities designed to capture the unique character of this area of the county. The Bayshore Community is predominantly a rural, residential area of single-family homes on large acreages, small horse farms, citrus groves and plant nurseries interspersed by some larger cattle grazing operations. Both the citizens of this community and the BOCC have the shared goal of protecting this area's environmental resources, protecting the existing agricultural and equestrian activities and retaining the atmosphere and character of the area (LCDCD 2014). Because of this mandate, changes in the area surrounding PACP seem unlikely as commercial activities are not permitted in the immediate area and rezoning for either industrial or mining will not be permitted. Additionally, the Land Use surrounding the Preserve is Density Reduction Groundwater Resource, only allowing one development unit for every 10 acres.

There is potential for Del Prado Boulevard to extend to the east of I-75 in the future and connect with State Road 31 (Figure 19). According to the Lee Plan, the existing Nalle Grade Road alignment, which marks the southern boundary of the Preserve, must be considered as a possibility for this road extension. This would dramatically increase the traffic and could put constraints on prescribed burns at the Preserve.

Another external influence relates to the tremendous amount of sheet flow from Charlotte County that enters the Preserve each rainy season. Most of the Preserve is wet during the summer months and both management activities and recreation will be reduced during this time to minimize disturbance to the submerged soils.

There have been occasional problems with illegal public use of the Preserve, including ORVs, littering, campfires and wildlife poaching. The cattle rancher who holds a lease for grazing in the Preserve is responsible for maintaining the boundary fence, which helps to reduce additional illegal access on the northern half of the Preserve. Land Management staff also has a good relationship with several neighbors who help watch the Preserve and alert staff when they notice questionable activities. Protecting the boundaries from dumping, poaching and vehicular access will always be a priority for the Preserve.

FIGURE 19: EXTERNAL INFLUENCES

D. Legal Obligations and Constraints

i. Permitting

Land management activities at PACP may involve obtaining permits from regulatory agencies. Burn authorization from FFS is required for all prescribed burns. Although unlikely, any proposed hydrologic improvements may require obtaining permits from the FDEP, the 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).

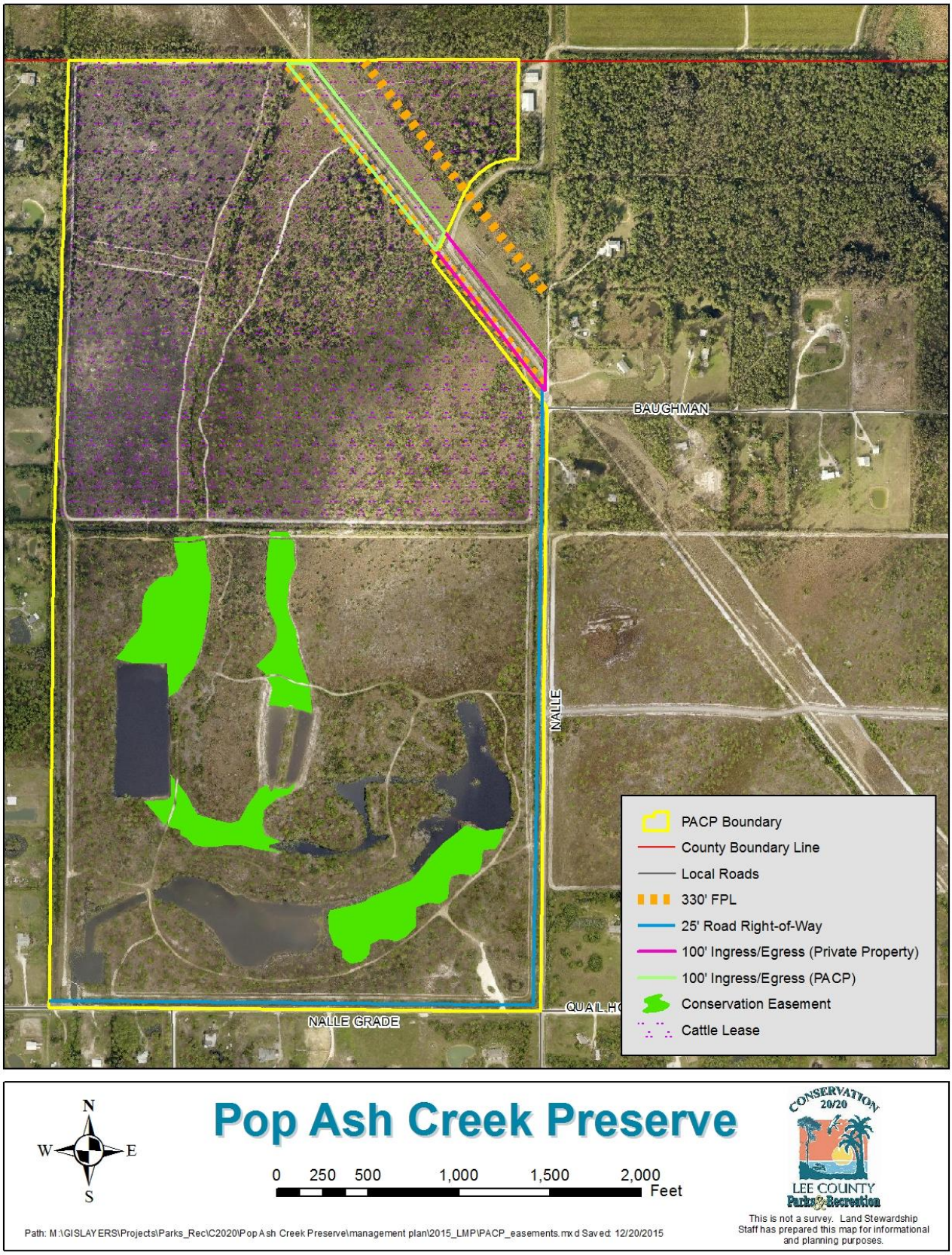
The weir in the southwest corner of the Preserve is operated according to SFWMD permit #090413-9 (http://my.sfwmd.gov/entsb/docdownload?object_id=0900eeea800e2f15) by LCDNR. In general, the weir gates are required to be open between June 1st and September 30th of each year. During emergencies, gates will be operated based upon downstream and localized field conditions. Generally, the gates will not be opened when the box culverts at Nalle Grade are at full capacity.

ii. Other Legal Constraints

There are five recorded easements on the property (Figure 20). Easements that existed before Lee County's purchase are: 330 foot FPL power line easement through the northeastern portion of the Preserve, 25 foot road easement along the eastern boundary and contains a portion of Nalle Road and a 25 foot road easement along the southern boundary and contains a portion of Nalle Grade Road (Appendices E and F). In August 2003, an easement was approved for the Permanent Access Easement Grant, which allows C20/20 staff to utilize the FPL roadway easement through an adjacent property owner's parcel (Appendix G). The final easement (Appendix H) is a 16.98 acre conservation easement over the created marshes constructed during the LCDNR restoration project mandated by the SFWMD.

Lee County cattle leases typically expire each September to simplify coordination between the parties. In September 2015, the existing cattle lease was renewed for another year (Appendix I) for the northern half (143 acres) of the Preserve. As a consideration of the Cattle Lease Agreement, this lease may be terminated with a 30-day written notice to the Licensee. At this Preserve, the Licensee has been very respectful to prevent harmful environmental impacts by limiting the number of cattle, their duration or exclusion in seasonally hydric locations, and maintaining fence lines. Land Stewardship staff recommends that the lease continue on a yearly basis with the above 30-day consideration.

FIGURE 20: EASEMENTS



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 2014). 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: www.leegov.com/dcd/planning/leeplan. The sections of the Lee Plan, which may pertain to C20/20 preserves, have been identified in the LSOM.

E. Management Constraints

The principle stewardship constraints for PACP include limited funding, the brief dry season for management activities and conducting land management activities concurrently with recreational use. Although C20/20 has funding allocated each year by the Lee County Board of County Commissioners (BoCC), 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.

Large portions of PACP are wet most of the year. January though April are typically the driest months. Management activities will typically need to be conducted in these months. If access is necessary for management when water levels are high, vehicles such as ATV's will be used if necessary, but truck use on the Preserve will be minimized.

Signs will be installed at designated entrance gates to warn the public that the area is temporarily closed, when restoration activities and prescribed burns, which could be dangerous to visitors, are in progress. Staff are also required to contact FPL when conducting any prescribed burns on the northern portion of the Preserve.

Finally, almost seventeen acres of the Preserve are under a conservation easement (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.

F. Public Access and Resource-Based Recreation

At the time of purchase, there was limited public use of the Preserve (fishing and ORVs), concentrated on the southwest corner of the Preserve. ORV use is prohibited under Lee County Ordinance 02-12 (www.leegov.com/bocc/Ordinances/02-12.pdf) and once a fence was constructed around the pond, the ORV use ended. Although the Ordinance does allow fishing, no parking was provided and Land Management staff was concerned for the safety of the people and their vehicles since the only access to the pond was a narrow strip of grass adjacent to a large roadside ditch.

In January 2004, Land Management staff had created a partnership with the licensed cattleman and local equestrians to allow limited public use while retaining the cattle lease. Riders who wished to access the Preserve would contact either Land Stewardship staff or the Caloosa Saddle Club. They are given an agreement letter that outlines the several established rules that were designed to protect the equestrians as well as the cattle. A copy of this letter is available in the first edition of the Stewardship Plan for the Preserve. After the rider signed the agreement and returned it to LCPR, they were given the combination to the equestrian gate, located at the southeast corner of PACP. There was also an unlocked gate for hikers at the same location. Like the fishing, there was no parking available, and access to the Preserve was limited to residents within walking/riding distance. After the first edition of Stewardship Plan was passed by BOCC in 2006, the agreement letter and lock system was removed, replaced by a sign reminding all visitors that the Preserve had an active cattle lease and that it was important to keep the gate closed.

In 2009 for upcoming restoration activities, LCPR staff moved the fence from the edge of Nalle Grade road back approximately 300 feet to allow space for the logging trucks to access the Preserve during melaleuca removal and pine tree thinning. This also created a primitive, at grade, trailhead so visitors to the Preserve could safely park their vehicles and horse trailers.

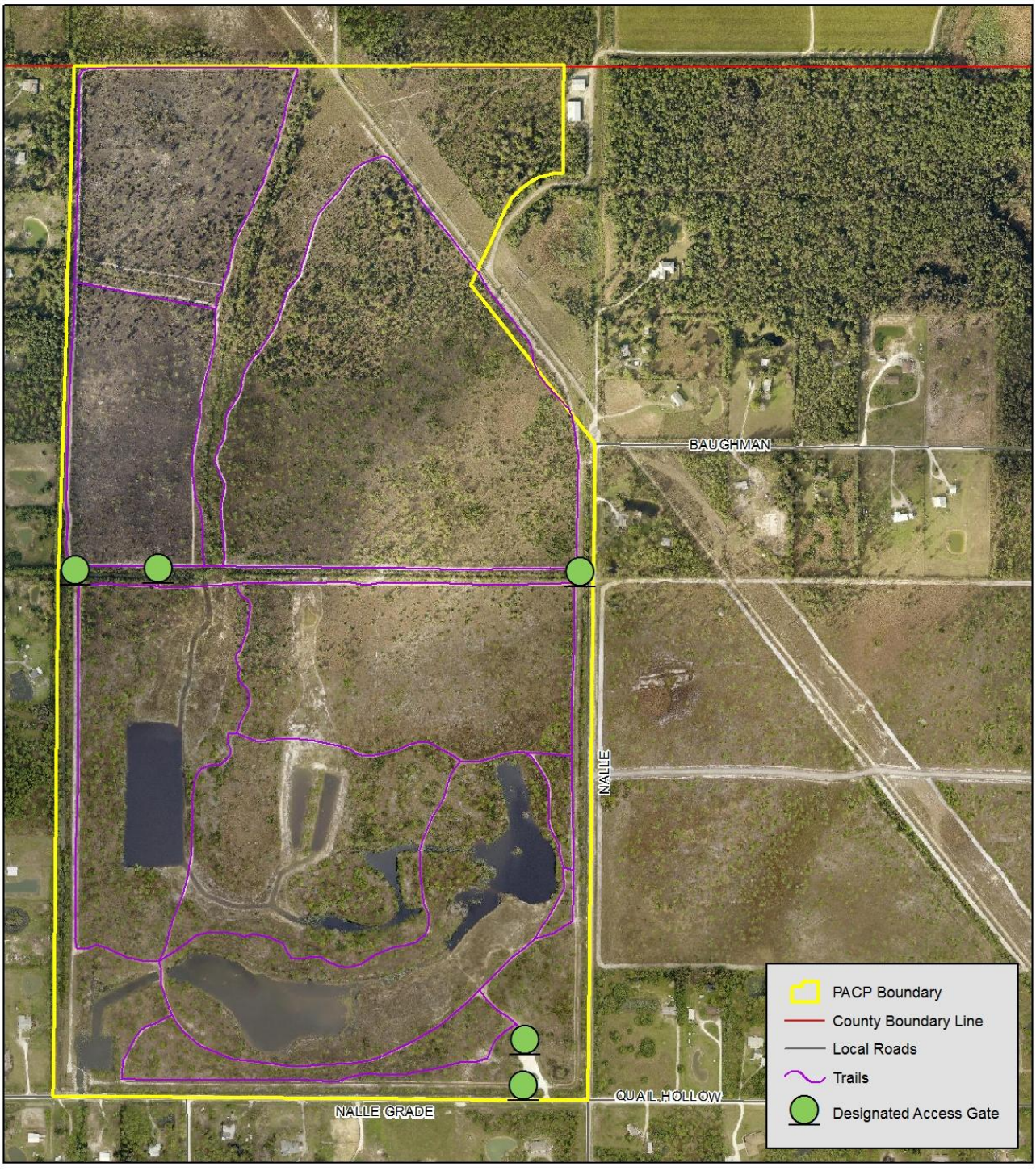
During the LCDNR restoration activities the following year, excess fill from the project was placed in the trailhead which created a better surface for parking that was less prone to flooding. It also reduced the maintenance costs because mowing the trailhead area was no longer necessary. Another benefit for the public from the restoration project who were interested in fishing was that the elevated berm on the southern boundary could now be used to access the pond in the southwest corner of the Preserve from the trailhead. Although hikers can use the berms, equestrian use is not permitted on the berms to ensure their continued stability, as their primary function is to help contain water on the Preserve.

Other changes for public access since the first edition of the Stewardship Plan include some minor trail changes to adjust for the LCDNR restoration activities

and for the creation of additional fire lines on the north half of the Preserve. There are no plans to add or reroute any additional trails or add any additional public use activities.

After the creation of the filter marshes in the southern half of the Preserve, the cattle lease became restricted to the northern half, where there are no conservation easements. There was already a fence separating the halves of the Preserve, but two additional gates were installed for visitors to access the northern half. There have been no problems with visitors leaving the gates open or of cattle entering the southern half of the Preserve. Figure 21 shows the location of the trails and gates.

FIGURE 21: TRAIL MAP

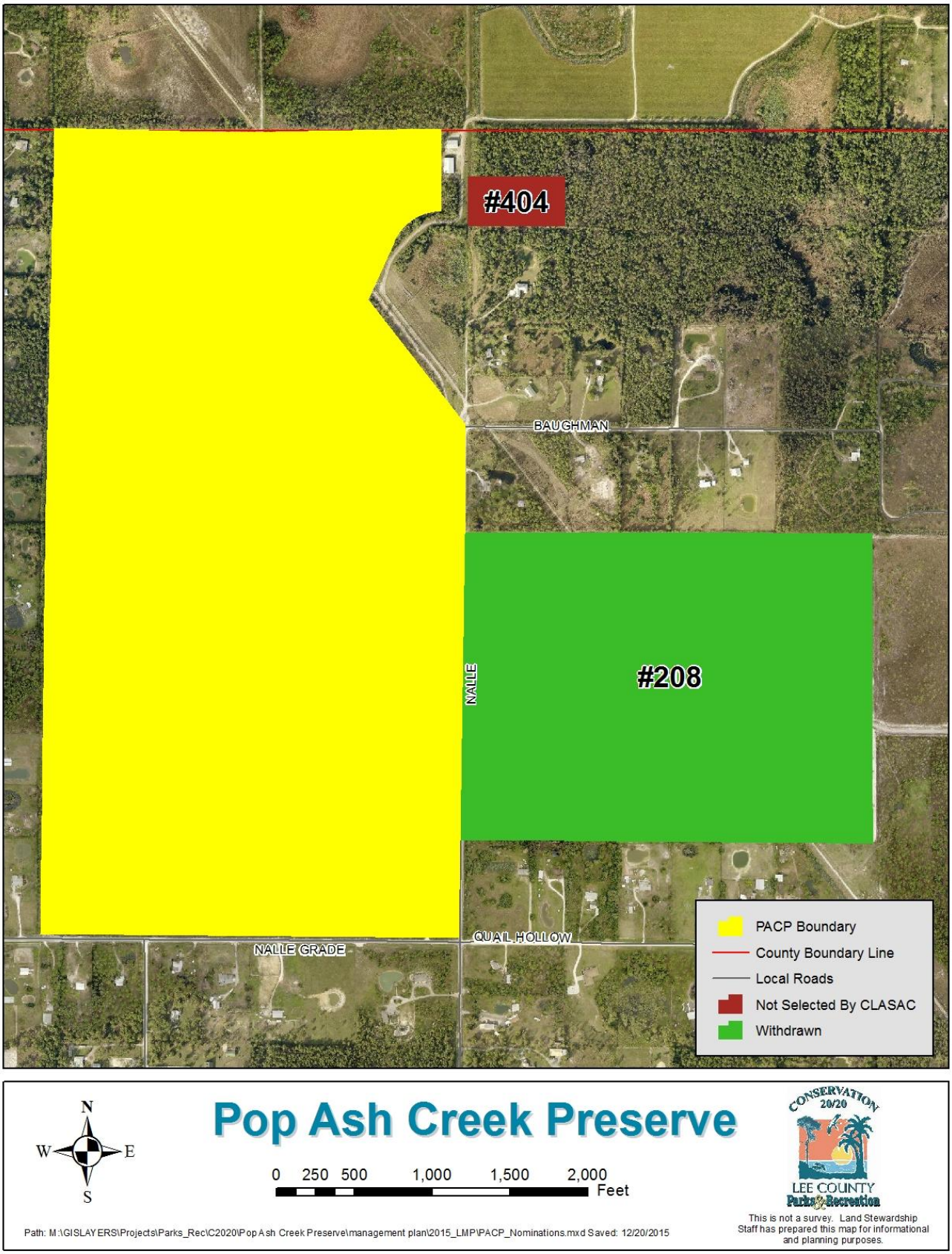


G. Acquisition

PACP (STRAP # 03-43-25-00-00004.0000) was purchased through C20/20 in August 2003 for $1,561,846 after being nominated to the program in the fall of 2001 by Chateau Estates Land Trust and Pri-Car, a Florida General Partnership. Figure 22 shows the location of two nominations near PACP. Nomination 208 was nominated to the C20/20 in 2001. It was withdrawn in the spring of 2004 because the Division of County Lands and the landowner were not able to reach an agreement on the price. Nomination 404 was not selected for consideration by CLASAC due to its small size and isolation.

The Preserve's Future Land Use is Conservation Lands and the zoning is Environmentally Critical.

FIGURE 22: ACQUISITION AND NOMINATIONS



VI. MANAGEMENT ACTION PLAN

A. Management Unit Descriptions

PACP has been divided into three Management Units (MU) to better organize and achieve management goals. Figure 23 delineates the units that were created based on existing ditches, berms, and the FPL easement. Acreage for all units has been rounded to the nearest tenth of an acre.

- Management Unit 1

  MU 1 is 163.4 acres and is the southern half of the Preserve. The unit is bordered by Nalle Road to the south, Nalle Grade Road to the east, a ditch and berm running through the center of the Preserve to the north, and Popash Canal/Creek to the west. This management unit has all of the created filter marshes and contains wet and mesic flatwoods as well as the wet prairie.

  Initial treatment of exotic plants was in 2008 and maintenance treatments have taken place in 2009, 2011, 2012 and 2014. The pine trees were thinned in 2009. After acquisition of the Preserve C20/20 staff and volunteers focused on treating a large cogongrass patches in this MU. The thick melaleuca was treated in 2006 and 2008. The pine trees were thinned in the mesic flatwoods in 2009.

  Land Stewardship staff has conducted two prescribed burns in the wet flatwoods of this Unit in 2007 and 2010.

- Management Unit 2

  MU 2 is 128.2 acres in the northern half of the Preserve. This unit is bordered by the FPL easement on the northeast, Nalle Road on the east, a ditch and property single family farms and homes to the west. This unit is primarily wet flatwoods.

  The thick melaleuca was removed from this MU in 2006. There was a large die off of pines following the treatment that is still evident by snags in the unit. Initial treatment of other invasive exotic plants took place in 2008 and maintenance treatments have followed in 2009, 2011, and 2014.

  Land Stewardship staff conducted a 12-acre prescribed burn as part of an experiment funded by the CHNEP to measure the effects of fire on mortality of melaleuca seedlings and saplings in 2006. One additional 9-acre burn, between the trail and the creek was conducted in 2010.

C20/20 staff conducted two prescribed burns in 2015 in this unit. Several large pieces of metal debris and tires were removed after the vegetation covering them was burned away in the burn.

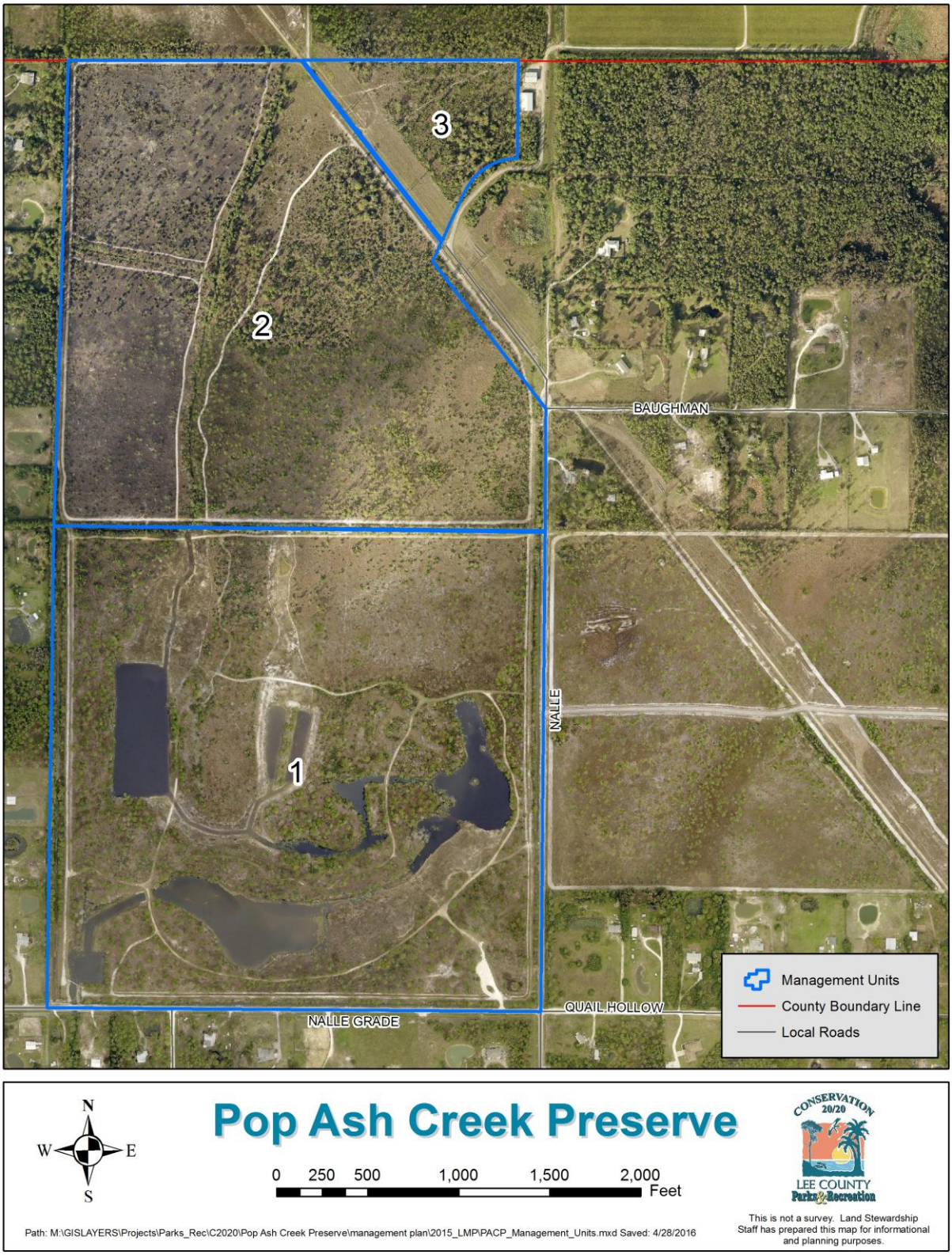
- Management Unit 3

  Management Unit 3 is 27.9 acres and is located in the northeastern corner of the Preserve. This unit is bordered by the Lee County boundary line and private property to the north, the FPL power line easement to the west and south, and private property to the east. This unit contains mesic flatwoods and most of the power line easement.

  Initial exotic plant treatments took place between 2006 and 2008. Three maintenance sweeps have occurred in 2009, 2011 and 2014.

  Land Stewardship staff conducted a prescribed burn in 2015.

FIGURE 23: MANAGEMENT UNITS



B. Goals and Strategies

While the following are long-term goals for the Preserve, funding is currently not available to conduct all of these activities.

Natural Resource Management

- ✓ Exotic plant maintenance
- ✓ Prescribed fire management
- ✓ Brush reduction (if needed)
- ✓ Monitor and protect listed species
- ✓ Exotic and feral animal removal
- ✓ Maintain fire breaks

Overall Protection

- ✓ Debris removal and prevention of dumping
- ✓ Boundary sign maintenance
- ✓ Trail maintenance

Volunteers

- ✓ Assist volunteer group

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 when and in which units each activity will take place.

Natural Resource Management

Exotic plant maintenance

All of the Preserve has had initial and at least one maintenance treatment for invasive exotic plants. In the future, the most current FLEPPC's List of Invasive Species will be consulted in determining the invasive exotic plants to be treated in each management unit. The goal is to keep the entire Preserve at a maintenance level, defined as less than 5% invasive exotic plant coverage.

Prior to each invasive exotic plant control project at PACP, a Prescription Form (located in the LSOM) will be filled out by the contractor(s) and approved by C20/20 Staff. Final project information will be entered into the GIS database.

Since the Preserve is at a maintenance level for exotics, hand removal work crews will be used for control. Specific methodology will depend on stem size, plant type and season, location within a plant community, 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 in some situations.

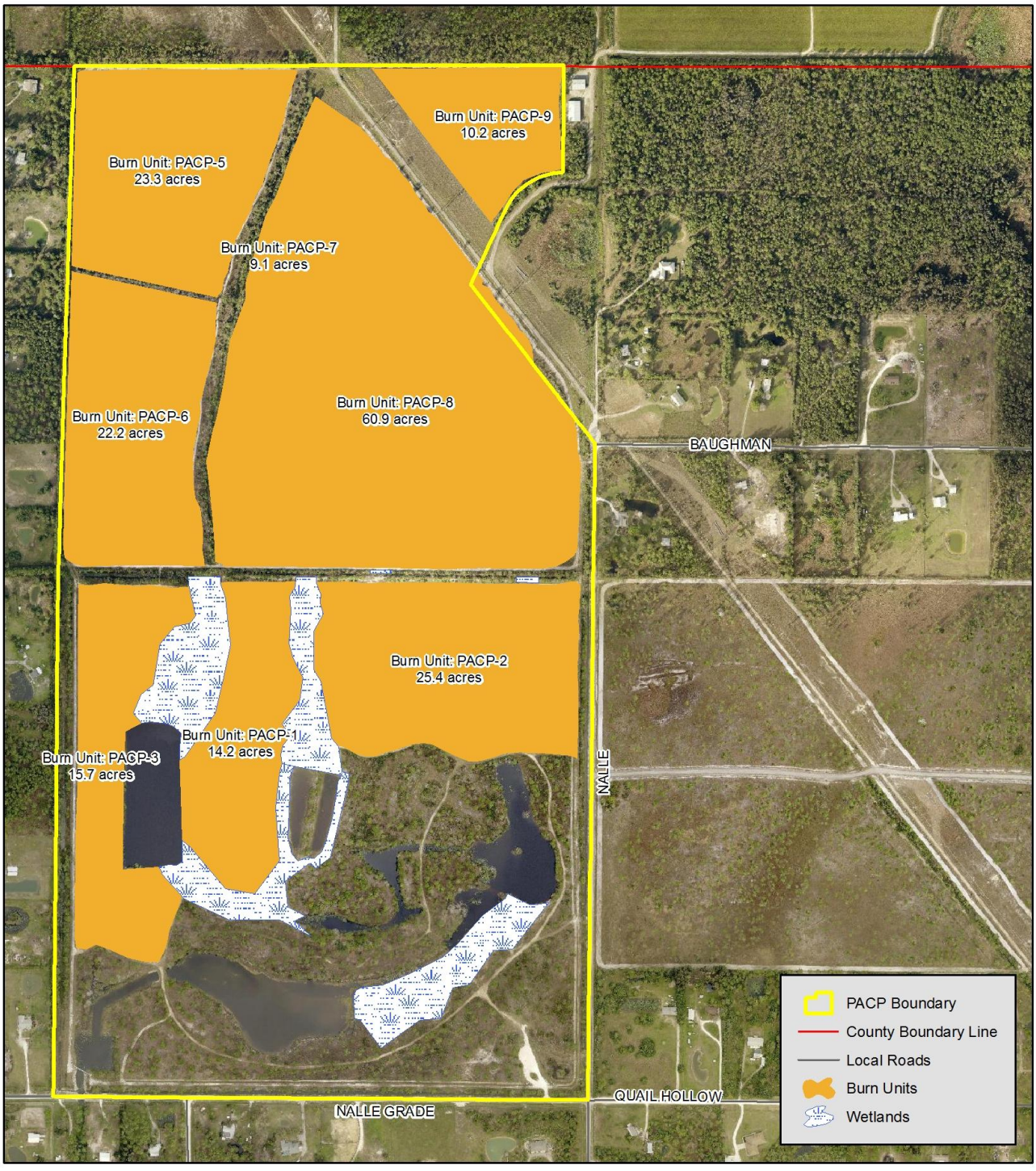
Prescribed fire management

PACP currently has 8 burn units (Figure 24). At this time, the southern portion of the Preserve is not divided into burn units, as this portion of the Preserve is more disturbed has minimal fuel to sufficiently carry a fire. With limited staff and days with appropriate weather and soil moisture conditions, burning has been prioritized to less disturbed portions of the Preserve. A prescribed fire program has been implemented to mimic the natural fire regime for the different plant communities to increase plant diversity and ensure tree canopies remain open. Prescribed fire may be utilized for exotic plant control of seedling/sapling in areas previously treated. Ideally MUs 1-3 will be burned a minimum of once every 4 years.

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. Before burns are conducted in the units adjacent to the power lines, FPL will be notified of the burn plan.

On the day of a burn, C20/20 Staff will shutdown the Preserve to public use. The designated access gate 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.

FIGURE 24: BURN UNITS



N
W E
S

Pop Ash Creek Preserve

0 250 500 1,000 1,500 2,000 Feet

CONSERVATION 20/20
LEE COUNTY Parks & Recreation

Path: M:\GISLAYERS\Projects\Parks_Rec\C2020\Pop Ash Creek Preserve\management plan\2015_LMP\PACP-Burn_Units.mxd Saved: 2/13/2016

This is not a survey. Land Stewardship Staff has prepared this map for informational and planning purposes.

Mechanical brush reduction

Some environmental conditions can cause even native plant species to become invasive. Wax myrtle and palmetto are species that can take over areas and may need to be mechanically reduced. The Preserve will be monitored for these conditions and, if needed, roller chopping or other mean of mechanical brush reduction may be used to maintain healthy natural plant communities.

Monitor and protect listed species

There are several listed species that have been documented on the Preserve including Sherman's fox squirrels, Florida sandhill cranes, and Catesby lilies. These species will benefit from continued exotic plant control and prescribed burns. During management activities, efforts will be made to minimize negative impacts to listed species.

PACP 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

The exotic species Land Stewardship staff is primarily concerned with is feral hogs. Lee County has approved both hunting and trapping as acceptable methods of hog removal on C20/20 preserves. Trapping was attempted by a contractor in 2012, but they were only able to catch 1 hog. An outfitter, Lee County Outfitters, has been selected to lead hunts over bait and will work with staff to come up with appropriate and approved locations for feeders to be placed onsite. The Preserve will be closed to the public with access gates being locked during these hunts.

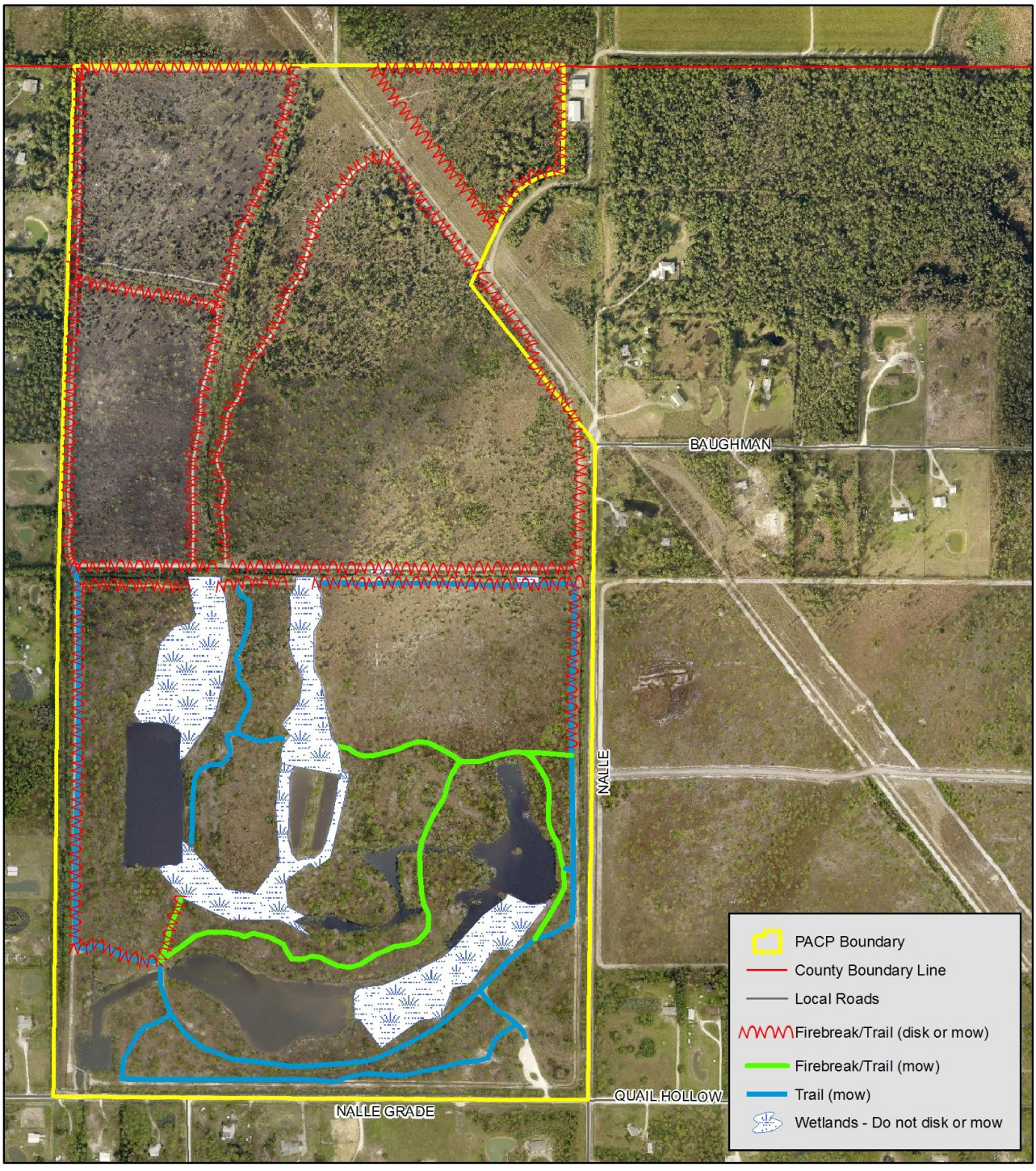
Staff will investigate the feasibility of controlling other exotic species listed in Appendix D. If practical, a methodology will be established and implemented.

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.

Maintain firebreaks

Firebreaks have been installed and are maintained annually by staff. The current public use trails are mowed and/or disked and serve as firebreaks. There are some portions of the trails that cannot be disked, as disking would damage the LCDNR restoration project. C20/20 Staff will use Figure 24 when performing maintenance or disking to ensure the created marshes and elevated and planted berms are not damaged. When burns are planned the burn boss will evaluate the need for disking or mowing temporary lines.

FIGURE 25: FIREBREAKS



Overall Protection

Debris removal and prevent dumping

Debris removal will be an ongoing project at PACP and staff will remove small objects that are encountered during site inspections. C20/20 Rangers will also assist with removing small items when they are on patrol at the Preserve.

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 site inspections and replace missing ones. Boundary signs have been placed a maximum of 500 feet apart.

Trail maintenance

Trails will be mowed once or twice a year. Trimming will be conducted as needed with the help of volunteers or during site inspections. As needed, the geowebbed wetland crossings may have additional small stone added to them over time if the stone layer gets too thin.

Volunteers

Assist volunteer group

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.*

The Lee County Bird Patrol volunteer group performs bird-monitoring surveys at PACP on a monthly basis. Neighbors, scout troops and equestrian riders have all assisted at different times in trimming overhanging branches on trails. The Extreme Equine Club and an Eagle Scout have built mounting steps and benches for visitors while the Caloosa Saddle Club has, for years now, scheduled workdays to help maintain the trail system.

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 Prioritized Projected Timetable for Implementation (Section VII) 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.

C. Management Work to Date

From 2006-2010, C20/20 staff and volunteers focused on mowing and spraying several large patches of cogon (*Imperata cylindrica*) and guinea grass (*Panicum maximum*). After 2010, the regular maintenance sweeps by exotic plant contracts have kept any new resprouts from beginning to spread. Also in 2006 C20/20 received grants from BIPM and the CHNEP to remove dense melaleuca thickets from the northern sections of the Preserve.

In 2008, C20/20 was awarded another BIPM grant, which provided funds for an exotic plant contractor to treat the remaining species of FLEPPC invasive exotics in the 138 acres that already had the melaleuca removed. Additional sweeps to treat seedling and sapling exotic plants have taken place in 2009 and 2011.

In April 2009, Cooper Timber Harvesting conducted pine thinning and snag removal on the Preserve. This timber sale was part of a larger timber sale contract overseen by what was then the Florida Division of Forestry. Funds from this work were used to pay for additional invasive exotic plant treatment on the Preserve.

In 2009, a contractor was hired to concentrate on the excessive amount of Caesar weed (*Urena lobata)* that had become a problem on the southern, more disturbed portions of the Preserve after the logging had finished. Although not a FLEPPC Category I plant, C20/20 staff was concerned at the speed with which it covered 52 acres, and had noticed it starting to spread into the less disturbed mesic flatwoods.

Also in 2009, a Department of Corrections crew, through a BIPM grant, removed some scattered, but dense, patches of Australian pine (*Casuarina equisetifolia*), earleaf acacia (*Acacia auriculiformis*), Brazilian pepper (*Schinus terebinthifolius*) and eucalyptus (*Eucalyptus ssp.*) from the southern half of the Preserve totaling 14 acres.

LCDNR performed their restoration activities discussed in the topography and hydrological components and watershed sections in 2011. In 2012, they used additional funds to remove the remaining invasive exotic plants form this final portion of the Preserve that was not at a maintenance level. The entire preserve had its first Preserve-wide maintenance exotic plant sweep in 2014. LCDNR also cleared vegetation from the Pop Ash canal that runs down the western side of

the property a total of 4 times. These vegetation removals, which happened each year between 2011 and 2015, treat all non-native plants and the potentially invasive native as well in order to allow the canal to function properly and be able to move a maximum amount of water when needed.

VII. PROJECTED TIMETABLE FOR IMPLEMENTATION

Prioritized Projected Timetable for Implementation of the Management Action Plan (March 2016 – September 2020)

Management Activity	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19	Mar-20	Jun-20	Sep-20
Natural Resource Management																			
Exotic plant control maintenance				X								X							
Conduct prescribed burn	Any time when weather and soil moisture conditions are suitable. Goal of burning MUs 1-3 every 1-4 years.																		
Reduce palmetto and wax myrtle cover						If needed							If needed						
Maintenance (on-going or annual)																			
Exotic or feral animal removal	If needed	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Fire breaks/trails - mow/disk		X		X		X		X		X		X		X		X		X	
Overall Protection																			
Small debris removal	On-going	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Boundary sign maintenance	On-going	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Trail trimming				X				X				X				X			
Volunteers																			
Assist volunteer group	On-going	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→

Timetable 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.

VIII. FINANCIAL CONSIDERATIONS

C20/20 is funded by the county's general fund in accordance with ordinance 15-08 (as amended). This annual allocation funds restoration, maintenance of the preserves and C20/20 staff costs. Funds not used in the annual allocation rolls over to the following year for maintenance and restoration.

LCDNR funds will be used to continue with maintenance of their restoration project including the berms, weir and filter marshes.

Other possible funding for continued exotic plant removal and restoration projects might be requested through grants from agencies such as SFWMD, FDEP, FWC, and USFWS. Projected costs and funding sources are listed in Appendix L.

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X. APPENDICES

Appendix A: As-Built Survey

Appendix B: PACP Soils Table

Appendix C: Plant Species

Appendix D: Wildlife Species

Appendix E: Powerline Easement

Appendix F: Nalle Road and Nalle Grade Road Easement Approvals

Appendix G: Permanent Access Easement

Appendix H: Conservation Easement

Appendix I: 2015 Cattle Lease

Appendix J: Expended and Projected Costs and Funding Sources

Appendix A: As-Built Survey

LEE COUNTY BOARD OF COUNTY COMMISSIONERS

PUBLIC WORKS ADMINISTRATION
DIVISION OF NATURAL RESOURCES
CONSTRUCTION PLANS

PLANS OF PROPOSED

POPASH CREEK PRESERVE

COUNTY PROJECT # 4016

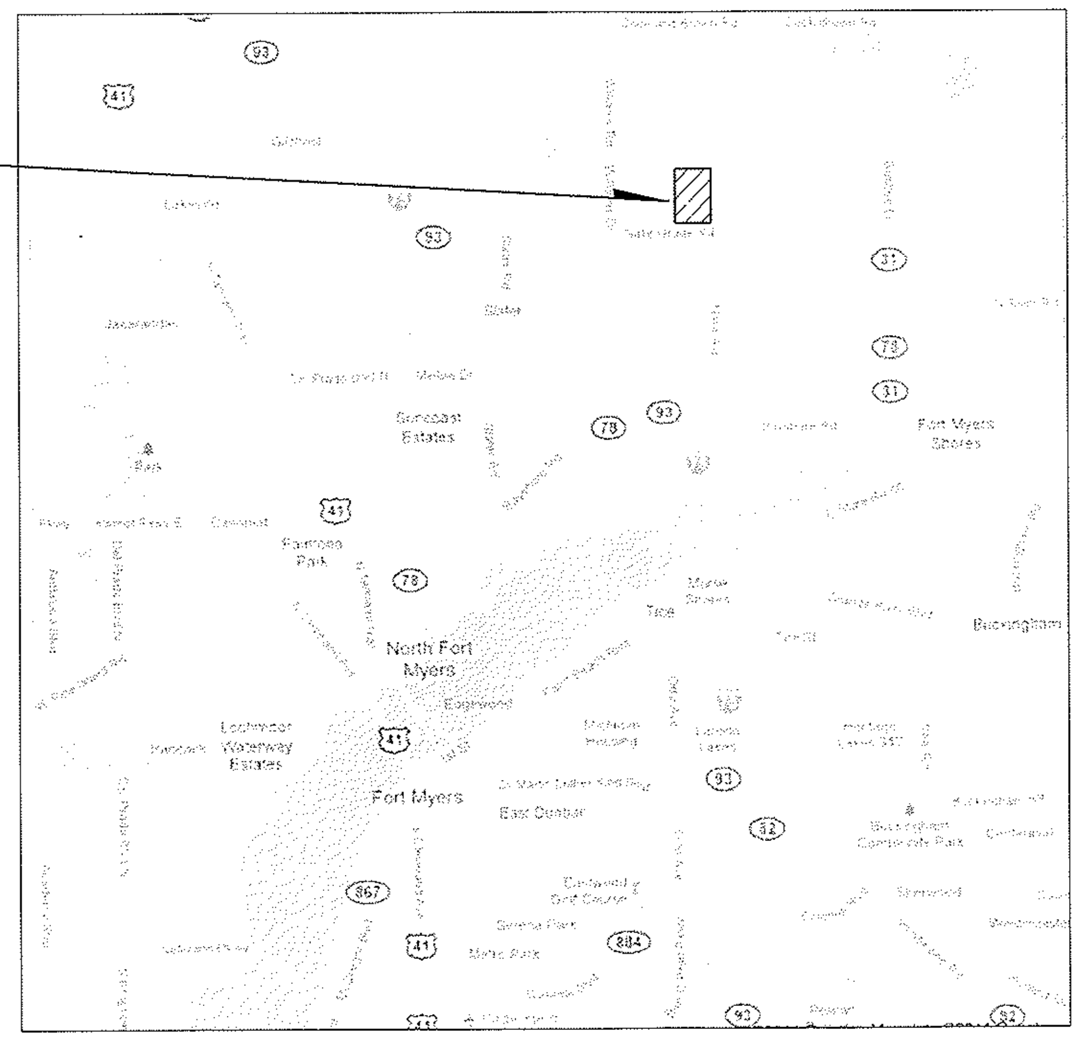
AS-BUILT SURVEY

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION

GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS DATED JANUARY 2008

STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED 2007,
AS AMENDED BY CONTRACT DOCUMENTS

PROJECT AREA
NW 1/4 S-3 T-43-S R-25-E



LOCATION MAP
NOT TO SCALE

LEE COUNTY COMMISSIONERS

DISTRICT 1	JOHN MANNING
DISTRICT 2	BRIAN BIGELOW
DISTRICT 3	RAY JUDAH
DISTRICT 4	TAMMY HALL
DISTRICT 5	FRANK MANN

LEE COUNTY STAFF

JIM LAVENDER	PUBLIC WORKS DIRECTOR
ROLAND OTTOLINI	DIR. DEPT OF NATURAL RESOURCES
KAREN HAWES	COUNTY MANAGER

THIS IS TO CERTIFY THAT THESE PLANS AND THE ASSOCIATED CONSTRUCTION PROJECT ARE IN SUBSTANTIAL COMPLIANCE WITH THE LEE COUNTY LAND DEVELOPMENT CODE WITH THE EXCEPTION OF THE FOLLOWING DEVIATIONS WHICH HAVE BEEN APPROVED BY THE DIRECTOR OF PUBLIC WORKS:

LIST OF DEVIATIONS: NONE

DEVELOPMENT ORDER APPROVED:
LEE COUNTY PUBLIC WORKS ADMINISTRATION

JIM LAVENDER
PUBLIC WORKS DIRECTOR

SIGNATURE DATE

CONSTRUCTION PLANS
ENGINEER OF RECORD:

SIGNATURE DATE
RICHARD WHITE
P.E. NO.: 47754

PLANS PREPARED BY:
T.Y. LIN INTERNATIONAL
2400 FIRST STREET, SUITE 200
FORT MYERS, FL 33901
239-332-4246
239-332-4798 (FAX)
E.B. 2017

SHEET INDEX

SURVEYOR'S NOTES

1. THE SURVEY DATA SHOWN HEREON REPRESENTS THE AS-BUILT LOCATION OF THE PROPOSED IMPROVEMENTS FOR 'POPASH CREEK PRESERVE', COUNTY PROJECT NO. 4016.
2. THE SURVEY DATA WAS COLLECTED MAY 19, 2011 THROUGH AUGUST 1, 2011.
3. THE UNDERLYING BASEMAPS ARE FROM THE PROPOSED PLANS OF 'PROPASH CREEK PRESERVE', COUNTY PROJECT NO. 4016, PREPARED BY T.Y. LIN INTERNATIONAL.
4. THIS MAP IS NOT VALID WITHOUT THE SIGNATURE AND RAISED SEAL OF A FLORIDA PROFESSIONAL SURVEYOR AND MAPPER.
5. ELEVATIONS SHOWN HEREON RELATE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88). ORIGIN BENCHMARK IS A 'LEE COUNTY' BRASS DISC LOCATED IN THE EAST END OF THE NORTH HEADWALL OF POPASH CREEK ON NALLE GRADE. BENCHMARK ELEVATION = 24.96 (NAVD '88).
6. THIS SURVEY MEETS THE MINIMUM TECHNICAL STANDARDS AS SET FORTH IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE.
7. THE ACCURACY OF THE HORIZONTAL AND VERTICAL DATA SHOWN HEREON IS 0.1'±.

LEE COUNTY, FLORIDA

LEE COUNTY PROJECT MANAGER: TILDON COPELAND

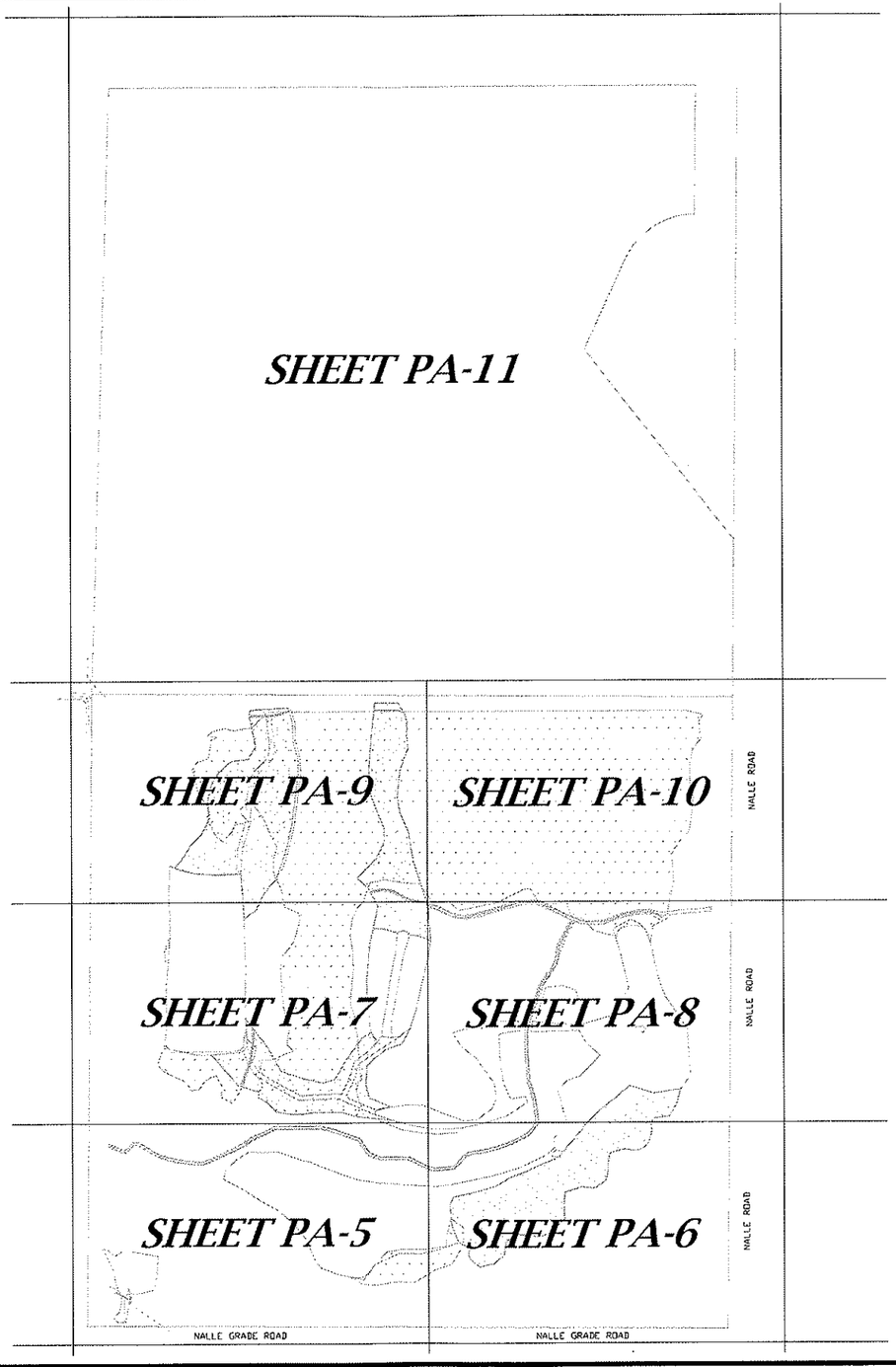
CERTIFIED TO:
D.N. HIGGINS, INC.
T.Y. LIN INTERNATIONAL

JUDITH H. McCARRIER
PROFESSIONAL SURVEYOR & MAPPER
FLORIDA LICENSE NO. 6021

AS-BUILT SHEET PA-1

AS-BUILT SURVEY
AUGUST 1, 2011

J H McCARRIER LAND SURVEYING, INC.
Licensed Business No. 7027
2460 SUNRISE BOULEVARD
FORT MYERS, FLORIDA 33907
Phone:(239) 277-7821
Fax: (239) 277-7829



N

0 100 300 600
Feet

AS-BUILT SURVEY

SEE SHEET PA-1 FOR SURVEYOR'S NOTES.
AUGUST 1, 2011

AS-BUILT SHEET PA-4

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Phone:(239) 277-7821
Fax: (239) 277-7829

NO.	DATE	BY	REVISIONS - DESCRIPTION

T.Y. LIN INTERNATIONAL
2400 First Street, Suite 200
FORT MYERS, FLORIDA 33901
TEL. (239) 332-4846
FAX. (239) 332-4798
WWW.TYLIN.COM

APPROVED BY:
RICHARD WHITE, JR., P.E.
REGISTERED PROFESSIONAL ENGINEER
FLORIDA CERTIFICATE NO. 47754

PUBLIC WORKS
LEE COUNTY
SOUTHWEST FLORIDA
DIVISION of NATURAL RESOURCES
1500 MONROE STREET FORT MYERS, FLORIDA 33901
(239) 479-8900 www.lee-county.com/publicworks/dotitle.htm

SHEET INDEX

POPASH CREEK PRESERVE

SHEET NO. 4

MATCH LINE SHEET PA-7

N

0 20 100
Feet

PROP. BERM ELEV. 23.5'

LAKE 2

6-36" RCP

I.E.=16.94
I.E.=16.99
I.E.=17.04

I.E.=17.07
I.E.=16.99
I.E.=17.11
I.E.=16.99
I.E.=17.01
I.E.=17.07

SAND CEMENT END WALL TOP EL.=22.9

(6) 36" RCP WITH SAND CEMENT HEAD WALLS SEE SHEET 26 FOR DETAIL

EXCAVATE CHANNEL

EXTEND EXISTING CHANNEL TO NALLE GRADE RD. DITCH (402 FT) SEE TYPICAL SECTION D

PROP. BERM ELEV. 26.0'

EXCAVATE CHANNEL & INSTALL RIP RAP

FIRE LINE

PROP. CONTROL STRUCTURE #1 SEE SHEET 27 & 28 FOR DETAIL

CONTROL STRUCTURE

EQUIPMENT VAULT

PROP. FENCE DETAIL - SHEET 26

4=STRAND BARBED WIRE FENCE

TOE

BERM

POWER POLE

E 23.82'

SEE DITCH CONNECTION DETAIL SHEET 25

PROJECT LIMIT

NALLE GRADE ROAD

MATCH LINE SHEET PA-6

AS-BUILT SURVEY

SEE SHEET PA-1 FOR SURVEYOR'S NOTES.
AUGUST 1, 2011

AS-BUILT SHEET PA-5

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1500 MONROE STREET
(239) 479-8900 www.lee-county.com/publicworks/dotlte.htm

DIVISION of NATURAL RESOURCES
FORT MYERS, FLORIDA 33901

PROPOSED IMPROVEMENTS
POPASH CREEK PRESERVE

SHEET NO. 5

MATCH LINE SHEET PA-5

MATCH LINE SHEET PA-8

PROJECT LIMIT

NALLE GRADE ROAD

PROP. BERM SEE SHEET 26

PROP. FENCE SEE SHEET 26

HABITAT ENHANCEMENT

PROPOSED EXCAVATION

EXISTING HORSE TRAILS

WATER QUALITY / HABITAT ENHANCEMENT

REP. EXISTING GATES

EX. FENCE CONNECT PROPOSED FENCE TO EXISTING FENCE

SHELL PARKING

4-STRAND BARBED WIRE FENCE

GATE

TOE

BERM

SEE DRIVEWAY GRADING DETAIL SHEET 25

N

0 20 100
Feet

AS-BUILT SHEET PA-6

AS-BUILT SURVEY

SEE SHEET PA-1 FOR SURVEYOR'S NOTES.
AUGUST 1, 2011

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RICHARD WHITE, JR., P.E.
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FLORIDA CERTIFICATE NO. 47754

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PROPOSED IMPROVEMENTS

POPASH CREEK PRESERVE

SHEET NO. 6

MATCH LINE SHEET PA-9

MATCH LINE SHEET PA-5

MATCH LINE SHEET PA-8

N

0 20 100
Feet

SHALLOW FLOWWAY

RIP-RAP BERM EL. 200

LAKE 4

TOE

BERM

4-STRAND BARBED WIRE FENCE

EXISTING HORSE TRAIL

FISH TRAP

EX. BERM TO REMAIN AS IS AND GRADE TO MATCH EXISTING GROUND

GRADE AREA TO ELEV 23. SLOPE TO MATCH EX. GRADE

EQUESTRIAN FORC. SEE DETAIL SHEET 25

SHALLOW FLOWWAY SEE CROSS SECTION H

EXCAVATE NEW CHANNEL TO ELEV 20

LAKE 5

LAKE 6

AS-BUILT SURVEY

SEE SHEET PA-1 FOR SURVEYOR'S NOTES.
AUGUST 1, 2011

AS-BUILT SHEET PA-7

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PROPOSED IMPROVEMENTS

POPASH CREEK PRESERVE

SHEET NO.
7

MATCH LINE SHEET PA-10

MATCH LINE SHEET PA-7

MATCH LINE SHEET PA-6

PROP. BERM EL. 23.5

EXISTING HORSE TRAIL

PROP. BERM EL. 23.5

SEE DETAIL SHEET 22

SAND CEMENT END WALL TOP EL.=23.9

4-48" RCP

I.E.=17.10
I.E.=17.09
I.E.=16.99
I.E.=17.05

I.E.=16.93
I.E.=16.91
I.E.=17.02
I.E.=16.84

SAND CEMENT END WALL TOP EL.=23.9

(4) 48" RCP SAND CEMENT END WALLS W/ RIP RAP GRADE CHANNEL TO CONNECT

SEE DETAIL ON SHEET 25

WATER QUALITY HABITAT ENHANCEMENT AREA

SEE CROSS SECTION H&I-G

FISH TRAP

HABITAT ENHANCEMENT

TOE

BERM

4-STRAND BARBED WIRE FENCE

NAPLES ROAD

0 20 100
Feet

N

AS-BUILT SHEET PA-8

AS-BUILT SURVEY

SEE SHEET PA-1 FOR SURVEYOR'S NOTES.

AUGUST 1, 2011

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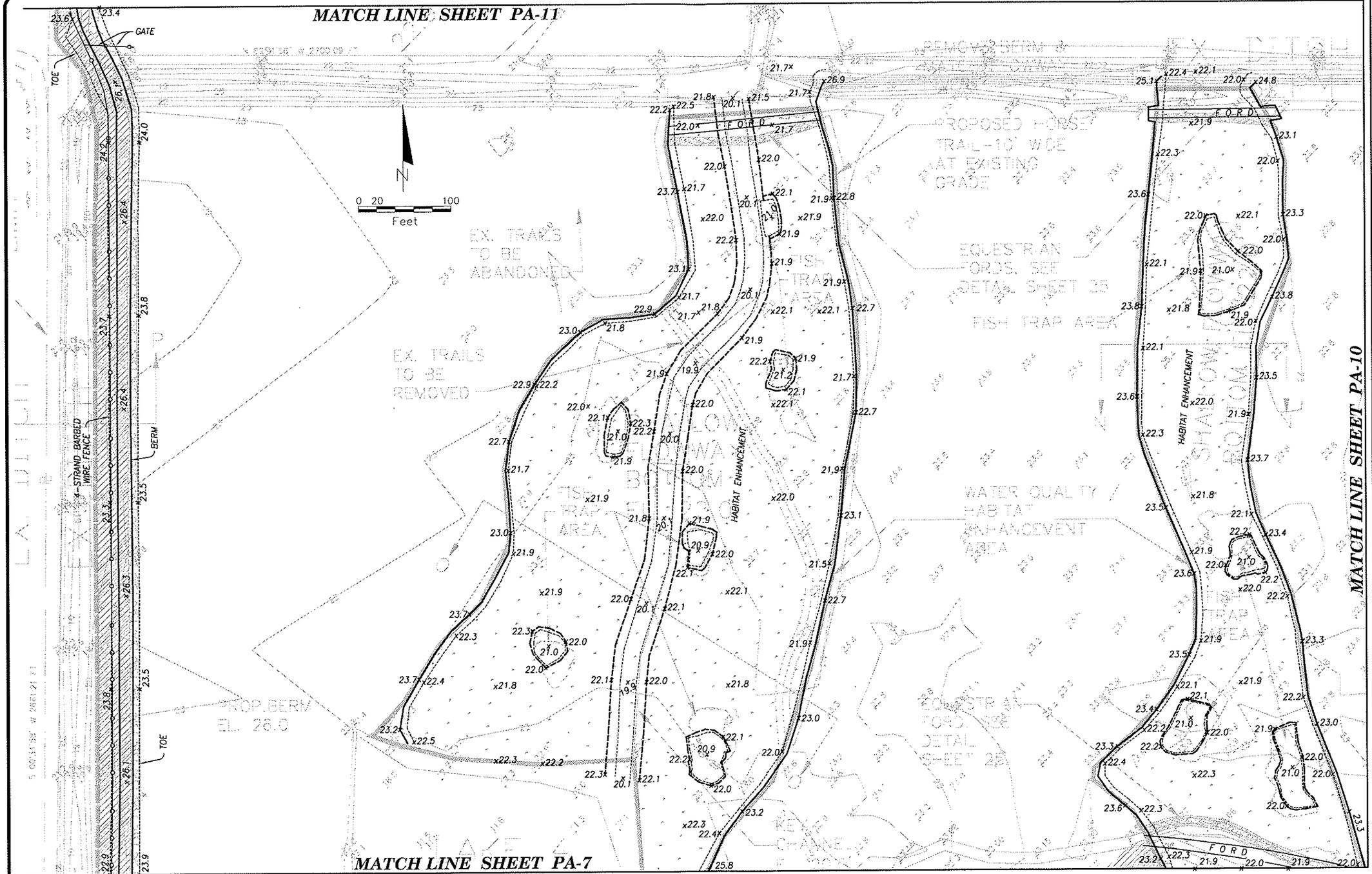
PROPOSED IMPROVEMENTS

POPASH CREEK PRESERVE

SHEET NO.
8



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PROPOSED IMPROVEMENTS

POPASH CREEK PRESERVE

SHEET NO. 9

AS-BUILT SHEET PA-9

AS-BUILT SURVEY
SEE SHEET PA-1 FOR SURVEYOR'S NOTES.
AUGUST 1, 2011

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MATCH LINE SHEET PA-11

MATCH LINE SHEET PA-9

MATCH LINE SHEET PA-8

BERM CUT

BERM CUT

EXISTING BERM

REMOVE BERM & GRADE SO WATCH GROUND TO SOUTH LOCATIONS TO BE FIELD DESIGNATED BY ENGINEER IN CONSULTATION WITH COUNTY STAFF DURING CONSTRUCTION.

BLOCK EXISTING D-TCH

PROP. FENCE DETAIL SHEET 12

PROP. BERM EL. 25.0

PROP. BERM EL. 26.0

GATE

GATE

TOE

TOE

BERM

NAPLE ROAD

PROJECT LIMIT

4-STRAND BARBED WIRE FENCE

N

0 20 100
Feet

AS-BUILT SURVEY

SEE SHEET PA-1 FOR SURVEYOR'S NOTES.
AUGUST 1, 2011

AS-BUILT SHEET PA-10

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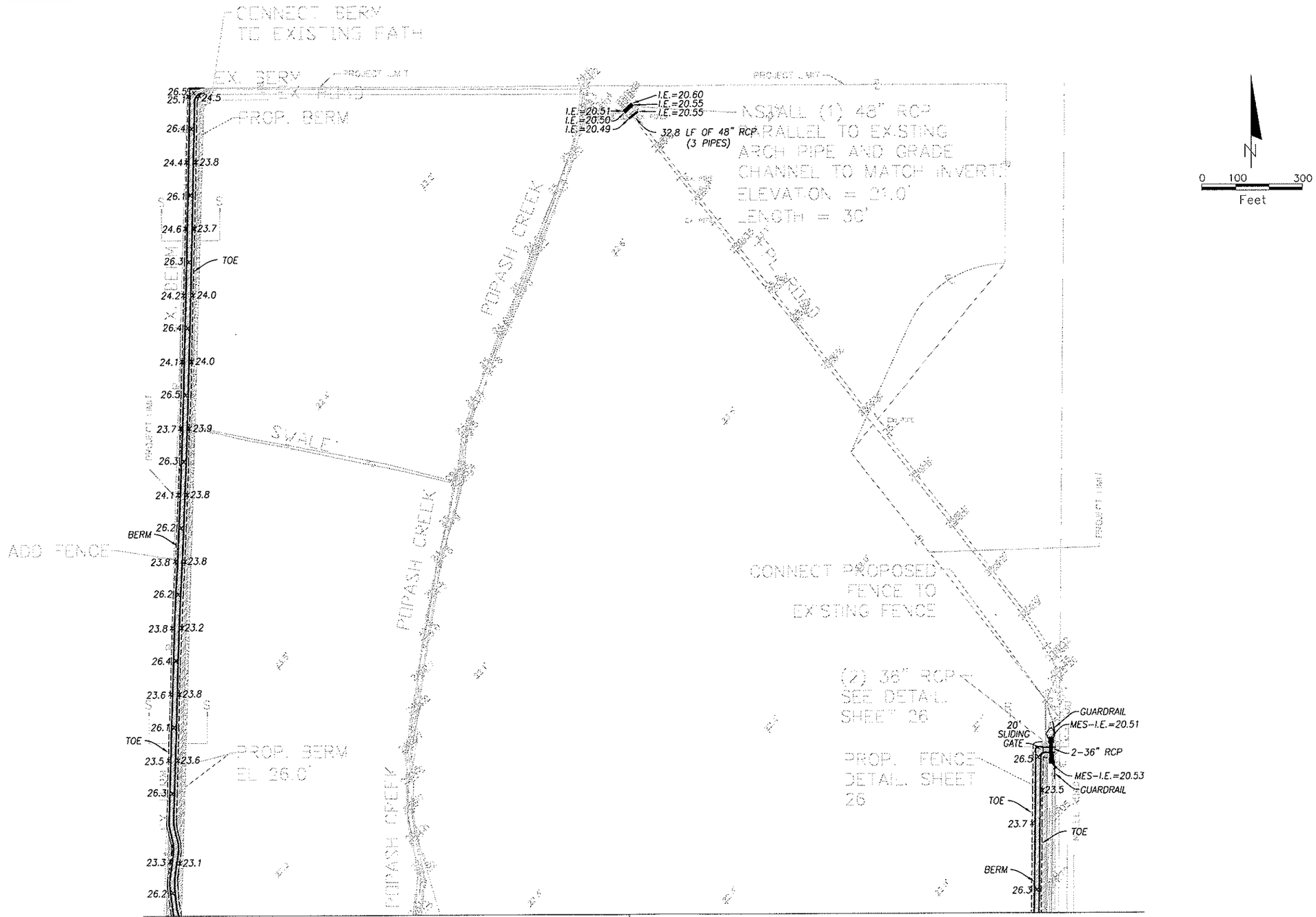
PROPOSED IMPROVEMENTS

POPASH CREEK PRESERVE

SHEET NO. 10



MATCH LINE SHEET PA-9

MATCH LINE SHEET PA-10

AS-BUILT SHEET PA-11

AS-BUILT SURVEY

SEE SHEET PA-1 FOR SURVEYOR'S NOTES.

AUGUST 1, 2011

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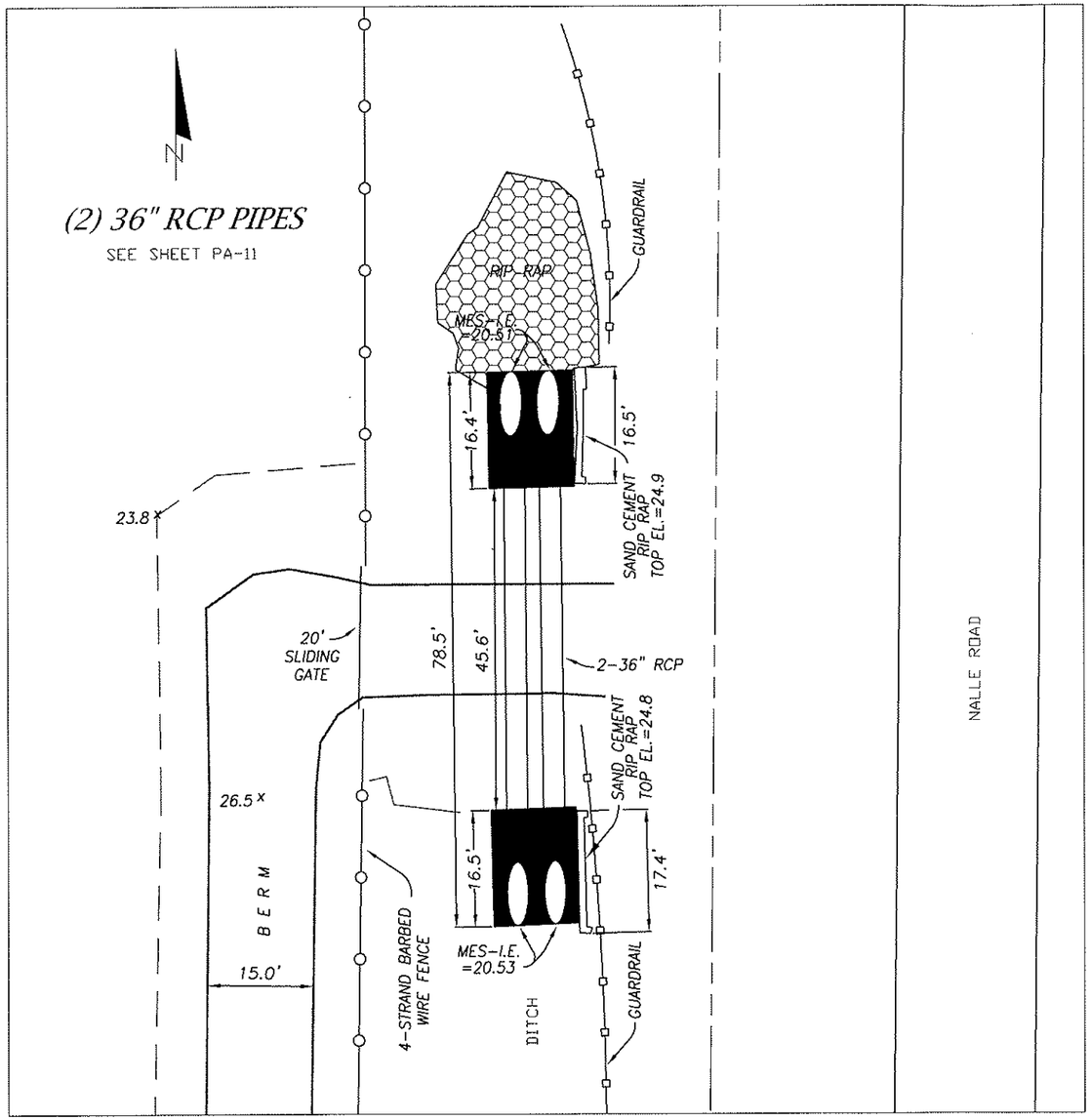
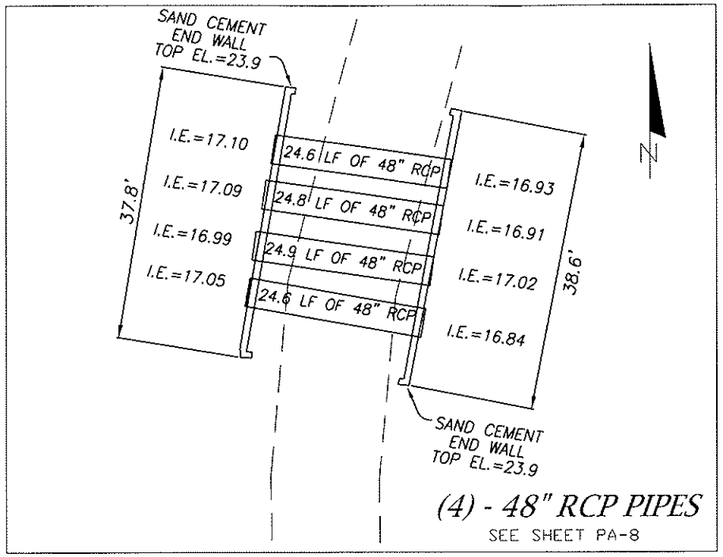
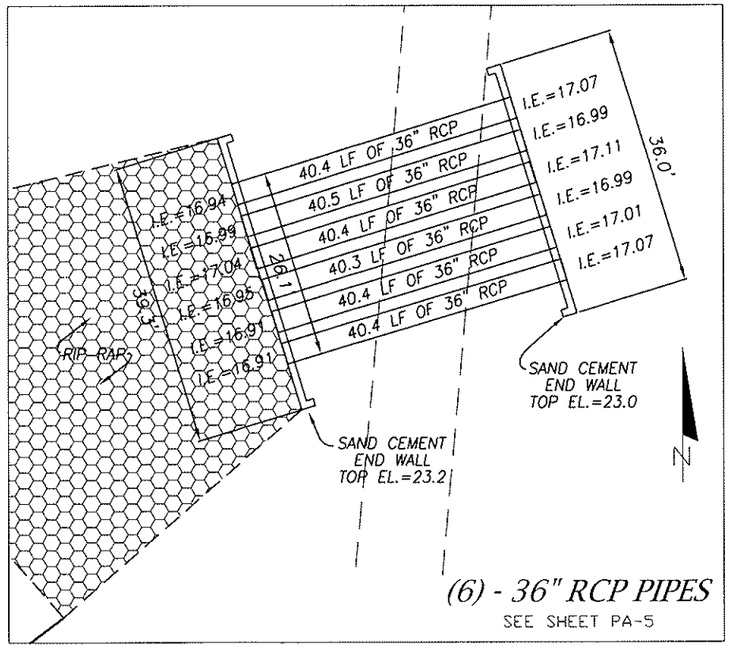
PROPOSED IMPROVEMENTS

POPASH CREEK PRESERVE

SHEET NO. 11







AS-BUILT SHEET PA-26

AS-BUILT SURVEY

SEE SHEET PA-1 FOR SURVEYOR'S NOTES.

AUGUST 1, 2011

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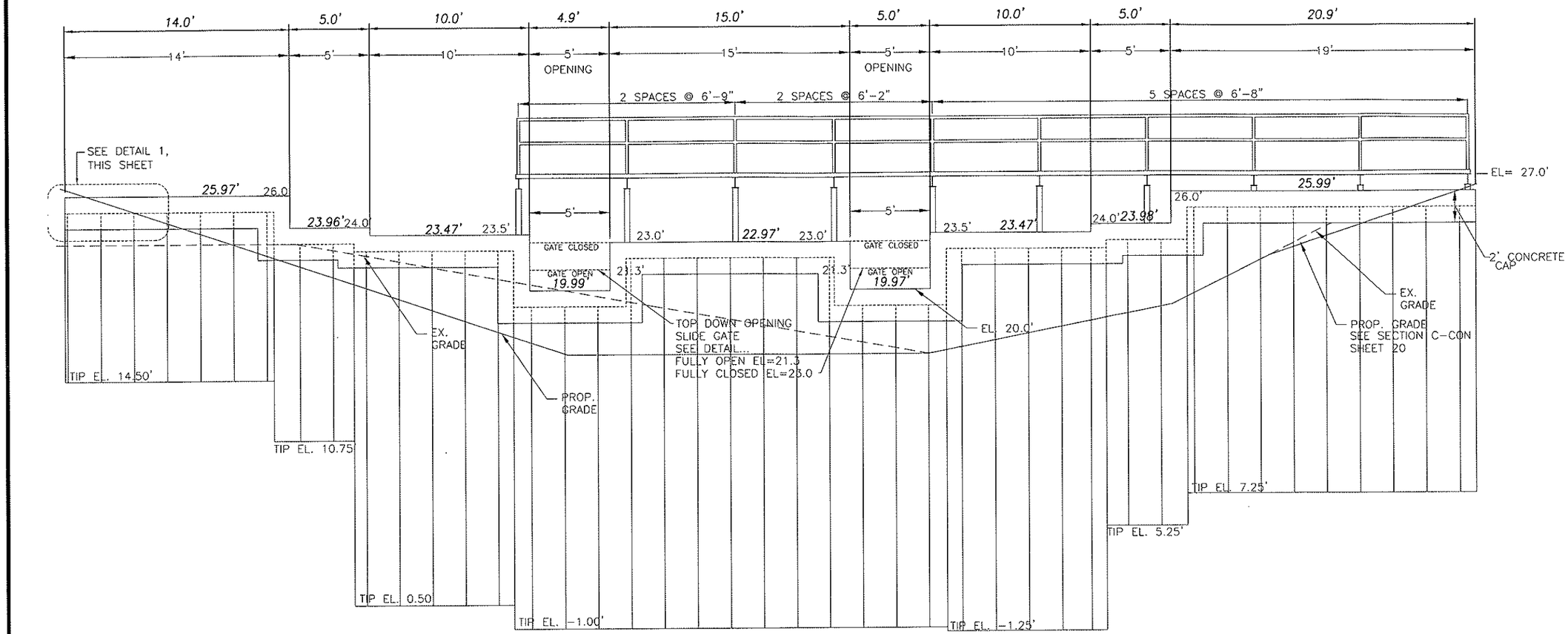
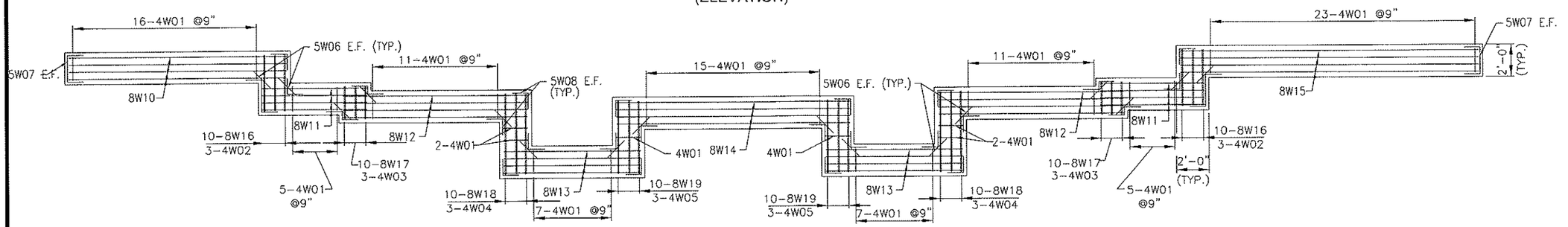
DETAILS
NOT TO SCALE

POPASH CREEK PRESERVE

SHEET NO. 26



CONTROL STRUCTURE #1
(ELEVATION)



ELEVATION VIEW
(WEIR STRUCTURE)

AS-BUILT SURVEY
SEE SHEET PA-1 FOR SURVEYOR'S NOTES.
AUGUST 1, 2011

AS-BUILT SHEET PA-29

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WEIR ELEVATION
POPASH CREEK PRESERVE

SHEET NO.
29

Appendix B: Soil Types

Appendix B: PACP Soils Table

					Physical Attributes							*Biological Attributes*				
Soil Types	Map Symbol	Total Acres	% of Preserve	Habitats (Range Site)	Wetland Class (1)	Hydrologic Group (2)	Surface Permeability	Subsurface Permeability	Water Table within 10" of surface	Water Table below 10-40" of surface	% Organic Matter	Potential as habitat for wildlife in-- Openland	Woodland	Wetland	Rangeland	Limitations for Recreational Paths & Trails
Boca Fine Sand	13	0.07	0.02	South Florida flatwoods		B/D	rapid	rapid	2-4 months	6 months	1-3%	fair	poor	fair	good	Severe: wetness, too sandy
Matlacha Gravelly Fine Sand	69	63.45	21.74	manmade areas		C	moderately rapid	rapid		2-4 months	not estimated	--	--	--	--	Severe: too sandy
Pineda Fine Sand	26	226.1	77.46	slough	S	B/D	rapid	rapid	2-4 months	> 6 months	.5-6%	fair	poor	fair	--	Severe: wetness, too sandy
Pineda Fine Sand, Depressional	73	2.28	0.78	freshwater marshes/ponds	P	D *	rapid	rapid	3-6+ months (ponded	4-6 months	.5-6%	very poor	very poor	good	--	Severe: ponding, too sandy

Color Key:

Dry

Wetter

Wettest

(1) 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 C: Plant Species

Appendix C: Plant Species List for Pop Ash Creek Preserve

Common and scientifc names for this list were obtained from Wunderlin Hansen, 2003

Scientific Name	Common Name	Native/Exotic	EPPC	FDACS	IRC	FNAI
Family: Blechnaceae (min-sorus fern)						
Blechnum serrulatum	swamp fern	native				
Family: Nephrolepidaceae (sword fern)						
Nephrolepis exaltata	wild Boston fern	native				
Osmunda regalis	royal fern	native				
Family: Polypodiaceae (polypod)						
Phlebodium aureum	golden polypody	native				
Family: Pteridaceae (brake fern)						
Pteris vittata	Chinese ladder brake fern	exotic	II			
Family: Schizaeaceae (curly-grass)						
Lygodium microphyllum	Old World climbing fern	exotic	I			
Family: Pinaceae (pine)						
Pinus elliottii var. densa	south Florida slash pine	native				
Family: Agavaceae (agave)						
Yucca aloifolia	Spanish bayonet	native				
Family: Alismataceae (water plantain)						
Sagittaria graminea	grassy arrowhead	native			R	
Sagittaria lancifolia	bulltongue arrowhead	native				
Family: Amaryllidaceae (amaryllis)						
Crinum americanum	string-lily	native				
Hymenocallis palmeri	alligatorlily	native				
Family: Arecaceae (palm)						
Sabal palmetto	cabbage palm	native				
Serenoa repens	saw palmetto	native				
Family: Bromeliaceae (pineapple)						
Tillandsia paucifolia	potbelly airplant	native				
Tillandsia recurvata	ballmoss	native				
Tillandsia usneoides	Spanish moss	native				
Tillandsia utriculata	giant airplant	native		E		
Family: Commelinaceae (spiderwort)						
Commelina diffusa var. diffusa	common dayflower	exotic				
Family: Cyperaceae (sedge)						
Cladium jamaicense	Jamaica swamp sawgrass	native				
Cyperus esculentus	yellow nutgrass	exotic				
Cyperus flavescens	yellow flatsedge	native			R	
Cyperus haspan	haspan flatsedge	native				
Cyperus ligularis	swamp flatsedge	native				
Cyperus polystachyos	manyspike flatsedge	native				
Cyperus prolifer	Furnari funsedge	exotic	II			
Cyperus surinamensis	tropical flatsedge	native				
Eleocharis interstincta	knotted spikerush	native				
Fimbristylis cymosa	hurricanegrass	native				
Fimbristylis dichotoma	forked fimbry				R	
Fuirena pumila	dwarf unbrellasedge	native			I	
Fuirena scirpoidea	southern umbrellasedge				R	
Rhynchospora colorata	starrush whitetop	native				
Rhynchospora fascicularis	fascicled beakrush	native			R	
Rhynchospora globularis	globe beaksedge	native			I	
Rhynchospora latifolia	giant whitetop	native			R	
Rhynchospora microcarpa	southern beakrush	native			R	
Rhynchospora nitens	baldrush	native			R	

Appendix C: Plant Species List for Pop Ash Creek Preserve

Common and scientifc names for this list were obtained from Wunderlin Hansen, 2003

Scientific Name	Common Name	Native/Exotic	EPPC	FDACS	IRC	FNAI
Rhynchospora tracyi	Tracy's beaksedge	native			R	
Scleria ciliata var. ciliata	fringed nutrush				R	
Scleria georgiana	slenderfruit nutrush	native			I	
Scleria reticularis	netted 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: Hypoxidaceae (yellow stargrass)						
Hypoxis juncea	fringed yellow stargrass	native				
Family: Juncaceae (rush)						
Juncus marginatus	shore rush	native			R	
Juncus megacephalus	bighead rush	native			R	
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)						
Eulophia alta	wild coco	native				
Habenaria floribunda	toothpedal false reinorchid	native				
Habenaria quinqueseta	longhorn false reinorchid	native			R	
Sacoila lanceolata var. lanceolata	leafless beaked ladiestresse	native		T	I	
Family: Poaceae (grass)						
Amphicarpum muhlenbergianum	blue maidencane	native			R	
Andropogon glomeratus var. glaucopsis	purple bluestem				R	
Andropogon glomeratus var. pumilus	bushy bluebeard	native				
Andropogon gyrans	Elliott's bluestem	native			I	
Andropogon longiberbis	hairy bluestem	native			R	
Andropogon virginicus	broomsedge bluestem	native			I	
Andropogon virginicus var. *glaucus*	chalky bluestem	native			R	
Andropogon virginicus var. decipiens	broomsedge bluestem	native			I	
Aristida purpurascens var. purpurascen	arrowfeather threeawn	native				
Aristida spiciformis	bottlebrush threeawn	native			R	
Aristida stricta	wiregrass	native				
Cenchrus gracillimus	slender sandbur	native				
Dichanthelium erectifolium	erectleaf witchgrass	native			R	
Digitaria insularis	sourgrass	native				
Eragrostis atrovirens	thalia lovegrass	exotic				
Eragrostis ciliaris	gophertail lovegrass	native				
Eragrostis elliottii	Elliott's lovegrass	native				
Eragrostis spectabilis	purple lovegrass	native			I	
Eragrostis virginica	coastal lovegrass	native			I	
Eustachys glauca	saltmarsh fingergrass	native				
Eustachys petraea	pinewoods fingergrass	native				
Imperata cylindrica	cogon grass	exotic	I			
Leptochloa fusca subsp. fascicularis	bearded sprangletop	native			R	

Appendix C: Plant Species List for Pop Ash Creek Preserve

Common and scientifc names for this list were obtained from Wunderlin Hansen, 2003

Scientific Name	Common Name	Native/Exotic	EPPC	FDACS	IRC	FNAI
Panicum hemitomon	maidencane	native				
Panicum hians	gaping panicum	native			R	
Panicum maximum	Guinea grass	exotic	II			
Panicum repens	torpedo grass	exotic	I			
Panicum rigidulum	redtop panicum	native				
Panicum tenerum	bluejoint panicum	native			R	
Paspalum caepitosum	blue crowngrass	native				
Paspalum laeve	field paspalum	native				
Paspalum monostachyum	gulfdune paspalum	native			R	
Paspalum praecox	early paspalum	native				
Paspalum setaceum	thin paspalum	native				
Rhynchelytrum repens	rose natalgrass	exotic	I			
Sacciolepis striata	American cupscale	native			R	
Setaria parviflora	knotroot foxtail	native				
Sorghum bicolor	grain sorghum	exotic				
Family: Pontederiaceae (pickerelweed)						
Pontederia cordata	pickerelweed	native				
Family: Ruscaceae (butcher's broom)						
Sansevieria hyacinthoides	bowstring hemp	exotic	II			
Family: Smilacaceae (smilax)						
Smilaax auriculata	earleaf greenbrier	native				
Family: Typhaceae (cattail)						
Typha latifolia	broadleaf cattail	native			R	
Family: Xyridaceae (yelloweyed grass)						
Xyris sp.	yelloweyed grass	native				
Family: Acanthaceae (acanthus)						
Stenandrium dulce	sweet shaggytuft	native			R	
Family: Amaranthaceae (amaranth)						
Alternanthera philoxeroides	alligatorweed	exotic	II			
Family: Anacardiaceae (cashew)						
Rhus copallinum	winged sumac	native				
Schinus terebinthifolius	Brazilian pepper	exotic	I			
Family: Annonaceae (custard-apple)						
Asimina reticulata	netted pawpaw	native				
Family: Apiaceae (carrot)						
Eryngium yuccifolium	button rattlesnakemaster	native			R	
Oxypolis filiformis subsp. f*iliformis*	water cowbane	native				
Family: Apocynaceae (dogbane)						
Catharanthus roseus	Madagascar periwinkle	exotic				
Family: Aquifoliaceae (holly)						
Ilex glabra	gallberry	native				
Family: Araliaceae (ginseng)						
Hydrocotyle verticillata	whorled marshpennywort	native			R	
Family: Asteraceae (aster)						
Ambrosia artemisiifolia	common ragweed	native				
Baccharis halimifolia	groundsel tree	native				
Bidens alba	beggerticks	native				
Chaptalia tomentosa	pineland daisy	native				
Cirsium horridulum	purple thistle	native				
Cirsium nuttallii	Nuttall's thistle	native			I	
Conyza canadensis	Canadian horseweed	native				

Appendix C: Plant Species List for Pop Ash Creek Preserve

Common and scientifc names for this list were obtained from Wunderlin Hansen, 2003

Scientific Name	Common Name	Native/Exotic	EPPC	FDACS	IRC	FNAI
Coreopsis leavenworthii	Leavenworth's tickseed	native				
Elephantopus elatus	tall elephantsfoot	native			R	
Emilia fosbergii	Florida tasselflower	exotic				
Erigeron quercifolius	oakleaf fleabane	native				
Eupatorium capillifolium	dogfennel	native				
Eupatorium leptophyllum	falsefennel	native			R	
Eupatorium mikanioides	semaphore thoroughwort	native			R	
Euthamia caroliniana	slender flattop goldenrod	native				
Flaveria floridana	Florida yellowtops	native			I	
Helenium pinnatifidum	southern sneezeweed	native			R	
Iva microcephala	piedmont marshelder	native				
Liatris sp.	gayfeather	native				
Mikania scandens	climbing hempvine	native				
Pityopsis ssp.	silkgrass	native				
Pluchea odorata	sweetscent	native				
Pluchea rosea	rosy camphorweed	native				
Solidago fistulosa	pinebarren goldenrod	native			R	
Solidago stricta	wand goldenrod	native				
Sphagneticola trilobata	creeping oxeye	exotic	II			
Symphyotrichum simmondsii	Simmonds' aster	native				
Vernonia angustifolia	tall ironweed	native				
Vernonia blodgettii	Florida ironweed	native			R	
Family: Bignoniaceae (trumpet creeper)						
Campsis radicans	trumpet creeper	native			CI	
Family: Boraginaceae (borage)						
Helitropium polyphyllum	pineland helliotrope	native				
Family: Casuarinaceae (sheoak)						
Casuarina equisetifolia	Australian pine	exotic	I			
Family: Chrysobalanaceae (coco plum)						
Licania michauxii	gopher apple	native				
Family: Clusiaceae (mangosteen)						
Hypericum brachyphyllum	coastalplain St. John's-wort	native			R	
Hypericum cistifolium	roundpod St. John's-wort	native				
Hypericum hypercoides	St. John's-wort	native				
Hypericum reductum	Atlantic St. John's-wort	native			R	
Hypericum tetrapetalum	fourpedal St. John's-wort	native				
Family: Combretaceae (combretum)						
Terminalia catappa	West Indian almond	exotic	II			
Family: Droseraceae (sundew)						
Drosera ssp.	sundew	native				
Family: Ebenaceae (ebony)						
Diospyros virginiana	common persimmon	native			R	
Family: Ericaceae (heath)						
Lyonia lucida	fetterbush	native				
Vaccinium myrsinites	shiny blueberry	native				
Family: Euphorbiaceae (spurge)						
Phyllanthus urinaria	chamber bitter	exotic				
Stillingia aquatica	corkwood	native			R	
Family: Fabaceae (pea)						
Acacia auriculiformis	earleaf acacia	exotic	I			
Aeschynomene americana	shyleaf	native			R	

Appendix C: Plant Species List for Pop Ash Creek Preserve

Common and scientifc names for this list were obtained from Wunderlin Hansen, 2003

Scientific Name	Common Name	Native/Exotic	EPPC	FDACS	IRC	FNAI
Albizia lebbeck	woman's tongue	exotic	I			
Chamaecrista fasciculata	partridge pea	native				
Crotalaria lanceolata	lanceleaf rattlebox	exotic				
Desmodium triflorum	threeflower ticktrefoil	exotic				
Indigofera hirsuta	hairy indigo	exotic				
Family: Fagaceae (beech)						
Quercus laurifolia	laurel oak	native				
Quercus virginiana	live oak	native				
Family: Gentianaceae (gentian)						
Sabatia grandiflora	largeflower rosegentian	native			R	
Sabatia stellaris	rose-of-plymouth	native				
Family: Haloragaceae (watermilfoil)						
Proserpinaca palustris	marsh mermaidweed	native			R	
Proserpinaca pectinata	combleaf mermaidweed	native			R	
Family: Iridaceae (iris)						
Sisyrinchium altanticum	Blue-eyed grass					
Family: Lamiaceae (mint)						
Hyptis alata	musky mint	native				
Physostegia purpurea	eastern false dragonhead	native			I	
Piloblephis rigida	wild pennyroyal	native			R	
Family: Lauraceae (laurel)						
Cassytha filiformis	love vine	native				
Family: Lentibulariaceae (bladderwort)						
Utricularia cornuta	horned bladderwort	native			R	
Utricularia foliosa	leafy bladderwort	native			R	
Family: Linaceae (flax)						
Linum sp.	flax	depends on species				
Family: Loganaceae (logania)						
Mitreola petiolata	lax hornpod	native				
Mitreola sessilifolia	swamp hornpod	native			R	
Family: Lythraceae (loosestrife)						
Cuphea carthagenesis	Colombian waxweed	exotic				
Lythrum alatum	winged loosestrife	native				
Family: Malvaceae (mallow)						
Melochia corchorifolia	chocolateweed	exotic				
Urena lobata	Caesar's weed	exotic	II			
Family: Melastomataceae (melastome)						
Rhexia cubensis	West Indian meadowbeauty	native			I	
Rhexia nuttallii	Nuttall's meadowbeauty	native			I	
Family: Myricaceae (bayberry)						
Myrica cerifera	wax myrtle	native				
Family: Myrsinaceae (myrsine)						
Rapanea punctata	myrsine	native				
Family: Myrtaceae (myrtle)						
Eugenia uniflora	Surinam cherry	exotic	I			
Eucalyptus torelliana	Torrell's eucalyptus	exotic				
Melaleuca quinquenervia	punktree	exotic	I			
Syzygium cumini	Java plum	exotic	I			
Family: Nymphaeaceae (waterlily)						
Nuphar advena	spatterdock	native				
Family: Oleaceae (olive)						

Appendix C: Plant Species List for Pop Ash Creek Preserve

Common and scientifc names for this list were obtained from Wunderlin Hansen, 2003

Scientific Name	Common Name	Native/Exotic	EPPC	FDACS	IRC	FNAI
Fraxinus caroliniana	pop ash	native			R	
Family: Onagraceae (eveningprimrose)						
Gaura angustifolia	southern beeblossom	native				
Ludwigia maritima	seaside primrosewillow	native			R	
Ludwigia microcarpa	smallfruit primrosewillow	native			R	
Ludwigia octovalvis	Mexican primrosewillow	native				
Ludwigia peruviana	Peruvian primrosewillow	exotic	I			
Ludwigia repens	creeping primrosewillow	native				
Ludwigia virgata	Savannah primrosewillow				CI	
Family: Orobanchaceae (broomrape)						
Buchnera americana	American bluehearts	native				
Family: Passifloraceae (passionflower)						
Passiflora suberosa	corkystem passionflower	native				
Family: Phytolaccaceae (pokeweed)						
Phytolacca americana	American pokeweed	native				
Family: Polygalaceae (milkwort)						
Polygala grandiflora	showy milkwort	native				
Family: Polygonaceae (buckwheat)						
Polygonum hydropiperoides	swamp smartweed	native			R	
Rumex verticillatus	swamp dock	native			I	
Family: Rubiaceae (madder)						
Diodia virginiana	Virginia buttonweed	native			R	
Ixora coccinea	scarlet jungleflame	exotic				
Richardia brasiliensis	tropical Mexican clover	exotic				
Spermacoce remota	woodland false buttonweed	native				
Family: Salicaceae (willow)						
Salix caroliniana	Carolina willow	native				
Family: Sapindaceae (soapberry)						
Cupaniopsis anacardioides	carrotwood	exotic	I			
Family: Simaroubaceae (quassia)						
Leitneria floridana	corkwood	native				
Family: Urticaceae (nettle)						
Boehmeria cylindrica	false nettle	native				
Family: Verbenaceae (vervain)						
Callicarpa americana	American beautyberry	native				
Phyla nodiflora	capeweed	native				
Family: Veronicaceae (speedwell)						
Scoparia dulcis	sweetbroom	native				
Family: Violaceae (violet)						
Viola lanceolata	bog white violet	native			I	
Viola palmata	early blue violet	native			CI	
Family: Vitaceae (grape)						
Parthenocissus quinquefolia	Virginia creeper	native				
Vitis aestivalis	summer grape	native			I	
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 D: Wildlife Species

Appendix D: Wildlife Species List for Pop Ash Creek 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)				
Sigmodon hispidus	hispid cotton rat			
Family: Leporidae (rabbits and hares)				
Sylvilagus palustris	marsh rabbit			
Sylvilagus floridanus	eastern cottontail			
Family: Talpidae (moles)				
Scalopus aquaticus	eastern mole			
Family: Canidae (wolves and foxes)				
Canis latrans	coyote			
Urocyon cinereoargenteus	common gray fox			
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				
Cairina moschata	muscovy duck *			
Aix sponsa	wood duck			
Anas platyrhynchos	mallard			
Anas fulvigula	mottled duck			
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)				
Mycteria americana	wood stork	E	E	G4/S2
Family: Phalacrocoracidae (cormorants)				
Phalacrocorax auritus	double-crested cormorant			
Family: Anhingidae (anhingas)				
Anhinga anhinga	anhinga			
Family: Pelecanidae (pelicans)				
Pelecanus erythrorhynchos	American white pelican			

Appendix D: Wildlife Species List for Pop Ash Creek Preserve

		Designated Status		
Scientific Name	**Common Name**	**FWC**	**FWS**	**FNAI**
Family: Ardeidae (herons, egrets, bitterns)				
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
Circus cyaneus	northern harrier			
Accipiter cooperii	Cooper's hawk			G5/S3
Hailaeetus leucocephalus	bald eagle	T		G5/S3
Buteo lineatus	red-shouldered hawk			
Buteo jamaicensis	red-tailed hawk			
Family: Rallidae (coots and gallinules)				
Gallinula chloropus	common moorhen			
Family: Aramidae (limpkins)				
Aramus guarauna	limpkin	SSC		G5/S3
Family: Gruidae (cranes)				
Subfamily: Gruinae				
Grus canadensis pratensis	Florida sandhill crane	T		G5T2T3/S2S3
Family: Charadriidae (plovers)				
Subfamily: Charadriinae				
Charadrius vociferus	killdeer			
Family: Scolopacidae (sandpipers and phalaropes)				
Subfamily: Scolopacinae				
Tringa melanoleuca	greater yellowlegs			
Tringa flavipes	lesser yellowlegs			
Gallinago delicata	Wilson's snipe			
Family: Columbidae (pigeons and doves)				
Streptopelia decaocto	Eurasian collared-dove *			
Zenaida macroura	mourning dove			
Columbina passerina	common ground-dove			
Family: Strigidae (true owls)				
Bubo virginianus	great horned owl			
Strix varia	barred owl			
Family: Tytonidae (barn owls)				
Tyto alba	barn owl			

Appendix D: Wildlife Species List for Pop Ash Creek Preserve

		Designated Status		
Scientific Name	**Common Name**	**FWC**	**FWS**	**FNAI**
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
Colaptes auratus	northern flicker			
Dryocopus pileatus	pileated woodpecker			
Family: Falconidae (falcons)				
Subfamily: Caracarinae (caracaras)				
Caracara cheriway	crested caracara	**T**	**T**	G5/S2
Subfamily: Falconinae (falcons)				
Falco sparverius	American kestrel			
Family: Tyrannidae (tyrant flycatchers)				
Subfamily: Fluvicolinae				
Sayornis phoebe	eastern phoebe			
Myiarchus crinicensis	great-crested flycatcher			
Family: Laniidae (shrikes)				
Lanius ludovicianus	loggerhead shrike			
Family: Vireonidae (vireos)				
Vireo griseus	white-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			
Family: Paridae (chickadees and titmice)				
Baeolophus bicolor	tufted titmouse			
Family: Troglodytidae (wrens)				
Troglodytes aedon	house wren			
Cistothorus platensis	sedge wren			
Thryothorus ludovicianus	Carolina wren			
Family: Polioptilidae				
Polioptila caerulea	blue-gray gnatcatcher			
Family: Turdidae (thrushes)				
Sialia sialis	eastern bluebird			
Turdus migratorius	American robin			
Family: Mimidae (mockingbirds and thrashers)				
Dumetella carolinensis	gray catbird			
Toxostoma rufum	brown thrasher			
Mimus polyglottos	northern mockingbird			

Appendix D: Wildlife Species List for Pop Ash Creek Preserve

		Designated Status		
Scientific Name	**Common Name**	**FWC**	**FWS**	**FNAI**
Family: Sturnidae (starlings)				
Sturnus vulgaris	European starling *			
Family: Parulidae (wood-warblers)				
Mniotilta varia	black-and-white 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			
Dendroica virens	black-throated green warbler			
Family: Emberizine (sparrows and their allies)				
Pipilo erythrophthalmus	eastern towhee			
Passerculus sandwichensis	Savannah sparrow			
Family: Cardinalidae (cardinals, some grosbeaks, new world buntings, etc.)				
Cardinalis cardinalis	northern cardinal			
Family: Icteridae (blackbirds, orioles, etc.)				
Agelaius phoeniceus	red-winged blackbird			
Sturnella magna	eastern meadowlark			
Quiscalus quiscula	common grackle			
Quiscalus major	boat-tailed grackle			
Molothrus ater	brown-headed cowbird			
REPTILES				
Family: Alligatoridae (alligator and caiman)				
Alligator mississippiensis	American alligator	SSC		G5/S4
Family: Emydidae (box and water turtles)				
Terrapene carolina bauri	Florida box turtle			
Pseudemys peninsularis	peninsula cooter			
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: Teiidae (whiptails)				
Aspidoscelis sexlineata sexlineata	six-lined racerunner			
Family: Colubridae (harmless egg-laying snakes)				
Coluber constrictor priapus	southern black racer			
Pantherophis guttatus	eastern corn snake			
Family: Crotalidae (pitvipers)				
Crotalus adamanteus	eastern diamondback rattlesnake			G4/S3
Sistrurus miliarius barbouri	dusky pygmy rattlesnake			
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 terrestris	southern toad			
Anaxyrus quercicus	oak toad			
Family: Leptodactylidae (tropical frogs)				
Eleutherodactylus planirostris	greenhouse frog *			

Appendix D: Wildlife Species List for Pop Ash Creek Preserve

		Designated Status		
Scientific Name	**Common Name**	**FWC**	**FWS**	**FNAI**
Family: Hylidae (treefrogs and their allies)				
Acris gryllus dorsalis	Florida cricket frog			
Hyla cinerea	green treefrog			
Hyla squirella	squirrel treefrog			
Osteopilus septentrionalis	Cuban treefrog *			
Pseudacris nigrita	southern chorus frog			
Family: Microhylidae (narrowmouth toads)				
Gastrophryne carolinensis	eastern narrowmouth toad			
Family: Ranidae (true frogs)				
Rana grylio	pig frog			
Lithobates sphenocephalus sphenocephalus	Florida leopard frog			
FISHES				
Family: Lepisosteidae (gar fish)				
Lepisosteus platyrhincus	Florida gar			
Family: Clariidae (labyrinth catfishes)				
Clarias batrachus	walking catfish *			
Family: Loricariidae (suckermouth armored catfishes)				
Hypostomus spp.	suckermouth catfish*			
Pterygoplichthys multiradiatus	Orinoco sailfin catfish*			
Family: Fundulidae (topminnows and killifishes)				
Fundulus seminolis	Seminole killifish			
Fundulus chrysotus	golden topminnow			
Lucania goodei	bluefin killifish			
Family: Cyprinodontidae (pupfishes)				
Jordanella floridae	American flagfish			
Family: Poeciliidae (livebearers)				
Gambusia spp.	mosquitofish			
Heterandria formosa	least killifish, dwarf livebearer			
Family: Centrarchidae (sunfishes and basses)				
Micropterus salmoides	largemouth bass			
Lepomis macrochirus	bluegill			
Lepomis microlophus	redear sunfish			
Family: Cichlidae (cichlids)				
Hemichromis letourneauxi	African jewelfish, jewel cichlid *			
Cichlasoma urophthalmus	Mayan cichlid *			
Oreochromis aureus	blue tilapia *			
INSECTS				
Family: Acrididae (grasshoppers)				
Romalea microptera	eastern lubber grasshopper			
Family: Psyllidae (psyllids)				
Boreioglycaspis melaleucae	melaleuca psyllid *			
Family: Bibionidae (march flies)				
Plecia nearctica	love bug			
Family: Curculionidae (true weevils)				
Oxyops vitiosa	melaleuca weevil *			
Family: Papilionidae (swallowtails)				
Eurytides marcellus	zebra swallowtail			
Papilio polyxenes	black swallowtail			
Papilio cresphontes	giant swallowtail			
Family: Pieridae (whites and sulphurs)				
Subfamily: Coliadinae (sulphurs)				
Phoebis philea	orange-barred sulphur			

Appendix D: Wildlife Species List for Pop Ash Creek Preserve

		Designated Status		
Scientific Name	**Common Name**	**FWC**	**FWS**	**FNAI**
Family: Nymphalidae (brushfoots)				
Subfamily: Heliconiinae (longwings)				
Agraulis vanillae	gulf fritillary			
Heliconius charitonius	zebra			
Subfamily: Nymphalinae (brushfoots)				
Junonia coenia	common buckeye			
Anartia jatrophae	white peacock			
Subfamily: Danaidae (milkweed butterfiles)				
Danaus plexippus	monarch			
Danaus gilippus	queen			
ARACHNIDS				
Family: Araneidae (orb weavers)				
Nephila clavipes	golden-silk spider			
CRUSTACEANS				
Family: Cambaridae (crayfish)				
Cambaridae camburus	crayfish			
GASTROPODS				
Family: Ampullariidae (apple snails)				
Marisa cornuarietis	giant ram's horn 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
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 E: Powerline Easement

SUPPLEMENT TO RIGHT-OF-WAY AGREEMENT

567358

REC'D REC. 636 PAGE 379

Parcel No. 1
ER No. 3956
Pole No. ____

6.220.-

DOC. STAMPS
SUR TAX $.55
$1.10
$5.50

Florida Power & Light Company
Miami, Florida

Gentlemen:

The undersigned for One Dollar and other good and valuable considerations in hand paid, the receipt of which is hereby acknowledged, agrees that the width of the right-of-way in that certain Right-of-Way Agreement of Florida Power & Light Company, recorded in Deed Book 230, Page 388 of the Public Records of Lee County, Florida, and that certain Supplement to Right-of-Way Agreement recorded in Deed Book 268, Page 296, of the Public Records of Lee County, Florida, where said right-of-way crosses over and above lands owned by the undersigned in Lee County, Florida described as follows:

NW¼, Section 3, Township 43 South, Range 25 East, Lee County, Florida.

The centerline of this right-of-way, 160 feet in width, is described as beginning at a point on the East line of above described property 1,683.4 feet South of the Northeast corner thereof and extending in a northwesterly direction for 2,133.2 feet more or less to a point on the North line thereof 1,312.76 feet East of the Northwest corner of said Section 3,

is hereby enlarged by the addition of 170 feet on the northeasterly side of and being adjacent to and parallel with the said right-of-way.

THIS INSTRUMENT WAS PREPARED BY W. C. SIRMANS, JR.
FLORIDA POWER & LIGHT COMPANY
P. O. BOX 1110 SARASOTA, FLORIDA

This, the 17th day of July, 1970.

In the presence of:

Louis E. Walker

Harriet N. Dayton

Albert L. Easton a single man (SEAL)

Albert L. Easton

(SEAL)

Dorothy I. Easton

FLORIDA
STATE OF NEW YORK AND COUNTY OF COLLIER

I, a Notary Public in and for the County and State aforesaid, do hereby certify that Albert L. Easton and Dorothy I. Easton a single man known to me, personally appeared before me and acknowledged the execution of the foregoing instrument for the uses and purposes therein expressed.

WITNESS my hand and official seal in said County and State this 23rd day of July, 1970.

Louis E. Walker
Notary Public, State of New York
FLORIDA

My Commission Expires:

Notary Public, State of Florida at Large
My Commission Expires May 30, 1971
Bonded by Insurance Underwriters & Surety Co.

RECORDED IN OFFICIAL RECORDS
LEE COUNTY, FLORIDA
RECORD VERIFIED
OCT 28 12 26 PM '70
D.T. FARABEE
CLERK CIRCUIT COURT
BY R Knapp D.C.

LEE COUNTY
STATE OF FLORIDA
DOCUMENTARY STAMP TAX
OCT 28 1970
PD 1.20

Appendix F: Nalle Road and Nalle Grade Road Easement Approvals

Fort Myers, Florida, December 0th, 1925.

The Board of County Commissioners of Lee County, Florida, met in regular session on this date at their office in the Court House in the City of Fort Myers, Florida, for the transaction of any and all business that may regularly come before them. Members of the Board present: John E. Morris, Chairman, F.G. Thompson, A.M. Smith, C.J. Segraves and D.S. Borland.

The Board was called to order by the Chairman at 10:15 A.M., the minutes of the previous sessions read, which was upon motion of Smith, seconded by Segraves, called and carried, approved.

Sec 61" The viewers heretofore appointed by the Board to view and mark out the best route for a certain route for a certain road petitioned for, having first subscribed to an oath to faithfully perform their duties, filed their report recommending that said road commence at the Northwest corner of Section 7, Township 43 South, of Range 25 East, thence East along the Section line to the center of the North line of Section 10, thence South on the half section line of Sections 10, 15 and 22, said Township and Range, to the Samville-Halgrim hard road, be opened up and declared a Public Road of Lee County, Florida, fifty feet in width.

Upon motion of Borland, seconded by Smith, called and carried, that the viewers report be accepted and filed and said road be opened up and declared a Public Road of Lee County, Florida, fifty feet in width, said order not to become effective, however, until after due notice has been given as required by Law.

Sec 61" The viewers heretofore appointed by the Board to view and mark out the best route for a certain road petitioned for, having first subscribed to an oath to faithfully perform their duties as such, filed their report recommending that said road commence at the intersection of the line of Sections 30 and 31, Township 43 South, of Range 25 East, with the Samville Road, thence East along said Section line to the West banks of Daughtry Creek in Sections 29 and 32, be opened up and declared a Public Road of Lee County, Florida, fifty feet in width. Upon motion of Borland, seconded by Smith, called and carried, that said petition be accepted and filed and the road as described therein be opened up and declared a Public Road of Lee County, Florida, fifty feet in width, said order not to become effective, however, until after due notice has been given as required by Law.

A petition was presented to the Board signed by the required number of freeholders residing in the vicinity of the road sought to be opened up requesting that a road fifty feet in width, commencing at the Northwest corner of Section 12, Township 44 South, of Range 25 East, thence East along the North line of said Section to the Northeast corner of said Section 12, be opened up and declared a Public Road of Lee County, Florida. Upon motion of Borland, seconded by Segraves, called and carried, that said petition be filed and Guy M. Strayhorn, L.A. Osteen, and Harry Scott be appointed as viewers to view and mark out the best route for said road and report on same at the next regular meeting of the Board.

A petition was presented to the Board signed by the required number of citizens living in the vicinity of the road sought to be opened up, requesting that a road, fifty feet in width, commencing at a point on the Fort Myers-Palm Beach Boulevard at the Northwest corner of the Northeast quarter of Section 28, Township 43 South, of Range 26 East, thence along the Section line between Sections 21 and 28, 22 and 27, 23 and 26 to a point on the Fort Myers-Palm Beach Boulevard at the Northeast corner of the Northwest quarter of Section 26 said Township and Range, be opened up and declared a public road of Lee County, Florida. Upon motion of Segraves,

A petition was filed with the Board asking that a road commencing at the intersection of the mid-section line of Section 3, with a road already graded, and running North on said mid-section line one mile to the Charlotte County line, all in Township 43 South, of Range 25 East, be opened up and declared a public road of Lee County, Florida, fifty feet in width. It was upon motion of Borland, seconded by Thompson, called and carried, that the petition be filed, and Harry N. Peterson, A.E. Dewey, and R.H. Howell, be appointed as viewers to view and mark out the best route for said road and report on same at the next regular meeting of the Board.

The County Judge and Tax Collector filed their License Report for the month of April, 1946, showing $438.25 collected for State License and $244.43 for County License.

Upon motion of Thompson, seconded by Smith, called and carried, the Board adjourned for dinner.

The Board was called to order by the Chairman at 1:30 P.M., all members of the Board being present.

The viewers heretofore appointed by the Board to view and mark out the best route for a certain road petitioned for, having first subscribed to an oath to faithfully perform their duties as such, filed their report recommending that saidroad commence at the Northwest corner of the Northeast quarter of the Northeast quarter of Section 24, thence extending South to the Caloosahatchee River, thence Southwesterly in a meandering course along the bank of said river to its intersection with the Public Road at the dock called Halgrim. Also beginning at the intersection of the above mentioned line with the mid-section line of Section 24 and from thence extending West along said mid-section line to its intersection with the Samville (Bayshore) Slater Road on the East side of the A.C.L. Ry. right-of-way, and also at the intersection of this line in the center of Section 21 with the mid-section line running South, extending from thence South to the East side of A.C.L. Ry. right-of-way, all in Township 43, South of Range 25 East be opened up and declared a Public Road of Lee County, Florida, fifty feet in width. Upon motion of Borland, seconded by Thompson, called and carried, that said report be accepted and filed, and said road declared a Public Road of Lee County, Florida, fifty feet in width, said order not to become effective until after due notice has been given as required by law.

The viewers heretofore appointed by the Board to view and mark out the best route for a certain road petition for, having first subscribed to an oath to faithfully perform their duties, filed their report recommending the following as the best route: Park Avenue from the north side of Fifth Street to the north side of Fourth Street; Fourth Street from the west side of Gilchrist Avenue to the east side of Tarpon Avenue; the west side of Gilchrist Avenue from the south side of Fourth Street to the south side of First Street. The viewers recommending that the road as above described be opened up and declared a public road of Lee County, Florida, fifty feet in width, except that part of Park Avenue east of Lots 20 and 24 inclusive of Boca Grande, Florida, this street being approximately fifty feet wide at the north corner of Lot 24. It was upon motion of Thompson, seconded by Smith, called and carried, that the viewers report be accepted, and said road declared a public road of Lee County, Florida, as recommended by the viewers, said order not to become effective, however, until after due notice has been given as required by Law.

The Notary Public Bonds of Mabel E. Willis with American Surety Company of New York as surety; Ray Roure with American Surety Company of New York as surety, were upon motion of Segraves, seconded by Borland, called and carried, approved.

Appendix G: Permanent Access Easement

This instrument prepared by
Division of County Lands
P. O. Box 398
Ft. Myers, Florida 33902-0398

Project: Conservation Land & Program, Project No. 8800
STRAP No.: 03-43-25-00-00001.0000

PERMANENT ACCESS EASEMENT GRANT

This document, made and entered into between Lee County, a political subdivision of the State of Florida, Owner, whose address is P.O. Box 398, Fort Myers, Florida 33902-0398, hereinafter "Grantor", and PRICAR, A Florida General Partnership, and Scott M. Carter, Post Office Box 2148, Fort Myers, Florida 33902, hereinafter "Grantee".

WITNESSETH:

1. For good and valuable consideration, receipt of which is hereby acknowledged, Grantor does hereby grant to Grantee, and its successors in ownership to their adjacent properties, a permanent access easement for the purpose of providing access to Grantee's adjacent properties, so that Grantee's, employees and their representatives, vehicles, and equipment will have ingress and egress along the powerline road (graded). Provided, however, that Grantor retains the right to maintain a gate across such easement on Grantor's property and to keep the gate locked, and to change the lock and the key and/or combination so long as Grantor provides a key and/or the combination to such lock to Grantee in advance so that it always has the means to open the gate for access. The key and/or combination shall be provided by Grantor to such office as Grantee shall designate from time to time in writing.

   The access easement is situated in Lee County, Florida, more particularly described in Exhibit "A" attached hereto end incorporated herein,

2. Any damage to Grantor's property or permitted improvements thereon as the result of such access to the adjacent property will be restored by the Grantee to the condition in which it existed prior to the damage. Grantee shall have the right (but not the obligation) to provide routine maintenance for the roadway and its bank and the ditches, culverts and other facilities on the easement parcel and to keep them clear of debris and functional.

3. Grantor covenants that subject to existing easements, if any, for public highways or roads, railroads, laterals, ditches, pipelines, electrical transmission or distribution lines, telephone and cable television lines covering the land herein described, Grantor is lawfully seized and possessed of the described real property (Exhibit "A), having good and lawful right and power to convey it, and that the property is free and clear of all liens and encumbrances, except as recorded in the public records, and accordingly, Grantor will forever warrant and defend the title and terms to this easement and the quiet possession thereof against all claims and demands of all other entities.

4. The easement, rights and privileges granted herein are non-exclusive, and Grantor reserves the right to convey similar rights and easements to other persons, except those rights and easements that may interfere with and prevent the use by Grantee of the easement. Grantor also retains, reserves, and will continue to enjoy use of the property for purposes that do not interfere with or prevent the use by 'Grantee of the easement.

5. The easement area will be jointly utilized by both parties for access purposes to adjacent lands.

6. This instrument will be binding upon the parties hereto, their successors and assigns.

Permanent Access Easement Grant
Project Conservation Lands Program, Project No. 8800
STRAP No.: 03-43-25-00-00001 0000

IN WITNESS WHEREOF the COUNTY has caused these presents to be executed in its name by its Board of County Commissioners acting by the Chair or Vice Chair of said Board, this 15th day of August 2003.

CHARLIE GREEN, CLERK

BY: _____ 08/15/03
DEPUTY CLERK (DATE)

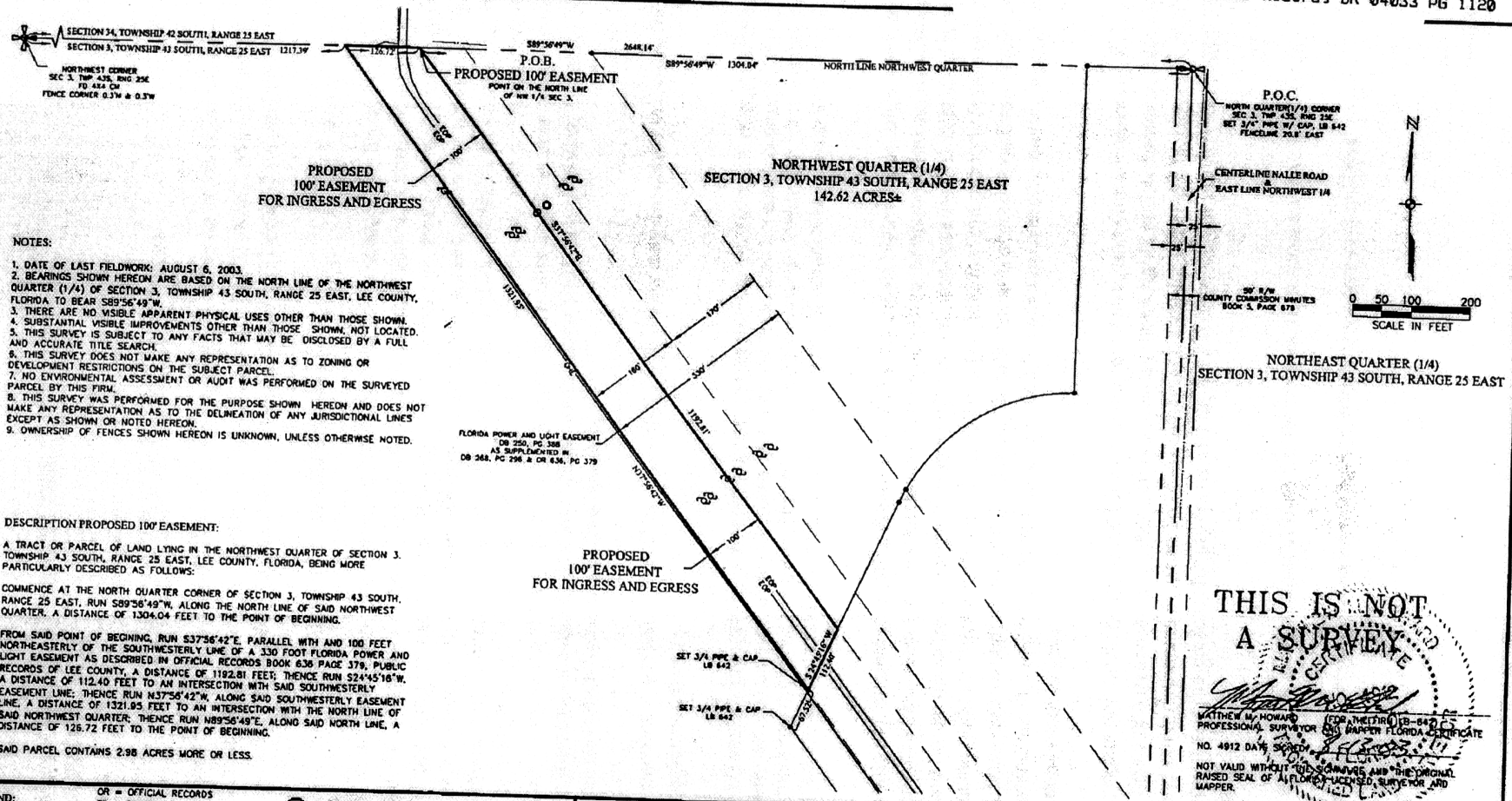
LEE COUNTY, FLORIDA, BY ITS
BOARD OF COUNTY COMMISSIONERS

BY: _____
CHAIRMAN OR VICE CHAIRMAN

APPROVED AS TO LEGAL FORM AND
SUFFICIENCY

_____ 8-15-03
COUNTY ATTORNEY (DATE)

Exhibit "A"



NOTES:

1. DATE OF LAST FIELDWORK: AUGUST 6, 2003.
2. BEARINGS SHOWN HEREON ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER (1/4) OF SECTION 3, TOWNSHIP 43 SOUTH, RANGE 25 EAST, LEE COUNTY, FLORIDA TO BEAR S89°56'49"W.
3. THERE ARE NO VISIBLE APPARENT PHYSICAL USES OTHER THAN THOSE SHOWN.
4. SUBSTANTIAL VISIBLE IMPROVEMENTS OTHER THAN THOSE SHOWN, NOT LOCATED.
5. THIS SURVEY IS SUBJECT TO ANY FACTS THAT MAY BE DISCLOSED BY A FULL AND ACCURATE TITLE SEARCH.
6. THIS SURVEY DOES NOT MAKE ANY REPRESENTATION AS TO ZONING OR DEVELOPMENT RESTRICTIONS ON THE SUBJECT PARCEL.
7. NO ENVIRONMENTAL ASSESSMENT OR AUDIT WAS PERFORMED ON THE SURVEYED PARCEL BY THIS FIRM.
8. THIS SURVEY WAS PERFORMED FOR THE PURPOSE SHOWN HEREON AND DOES NOT MAKE ANY REPRESENTATION AS TO THE DELINEATION OF ANY JURISDICTIONAL LINES EXCEPT AS SHOWN OR NOTED HEREON.
9. OWNERSHIP OF FENCES SHOWN HEREON IS UNKNOWN, UNLESS OTHERWISE NOTED.

DESCRIPTION PROPOSED 100' EASEMENT:

A TRACT OR PARCEL OF LAND LYING IN THE NORTHWEST QUARTER OF SECTION 3, TOWNSHIP 43 SOUTH, RANGE 25 EAST, LEE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTH QUARTER CORNER OF SECTION 3, TOWNSHIP 43 SOUTH, RANGE 25 EAST, RUN S89°56'49"W, ALONG THE NORTH LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 1304.04 FEET TO THE POINT OF BEGINNING.

FROM SAID POINT OF BEGINNING, RUN S37°56'42"E, PARALLEL WITH AND 100 FEET NORTHEASTERLY OF THE SOUTHWESTERLY LINE OF A 330 FOOT FLORIDA POWER AND LIGHT EASEMENT AS DESCRIBED IN OFFICIAL RECORDS BOOK 636 PAGE 379, PUBLIC RECORDS OF LEE COUNTY, A DISTANCE OF 1192.81 FEET; THENCE RUN S24°45'16"W, A DISTANCE OF 112.40 FEET TO AN INTERSECTION WITH SAID SOUTHWESTERLY EASEMENT LINE; THENCE RUN N37°56'42"W, ALONG SAID SOUTHWESTERLY EASEMENT LINE, A DISTANCE OF 1321.95 FEET TO AN INTERSECTION WITH THE NORTH LINE OF SAID NORTHWEST QUARTER; THENCE RUN N89°56'49"E, ALONG SAID NORTH LINE, A DISTANCE OF 126.72 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 2.98 ACRES MORE OR LESS.

S:\034010\SDWESTHALF.dwg (Layout1) KMR Aug 13, 2003 - 8:08am

LEGEND:
R/W = RIGHT-OF-WAY
SEC = SECTION
TWP = TOWNSHIP
RNG = RANGE
W/ = WITH
DB = DEED BOOK
PG = PAGE
OR = OFFICIAL RECORDS
FD = FOUND
CM = CONCRETE MONUMENT
P.O.B = POINT OF BEGINNING
P.O.C. = POINT OF COMMENCMENT
LB = LICENSED BUSINESS
EOP = EDGE OF PAVEMENT
OHE = OVERHEAD ELECTRIC
= CONCRETE POWER POLE
= WOOD POWER POLE
—X— = FENCE

JOHNSON ENGINEERING
2158 JOHNSON STREET
P.O. BOX 1550
FORT MYERS, FLORIDA 33902-1550
PHONE (239) 334-0046
FAX (239) 334-3661
E.B. #642 & L.B. #642

SKETCH AND DESCRIPTION

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
8/08/03	20034010	3-43-25	1" = 200'	1 OF 1

Appendix H: Conservation Easement

PACP

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 3rd day of November, 20 09, by

LEE COUNTY BOARD OF COUNTY COMMISSIONERS, ("Grantor") whose mailing address is

P. O. BOX 398
FORT MYERS, FLORIDA 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 POPSAH CREEK PRESERVE PROJECT ("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 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 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 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,

(Grantor) has hereunto set its authorized hand this 3rd day of November, 20 09.

a Florida corporation

By: _____ (Signature)

Name: Ray Judah (Print)

Title: Chair

APPROVED AS TO FORM
OFFICE OF COUNTY ATTORNEY

Signed, sealed and delivered in our presence as witnesses:

By: Marcia Wilson (Signature) By: Lisa L Pierce (Signature)

Name: Marcia Wilson (Print) Name: Lisa L. Pierce (Print)

STATE OF FLORIDA

) ss:

COUNTY OF LEE

On this 3rd day of November, 20 09 before me, the undersigned notary public, personally appeared Ray Judah, the person who subscribed to the foregoing instrument, as the Chairman of BOCC (title), of _____ (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 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: Rosanna Herrera (Print)

My Commission Expires: 8/24/13

ROSANNA HERRERA
MY COMMISSION # DD 910784
EXPIRES: August 24, 2013
Bonded Thru Notary Public Underwriters

EXHIBIT A

[DESCRIPTION OF PROPERTY]

LEGAL DESCRIPTIONS OF FOUR PASSIVE RECREATION CONSERVATION EASEMENTS

PASSIVE RECREATION CONSERVATION EASEMENT - SHALLOW FLOWWAY "A"
AN EASEMENT LYING IN THE SOUTHWEST QUARTER AND PART OF THE NORTHWEST QUARTER OF SECTION 3, TOWNSHIP 43 SOUTH, RANGE 25 EAST, LEE COUNTY, FLORIDA. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTH QUARTER OF SECTION 3, TOWNSHIP 43 SOUTH, RANGE 25 EAST, RUN S00°36'14"W, ALONG THE EAST LINE OF SAID NORTHWEST QUARTER, ALSO BEING THE CENTERLINE OF NALLE ROAD, AS DESCRIBED IN COUNTY COMMISSION MINUTES BOOK 5, PAGE 678, A DISTANCE OF 2567.151 FEET; THENCE RUN S82°12'58"W, A DISTANCE OF 1850.545 FEET TO THE POINT OF BEGINNING OF PASSIVE RECREATION CONSERVATION EASEMENT - SHALLOW FLOWWAY "A".

FROM SAID POINT OF BEGINNING, RUN S 2°38'39" E, A DISTANCE OF 67.62 FEET; THENCE RUN S 7°32'28" W, A DISTANCE OF 109.803 FEET; THENCE RUN S 7°34'13" W, A DISTANCE OF 115.462 FEET; THENCE RUN S 13d31'45" W, A DISTANCE OF 103.169 FEET; THENCE RUN S 18°55'49" W, A DISTANCE OF 125.819 FEET; THENCE RUN S 41°58'7" W, A DISTANCE OF 77.836 FEET; THENCE RUN S 25°14'18" W, A DISTANCE OF 76.983 FEET; THENCE RUN S 53°37'53" W, A DISTANCE OF 63.257 FEET; THENCE RUN N 3°58'55" W, A DISTANCE OF 189.572 FEET; THENCE RUN S 87°22'6" W, A DISTANCE OF 101.524 FEET; THENCE RUN N 85°50'44" W, A DISTANCE OF 92.467 FEET; THENCE RUN N 75°40'10" W, A DISTANCE OF 66.815 FEET; THENCE RUN N 70°54'21" W, A DISTANCE OF 25.567 FEET; THENCE RUN N 60°31'28" E, A DISTANCE OF 4.129 FEET; THENCE RUN N 43°9'35" E, A DISTANCE OF 45.239 FEET; THENCE RUN N 32°23'14" E, A DISTANCE OF 75.103 FEET; THENCE RUN N 45°24'45" E, A DISTANCE OF 60.963 FEET; THENCE RUN N 26°14'16" E, A DISTANCE OF 72.577 FEET; THENCE RUN N 4°8'9" W, A DISTANCE OF 78.512 FEET; THENCE RUN N 12°31'55" E, A DISTANCE OF 60.889 FEET; THENCE RUN N 30°54'47" E, A DISTANCE OF 67.76 FEET; THENCE RUN N 49°28'0" E, A DISTANCE OF 65.328 FEET; THENCE RUN N 82°8'5" E, A DISTANCE OF 70.292 FEET; THENCE RUN N 33°38'58" E, A DISTANCE OF 59.193 FEET; THENCE RUN N 8°44'54" W, A DISTANCE OF 39.186 FEET; THENCE RUN N 12°7'26" W, A DISTANCE OF 89.805 FEET; THENCE RUN N 89°52'58" E, A DISTANCE OF 96.763 FEET; THENCE RUN N 74°49'10" E, A DISTANCE OF 75.513 FEET;
THENCE RUN N 15°8'51" W, A DISTANCE OF 12.000 FEET; THENCE RUN S 74°49'10" W, A DISTANCE OF 73.934 FEET; THENCE RUN S 89°52'58" W, A DISTANCE OF 94.26 FEET; THENCE RUN N 5°42'42" E, A DISTANCE OF 18.865 FEET; THENCE RUN N 86d52'41" E, A DISTANCE OF 161.803 FEET; THENCE RUN

S 15°8'51" E, A DISTANCE OF 65.557 FEET; THENCE RUN S 3°22'2" E, A DISTANCE OF 81.781 FEET; THENCE RUN S 14°22'5" E, A DISTANCE OF 67.751 FEET, TO THE POINT OF BEGINNING.

SAID EASEMENT CONTAINS 5.28 ACRES, MORE OR LESS

PASSIVE RECREATION CONSERVATION EASEMENT - SHALLOW FLOWWAY "B"
AN EASEMENT LYING IN THE SOUTHWEST QUARTER AND PART OF THE NORTHWEST QUARTER OF SECTION 3, TOWNSHIP 43 SOUTH, RANGE 25 EAST, LEE COUNTY, FLORIDA. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTH QUARTER OF SECTION 3, TOWNSHIP 43 SOUTH, RANGE 25 EAST, RUN S00°36'14"W, ALONG THE EAST LINE OF SAID NORTHWEST QUARTER, ALSO BEING THE CENTERLINE OF NALLE ROAD, AS DESCRIBED IN COUNTY COMMISSION MINUTES BOOK 5, PAGE 678, A DISTANCE OF 2567.151 FEET; THENCE RUN S82°12'58"W, A DISTANCE OF 1850.545 FEET TO THE POINT OF BEGINNING OF PASSIVE RECREATION CONSERVATION EASEMENT – SHALLOW FLOWWAY "B".

FROM SAID POINT OF BEGINNING, RUN S 1°49'7" W, A DISTANCE OF 56.824 FEET; THENCE RUN S 6°56'34" E, A DISTANCE OF 52.22 FEET; THENCE RUN S 19°36'32" W, A DISTANCE OF 105.519 FEET; THENCE RUN S 5°31'7" W, A DISTANCE OF 113.624 FEET; THENCE RUN S 11°44'55" E, A DISTANCE OF 66.291 FEET; THENCE RUN S 23°39'34" E, A DISTANCE OF 84.89 FEET; THENCE RUN S 8°25'44" E, A DISTANCE OF 122.777 FEET; THENCE RUN S 18°23'1" E, A DISTANCE OF 193.599 FEET; THENCE RUN S 4°30'49" E, A DISTANCE OF 153.257 FEET; THENCE RUN N 68°9'0" W, A DISTANCE OF 53.961 FEET; THENCE RUN N 81°17'58" W, A DISTANCE OF 38.003 FEET; THENCE RUN S 33°31'58" W, A DISTANCE OF 4.435 FEET; THENCE RUN ALONG SAID CURVE, HAVING A RADIUS OF 26.994 FEET, DELTA ANGLE OF 134°0'0", A CHORD BEARING OF N80°58'49", A CHORD LENGTH OF 49.653 FEET, A DISTANCE OF 63.023 FEET; THENCE RUN N 74°29'48" W, A DISTANCE OF 60.17 FEET; THENCE RUN N 86°51'18" W, A DISTANCE OF 43.641 FEET; THENCE RUN N 12°27'38" E, A DISTANCE OF 95.053 FEET; THENCE RUN N 27°42'50" W, A DISTANCE OF 60.209 FEET; THENCE RUN N 71°16'15" E, A DISTANCE OF 21.25 FEET; THENCE RUN N 81°34'47" E, A DISTANCE OF 28.668 FEET; THENCE RUN S 81°28'24" E, A DISTANCE OF 30.141 FEET; THENCE RUN S 71°46'15" E, A DISTANCE OF 11.641 FEET; THENCE RUN S 62°34'49" E, A DISTANCE OF 77.252 FEET; THENCE RUN S 79°26'57" E, A DISTANCE OF 38.564 FEET; THENCE RUN S 75°25'50" E, A DISTANCE OF 43.466 FEET; THENCE RUN N 13°47'47" W, A DISTANCE OF 13.637 FEET;THENCE RUN N 75°25'50" W, A DISTANCE OF 37.407 FEET; THENCE RUN N 79°26'57" W, A DISTANCE OF 37.206 FEET; THENCE RUN N 62°34'49" W, A DISTANCE OF 76.437 FEET; THENCE RUN N 71°46'15" W, A DISTANCE OF 13.624 FEET; THENCE RUN N 81°28'24" W, A DISTANCE OF 32.947 FEET; THENCE RUN S 81°34'47" W, A DISTANCE OF 31.538 FEET; THENCE RUN S 71°16'15" W, A DISTANCE OF 24.23 FEET; THENCE RUN N 27°42'50" W, A DISTANCE OF 18.795 FEET; THENCE RUN N 51°9'14" W, A DISTANCE OF 54.364 FEET; THENCE RUN N

5°11'46" E, A DISTANCE OF 12.987 FEET; THENCE RUN N 48°35'0" E, A DISTANCE OF 53.323 FEET; THENCE RUN N 43°13'2" E, A DISTANCE OF 53.244 FEET; THENCE RUN N 27°24'48" E, A DISTANCE OF 71.526 FEET; THENCE RUN N 00°00'00", A DISTANCE OF 65.846 FEET; THENCE RUN N 22°52'44" W, A DISTANCE OF 81.678 FEET; THENCE RUN N 19°42'45" W, A DISTANCE OF 83.684 FEET; THENCE RUN N 1°28'9" W, A DISTANCE OF 91.744 FEET; THENCE RUN N 4°5'12" E, A DISTANCE OF 132.027 FEET; THENCE RUN N 6°31'17" E, A DISTANCE OF 109.961 FEET; THENCE RUN N 88°24'16" E, A DISTANCE OF 61.147 FEET; THENCE RUN S 85°30'50" E, A DISTANCE OF 66.692 FEET; THENCE RUN N 31°16'3" W, A DISTANCE OF 14.787 FEET; THENCE RUN N 85°30'50" W, A DISTANCE OF 58.689 FEET; THENCE RUN S 88°24'16" W, A DISTANCE OF 60.073 FEET;THENCE RUN N 0°23'29" E, A DISTANCE OF 25.125 FEET; THENCE RUN S 89°57'23" E, A DISTANCE OF 101.407 FEET; THENCE RUN S 31°16'3" E, A DISTANCE OF 51.044 FEET; THENCE RUN S 15°45'18" E, A DISTANCE OF 36.531 FEET, TO THE POINT OF BEGINNING.

SAID EASEMENT CONTAINS 3.38 ACRES, MORE OR LESS

PASSIVE RECREATION CONSERVATION EASEMENT - SHALLOW FLOWWAY "C"
AN EASEMENT LYING IN THE SOUTHWEST QUARTER AND PART OF THE NORTHWEST QUARTER OF SECTION 3, TOWNSHIP 43 SOUTH, RANGE 25 EAST, LEE COUNTY, FLORIDA. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTH QUARTER OF SECTION 3, TOWNSHIP 43 SOUTH, RANGE 25 EAST, RUN S00°36'14"W, ALONG THE EAST LINE OF SAID NORTHWEST QUARTER, ALSO BEING THE CENTERLINE OF NALLE ROAD, AS DESCRIBED IN COUNTY COMMISSION MINUTES BOOK 5, PAGE 678, A DISTANCE OF 2567.151 FEET; THENCE RUN S44°25'32"W, A DISTANCE OF 1945.293 FEET TO THE POINT OF BEGINNING OF PASSIVE RECREATION CONSERVATION EASEMENT – SHALLOWFLOWWAY "C".

FROM SAID POINT OF BEGINNING, RUN S 27°38'24" W, A DISTANCE OF 73.316 FEET; THENCE RUN S 69°50'2" W, A DISTANCE OF 81.156 FEET; THENCE RUN S 48°36'14" W, A DISTANCE OF 96.372 FEET; THENCE RUN S 4°31'48" W, A DISTANCE OF 78.739 FEET; THENCE RUN S 12°56'28" E, A DISTANCE OF 59.009 FEET; THENCE RUN S 66°9'39" E, A DISTANCE OF 95.171 FEET; THENCE RUN S 75°4'1" W, A DISTANCE OF 58.959 FEET; THENCE RUN S 16°55'54" W, A DISTANCE OF 3.444 FEET; THENCE RUN 75°46'31" W, A DISTANCE OF 4.386 FEET; THENCE RUN S 2°50'36" E, A DISTANCE OF 13.991 FEET; THENCE RUN S 71°52'58" E, A DISTANCE OF 82.086 FEET; THENCE RUN N 83°28'35" W, A DISTANCE OF 107.064 FEET; THENCE RUN N 82°13'21" W, A DISTANCE OF 54.369 FEET; THENCE RUN N 72°53'37" W, A DISTANCE OF 61.484 FEET; THENCE RUN S 89°54'47" W, A DISTANCE OF 114.21 FEET; THENCE RUN S 81°27'54" W, A DISTANCE OF 49.484 FEET; THENCE RUN S 89°54'47" W, A DISTANCE OF 45.684 FEET; THENCE RUN N 81°2'41" W, A DISTANCE OF 69.388 FEET; THENCE RUN N 42°0'5" W, A DISTANCE OF 48.848 FEET; THENCE RUN N 60°58'12" W, A DISTANCE OF 44.822 FEET; THENCE RUN N 0°5'12" W, A DISTANCE OF 25.445

FEET; THENCE RUN N 72°50'30" W, A DISTANCE OF 74.377 FEET; THENCE RUN N 25°49'16" E, A DISTANCE OF 33.277 FEET; THENCE RUN N 16°58'44" E, A DISTANCE OF 31.522 FEET; THENCE RUN N 20°16'19" E, A DISTANCE OF 62.354 FEET; THENCE RUN N 7°38'59" E, A DISTANCE OF 59.179 FEET; THENCE RUN N 0°37'22" E, A DISTANCE OF 60.543 FEET; THENCE RUN N 37°44'0" W, A DISTANCE OF 19.338 FEET; THENCE RUN S 0°37'22" W, A DISTANCE OF 74.971 FEET; THENCE RUN S 7°38'59" W, A DISTANCE OF 57.115 FEET; THENCE RUN S 20°16'19" W, A DISTANCE OF 61.372 FEET; THENCE RUN S 16°58'44" W, A DISTANCE OF 30.939 FEET; THENCE RUN S 25°49'16" W, A DISTANCE OF 34.178 FEET; THENCE RUN N 72°50'30" W, A DISTANCE OF 1.706 FEET; THENCE RUN N 41°8'37" W, A DISTANCE OF 173.675 FEET; THENCE RUN N 85°19'4" E, A DISTANCE OF 119.396 FEET; THENCE RUN N 69°22'45" E, A DISTANCE OF 21.338 FEET; THENCE RUN N 33°40'53" E, A DISTANCE OF 21.329 FEET; THENCE RUN N 2°49'53" W, A DISTANCE OF 105.214 FEET; THENCE RUN N 1°20'47" W, A DISTANCE OF 9.286 FEET; THENCE RUN S 37°44'0" E, A DISTANCE OF 149.856 FEET; THENCE RUN S 27°51'57" E, A DISTANCE OF 61.537 FEET; THENCE RUN S 31°55'39" E, A DISTANCE OF 55.857 FEET; THENCE RUN S 72°22'20" E, A DISTANCE OF 105.22 FEET; THENCE RUN S 77°5'45" E, A DISTANCE OF 76.56 FEET; THENCE RUN N 72°56'26" E, A DISTANCE OF 53.098 FEET; THENCE RUN N 29°27'52" E, A DISTANCE OF 96.402 FEET; THENCE RUN N 36°18'17" E, A DISTANCE OF 108.973 FEET; THENCE RUN N 60°37'17" E, A DISTANCE OF 45.476 FEET; THENCE RUN S 33°40'55" E, A DISTANCE OF 44.652 FEET; THENCE RUN N 39°41'55" E, A DISTANCE OF 28.467 FEET; THENCE RUN S 82°26'31" E, A DISTANCE OF 43.79 FEET; THENCE RUN N 82°32'14" E, A DISTANCE OF 36.438 FEET; THENCE RUN N 50°49'34" E, A DISTANCE OF 56.365 FEET, TO THE POINT OF BEGINNING.

SAID EASEMENT CONTAINS 2.93 ACRES, MORE OR LESS

PASSIVE RECREATION CONSERVATION EASEMENT - HABITAT ENHANCEMENT AREA
AN EASEMENTLYING IN THE SOUTHWEST QUARTER AND PART OF THE NORTHWEST QUARTER OF SECTION 3, TOWNSHIP 43 SOUTH, RANGE 25 EAST, LEE COUNTY, FLORIDA. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTH QUARTER OF SECTION 3, TOWNSHIP 43 SOUTH, RANGE 25 EAST, RUN S00°36'14"W, ALONG THE EAST LINE OF SAID NORTHWEST QUARTER, ALSO BEING THE CENTERLINE OF NALLE ROAD, AS DESCRIBED IN COUNTY COMMISSION MINUTES BOOK 5, PAGE 678, A DISTANCE OF 2567.151 FEET; THENCE RUN S7°43'56"W, A DISTANCE OF 1662.796 FEET TO THE POINT OF BEGINNING OF PASSIVE RECREATION CONSERVATION EASEMENT – HABITAT ENHANCEMENT AREA.

FROM SAID POINT OF BEGINNING, RUN S 15°37'54" W, A DISTANCE OF 68.356 FEET; THENCE RUN S 31°45'57" W, A DISTANCE OF 56.889 FEET; THENCE RUN S 81°52'19" W, A DISTANCE OF 38.01 FEET; THENCE RUN S 83°49'54" W, A DISTANCE OF 28.579 FEET; THENCE RUN S 28°4'41" W, A DISTANCE OF 26.104

FEET; THENCE RUN S 10°26'23" E, A DISTANCE OF 29.665 FEET; THENCE RUN S 13°44'22" W, A DISTANCE OF 35.566 FEET; THENCE RUN S 21°30'22" W, A DISTANCE OF 27.231 FEET; THENCE RUN S 56°1'48" W, A DISTANCE OF 42.594 FEET; THENCE RUN W, A DISTANCE OF 25.342 FEET; THENCE RUN N 79°22'58" W, A DISTANCE OF 37.503 FEET; THENCE RUN S 74°28'4" W, A DISTANCE OF 61.906 FEET; THENCE RUN S 11°35'43" W, A DISTANCE OF 43.574 FEET; THENCE RUN S, A DISTANCE OF 36.118 FEET; THENCE RUN S 13°40'28" W, A DISTANCE OF 41.677 FEET; THENCE RUN S 57°52'54" W, A DISTANCE OF 55.581 FEET; THENCE RUN N 84°17'27" W, A DISTANCE OF 55.011 FEET; THENCE RUN S 71°34'10" W, A DISTANCE OF 72.699 FEET; THENCE RUN S 4°23'59" W, A DISTANCE OF 57.081 FEET; THENCE RUN S 3°34'38" E, A DISTANCE OF 52.638 FEET; THENCE RUN S 45°36'27" W, A DISTANCE OF 84.691 FEET; THENCE RUN S 68°12'13" W, A DISTANCE OF 53.057 FEET; THENCE RUN N 74°34'53" W, A DISTANCE OF 32.933 FEET; THENCE RUN N 88°58'38" W, A DISTANCE OF 61.316 FEET; THENCE RUN S 59°49'58" W, A DISTANCE OF 54.449 FEET; THENCE RUN S 7°31'33" W, A DISTANCE OF 58.512 FEET; THENCE RUN S 47°29'49" W, A DISTANCE OF 53.458 FEET; THENCE RUN S 77°9'19" W, A DISTANCE OF 64.003 FEET; THENCE RUN N 50°20'21" W, A DISTANCE OF 58.305 FEET; THENCE RUN N 2°56'11" W, A DISTANCE OF 42.741 FEET; THENCE RUN N 60°16'31" W, A DISTANCE OF 49.873 FEET; THENCE RUN N 22°31'25" W, A DISTANCE OF 75.012 FEET; THENCE RUN N 4°52'0" W, A DISTANCE OF 93.287 FEET; THENCE RUN N 29°8'0" E, A DISTANCE OF 32.678 FEET; THENCE RUN N 77°17'9" E, A DISTANCE OF 117.867 FEET; THENCE RUN N 72°24'35" E, A DISTANCE OF 73.183 FEET; THENCE RUN N 57°39'2" E, A DISTANCE OF 63.708 FEET; THENCE RUN N 69°51'5" E, A DISTANCE OF 69.568 FEET; THENCE RUN N 65°17'3" E, A DISTANCE OF 55.726 FEET; THENCE RUN N 67°8'20" E, A DISTANCE OF 99.287 FEET; THENCE RUN N 38°55'38" E, A DISTANCE OF 28.108 FEET; THENCE RUN N 41°29'6" E, A DISTANCE OF 40.545 FEET; THENCE RUN N 38°57'3" E, A DISTANCE OF 113.658 FEET; THENCE RUN N 45°15'4" E, A DISTANCE OF 81.663 FEET; THENCE RUN N 51°34'16" E, A DISTANCE OF 92.497 FEET; THENCE RUN N 49°51'43" E, A DISTANCE OF 67.313 FEET; THENCE RUN S 72°23'2" E, A DISTANCE OF 105.58 FEET;THENCE RUN N 80°47'54" E, A DISTANCE OF 114.906 FEET, TO THE POINT OF BEGINNING.

SAID EASEMENT CONTAINS 5.39 ACRES, MORE OR LESS

THE FOLLOWING PASSIVE RECREATIONAL USES ARE SPECIFICALLY PERMITTED IN ALL EASEMENTS DESCRIBED ABOVE:

1. HORSEBACK RIDING IN ACCORDANCE WITH THE POP ASH CREEK PRESERVE LAND STEWARDSHIP PLAN, DATED JANUARY 2006.
2. HIKING IN ACCORDANCE WITH THE POP ASH CREEK PRESERVE LAND STEWARDSHIP PLAN, DATED JANUARY 2006.
3. FISHING IN ACCORDANCE WITH THE POP ASH CREEK PRESERVE LAND STEWARDSHIP PLAN, DATED JANUARY 2006.
4. CONTROLLED BURNING AS PART OF THE MANAGEMENT OF THE PRESERVE IN ACCORDANCE WITH THE POP ASH CREEK PRESERVE LAND STEWARDSHIP PLAN, DATED JANUARY 2006.

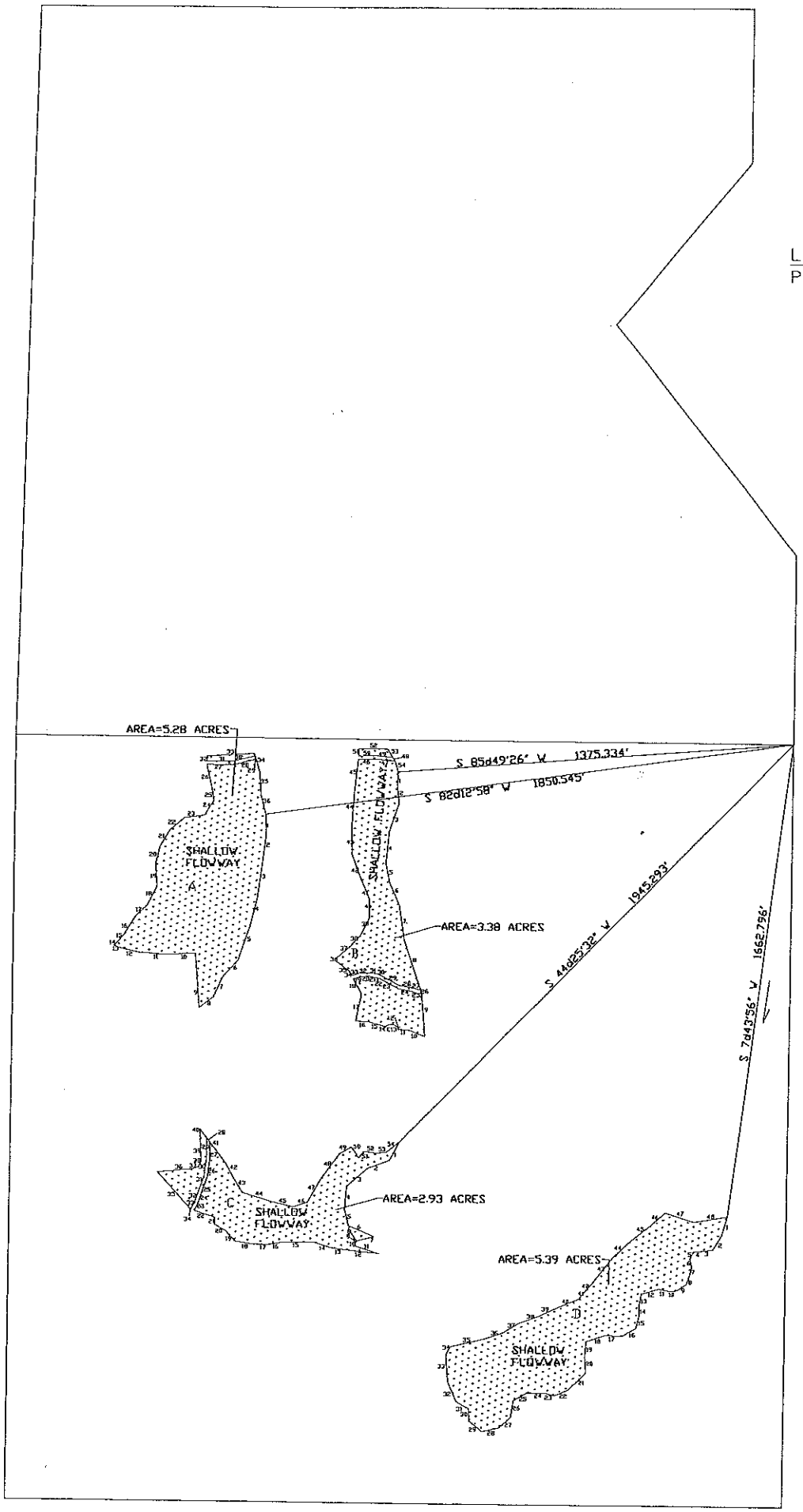


EXHIBIT B
PASSIVE RECREATIONAL
CONSERVATION EASEMENT
SKETCHES

sfwmd.gov

Appendix I: 2015 Cattle Lease

LICENSE AGREEMENT FOR CATTLE GRAZING

This AGREEMENT made this 20 day of Sept., 2015, by and between LEE COUNTY, a political subdivision and Charter County of the State of Florida, whose address is P.O. Box 398, Fort Myers, Florida 33902-0398, (Licensor); and PRI-CAR, a Florida General Partnership, an individual, whose address is P.O. Box 3648, North Fort Myers, FL. 33918, (Licensee).

WHEREAS, Licensor is the owner of property situated in Lee County and depicted and described in attached Exhibit A; and

WHEREAS, Licensor, in consideration of the fees paid and the covenants and agreements set forth herein to be kept and performed by the Licensee, does hereby grant to the Licensee a license solely for the grazing of cattle on Licensors lands as depicted/described in attached Exhibit B (Licensed Property).

NOW, THEREFORE, in consideration of the covenants and conditions set forth below, the parties agree as follows:

1. Recitals. The above recitals are true and correct and incorporated herein as though fully set forth below.

2. License. Licensor hereby grants to Licensee a revocable, non-exclusive License to graze cattle on the property described in attached Exhibit B.

3. License Fee. Licensee agrees to pay Lee County $71.00 per year for each license term or portion thereof is due in advance or before September 15th of each year. Payment may be provided to the Conservation 20/20 Supervisor for appropriate processing.

4. Term. This License begins on the date it is fully executed and ends September 30. The term of this license may be extended for one additional year, beginning October 1 and ending September 30upon mutual agreement of the parties. Licensee must request the extension by August 31st.

5. Revocation, Expiration, Termination or Cancellation. Licensor may revoke the License at any time with 30 days written notice to Licensee. Upon termination of the License, Licensee must remove all cattle and return the property to Licensor in as good or better condition that when it was first licensed.

The parties understand and agree that this License Agreement may be canceled upon 48 hours written notice to the Licensee, if any of the Licensees cattle are not kept within the confines of the Licensed Property as described on Exhibit B. Cattle may be transferred between adjacent or adjoining property, provided the properties are both the

subject of a cattle license held by or involving Licensee, but the cattle must remain within the confines of the perimeter fencing.

6. Use of Licensed Property.

a. *Cattle grazing.* Licensee understands and agrees the licensed property may only be used for cattle grazing and no other purpose.

Use of this License is limited to grazing of cattle owned by Licensee only. If Licensee uses or allows use of the Licensed Property to graze cattle owned by others, the County may terminate or revoke this License Agreement in accordance with paragraph 5 above.

Licensee agrees to graze cattle in the licensed area provided the Licensed area is not being over-grazed and there is a sufficient water supply.

b. *Maximum number of cattle.* Licensee may not exceed 20 head of Cattle on the Licensed Property at any time.

c. *Land management activity.* Licensee must obtain written approval from the Conservation 20/20 Land Stewardship Supervisor prior to performing any land clearing, controlled burns, fertilizing, exotic removal, chopping, chemical spraying, or other land management activities.

d. *Hog removal.* In order to preserve the licensed property and its use for cattle grazing, Licensee may trap and remove feral hogs, at Licensees sole cost and expense, in a manner complying with state and local laws and regulations.

e. *Public Use.* Licensee has a non-exclusive right to use the Licensed Property. Licensee may not prevent the entry of members of the public on the Licensed Property for purposes of maintenance of the preserve areas/property and recreational enjoyment by hikers.

f. *Best Management Practices.* Licensee is responsible for implementing and using the most current Best Management Practices (BMP) provided by Florida Department of Agriculture and Consumer Services. Lee County Extension Services holds classes regarding BMPs, please contact them for scheduling. Failure of Licensee to use BMPs is grounds for termination or non-renewal of a Lee County cattle License.

7. Fencing.

a. During the term of this License, Licensee must maintain all perimeter and interior fencing necessary to keep livestock within the licensed area as follows:

1. Along all road frontage the fencing must be, at minimum, a 5 strand barbed wire fence.

2. Along non-road frontage license boundaries the fencing must be, at minimum, a 4 strand barbed wire fence.

3. The fencing must be maintained in good repair and must effectively prevent cattle from roaming beyond the boundaries of the Licensed Property at all times during the term of this license.

b. At the end of the license period stated in this Agreement, Licensee must turn over the Licensed Property with the fencing in good repair. In the event the fencing is not in good repair, Lee County may take one or more of the following actions: repair the fencing and send an invoice for the repair costs to Licensee; refuse to License County property to Licensee (including any entity involving the Licensee) in the future; or, take any other action the County deems appropriate.

8. Survey monuments. All section corners, quarter corners, and other survey monuments lying in the premises will be properly flagged by the Licensor. Licensee agrees to bear any survey costs for resetting these monuments in the event they are disturbed by the Licensee in any way.

9. Indemnification. Licensee hereby indemnifies and releases the Licensor from any and all claims for damages to both persons and property as the result of the cattle grazing; and, holds Licensor harmless from all damages during the term of this Agreement to include all reasonable fees, costs and expenses incurred for litigation in any forum resulting from damage claimed by third parties as a result of the Licensee's use of the property described in Exhibit "B".

10. Insurance. Licensee must maintain Premises Liability Insurance coverage through the license term and provide proof of insurance to Lee County Parks and Recreation for the duration of the license. The policy must provide minimum limits of $1,000,0000 (combined Single Limit of Bodily Injury and Property Damage). Lee County must be named as a Certificate Holder and Additional Insured on the insurance policy. (A copy of the insurance certificate is attached as Exhibit C.)

11. Personal property taxes. Licensee covenants and agrees to file an annual personal property tax return with the County of Lee, State of Florida, as required by law.

12. Assignment. This License is not assignable or otherwise transferable to any other party.

13. Notices. The contact information for the parties is as follows:

Lee County, Licensor
Director of Parks and Recreation
3410 Palm Beach Boulevard
Fort Myers, FL 33916
239-533-7275

PRI-CAR, Licensee
P.O. Box 3648
North Fort Myers, FL. 33918
(239) 543-4004

14. Amendment. This is the entire agreement between the parties and may only be amended in a writing executed with the same formality.

15. Governing law. This Agreement will be construed in accordance with the laws of the state of Florida. Venue for any court proceedings is in Lee County.

16. Severability. In the event any portion or provisions of this License Agreement is deemed invalid, the remaining provisions will not be affected and will remain in full force and effect.

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CHERRY M LAIL
Notary Public - State of Florida
Commission # FF 210016
My Comm. Expires Mar 15, 2019
Bonded through National Notary Assn.

Licensees: Scott Carter and Richard Pritchett III
(PRI-CAR)

Witness: Cherry M Lail 6/29/15

Print Name: Cherry M Lail

By: [signature] CP

Printed name: Richard W. Pritchett III

Witness: [signature]

Print Name: Tim Funk

WITNESS: [signature]

PRINT NAME: Charles Cockrell

Witness: Cynthia C. Mitar

Print Name: Cynthia C. MITAR

Witness: [signature]

Print Name: Cathy O. Olson

Lee County Parks and Recreation

By: [signature]

X Dana Kastler, Director

__ Alise Flanjack, Deputy Director

Approved as to form for the
Reliance of Lee County only:

By: [signature]

Lee County Attorney's Office

[The Board of County Commissioners delegated authority to the Director of Parks and Recreation to enter short term leases/licenses for cattle grazing on Conservation 2020 lands and other lands managed by Lee County pursuant to Bluesheet #19990807 adopted on August 17, 1999.]

EXHIBIT A

DESCRIPTION: Site #206 Popash Creek Preserve

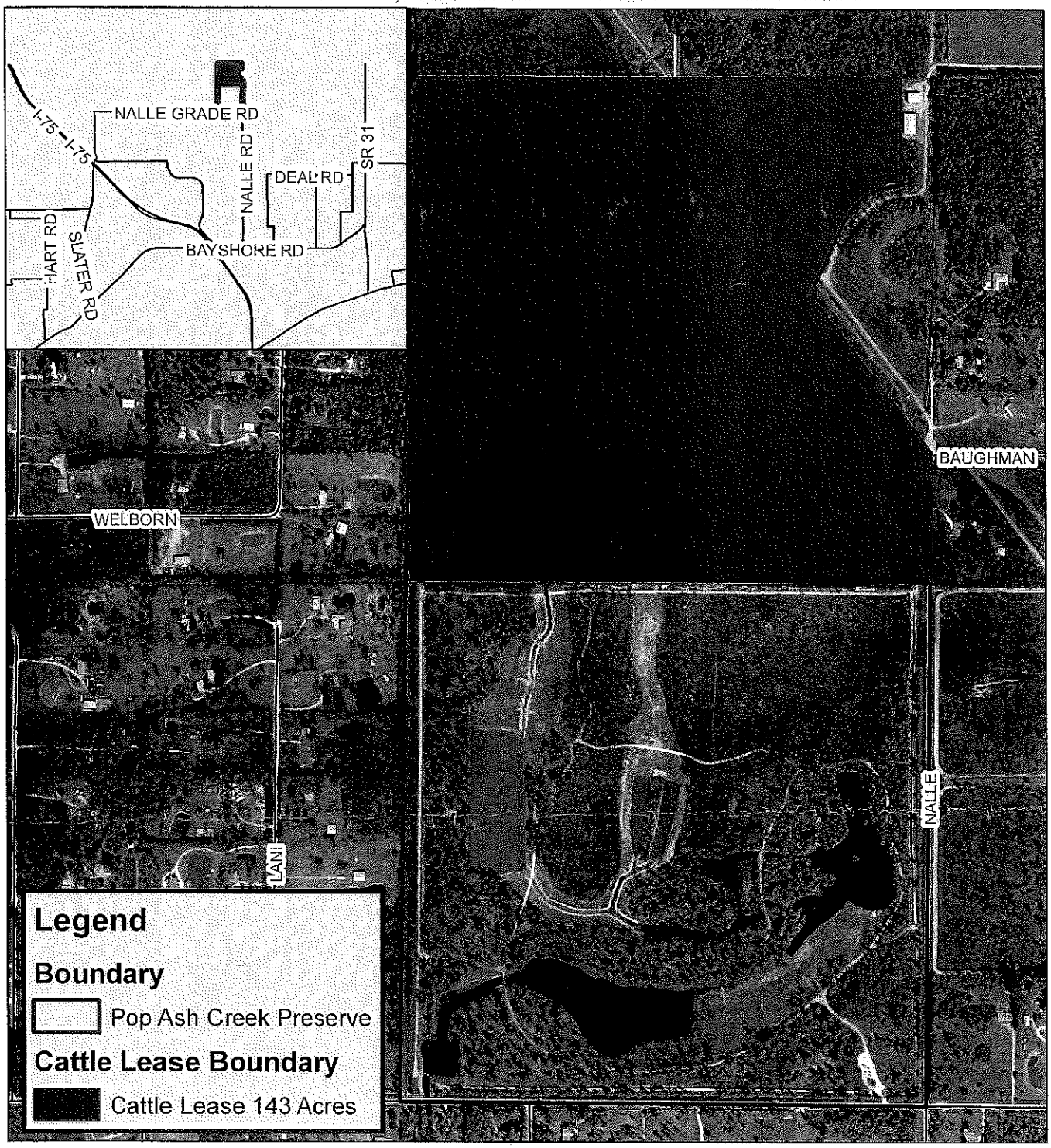
A TRACT OR PARCEL OF LAND LYING IN THE SOUTHWEST QUARTER AND PART OF THE NORTHWEST QUARTER OF SECTION 3, TOWNSHIP 43 SOUTH, RANGE 25 EAST, LEE COUNTY, FLORIDA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTH QUARTER CORNER OF SECTION 3, TOWNSHIP 43 SOUTH, RANGE 25 EAST, RUN S00°36'21" W, ALONG THE EAST LINE OF SAID NORTHWEST QUARTER, ALSO BEING THE CENTERLINE OF NALLE ROAD, AS DESCRIBED IN COUNTY COMMISSION MINUTES BOOK 5, PAGE 678, A DISTANCE OF 1908.04 FEET TO THE POINT OF BEGINNING;
FROM SAID POINT OF BEGINNING, RUN N37°56'42" W, PARALLEL WITH AND 60 FEET SOUTHWESTERLY OF THE SOUTH LINE OF A FLORIDA POWER AND LIGHT EASEMENT, AS DESCRIBED IN OFFICIAL RECORD BOOK 636, PAGE 379 PUBLIC RECORDS OF LEE COUNTY, A DISTANCE OF 1018.01 FEET; THENCE RUN N24°45'16" E A DISTANCE OF 414.49 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT; THENCE RUN ALONG SAID CURVE, HAVING A RADIUS OF 325.00 FEET AN INTERIOR ANGLE OF 64°40'16", A CHORD BEARING OF N57°05'23"E, A CHORD LENGTH OF 347.67 FEET, A DISTANCE OF 366.83 FEET TO A POINT OF NON-TANGENCY; THENCE RUN N00°36'21"E, PARALLEL WITH AND 175 FEET WESTERLY OF THE EAST LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 539.70 FEET TO AN INTERSECTION WITH THE NORTH LINE OF SAID NORTHWEST QUARTER; THENCE RUN S89°56'49"W, ALONG SAID NORTH LINE, A DISTANCE OF 2473.13 FEET TO THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER: THENCE RUN S01°46'58"W, ALONG THE WEST LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 2543.79 FEET TO THE WEST QUARTER CORNER OF SAID SECTION: THENCE RUN S00°34'58"W, ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SECTION 3, A DISTANCE OF 2661.21 FEET TO THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER; THENCE RUN S89°36'11"E, ALONG THE SOUTH LINE OF SAID SOUTHWEST QUARTER, A DISTANCE OF 2699.31 FEET TO THE SOUTH QUARTER CORNER OF SAID SECTION; THENCE RUN N00°36'10"E, ALONG THE EAST LINE OF SAID SOUTHWEST QUARTER, A DISTANCE OF 2657.79 FEET TO THE CENTER OF SAID SECTION; THENCE RUN N00°36'21"E, ALONG THE EAST LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 659.25 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 307.45 ACRES MORE OR LESS.

SUBJECT TO THE ROAD EASEMENT FOR NALLE ROAD OVER AND ACROSS THE EASTERLY 25 FEET THEREOF, ACCORDING TO COUNTY COMMISSION MINUTES BOOK 5, PAGE 678, PUBLIC RECORDS OF LEE COUNTY.
SUBJECT TO THE ROAD EASEMENT FOR NALLE GRADE ROAD OVER AND ACROSS THE SOUTHERLY 25 FEET THEREOF, ACCORDING TO COUNTY COMMISSION MINUTES BOOK 5, PAGE 628 PUBLIC RECORDS OF LEE COUNTY. SUBJECT TO THE FLORIDA POWER AND LIGHT EASEMENT ACCORDING TO OFFICIAL RECORD BOOK 636, PAGE 379, PUBLIC RECORDS OF LEE COUNTY.
SUBJECT TO EASEMENTS, RESTRICTIONS, RESERVATIONS AND RIGHTS-OF-WAY OF RECORD.

Pop Ash Creek Preserve Cattle Lease Map
Exhibit B



N

Cattle Lease Map

0 0.075 0.15 0.3 Miles

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 07/07/2015

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: STEVE POOLE	
Carlock & Associates Insurance, Inc. 2002 Del Prado Blvd S Suite 200 Cape Coral, FL 33990	PHONE (A/C, No, Ext): (239) 549-0221 FAX (A/C, No): (239) 549-6098 E-MAIL ADDRESS: steve@carlockinsurance.com	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A : AUTO OWNERS INSURANCE GROUP	
INSURED	INSURER B :	
PRICAR RICHARD PRITCHETT & SCOTT CARTER P O BOX 2148 FORT MYERS, FL 33902-2148	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY PRO-JECT X LOC	X		20588964	06/28/2015	06/28/2016	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 50,000 $ 5,000 $ 1,000,000 $ 1,000,000 $ 1,000,000
	AUTOMOBILE LIABILITY ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ $ $ $
	UMBRELLA LIAB OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION $						EACH OCCURRENCE AGGREGATE	$ $
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A					WC STATU-TORY LIMITS OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ $ $

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

LEE COUNTY B O C C IS LISTED AS AN ADDITIONAL INSURED WITH RESPECT TO THE GENERAL LIABILITY COVERAGE
POP ASH CREEK PRESERVE #206 CATTLE LEASE
STRAP #03-43-25-00-00004.0000

CERTIFICATE HOLDER

LEE COUNTY B O C C
P O BOX 398

FORT MYERS, FL 33902-0398
Phone: (239)533-7926x
Fax: (239)485-8577

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE <DMM>

Appendix J: Expended and Projected Costs and Funding Sources

Appendix L - Expended and Projected Costs and Funding Sources

EXPENDED $

Resource Enhancement and Protection

Item	Funding Source	Costs
Invasive Exotic Plant Removal (Initial)	Grants	$306,150
	C20/20 Management Fund	$57,509
	C20/20 Volunteers and Staff	$13,433
	LCDNR	$109,000
Invasive Exotic Plant Control (Maintenance)	C20/20 Management Fund	$25,092
	LCDNR	$5,969
Pine Tree Thinning and Snag Removal	C20/20 Staff	$1,000
Total		**$518,153**

Public Amenities

Item	Funding Source	Costs
New Gates	C20/20 Management Fund	$396
Trailhead	C20/20 Management Fund	$4,183
Total		**$4,579**

Overall Protection

Item	Funding Source	Costs
Fire Line Installation	C20/20 Management Fund	$1,800
Feral Hog Trapping	C20/20 Management Fund	$35
Management Plan (2 editions)	C20/20 in-house	$12,600
Total		**$14,435**

TOTAL COST TO DATE	**$537,167**

PROJECTED $

Resource Enhancement and Protection (Annual)

Item	Possible Funding Source	Costs
Fire Break Maintenance	C20/20 in-house	$688
Exotic Plant Maintenance Treatments	C20/20 Management Fund	$18,128
Prescribed Fire Regime (8 units, 1-4 years)	C20/20 Management Fund and in-house	$12,000
Total		**$30,816**

Public Amenities Maintenance (Annual)

Item	Funding Source	Costs
Trail Mowing	C20/20 in-house	$840
Total		**$840**

Overall Protection (Annual)

Item	Possible Funding Source	Costs
Fence repairs	C20/20 in-house	$100
Trash removal	C20/20 in-house	$250
Boundary sign replacement	C20/20 Management Fund	$100
total		**$450**

ESTIMATED ANNUAL COSTS	**$32,106**