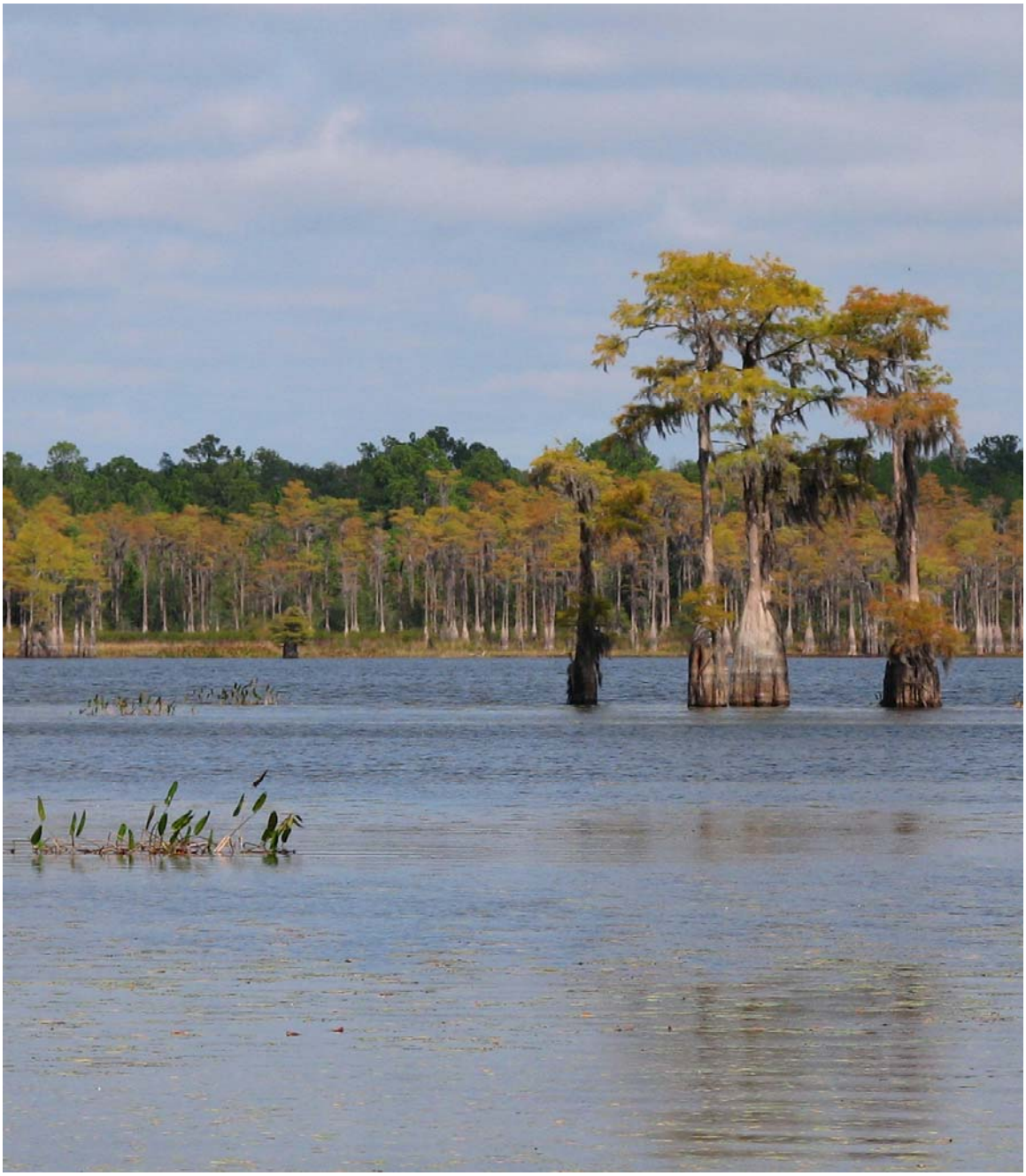
Sand Hill Lakes Mitigation Bank
First Annual Report
December 2006



Executive Summary

The Sand Hill Lakes Mitigation Bank (SLMB) consists of approximately 2,155 acres in southern Washington Co. in the Sand Hill Lakes region of the Florida Panhandle (Figure 1). It is located just west of the intersection of SR77 and SR 279 within Township 1 North, Range 14 & 15 West. It contains approximately 850 acres of wetlands, 155 acres of natural lakes and ponds, and 1,150 acres of upland buffer communities. The FDEP permit for the SHLMB was issued September 5, 2005. This is the first annual report for the SHLMB and serves as a baseline for current and future mitigation activities. A synoptic listing of notable activities conducted prior to this report and those anticipated in the coming year are presented below.

Perimeter fencing with gates and signs was installed prior to March of 2005. Ongoing law enforcement has been conducted at the site since purchase of the bank property. A conservation easement was recorded for the SHLMB in February of 2006, preserving the wetland, aquatic and upland communities in perpetuity. Duncan Cairns, Tyler Macmillan and David Clayton were proposed by the NWFWMD as QMS officers for the SHLMB and approved by FDEP upon sumittal. In accordance with permit requirements a mitigation fund was established for the bank. An archeological/historic survey was conducted at the SHLMB and approved by the Florida Division of Historical Resources (DHR). Construction activities were initiated in July of 2006 in accordance with all permit requirements. The majority of the restoration activities were to be initiated during 2005/2006. However, due in part to the delayed approval by the FDEP (September 2005) and even later approval of the Mitigation Banking Instrument by the US Army Corps of Engineers (March 2006), initiation of many of these activities were delayed by approximately a year from the initial proposed timeline. Additional delays involved a lengthy approval process by DHR for the archeological and historic survey of the SHLMB property, which in turn postponed the internal road improvement needed to accommodate the heavy equipment for many of the restoration activities. Road improvements were initiated on April 24th and completed in mid July 2006. Construction on three bridges, and two culverts was initiated in July 2006 and is anticipated to be completed by February of 2007. The remaining hydrologic improvements will likely occur during 2007.

Fire was re-introduced to the SHLMB during the winter of 2004 to portions of Management Unit 11 and 12. The remaining burns were completed by December of 2005. Surveys of nuisance species (flora and fauna) have been conducted throughout the past year in conjunction with the monthly site inspections. In addition a yearly fall site inspection for nuisance species occurs in conjunction with the annual monitoring as well as day to day monitoring by District and FWC staff. To date one hog has been trapped, 5 small patches of torpedo grass (*Panicum repens*) have been identified and either have or will be treated in the near future, and three seedling popcorn trees (*Sapium sebiferum*) have been removed. Water level gages were installed and surveyed in on December of 2005 for 10 locations throughout the bank. These gages are read monthly and reported to the District by the FWC.

The annual sampling for this report was conducted in October 2006. To date the majority of the restoration activities have occurred in the sand hill uplands. Many of the management activities that will be used to restore the wetland polygons will be conducted during 2007 when the bridges will be complete and allow the movement of heavy equipment into the restoration areas. The dam has been removed from Dykes mill pond and further restoration activities will occur in 2007. It is expected that in future these polygons will achieve more of the interim success criteria as restoration activities are implemented.

Pedestrian surveys were conducted for both wetland and uplands. The pedestrian surveys were very useful in providing a more detailed species list for each community and identifying threatened or endangered species that may occur within the polygon. The pedestrian surveys were also useful in identifying pockets of nuisance species and were also used to help evaluate fuel loads for areas that may need burning in the future. Overall, species diversity was good and plants were healthy.

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Introduction

The Sand Hill Lakes Mitigation Bank (SLMB) consists of 2,155 acres in the southern portion of Washington Co. in the Sand Hill Lakes region of the Florida Panhandle (Figure 1). It is located just west of the intersection of SR77 and SR 279, and is within Township 1 North, Range 14 & 15 West. It contains approximately 850 acres of wetlands including high quality cypress sloughs and strands, degraded hydric pine flatwoods, bayheads, seepage slopes, and approximately155 acres of natural solution ponds and shallow, gently-sloped lakes connected by streams and ditches. The remaining 1,150 acres of consist of secondary growth upland buffer communities (including high quality and degraded sand hill communities as well as sand pine plantation, slash pine plantation, and mixed hardwoods) (Figure 1a).

The SHLMB occurs on the divide between the Choctawhatchee and St. Andrew Bay watersheds. The majority of the proposed Bank is in the surface headwaters of Pine Log Creek, which flows westerly and southwesterly to Pine Log State Forest and ultimately to the Choctawhatchee River and Bay. However, because of the karst nature of the Sand Hill Lakes the SHLMB is also a recharge area for Econfina Creek, which, via Deer Point Lake, is the water supply for Panama City.

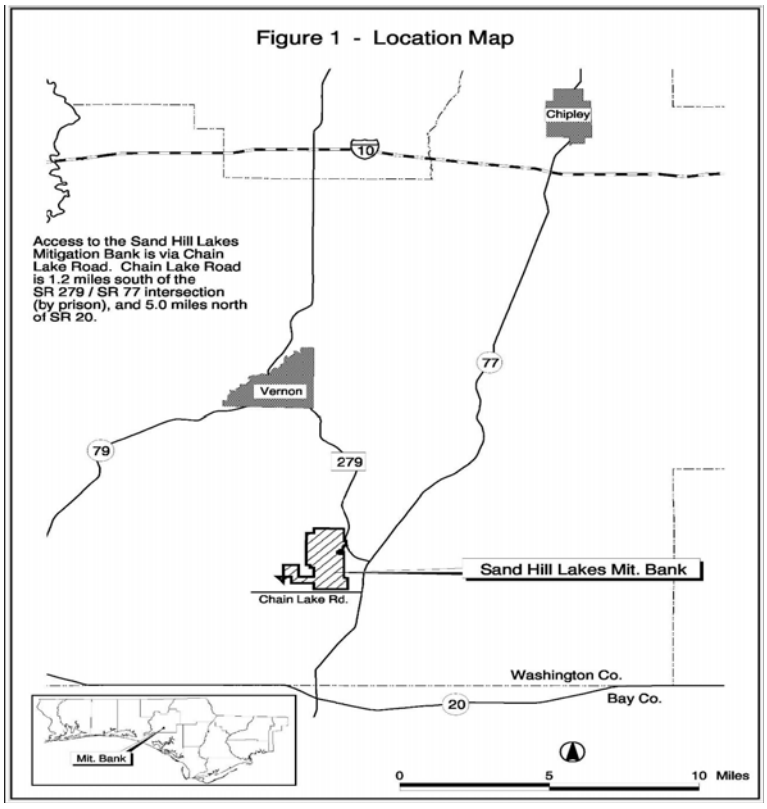
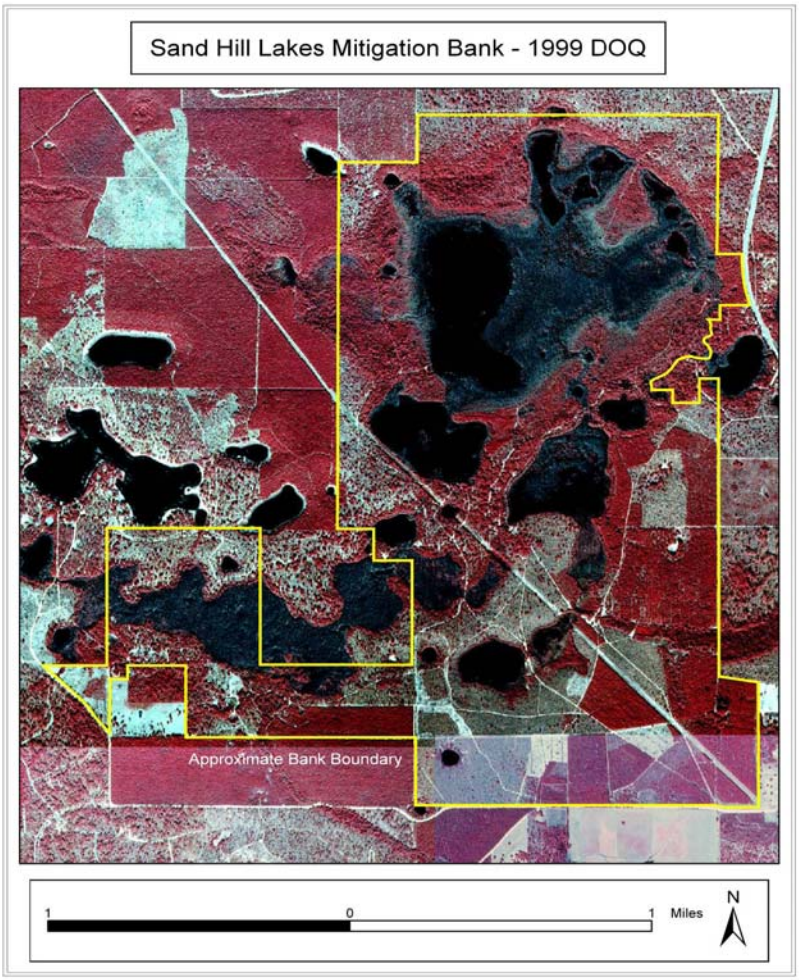


Figure 1a. SHLMB boundary map and habitats



Bank Establishment and Implementation of Permit Requirements

The permit for the Sand Hill Lakes Mitigation Bank (SHLMB) was issued by the DEP in September 2005 and March 2006 by the ACOE. This document represents the first annual report for the SHLMB and acts as a baseline for future and current mitigation activities. Perimeter fencing with gates and signs were installed prior to March of 2005. Law enforcement has been conducted at the site since the property was purchased and is ongoing at the SHLMB. A conservation easement was recorded for the SHLMB on 2/28/06, preserving the wetland, aquatic and upland communities in perpetuity. QMS officers Duncan Cairns, Tyler Macmillan and David Clayton were selected by the NWFWMD and approved. In accordance with permit

requirements a mitigation fund was established for the bank. An archeological and historic survey was conducted for the SHLMB and approved by the Division of Historical Resources. Construction activities were initiated in July of 2006, in accordance with permit requirements.

Summary of Mitigation Activities

Work Schedule

According to the proposed work schedule for the SHLMB, the majority of the restoration activities were to be initiated during 200 /2006. However, the restoration activities were not initiated as originally planned. This is due in part to a delayed approval by the FDEP (September 2005) and even later approval of the Mitigation Banking Instrument by the US Army Corps of Engineers (March 2006), initiation of many of the activities was delayed by approximately 1 year. Additional delays involved a lengthy approval process by DHR of the archeological and historic survey, which in turn postponed the internal road improvement needed to accommodate the heavy equipment used for restoration activities. Accordingly, the sand and slash pine forests harvesting was postponed until the roads, bridges and culverts were replaced. Due to these unforeseen set backs a revised work schedule was generated (Table 1).

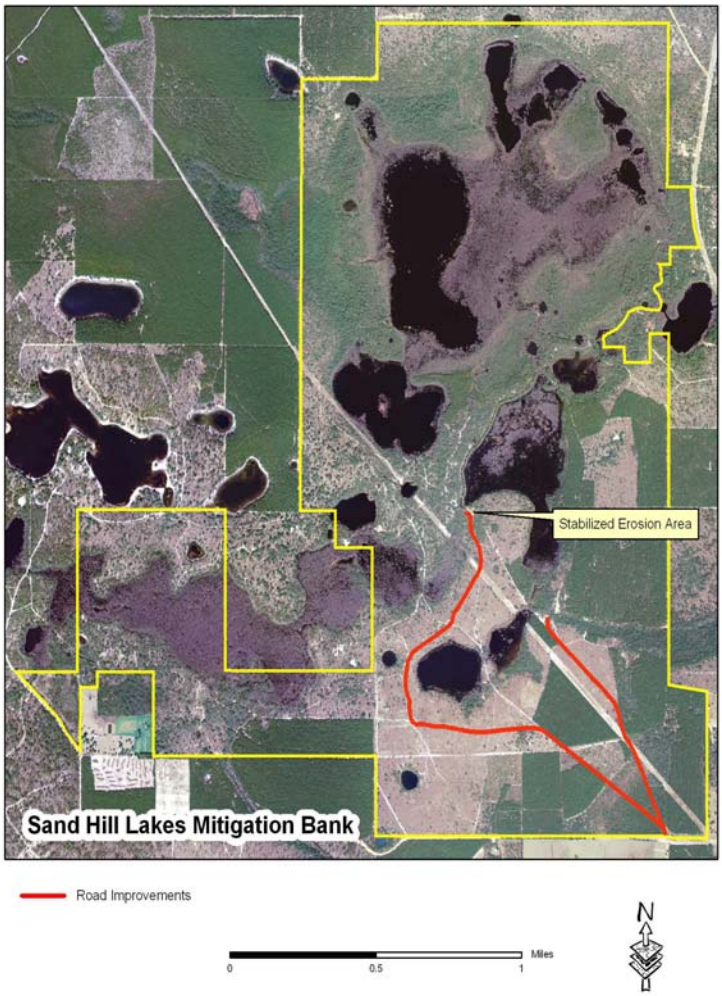
Table 1. Revised restoration work schedule

Activity	Estimated Completion Date
Conservation easement, QMS	Completed 3/06
Fencing and signage	Completed 3/05
Site security / law enforcement / internal gaiting / road closures	Ongoing
Stabilization of 10 erosion sites	2007
Hydrologic enhancements - Replacement of Black Pond dam - Removal of Dykes Mill Pond dam - Removal of road fill at (3) sites - Construction of 2 bridges and replacement of 3 culverts	 2007/2008 Completed 8/06 2007/2008 2006/2007
Removal of pine plantation and replanting with longleaf pine	2007/2008
Removal of oak overgrowth and replanting with longleaf pine	Oak removed 2005/2006 Pine planted 2005 and 2007
80% completion of initial growing season and fuel reduction fires in areas to be maintained as oak / pine community	Completed 12/05
Initial thinning, roller chopping, and fuel reduction fires in hydric pine	Initial burns 8/05 Additional burns and thinning 2007
Supplemental wiregrass seeding if necessitated by onsite conditions	2008/2009
Installation of water level gages	Completed 12/05
Baseline assessments of vegetation	2004/2005 Complete
Fire Management / Monitoring Year 1 / Annual Report	2005/2006 report
Fire Management / Monitoring Year 2/ Annual Report	2007/2008 report
Fire Management / Monitoring Year3 / Annual Report	2009/2010 report
Fire Management / Monitoring Year 4 / Annual Report	2010/2011 report
Fire Management / Monitoring Year 5 / Annual Report	2012/2013 report
Perpetual Ecological Management	2013 +

Road Improvement

In order to implement the restoration activities it became clear that the existing narrow dirt paths with tight curves could not accommodate the heavy equipment needed to remove the Dykes Mill Pond Dam, install the bridges and culverts, and remove the off site sand pine. In addition it was determined that without a more substantial road base, that the cranes and heavy equipment would get bogged down on the existing road ways. A plan was devised to modify existing roads to allow the movement of heavy equipment without creating additional impacts to the site. To that end the main loop road from the entrance to Deep Edge Pond and eastward to Dykes Mill Pond and Greenhead Branch and from Greenhead Branch back to the entrance road was improved by adding a clay base and capping it with limestone (Figure 2 – Road Improvements) The plans were submitted to the ACOE and DEP. The work initiated on April 24th and completed in mid July 2006.

Figure 2 - Road Improvements



Hydrologic Enhancements

Hydrologic enhancements include the complete removal of 3 fill-road crossings, installation of bridges at 2 crossings and 3 culverts and the removal or replacement of 2 failing water control structures, the remediation of 10 erosion areas, the stabilization of 1 boat launching site, and construction of one rain shelter (Figures 3 and 4).

Construction on three bridges (#1, #3, #7), and two culverts (#9, #10-A-B) was initiated in July 2006 and is anticipated to be completed by February or 2007 (Figure 3). Silt fences, staked hay bales and turbidity barriers were installed and have been inspected regularly. No turbid discharge has been observed at any of the construction sites. Due to the drought over the summer, water levels at the bridge and culvert sites for all but Greenhead Branch have been well below the construction areas, often 25' to 30' below the work area.

The road fill for the above referenced areas was excavated to attain natural grade or the native soils. Fill material was removed to an appropriate upland site. Care was taken to leave a surface area that has appropriate soils for colonization by native plants. The graded areas will be stabilized and seeded in early 2007 with season-appropriate, non-invasive annual grass to reduce potentially turbid runoff.

Future hydrologic enhancements will occur in 2007, following the bridge and culverts replacement. This will allow the heavy equipment access to the erosion sites. This will include the replacement of the existing water control structure at Black Pond (#2) and removal of road-fill at three (3) stream-crossing sites (#4, #5, and #6) as well as the restoration of 9 sites where extensive erosion has occurred (Figure 3 and 4). At the December 1, 2006 Board meeting an agreement with the Orange Hill Soil & Water Conservation District for erosion stabilization work at the Sand Hill Lakes Mitigation Bank approved by the governing board and signed on December 12, 2006. However a portion of one erosion area, associated with Dykes Mill Pond (Erosion Area 8) was repaired in June of 2006. The road had extensive erosion and caused impacts to wetlands associated with Dykes Mill Pond. The eroded road was abandoned and restored by creating a series of shallow basins. The area was then stabilized by planting annual rye grass. The area will be planted in 2007 with long leaf pine and wire grass plugs in accordance with the planting plan.

The stabilization of one boat launch area and one rain shelter has not been scheduled.

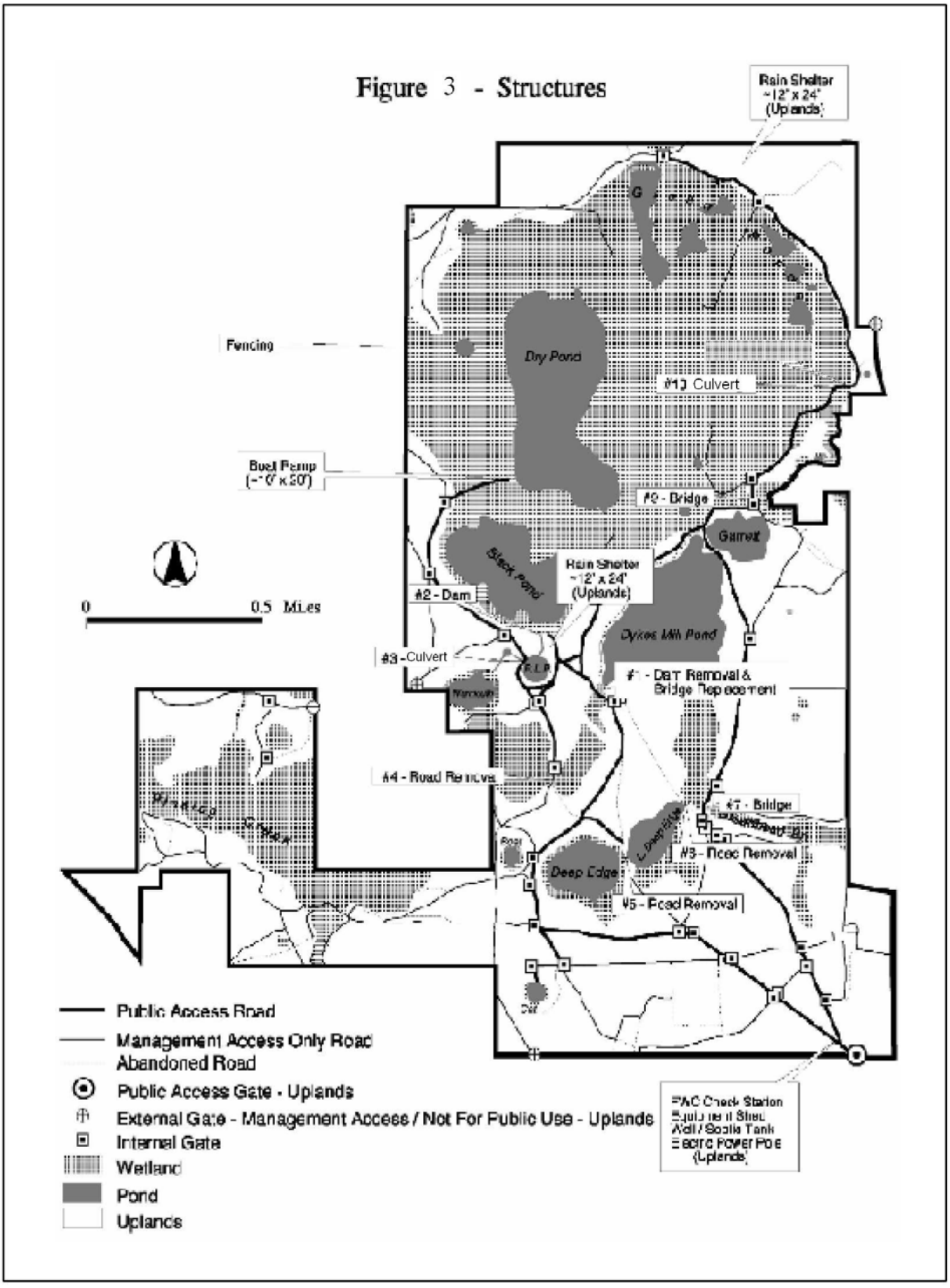
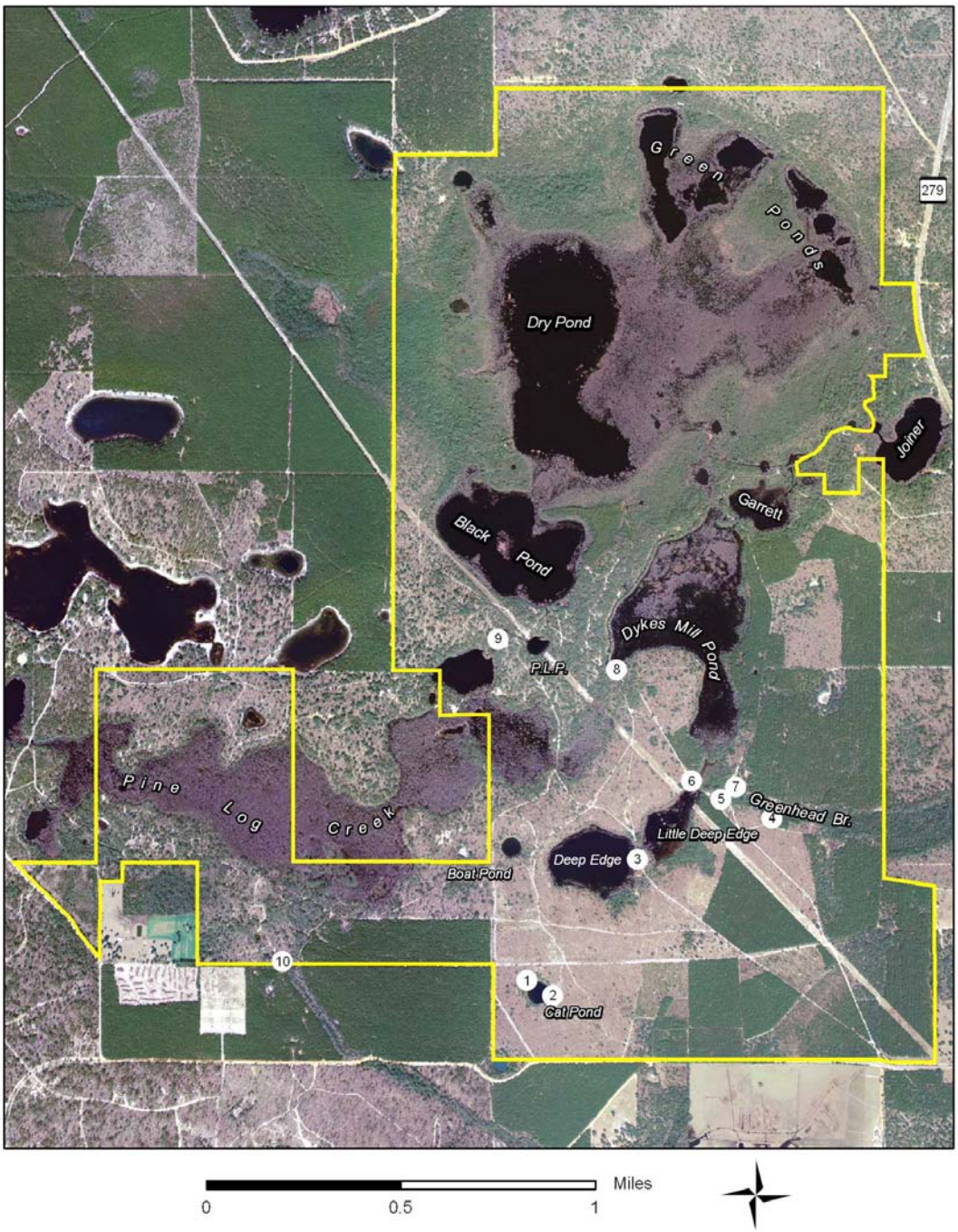


Figure 3 - Structures
Rain Shelter
~12' x 24'
(Uplands)
Fencing
Dry Pond
#1) Culvert
Fuel Pump
(~10' x 20')
#2 - Bridge
Garret
Rain Shelter
~12' x 24'
(Uplands)
#2 - Dam
Dykes Mill Pond
#3 - Culvert
#7 - DBT Removal &
Bridge Replacement
#4 - Road Removal
#7 - Bridge
#3 - Road Removal
Deep Edge
#5 - Road Removal
0
0.5 Miles
Public Access Road
Management Access Only Road
Abandoned Road
Public Access Gate - Uplands
External Gate - Management Access / Not For Public Use - Uplands
Internal Gate
Wetland
Pond
Uplands
PAC Check Station
Equipment Shed
Well / Septic Tank
Electric Power Pole
(Uplands)

Figure 4 - Erosion Stabilization Sites



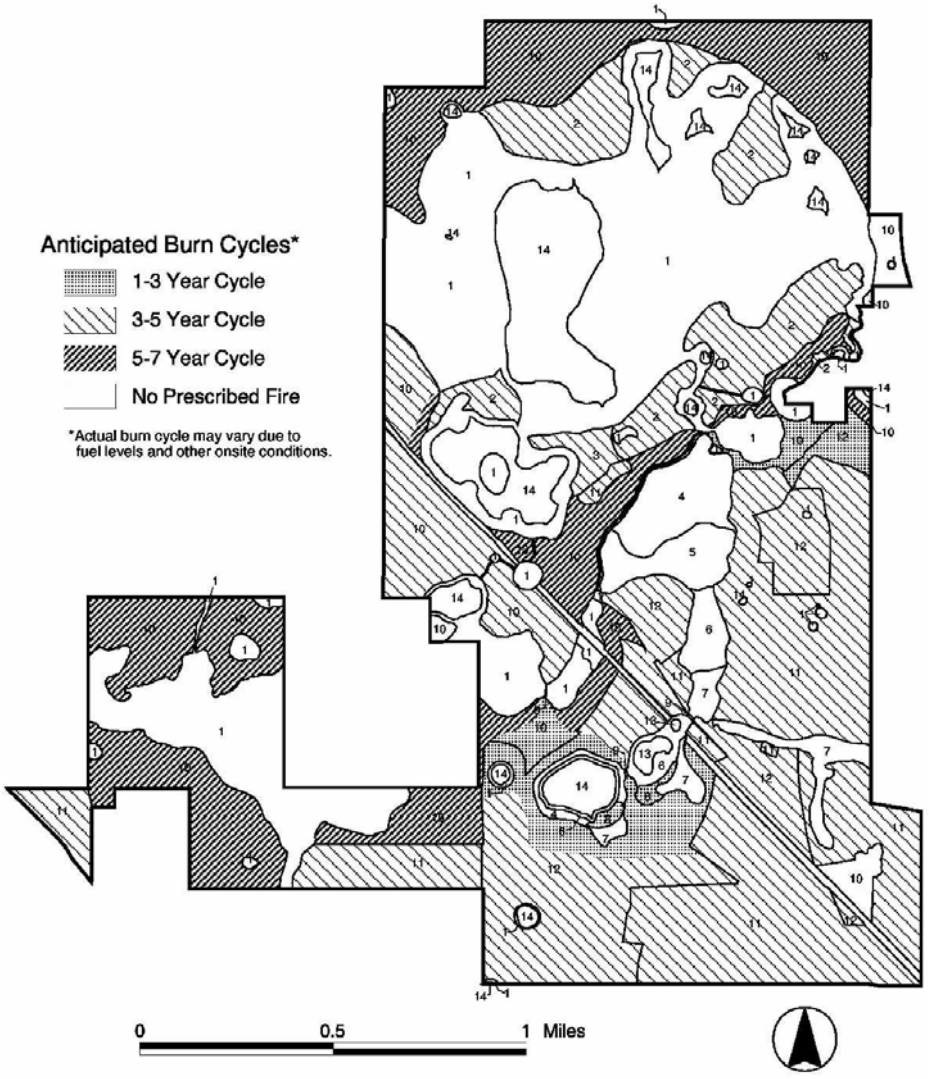
Fire Management

The bank is divided into 14 Management Units that range from 0.25 to ~580 acres Prescribed fire is an integral component of the management, enhancement and

restoration for six of the management units (Management Units 2, 3, 8, 10, 11, and 12), and will also be used to manage portions of the power line ROW(Figure 5). The remaining Management Units are wetlands or aquatic systems not typically managed with fire, although fire from adjacent Units may be allowed to burn into them when conditions allow. Prescribed burns have generally be conducted during the growing season (March through August), although initial dormant-season fuel-reduction fires have been required in some areas. Burns are planned for 1-3, 3-5 and 5-7 year cycles, although fuel levels, prevailing weather patterns and other on-site conditions may necessitate modification of burn cycles. Burn coverage of 80% or more within a polygon have been considered a successful burn. Prescribed fire is intended to inhibit establishment of woody species, promote fire-adapted species, and stimulate seed production of desirable herbs. Fire prescriptions have been written to comply with open burning laws (Florida Statutes 590) and liability considerations. Safety and protection of property will be the priority concern of the Florida Certified Prescribed Burn Manager (FCMB).

Fire was re-introduced to the SHLMB during the winter of 2004 to portions of Management Unit 11 and 12. Subsequently portions of the sand hills and hydric pine flatwoods were burned during the summer of 2005 with the remaining initial burns completed by December of 2005 in accordance with the Fire Management Plan (Figure 6). In areas with a high fuel loads such as Management Unit 2, 3, 8 and some portions of Management Unit 10 adjacent to Black pond dormant season fuel reduction fires were utilized. However in portions of Management Unit 11 and 12 that already had initial burns, warm season burns were conducted. Wire grass flowered in these areas following the fire and plants appeared healthy. The burns at the SHLMB have also been successful in reducing woody vegetation coverage as well as stimulating a seed bank of fire adapted species. Dramatic shifts in dominant species composition have been observed in the sand hills. Prior to the initiation of fire, woody golden rod (*Chrysoma pauciflosculosa*) was the dominant species, however, the initial fires greatly reduced the woody goldenrod cover and stimulated the wire grass coverage. In addition, Sand Hill species such sky blue lupine (*Lupinus diffuses*) and blue star (*Amsonia ciliata*) had not been observed at the SHLMB, prior to the re-introduction of fire, however, the year after the initial burns were conducted they were observed in the uplands near Boat Pond and Deep Edge Pond. Dormant season burns have been scheduled for 287 acres for 2006/2007 (Figure 7). The burn will include seventeen acres of Management Unit 11 along the western portion of the property (Carter SW), 183 of Management Units, 10, 11 and 12 adjacent to Boat Pond and Big and Little Deep Edge Pond, and 22 acres will be burned in Management Unit 12 adjacent to Dykes Mill Pond (Figure 7). These areas had previously had the live and turkey oaks thinned to less than 150 trees per acre and the burns should aid in the removal of downed oaks and also kill any stump sprouts.

Figure 5 - Anticipated Burn Cycles



Note: Numbers refer to Management Unit No.

Figure 6 - Areas Burned Since Inception of Bank Through 2006

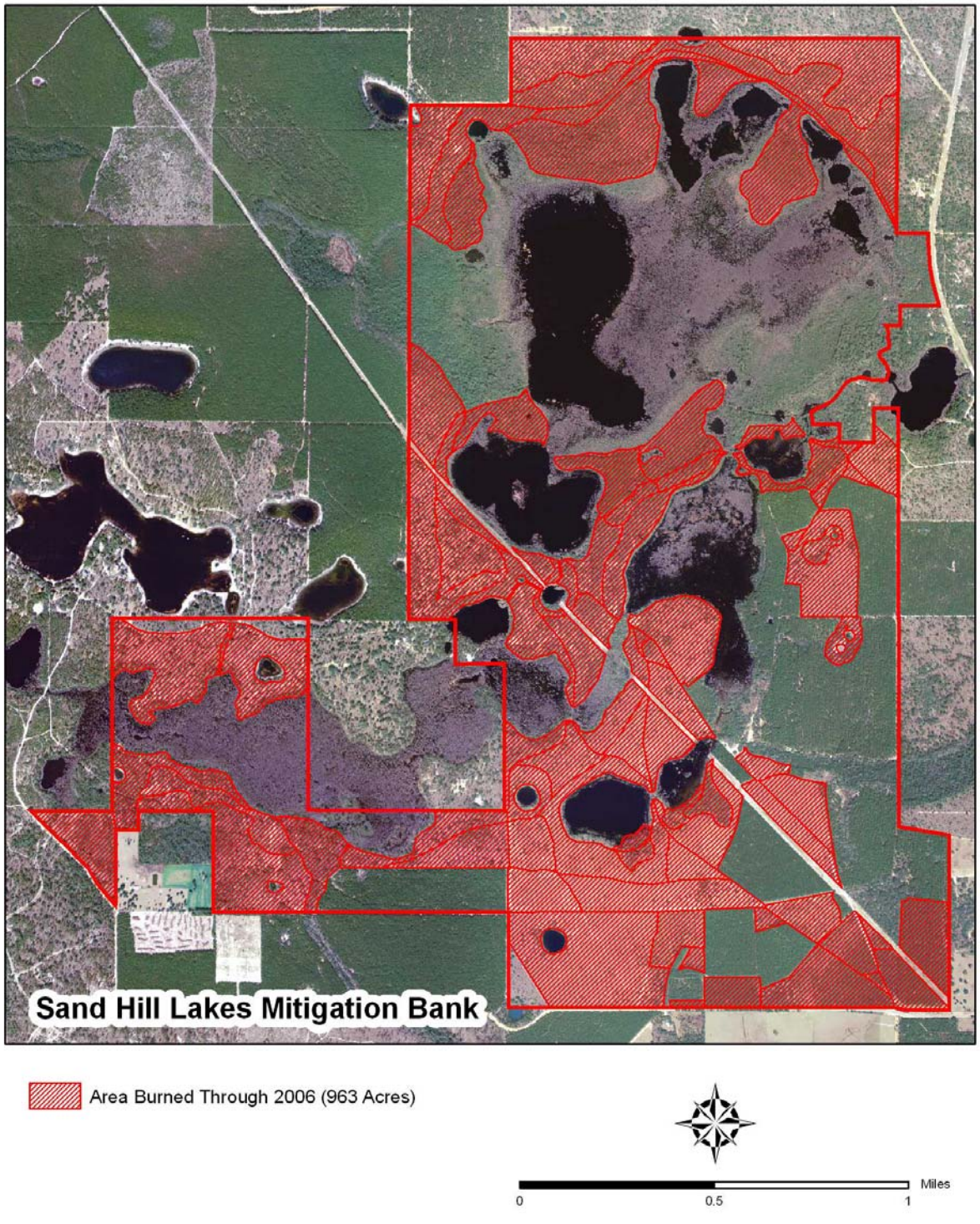
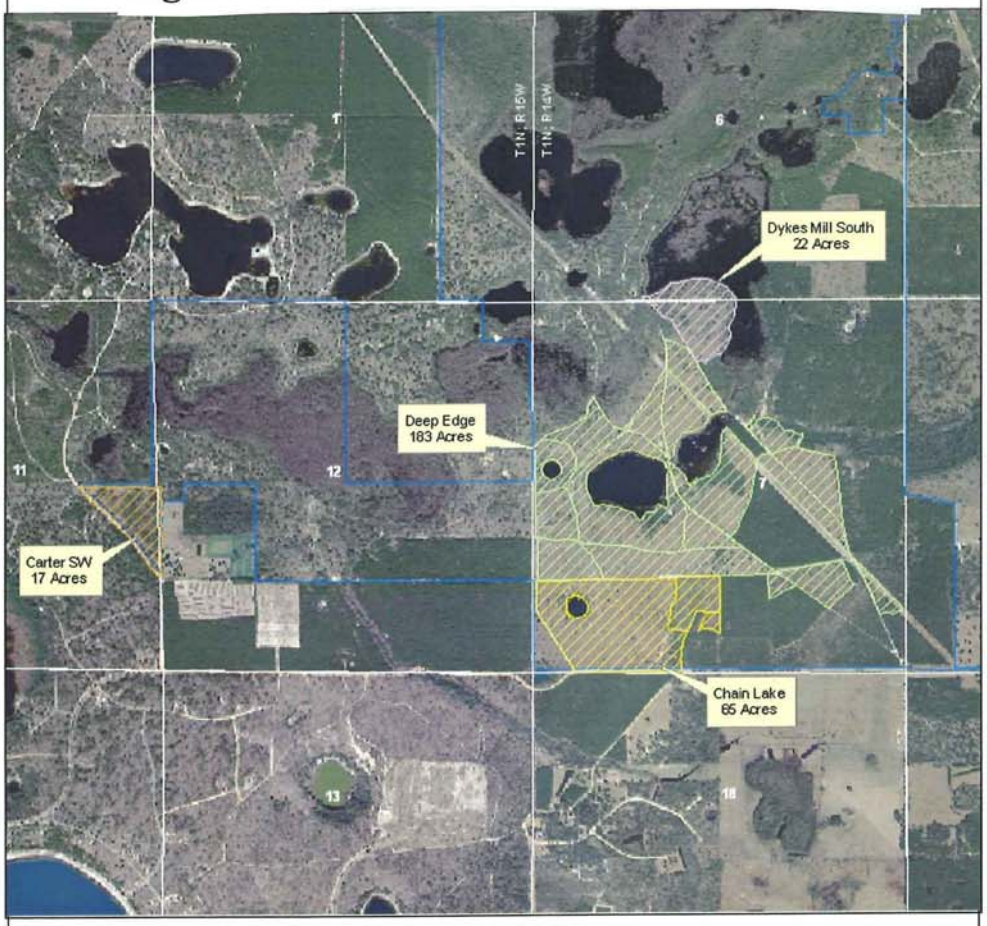


Figure 7 Dormant Season Burns 2006/2007



Sand Hill Lakes Mitigation Bank
Econfina Creek Water Management Area
Washington County
Sections 6 & 7; T1N; R14W &
Section 11; T1N; R15W
Dormant Season Prescribed Burns
287 Acres

Prescribed Burn Areas
Prescribed Burn Areas
Prescribed Burn Area
Prescribed Burn Area
District Boundary Line

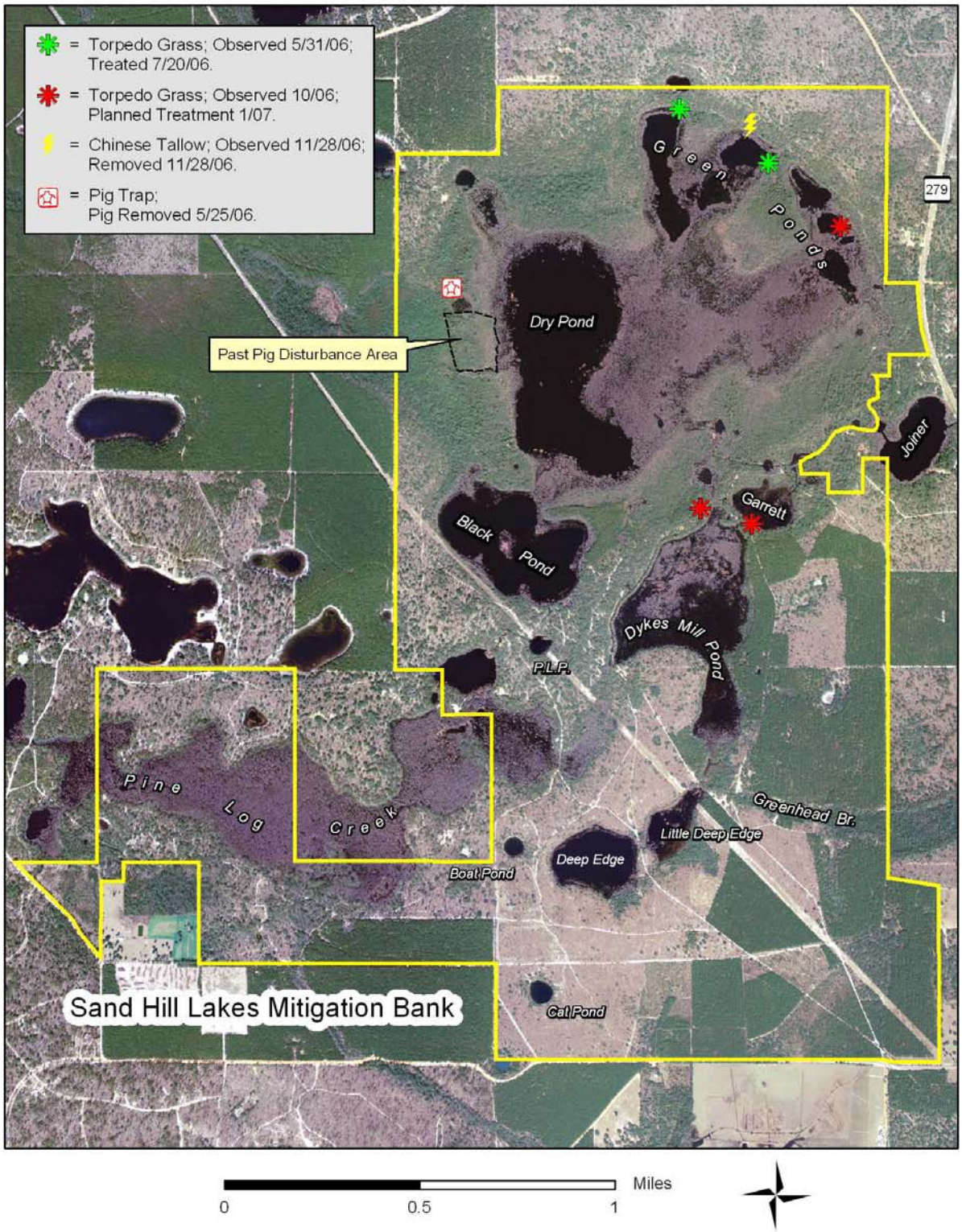
0 1,200 2,400 3,600 4,800
Feet

N
W E
S

Exotic Fauna and Vegetation

Surveys nuisance species have been conducted throughout the year in conjunction with the monthly monitoring. In April of 2006, a small herd of feral hogs estimated to consist of one boar, two sows and their offspring were observed adjacent to the green ponds. A special use take permit was issued to John Dunlap of the Florida Game and Fish Commission on May 12, 2006 to remove the feral hogs. One female hog approximately 80 pounds and pregnant was trapped. Since the trapping of the hog, there have been no signs of feral hog activity at the SHLMB. During the May site inspection, torpedo grass (*Panicum repens*) was observed adjacent to the boat ramps of two of the green ponds (Figure 8). The torpedo grass was subsequently sprayed by DEP employees from the Bureau of Invasive Plant Management on July 20th 2006. Follow up visits indicate an excellent kill with little to no surviving torpedo grass. Future site inspections will continue to monitor these areas. A detailed inspection of the green ponds was conducted the week of May 22nd No additional populations were observed. During the fall monitoring the annual exotic species survey was conducted. Three additional small populations of torpedo grass were observed at the SHLMB, one at the boat ramp to Garret Pond, one in the road adjacent to Dry pond and another small patch adjacent to one of the more isolated green ponds. The torpedo grass will be treated with herbicide early in 2007. In addition, three Chinese tallow seedlings were observed on the roadside adjacent to the green ponds (Figure 8). The plants were hand pulled when they were observed.

Figure 8 - Nuisance and Exotic Species Tracking



Monthly Site Inspections:

Monthly inspections were conducted for the SHLMB. Copies of the monthly inspection reports are included in (Appendix 1).

Monthly Water Gage Assessments:

Water levels gauges were installed and surveyed in on December of 2005 for 10 locations throughout the bank. These locations include Black Pond, Power Line Pond, Pine Log Creek, Deep Edge Pond, Little Deep Edge Pond, Dykes Mill Pond, Ditch connecting to Pine Log Creek #7, natural channel from Joiner Lake to the Green Pond, Green Ponds, and Dry Lake (Table 2, Figure 9). The gauges were read monthly by the Florida Wildlife Conservation Commission staff and the results submitted to the NWFWMD (Table 2, Figure 9). Staff gage readings indicate that there was water present at all locations until April, then from May to November the site had dried down during the summer drought. Most Gages were dry throughout the summer and into the fall.

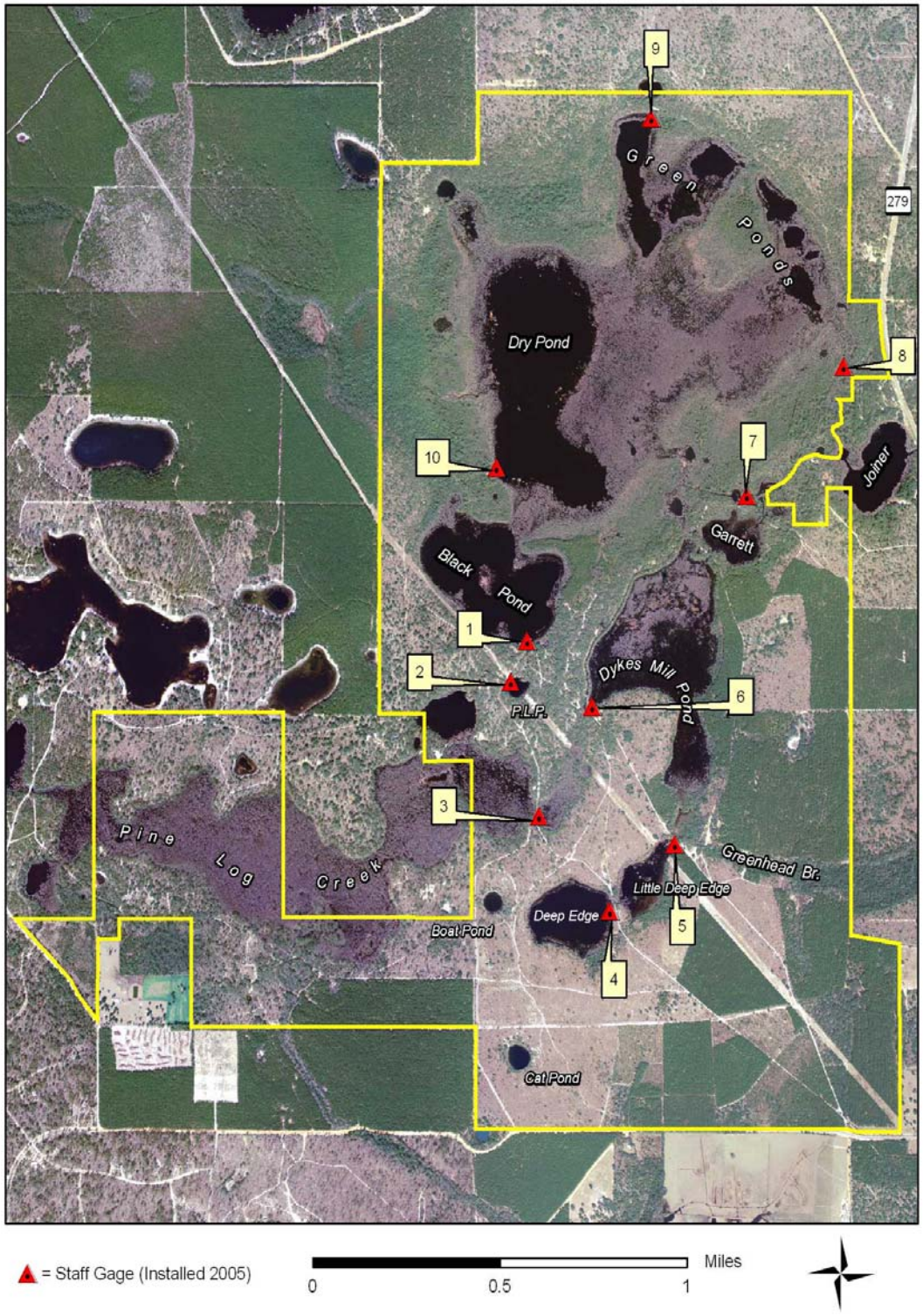
TABLE 2: WATER LEVEL STAFF GAGE READINGS - 2006

(All Readings are in Feet)

Date	Gage 1 Black Pond	Gage 2 Power Line Pond	Gage 3 Pine Log Creek	Gage 4 Deep Edge Pond	Gage 5 Little Deep Edge Pond	Gage 6 Dykes Mill Pond	Gage 7 Joiner/ Dry Ditch	Gage 8 Joiner/ Green Ponds Channel	Gage 9 Green Ponds	Gage 10 Dry Pond
1/16/06	3.60	3.54	2.14	3.10	3.00	3.58	3.58	2.90	3.60	4.18
2/2/06	3.60	3.50	2.12	2.88	3.18	3.88	3.58	3.62	3.70	4.15
3/3/06	3.74	3.80	2.00	2.74	3.02	4.38	3.78	3.44	3.70	4.32
4/3/06	3.36	3.12	1.34	2.00	2.74	4.02	3.10	1.86	3.20	3.78
5/2/06	2.92	2.46	DRY	1.32	2.58	3.72	2.74	0.54	2.58	3.34
6/2/06	2.60	1.18	DRY	0.78	2.40	3.62	1.98	DRY	2.10	3.08
7/7/06	1.68	<Gage	DRY	<Gage	1.80	2.90	DRY	DRY	0.60	2.30
8/9/06	1.58	<Gage	DRY	<Gage	2.00	3.00	DRY	DRY	0.35	X
9/22/06	0.76	<Gage	DRY	<Gage	.	.	DRY	DRY	<Gage	X
10/16/06	0.06	<Gage	DRY	<Gage	0.30	2.17	DRY	DRY	<Gage	X
11/1/06	0.20	<Gage	DRY	<Gage	0.60	2.50	DRY	DRY	<Gage	X

<Gage = Water level was down slope of staff gage.
DRY = Site is dry.
X = Site was inaccessible due to bridge construction or other factors.
"." = No record of gage being read.
Staff gages are monitored by Florida Wildlife Conservation Commission (FWC) personnel.

Figure 9 - Water Level Staff Gage Locations



Sand Hill Restoration

Activities: oak eradication, planting of pine

A total of 1,150 acres longleaf pine / wiregrass community, live oak forest and other buffer habitats occur on the SHLMB. The NWFWMD will provide perpetual ecological management for these habitats. Several restoration activities have been initiated for these habitats including the re-introduction of fire, reduction of the density of turkey and live oaks to less than 150 trees per acre in Management Unit 12 and selected portions of Management Unit 10, and the planting of longleaf pine seedlings in portions of Management Unit 12 in November of 2004 (Figure 10). The densities of live oak and turkey oak have been reduced to less than 150 trees per acre In Management Unit 12 during August of 2005. In addition a small portion of Management Unit 12 that had been missed during the previous year was thinned in September of 2006. The areas of Management Unit 10 selected for oak eradication had excellent wire grass cover and a well developed understory of sand hill species. It was determined that these areas could be restored to a diverse sand hill community if the invading oaks were removed and an appropriate fire regime was implemented. Turkey and live oaks were reduced to less than 150 trees per acre for selected portions of Management Unit 10 in September of 20006 (Figure 11). The areas that had live and turkey oak reduction during September of 2006 will be burned during the winter of 2007/2008. Prior to permit issuance, longleaf pine seedlings were planted in portions of Management Unit 12 in the winter of 2004 (Figure 12)**.** Additional plantings of longleaf pine at a rate of 436 trees per acre will occur in Management Unit 12 during the dormant season of 2007/2008.

Restoration activities for the existing sand pine plantation and slash pine plantations (~385 acres) will be initiated in 2007. The sand pine and slash pine plantations will be harvested in late spring/early summer of 2007 and the area prepped for planning of longleaf pine seedlings during the dormant season of 2007/2008.

Figure 10 - Oak Removed Through 2006

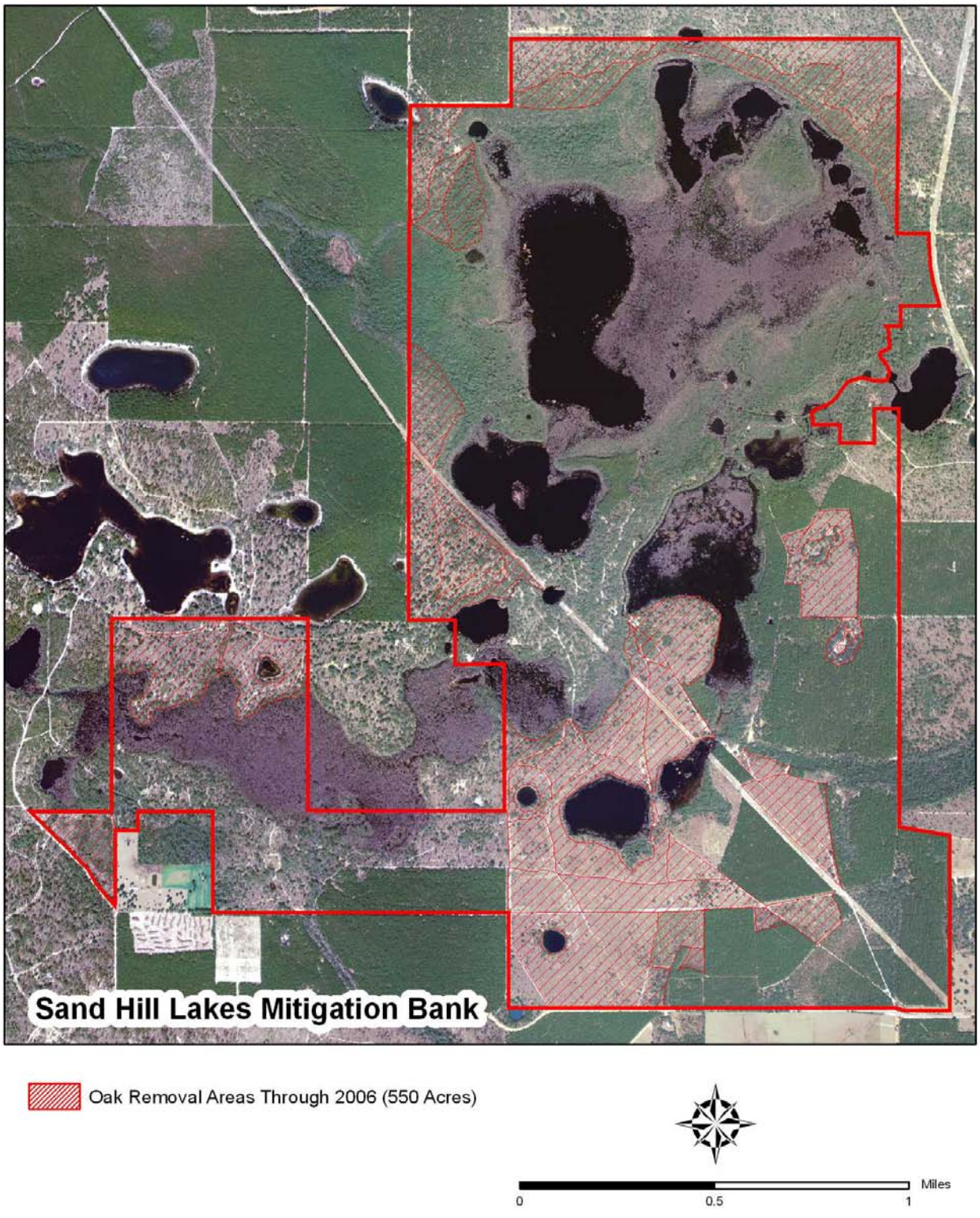


Figure 11 Management Unit 10 Oak Eradication

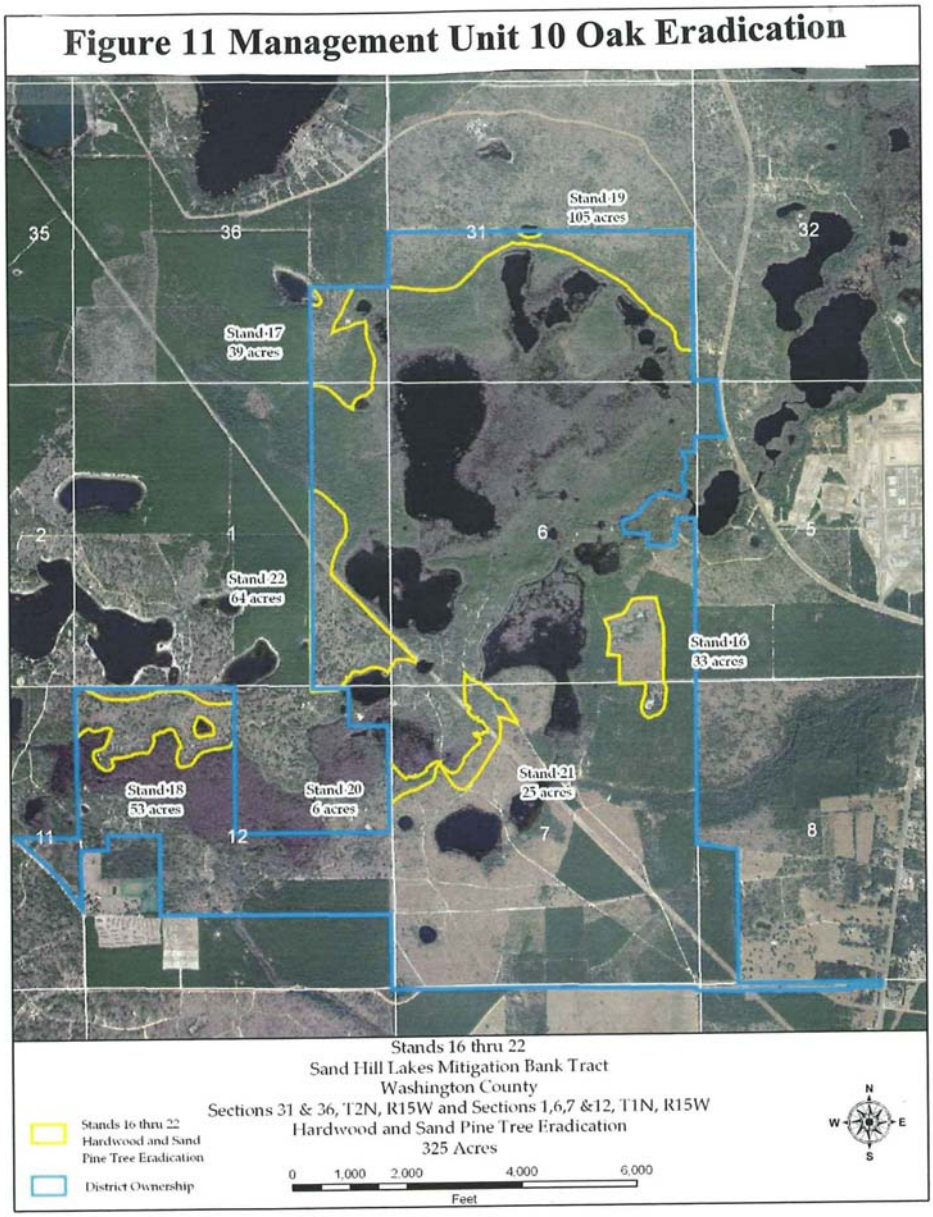


Figure 12 - Longleaf Pine Planting Through 2006

Annual Monitoring

In accordance with the permit all sampling locations have been identified (Figure 13). Fall monitoring methods as well as data analysis are described below. Sampling for the annual report was conducted on October 11, 13, 16, 25, 28, 29, 30 2006. Sample data sheets, raw data sheet as well as computations and analysis and transect photographic documentation are included in Appendix 2, 3 and 4 in accordance with the Monitoring Plan, oblique aerials were taken for the SHLMB on October 23, 2006 and have been included in Appendix 5.

The 2005-2006 Annual report by the Florida Fish and Conservation Commission was completed in October and can be found in Appendix 6.

Quantitative Monitoring

Materials and Methods

Quantitative monitoring has been conducted in accordance with the methods described in the permit. Quantitative vegetation monitoring occurred at the end of the growing season (~September). This is the first annual or baseline monitoring report for the SHLMB.

The percent vegetation cover was monitored at locations shown in Figure 13. One-meter square quadrats were established along 600' transects at 20' intervals within WRAP polygons D, E, F (hydric flatwoods) WRAP polygon O (cypress/gum slough).

Percent vegetation cover was monitored at UMAM areas I and II (sand hill) using quarter-meter square quadrats established along 600' transects at 20' intervals.

Each transect contained a permanently established photographic documentation stations, where qualitative quadrat (north, east, south, and west) observations were recorded (Appendix 4). Transect termini will be marked using iron rebar surrounded by PVC pipe.

Vegetation species coverage statistics were developed from the recorded coverage of each species (or bare ground or open water) within a given quadrat. The percent coverage for each species (and bare ground or open water) was generated by adding all quadrat observations together, and dividing the total coverage by the cover of each species within each transect. This represents a modified Daubenmire cover scale where vegetation species statistics are used to determine the percent cover by bare ground, water, individual species and groups, such as wetland species, invasive exotic and nuisance species, and present.

Tree density was monitored using the "line strip" (belt transect) technique. The transects were co-located with each vegetation transect. The belt transects will be 600± feet in length and 30± feet in width. Within each belt transect, the height and condition of each planted tree will be recorded.

Photographic Stations:

Panoramic photographs were taken from the permanently established stations at each transect (Appendix 4).

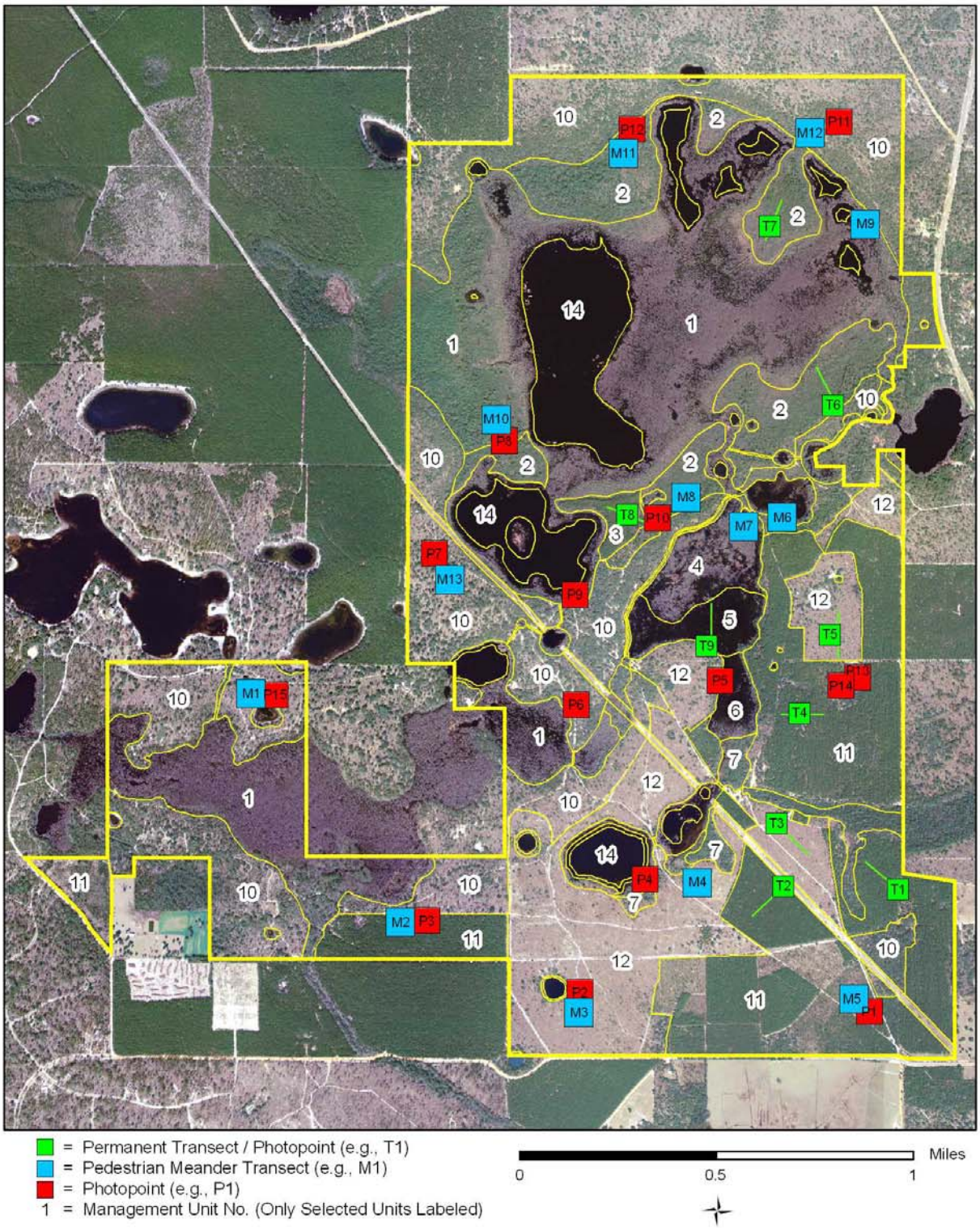
Wildlife Utilization:

During the vegetation monitoring described above, wildlife observations will be recorded in each community. These observations will consist of direct sightings, scat, tracks, or vocalizations.

Fuel loads and prescribed fires within wet flatwood and sandhill communities:

Semi-annual status reports will detail the condition of the communities relative to the need and potential for a burn, the conditions required for the next desirable burn, and the anticipated timeframe for the next burn. This data was included for each pedestrian survey transect (Appendix 7).

Figure 13 - Monitoring Locations



Results and Discussion

UMAM Polygon II, Management Unit 11- Sand Pine Plantation

UMAM Polygon II, Management Unit 11, consists of 383.484 acres of planted sand pine plantation that will be converted to long leaf pine and sand hill habitat. Removal of the sand pine was anticipated for 2006, however, it when it was determined that the log trucks could not travel on the existing roads and bridges, the harvesting date was delayed to spring /summer of 2007 when road improvements will be complete. A timber cruise was completed for the property in June 2006 and the timber sale was placed out for bids. Three transects (transect #1, #2 and #4) were located within UMAM Polygon II, Management Unit 11, and reflect baseline conditions (Tables 3-5 and Figures 14-16). A near continuous sand pine canopy with nearly 100 percent canopy closure occurred throughout much of sand pine plantation. According to the timber cruise conducted by American Forestry Management an average of 446 sand pine trees per acre occur in the sand pine plantations.

A total of 9 species were observed in transect 2, 12 species in transect1 and 21 in transect 4 (Tables 3-5, Figures 14-16). Based on site observations, the number of species occurring within the transect was probably due in part to the amount of light reaching the forest floor. The transects with fewer species (1 and 2) appeared to have a denser canopy cover while transect 4 had a greater number of breaks in the canopy cover and appeared to have more light eaching the forest floor. In general, species observed were common to sand hill communities. Three species, milk pea, diamond oak and cat briar were common to all transects. Wire grass was observed only in transect 2 with 5.5% cover and was the dominant species occurring in that transect. It could be that wire grass cover had been shaded out from transect 1 and 4, or that the areas had been previously plowed and converted to pasture prior to conversion to pine plantation. These areas will be monitored following the removal of the sand pine to determine if a seed bank remains for wire grass or if wire grass plugs will have to be planted within these areas. The dominant cover class for all transects was bare ground with a range of 81% bare ground (transect 4) to 96% bare ground (transect 2). The exotic species Bahia grass (*Paspalum notatum*) was observed in transects 1 (0.1% cover) and transect 4 (1.5% cover) and may be due to the previous conversion of this area to pasture prior to conversion to a sand pine plantation. Similarly centipede grass (10.6% cover) was observed in transect 4 and was the dominant species within that transect. The centipede grass cover of 10.6% in transect 4 is significantly greater than the 2% allowed by the permit. Following the sand pine removal, transects 1 and 4 will be treated with herbicide to eliminate the cover of Bahia and centipede grass. Wildlife observations include blue jays (Common to all transects), American crow, squirrel, turkey tracks, and rabbit dropping.

Interim Success Criteria:
Many of the management activities that will be used to restore UMAM II, Management Unit 11 will be implemented in 2007. However, fire has been re-introduced to the polygon. It is expected that UMAM II, Management Unit 11 will achieve more of the interim success criteria as restoration activities are implemented.

Table 3. Transect 1. Species occurrence and cover (Sand Pine Plantation)

Date: 10/11/2006, 7:30 am	Transect 1 UMAM II, Management	Overstory: Sand Pine Plantation Canopy Closure approximately	Sand Pines per acre
Name of data collector: David Clayton Wildlife observed: Blue jay, crow, turkey tracks	Unit 11	100%	Average of 446

Scientific Name	**Common Name**	**Percent Cover**	**# Species**
Asplenium platyneuron	Ebony spleenwort	1.2	1
Calicarpa americana	Beauty berry	0.06	2
Glactia sp.	Milk Pea	0.06	3
Ilex vomitoria	Yaupon	1.2	4
Oxalis corniculata	Wood sorrel	0.06	5
Paspalum notatum	Bahia grass	0.1	6
Pinus clausa	Sand pine	0.2	7
Quercus hemesphaerica	Diamond oak	0.6	8
Quercus virginiana	Live Oak	0.3	9
Scleria sp	Scleria	0.03	10
Smilax sp.	Cat briar	0.03	11
Vitis rotundifolia	Muscadine	0.16	12
	Bare ground	96	
		100	

Figure 14. Transect 1: Species Cover and Occurrence (Sand Pine Plantation)

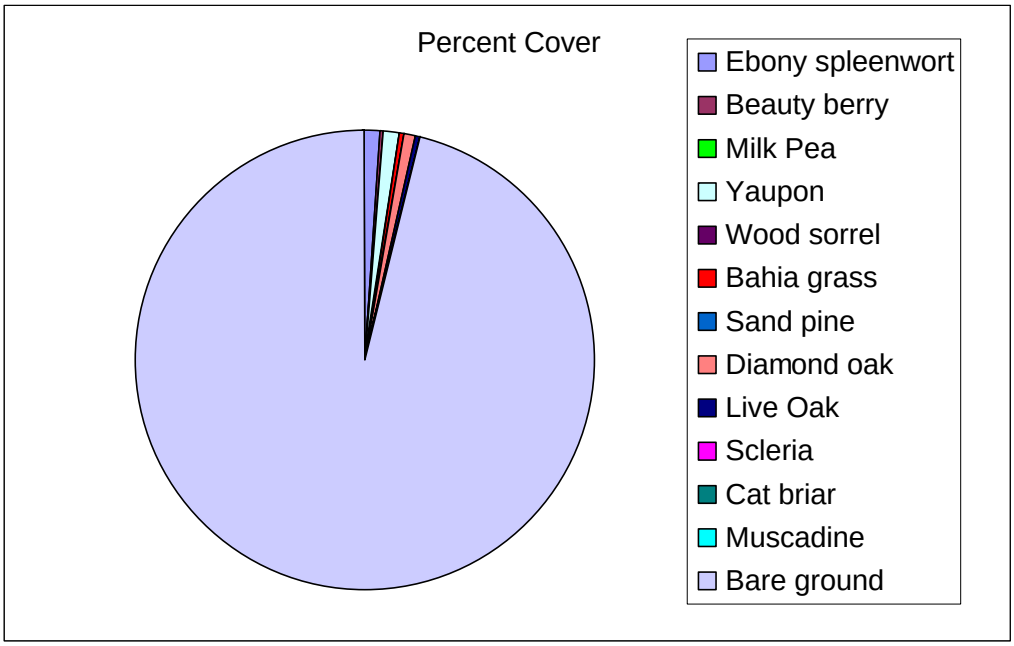


Table 4. Transect 2. Species cover and occurrence (Sand Pine Plantation)

Date: 10/11/2006, 9 am	Transect 2 UMAM II, Management Unit 11	Overstory: Sand Pine Plantation Canopy Closure approximately 100%	Sand Pines per acre
Name of data collector: David Clayton			Average 446
Wildlife observed: Blue jay, phoebe			
Scientific Name	**Common Name**	**Percent Cover**	**# Species**
Andropogon gyrans	Elliot's blue stem	0.03	1
Aristida beyrichiana	Wire grass	5.5	2
Cladonia subtenis	Deer moss	2.6	3
Dichanthelium sp.	Witch grass	0.003	4
Galactia sp.	Milk pea	0.006	5
Gaylussacia dumosa	Dwarf Huckleberry	0.2	6
Licania michauxii	Gopher apple	0.3	7
Quercus hemisphaerica	Diamond oak	0.003	8
Smilax sp.	Cat briar	0.003	9
	Bare ground	91.355	
		100	

Figure 15. Transect 2: Species Cover and Occurrence (Sand Pine Plantation)

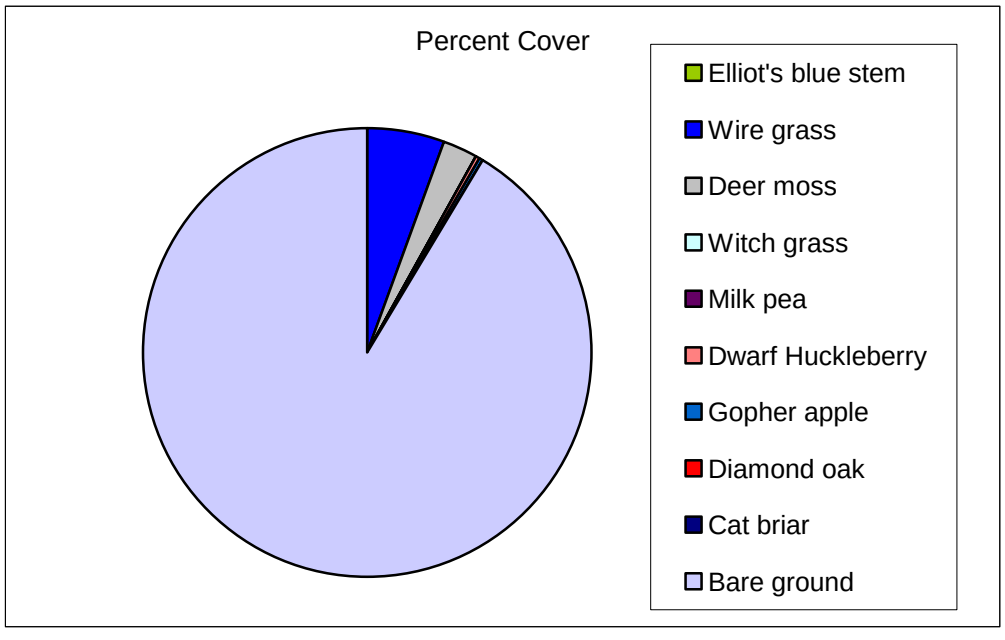
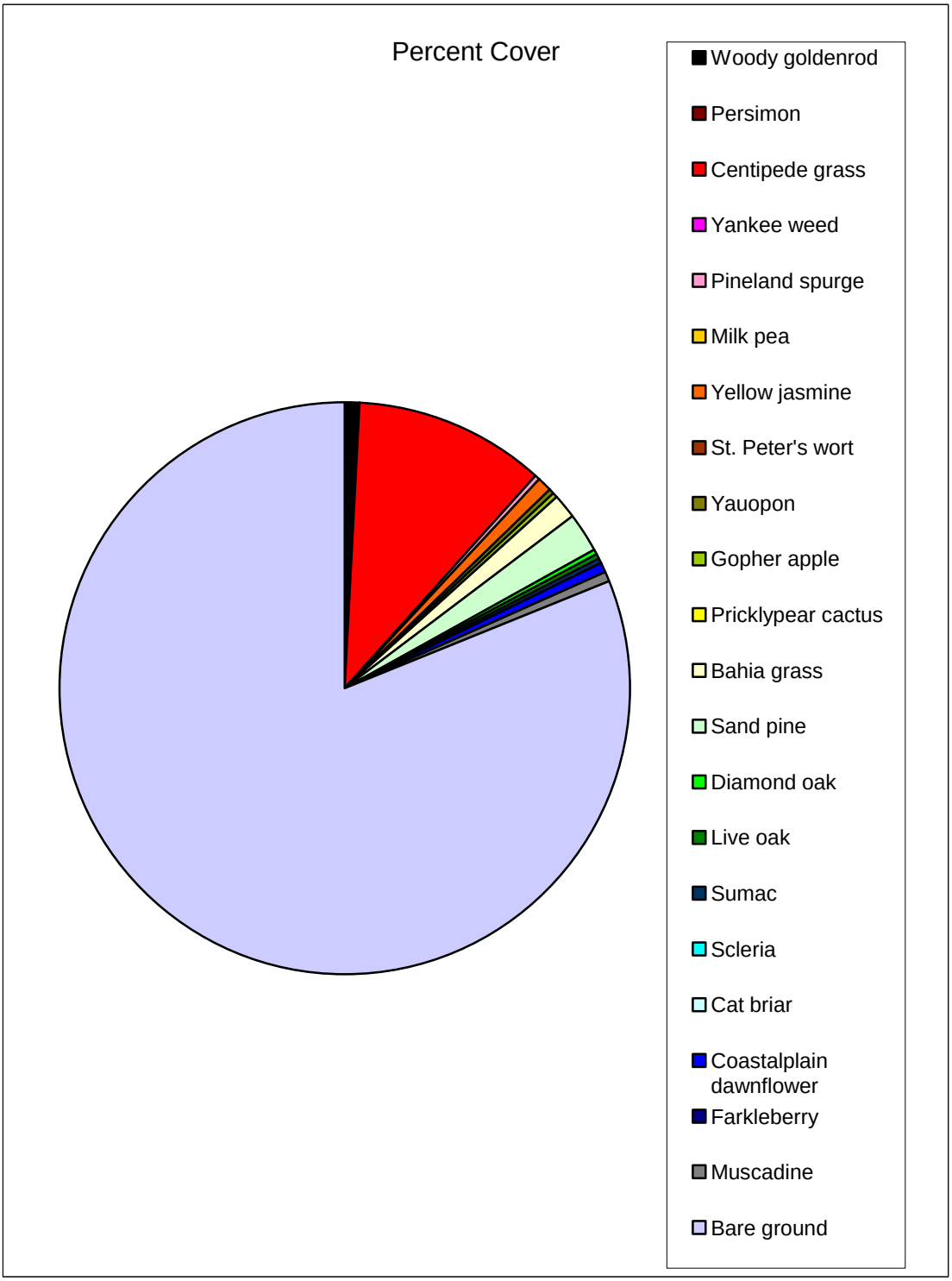


Table 5. Transect 4. Species cover and occurrence (Sand Pine Plantation)

Date: 10/13/2006, 11:14 am	Transect 4	Overstory: Sand Pine Plantation	Sand Pines per acre
Name of data collector: David Clayton	UMAM II, Management Unit 11	Canopy Closure Approximate 100% cover	Average 446
Wildlife: squirrel, blue jay, rabbit scat			
Scientific Name	**Common Name**	**Percent Cover**	**# Species**
Chrysoma pauciflosculosa	Woody goldenrod	0.9	1
Diospyros virginiana	Persimon	0.03	2
Eremochloa ophiuroides	Centipede grass	10.6	3
Eupatorium capilifolium	Yankee weed	0.27	4
Euphorbia inundata	Pineland spurge	0.23	5
Galactia sp.	Milk pea	0.03	6
Gelsemium sempervirens	Yellow jasmine	0.83	7
Hypericum crux-andreae	St. Peter's wort	0.003	8
Ilex vomitoria	Yauopon	0.17	9
Licania michauxii	Gopher apple	0.17	10
Opuntia humifusa	Pricklypear cactus	0.1	11
Paspalum notatum	Bahia grass	1.5	12
Pinus clausa	Sand pine	2.1	13
Quercus hemisphaerica	Diamond oak	0.3	14
Quercus virginiana	Live oak	0.4	15
Rhus copallinum	Sumac	0.1	16
Scleria sp.	Scleria	0.006	17
Smilax sp.	Cat briar	0.16	18
Stylisma patens	Coastalplain dawnflower	0.3	19
Vaccinium arboreum	Farkleberry	0.16	20
Vitis rotundifolia	Muscadine	0.5	21
	Bare ground	81.141	
		100	

Figure 16. Transect 4: Species Cover and Occurrence (Sand Pine Plantation)



UMAM Polygon I, Management Unit 12- Sand Hill

UMAM Polygon I, Management Unit 12, consists of 263.52 acres. This polygon is dominated by a sand hill community with an overstory dominated by turkey and live oaks with scattered remnant longleaf pine and an understory dominated by wire grass and a wide variety of herbaceous species. Reclamation activities within this upland community include re-introduction of fire, thinning of oaks to less than 150 trees per acre and planting of long leaf pine seedlings at a density not to exceed 200 trees per acre at final release. Fire was re-introduced to this area during the winter of 2004. A winter burn scheduled for the areas that had oak reduction. Prior to the re-introduction of fire, the dominant understory species was woody goldenrod. Oaks were thinned for the majority of Management Unit 12 in August of 2005, however, the portion of Management Unit 12 which contains Transect 5 was thinned in September of 2006. The re-introduction of fire and thinning of the turkey and live oaks have already significantly changed the appearance of UMAM Polygon I, Management Unit 12. The polygon consists of scattered oaks and pines with and understory dominated by wire grass. Longleaf pine seedlings were planted during the dormant season for the majority UMAM Polygon I, Management Unit 12, however, the area containing transect 5 will be planted in 2007. Two transects (transect #3 and #5) were located within UMAM Polygon I, Management Unit 12, and reflect baseline conditions (Table 6, 7 and Figure 16, 17).

A total of 23 species were observed in transect 3 and 31 species in transect 5 (Table 6, 7 and Figure 16, 17). A diverse understory of plants typical of sand hill vegetation was observed within each transect. No nuisance or exotic species cover occurred within these transects. The greatest cover class was bare ground for both transects with 47.5% bare ground for transect 3 and 68.5% bare ground for transect 5 (Table 6,7 Figure 16, 17). The significantly amount of bare ground in both transects may be due to the re-introduction of fire to both areas, reducing the cover of hardwoods and woody goldenrod. It is expected in future less bare ground will be observed as the community adapts to the new fire regime. Wire grass was the dominant species for both transects with 27.2 % cover for transect 3 and 22.2% cover for transect 5 (Table 6, 7 , Figure 16 and 17). Wire grass was observed flowering in both transects and it is expected that wire grass cover will increase through the expansion of the existing plants and recruitment of seedlings. A total of 12 species, Elliot's bluestem, wiregrass, Coastalplain honeycombhead, woody goldenrod, silver croton, witch grass, persimmon, pineland spurge, milk pea, pineweed, gopther apple and bracken fern were common to both transects (Table 6, 7 and Figure 16 and 17). Wildlife observations included a red shouldered hawk, blue jay (Common to both transects), towhee, and phoebe.

Longleaf pines were planted for the majority of UMAM polygon I, Management Unit 12 in the winter of 2004. However, planted longleaf pines were only observed in Transect 3. A belt transects 600' feet in length and 30' feet in width was co-located with the vegetation transect. The number, height and condition of each planted tree were recorded. A total of 36 trees were observed or an average of 871 trees per acre. The majority of the trees were in excellent health. The longleaf pine seedlings are all within

the grass stage and ranged in height from 5” to 18”. A comparison of height distribution to number of trees per acre can be found in Figure 18.

Interim success Criteria:
Many of the interim success criteria have been met for UMAM I polygon I. Fire was re-introduced to the site, turkey and live oaks were thinned to less than 150 trees per acre. No nuisance or exotic species occurred were observed within the transects, fire adapted species average greater than 70% cover, woody shrubs average less than 20% cover, and long leaf pine has been planted for most of the area.

Table 6. Transect 3. Species cover and occurrence (Sand Hill)

Date: 10/11/2006, 11:00 am	Transect 3	Community: Sand hill	Planted Longleaf Pine per acre
Name of data collector: David Clayton	UMAM I, Management Unit 12		871
Wildlife: Crow, phoebe, red shouldered hawk, blue jay			

Scientific Name	**Common Name**	**Percent Cover**	**# Species**
Agalinus setaceae	False fox gloves	1.2	1
Andropogon glomeratus var. glauca	Blue stem	1	2
Andropogon gyrans	Elliot's blue stem	2.7	3
Aristida beyrichiana	Wire grass	27.1	4
Balduina angustifolia	Coastalplain Honeycombhead	0.2	5
Chrysoma pauciflosculosa	Woody goldenrod	2.1	6
Crataegus michauxii	Michaux's hawthorn	0.3	7
Croton argyranthemus	Silver croton	0.16	8
Dichanthelium sp.	Witch grass	2.1	9
Diospyros virginiana	Persimon	0.5	10
Euphorbia inundata	Florida pineland spurge	0.066	11
Euphorbia sp.	Spurge	0.03	12
Gaylussacia dumosa	Dwarf huckleberry	1.8	13
Gelsemium sempervirens	Yellow jasmine	0.1	14
Hypericum gentianoides	Pine weed	0.23	15
Licania michauxii	Gopher apple	0.16	16
Pinus paulstris	Long leaf pine	0.16	17
Pityopsis graminifolia	Shinners	0.6	18
Pteridium aquilinum	Braken fern	0.56	19
Quercus laevis	Turkey oak	10	20
Quercus incana	Blue jack oak	0.16	21
Schrankia microphylla	Sensitive briar	0.83	22
Vaccinium myrsinities	Dwarf blueberry	0.36	23
Bare ground	Bare ground	47.584	
		100	

Figure 17. Transect 3: Species Cover and Occurrence (Sand Hill)

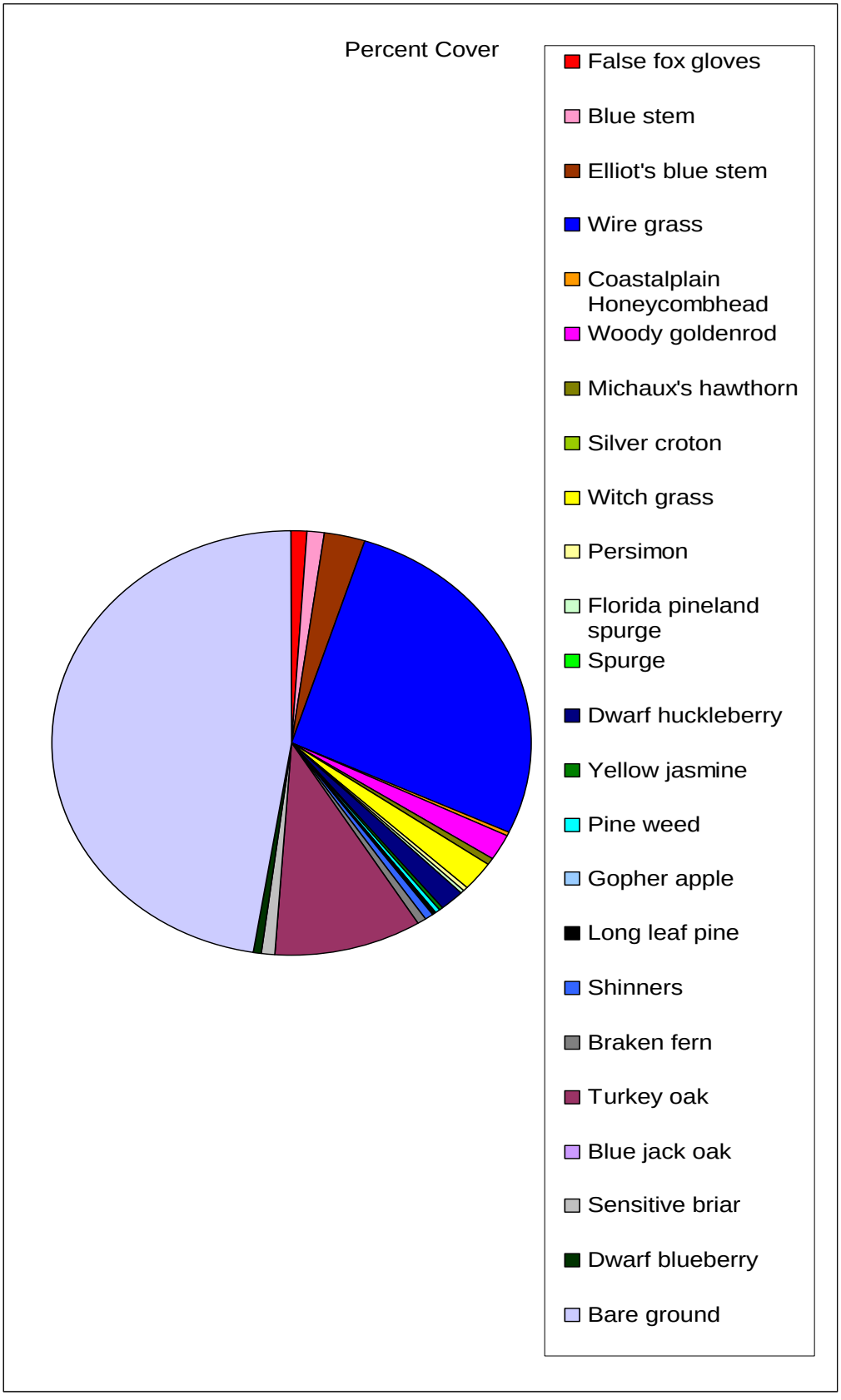


Table 7. Transect 5 Species and Occurrence (Sand Hill)

Date: 10/13/2006	Transect 5	Community: Sand hill	Trees per acre
Name of data collector: David Clayton	UMAM I, Management Unit 12		Not planted yet
Wildlife: Red shouldered hawk, towhee, blue jay			

Scientific Name	**Common Name**	**Percent Cover**	**# Species**
Andropogon gyrans	Elliot's bluestem	0.067	1
Aristida beyrichiana	Wire grass	22.2	2
Balduina angustifolia	Coastalplain Honeycombhead	0.167	3
Baptisia lanceolata	Gopherweed	0.23	4
Chrysoma pauciflosculosa	Woody goldenrod	1.2	5
Cladonia subtenis	Deer moss	0.8	6
Croton argyranthemus	Silver croton	0.3	7
Dichanthelium sp.	Witch grass	0.13	8
Diodia teres	Poor joe	0.1	9
Diospyros virginiana	Persimon	0.3	10
Eriogonum tomentosum	Wild buckwheat	0.33	11
Euphorbia inundata	Pineland spurge	0.03	12
Galactia sp.	Milk pea	0.46	13
Hypericum gentianoides	Pineweed	0.16	14
Liatris gracilis	Slender gayfeather	0.73	15
Liatris pauciflora	Few flowered gayfeather	0.16	16
Licania michauxii	Gopher apple	0.8	17
Opuntia humifusa	Pricklypear cactus	0.03	18
Polygonella gracilis	Tall jointweed	0.6	19
Pteridium aquilinum	Bracken	0.36	20
Quercus hemisphaerica	Diamond oak	0.367	21
Quercus inopina	Bluejack oak	0.067	22
Quercus laevis	Turkey oak	0.03	23
Quercus virginiana	Live oak	0.5	24
Rhynchosia reniformis	Rhynchosia	0.167	25
Smilax sp.	Cat briar	0.43	26
Stylosanthes hamata	Pencilflower	0.03	27
Trichostema setaceum	Narrowleaf bluecurls	0.23	28
Vaccinium arboreum	Farkleberry	0.23	29
Vaccinium darrowii	Darrow's blueberry	0.26	30
	Bare ground	68.535	31
		100	

Figure 18. Transect 5: Species Cover and Occurrence (Sand Hill)

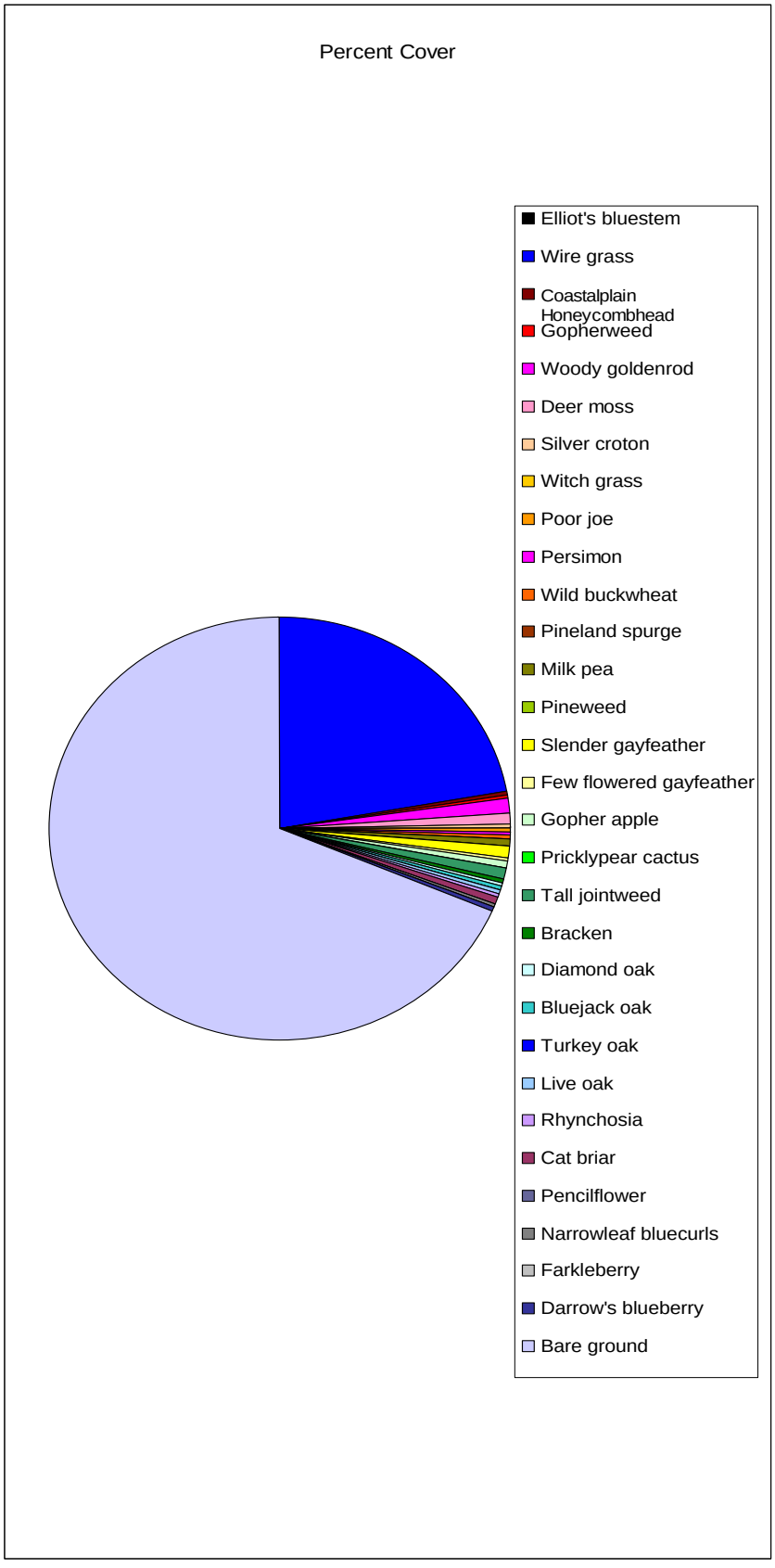
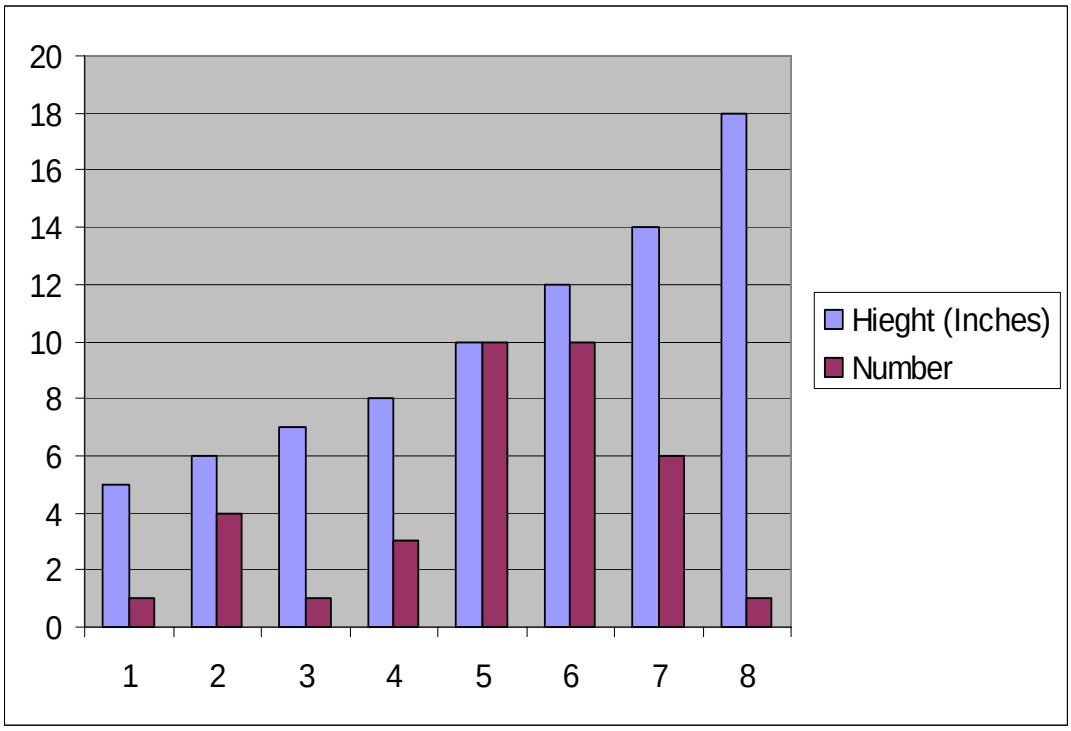


Figure 19. Height Distribution and Number for Longleaf Pine Transect 3



WRAP Polygon F, Management Unit 3- Planted Slash Pine Plantation

Management Unit 3, consists of 11.532 acres of bedded planted slash pine that will be restored to a hydric pine flatwood. The overstory is dominated by planted slash pine and the understory has largely been shaded out by the near complete canopy closure of the slash pine. An average of 331 slash pine trees per acre were observed during the forest inventory conducted by American Forestry Management. Reclamation activities within this polygon include re-introduction of fire, thinning of shall pine to less than 200 trees per acre trees per acre and planting of long leaf pine seedlings**,** reduction of shrub layer (primarily titi, gallberry and fetterbush) by roller chopping, planting of wiregrass (either tubelings on 3' centers or seeding at 2-5 lbs. per acre), direct seeding or planting of wet flatwood and wet prairie species if cover is less than 40%, and annual vegetation monitoring, including monitoring for nuisance / exotic plant species**.** Fire was re-introduced into this polygon during the summer of 2005. The warm season burn effectively removed the accumulating duff layer and reduced shrub cover. However, many of the management activities for UMAM Polygon VII, Management Unit 3 will occur in 2007. The thinning of the slash pine was anticipated for 2006, however, it when it was determined that the log trucks could not travel along existing roadways, the harvesting date was changed to spring of 2007. The transect analysis for UMAM Polygon VI, Management Unit 3 will serve as a baseline to compare with future sampling events. For transect 8, a 520' transect was sampled instead of a 600' transect because the width of the polygon was less than

600'. A total of 17 species were observed within the transect (Table 8, Figure 19). The majority of the species were common to wet flatwoods. No nuisance or exotic species were observed. The greatest cover class observed within the transect was bare ground at 80.5%. The dominant vegetation was black ti ti with 6.5 percent coverage (Table 8, Figure 19). The total shrub coverage for the transect was approximately 12%. Due to the low shrub coverage observed within the transect, roller chopping in selected areas and fire may be successful in managing the shrub layer. No wire grass was observed within this polygon. If after pine reduction no wire grass develops from the seed bank, wire grass will be planted on 3' centers. Wildlife observations include blue jay and gray squirrel.

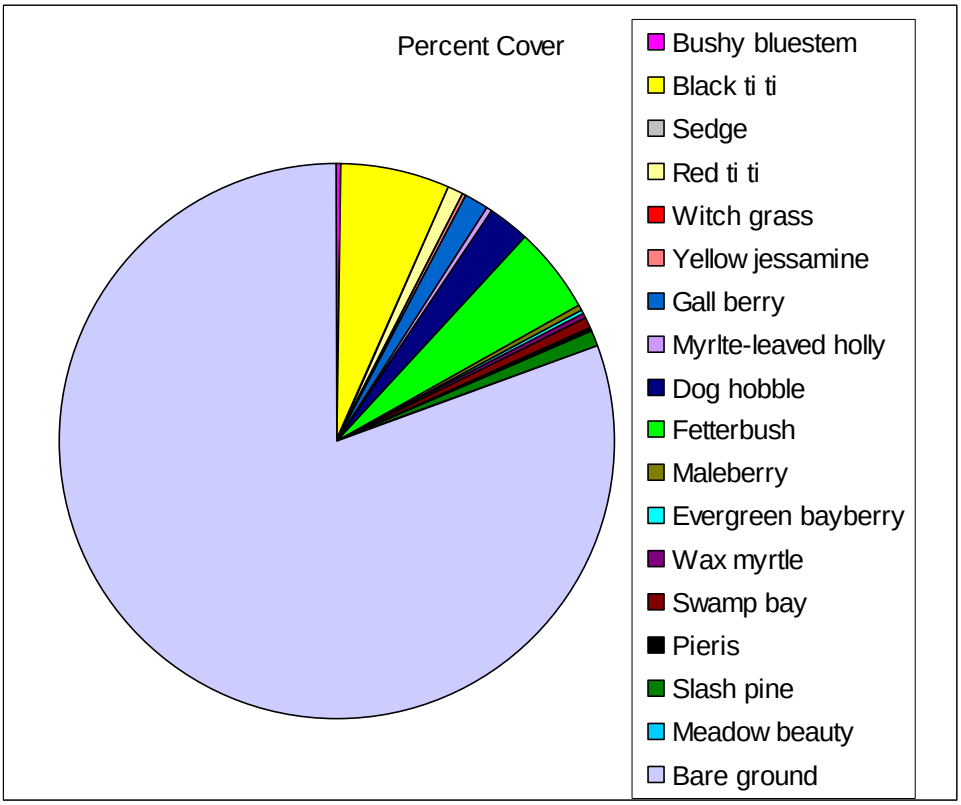
Interim success Criteria:

Many of the management activities that will be used to restore WRAP Polygon F, Management Unit 3 will be implemented in 2007. However, fire has been re-introduced to the polygon and no exotic vegetation was observed. In addition, it appears that the cover of the woody species within this transect has already been reduced from the warm season burn. It is expected that WRAP Polygon F, Management Unit 3 will achieve more of the interim success criteria as restoration activities are implemented.

Table 8. Transect 8. Species and Occurrence (Hydric Pine)

Date: 10/25/2006, 4:00 pm	Transect 8 UMAM VII, Management Unit 3	Community: Hydric Pine Flatwoods	Planted Slash Pine per acre
Name of data collector: David Clayton			331
Wildlife: Blue jay, squirrel			
Scientific Name	**Common Name**	**Percent Cover**	**# Species**
Andropogon glomeratus	Bushy bluestem	0.2	1
Cliftonia monophylla	Black ti ti	6.5	2
Cyperus sp.	Sedge	0.04	3
Cyrilla racemiflora	Red ti ti	0.8	4
Dichanthelium sp.	Witch grass	0.04	5
Gelsemium sempervirens	Yellow jessamine	0.11	6
Ilex glabra	Gall berry	1.5	7
Ilex myrtifolia	Myrlte-leaved holly	0.2	8
Leucothoe racemosa	Dog hobble	2.5	9
Lyonia lucida	Fetterbush	5	10
Lyonia ligustrina var. foliosiflora	Maleberry	0.4	11
Myrica caroliniensis	Evergreen bayberry	0.11	12
Myrica cerifera	Wax myrtle	0.31	13
Persea palustris	Swamp bay	0.61	14
Pieris phyllyreifolia	Pieris	0.38	15
Pinus elliottii	Slash pine	0.76	16
Rhexia sp.	Meadow beauty	0.04	17
	Bare ground	80.5	
		100	

Figure 20 Transect 8: Species Cover and Occurrence (Slash Pine Plantation)



WRAP Polygon D, E, Management Unit 2, Hydric Pine Flatwoods

Management Unit 2 **c**onsists of 146.678 acres of fire suppressed, shrub dominated hydric pine that will be restored to a hydric pine flatwood. The overstory is dominated by a near impenetrable shrub layer with a largely lacking tree canopy and herbaceous layer. Reclamation activities within this polygon include re-introduction of fire, planting of longleaf and slash pine trees at a rate of 436 trees per acre**,** reduction of shrub layer (primarily titi, gallberry and fetterbush) by roller chopping, planting of wiregrass (either tubelings on 3' centers or seeding at 2-5 lbs. per acre), direct seeding or planting of wet flatwood and wet prairie species if cover is less than 40%, and annual vegetation monitoring, including monitoring for nuisance / exotic plant species**.**

Fire was re-introduced into this polygon during the summer of 2005. Two transects, 6 and 7 were established in different portions of the hydric pine flatwoods. The warm season burn was effective in reducing the overstory of shrubs in transect 7, however, by the time of the initial sampling event, the majority of the shrubs had sprouted from the roots and already formed an extremely dense shrub layer approximately 3-4' in height. The fire was less effective in the area surrounding transect 6. Many of the black ti ti within this transect did not burn. It was not uncommon to see black ti ti at least 20' in height along this transect. However, many of the management activities for WRAP Polygons D, E, Management Unit 2 will occur in 2007. Roller chopping,

gyrotrack, and or hdyro- axe followed by additional burns were scheduled to take place between 2005 and 2007. When it was determined that the log trucks could not traverse the existing roads, these activities were postponed to the summer of 2007. The transect analysis will serve as a baseline to compare with future sampling events.

A total of 14 species were observed within the transect 6 and 16 in transect 7 (Table 9, 10 Figure 20 and 21). Seven of the species were common to both sites, and all of these were shrubs (Table 9, 10. Figure 20 and 21). Both sites were dominated by shrubs with little overstory and little to no understory species due to the extremely thick shrub layer. The majority of the species were common to wet flatwoods. No exotic species were observed. The greatest cover class observed for both transects was black ti ti with 69.87 % cover in transect 6 and 31.77 percent cover in transect 7. No wire grass was observed within this polygon. One other shrub species Fetterbush (15.3%) had significant cover within transect 6, while red ti ti (10.9) and myrtle leaved holly (15.4%) had significant cover in transect 7. Very little bare ground was observed in transect 6 (3.7%) while 11.5% bareground was observed in transect 7. In addition, no herbaceous species were observed in transect 6 while 4 species (blue stem, red root, spike rush, and St. John's wort) were observed in transect 7. These two observations are both probably due to the intensity of fire in the area around transect 7. Following the fire all shrubs were burned to the ground opening up the understory to light and may have stimulated a remnant seed bank. No wildlife was observed along transect 6, however 6 species were observed along transect 7 including towhee, catbird, tit mouse, red shouldered hawk, robin, and deer scat.

Interim Success Criteria:
Many of the management activities that will be used to restore WRAP Polygon D, E, Management Unit 2 will be implemented in 2007. However, fire has been re-introduced to the polygon and no exotic vegetation was observed. It is expected that UMAM V, Management Unit 2 will achieve more of the interim success criteria as restoration activities are implemented.

Table 9. Transect 6 Species and Occurrence (Hdyric Pine Flatwoods)

Date: 10/30/2006, 1:40 pm	Transect 6 UMAM V	Community: Hydric Pine Flatwoods		
Name of data collector: David Clayton	Management Unit 2	Overstory: Black ti ti		
Wildlife: none				
Scientific Name	**Common Name**	**Percent Cover**		**# Species**
Clethra alnifolia	Sweet pepperbush		0.33	1
Cliftonia monophylla	Black ti ti		69.87	2
Cyrilla racemiflora	Red ti ti		0.13	3
Gaylussacia dumosa	Dwarf huckleberry		0.17	4
Ilex coriaceae	Big gallberry		3	5
Ilex glabra	Gall berry		1.1	6
Lachnanthes caroliana	Red root		0.03	7
Leucothoe racemosa	Dog hobble		0.43	8
Lyonia lucida	Fetterbush		15.3	9
Persea palustris	Swamp bay		0.17	10
Quercus nigra	Water oak		0.17	11
Sphagnum sp.	Sphagnum moss		0.6	12
Vaccinium corymbosum	High bush blueberry		5	13
	Bare ground		3.7	14
			100	

Figure 21. Transect 6: Species Cover and Occurrence (Hydric Pine Flatwoods)

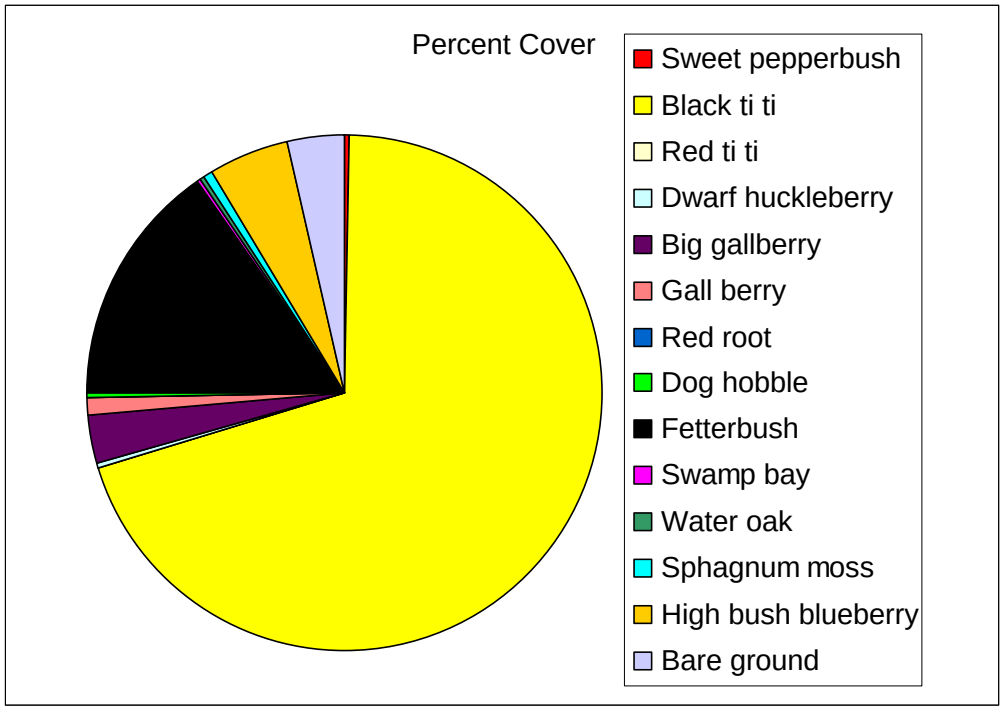
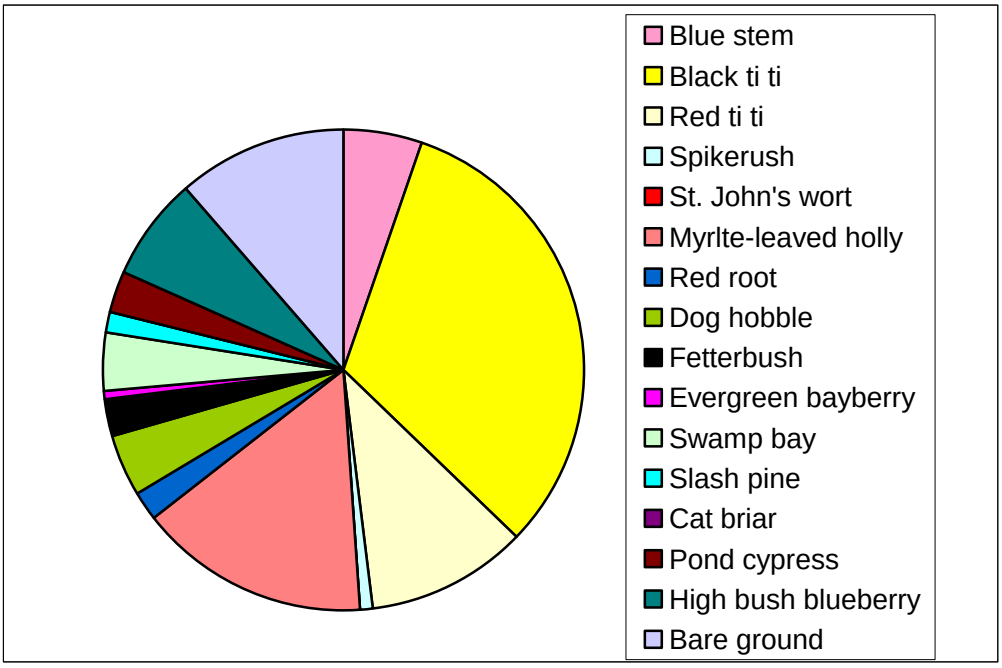


Table 10. Transect 7. Species and Occurrence (Hydric Pine Flatwoods)

Date: 10/30/2006, 10 am	Transect 7 UMAM V, Management Unit 2	Community: Hydric Pine Flatwoods
Name of data collector: David Clayton Wildlife: Red shouldered hawk, towhee, blue jay		
Overstory: Overgrown wet flatwoods		

Scientific Name	**Common Name**	**Percent Cover**	**# Species**
Andropogon glomeratus	Blue stem	5.4	1
Cliftonia monophylla	Black ti ti	31.77	2
Cyrilla racemiflora	Red ti ti	10.9	3
Eleocharis sp	Spikerush	0.83	4
Hypericum sp.	St. John's wort	0.1	5
Ilex myrtifolia	Myrlte-leaved holly	15.4	6
Lachnanthes caroliana	Red root	1.9	7
Leucothoe racemosa	Dog hobble	4.3	8
Lyonia lucida	Fetterbush	2.4	9
Myrica caroliniensis	Evergreen bayberry	0.6	10
Persea palustris	Swamp bay	4	11
Pinus elliottii	Slash pine	1.3	12
Smilax sp.	Cat briar	0.1	13
Taxodium ascendens	Pond cypress	2.6	14
Vaccinium corymbosum	High bush blueberry	6.9	15
	Bare ground	11.5	16
		100	

Figure 22. Transect 7. Species and Occurrence (Hydric Pine Flatwoods)



WRAP Polygon O, Management Unit 5, Inland Ponds and Sloughs

Management Unit 5 consists of 24.880 acres of a dammed slough (Dykes Mill Pond) that will be restored to slough/marsh. The overstory for most of the area is absent though a fringe of cypress remains along the ponds edge. The majority of the area is dominated by water lilies and other aquatic submerged vegetation. Reclamation activities within this polygon include the removal of Dykes Mill Pond dam, and spanning the gap with railcar bridge, planting of cypress and black gum saplings and planting the area with herbaceous and shrub species, if after 2 years, the native wetland understory is < 50%. Dykes Mill Pond was removed in August of 2006 and construction of the bridge continues. It is expected that the bridge will be completed by February of 2007. However, the majority of the restoration activities will take place in 2007 following replacement of the bridge. The monitoring conducted for this transect will serve as a baseline to compare with future monitoring.

A total of 7 species were observed within the transect 9 (Table 11, Figure 22). The species were common to freshwater marshes within the region. No exotic species were observed. The dominant species observed within the transect was fragrant water lily with 45 % cover. Florida yellow bladderwort was also common with 19.2 % cover. Open water was common within the transect with 34% cover, indicating that much of the transect occurs in what is currently a pond. Wildlife was observed along transect 9 included wood ducks and a great egret.

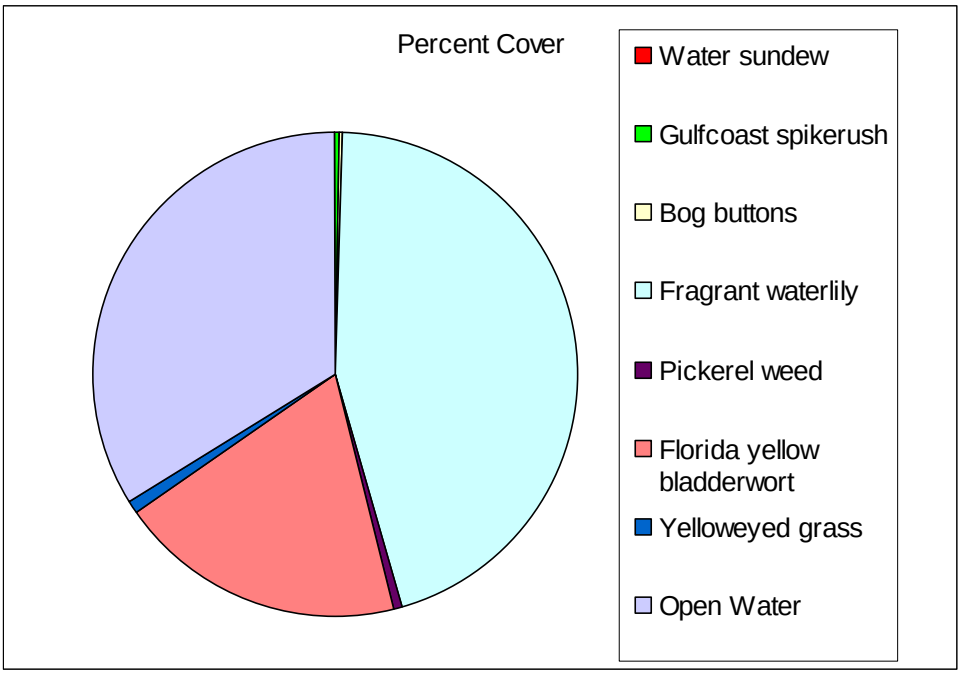
Interim Success Criteria:
Many of the management activities that will be used to restore WRAP Polygon O, Management Unit 5 will be implemented in 2007. However, the dam at Dykes Mill pond has been removed and no exotic or nuisance native vegetation was observed. It is expected that Management Unit 5 will achieve more of the interim success criteria as restoration activities are implemented.

Table 11. Transect 9. Species and Occurrence (Slough / Marsh)

Date: 10/13/2006, 3:00 pm	Transect 9 UMAM VI, Management Unit 5	Community: Slough/Marsh
Name of data collector: David Clayton		
Wildlife: wood ducks, great egret		
Overstory: Dykes Mill Pond		

Scientific Name	Common Name	Percent Cover	# Species
Drosera intermedia	Water sundew	0.06	1
Eleocharis cellulosa	Gulfcoast spikerush	0.16	2
Lachnocaulon anceps	Bog buttons	0.26	3
Nymphaea odorata	Fragrant waterlily	45	4
Pontederia cordata	Pickerel weed	0.66	5
Utricularia floridana	Florida yellow bladderwort	19.2	6
Xyris jupicai	Yelloweyed grass	0.66	7
	Open Water	34	
		100	

Figure 23. Transect 9. Species and Occurrence



Qualitative Monitoring

Materials and Methods

Qualitative vegetation monitoring will include assessment of the vegetation, both ground cover and planted trees, wildlife use observations, and general habitat health. Pedestrian surveys increase site coverage and include a 30+ minute meandering walk-path intended to provide information useful in management and to determination the success of management activities. A walk path traversed as much habitat as possible. The pedestrian walk-path continued as long as species were being added, however, once additional species were not recorded for 3 minutes the survey was complete. Representative photos and a community description and health were provided for each walk-path. Fuel load for each habitat was determined and the presence of any threatened or endangered species were recorded. Plants were listed in the data sheet in the following categories (tree, shrub, vine or herbaceous) to give a better understanding of composition of the habitat. Wildlife observations were also recorded for each walk-path (Figure 13) provides the location and coverage of transects and the data sheets can be found in (Appendix 7).

Results and Discussion

A total of 13 pedestrian transects were located at the SHLMB (Figure 13) Three pedestrian surveys were located in Management Unit 1, one in Management Unit 2, one in Management Unit 4, four in Management Unit 10, three in Management Unit 12, and one in Management Unit 14 (Appendix 7).

Management Unit 1, WRAP Polygons A, G, I, K, M, P, T, U, Preserved High Quality Forested and Herbaceous Wetlands

Management Unit 1, consists of 574.839 acres of a wide variety of preserved wetland habitats including approximately FLUCCS: 621 – Cypress, 617 – Mixed Wetland Hardwoods, 644 – Emergent Aquatic Wetlands, 611 – Bay Swamps, 641 – Freshwater Marshes, 616 – Inland Ponds and Sloughs, 640 – Vegetated Non-Forested Wetlands and 643 – Wet Prairies. The management goal for this polygon is the preservation of the existing high quality wetlands. Two of the pedestrian survey paths (M8 and M9) in Management Unit I, were located in cypress dominated wetlands, while the third pedestrian survey path (M10) was located in an overgrown hydric pine flatwoods (Appendix 7). However it is suggested that this transect be kept but the designation and analysis changed to the more appropriate Management Unit 2. A total of 38 species were observed in M8, while 32 species were observed in M9 **(**Appendix **7**). Twenty nine of the species were common to both transects. Five tree species were observed in M8 while 3 tree species were observed for M9, however the dominant tree species was pond cypress. Eight and nine shrub species were observed in M9 and M8 respectively, though cover of shrubs was not significant. Twenty one herbaceous species were observed in M8, while 19 herbaceous species were observed in M9. No nuisance or exotic species were found in M8, though a small patch of torpedo grass was observed in M9. Fuel load was low for each area and no threatened or endangered species were observed. Water

levels in both areas were extremely low due to the drought and many of the herbaceous species such as pickerel weed, duck potato (*Sagittaria latifolia*) and fragrant water lily (*Nymphaea odorata*) had browned or appeared dead. Sublimation from successive years of drought along M9 has caused the roots of some of the cypress to be exposed and caused several of the cypress trees to fall over. Cypress seedlings were numerous in both areas. Wildlife was abundant. Cardinals, great egret, wood ducks, white ibis, phoebe, towhee, red bellied wood peckers, deer and raccoon tracks were common. Overall the habitat is diverse and healthy, the successive years of drought have reduced the peat layers in the cypress areas, but drought also allows for the establishment of cypress seedlings that would not establish during flooded conditions.

Interim Success Criteria:

Interim success criteria includes exotic vegetation cover < 2% per acre, nuisance vegetation cover < 5% per acre, and maintaining or improving in ecological function. Results from the first monitoring at the site showed a very small patch of nuisance exotic species cover well below the 2% per acre cover and no other nuisance species cover was observed. The systems were healthy and reacting normally to the summer droughts within the region.

Management Unit 2, WRAP Polygon D, E, Hydric Pine Flatwoods

Management Unit 2, consists of 146.678 acres of FLUCCS 635 hydric pine flatwoods. The management goal for this polygon includes the enhancement and restoration of the degraded hydric pine flatwoods. Two pedestrian transects (M10 and M11) were located in Management Unit 2, UMAM Polygon V (Appendix 7). Both of these areas are overgrown, degraded hydric pine flatwoods dominated by a variety of tree and shrub species. Both areas were burned during the summer of 2005, though fuel loads in both areas are moderate and additional fires are warranted. Dominant species cover along M10 was black ti ti with some silver bay and slash pine, while M11 was more diverse with an overstory reflective of a hardwood invanded pine flatwoods and an understory with a greater number of hydric pine flatwoods species Appendix **7).** M11 had a variety of species indicative of adjacent wetter (bayhead) and drier (oak uplands) habitats. Wire grass was present in M11, but absent in M10. A total of 32 species (8 trees, 17 shrubs, 4 vines and 3 herbaceous species) were observed along M10, while 46 species (14 trees, 18 shrubs, 3 vines and 11 herbaceous species) were observed along transect 11 (Appendix 7). The additional herbaceous species found in transect 11 in probably due to a more open habitat and increased light penetrating to the understory. A total of 18 species were observed in both transects. No nuisance exotic species were observed in either area. One Florida threatened plant species, the southern crab apple (*Malus angustifolia*) was observed in M11. Wildlife observed included blue jay, kingfisher, red bellied woodpecker, red shouldered hawk, and gray squirrel. These two transects are typical of the degraded wet flatwoods onsite for areas that are not been dominated by shrubs. Successive fires should greatly reduce the shrub layers and aid in the restoration of these habitats.

Interim Success Criteria:

Interim success criteria include exotic vegetation cover < 2% per acre, nuisance native vegetation cover < 5% per acre, increasing herbaceous groundcover, decreasing density of woody shrub layer, planted pines are surviving and healthy and prescribed burns have been conducted in accordance with fire management plan. Several of the interim success criteria have already been met for this polygon. No nuisance exotic or nuisance native species cover has been observed, and the prescribed burns have been conducted in accordance with the fire management plan. In addition, there is some evidence that the initial burns had some effect on slightly reducing the cover of the shrub layer.

Management Unit 10, UMAM Polygon III, Xeric and Live Oak

Management Unit 10, UMAM Polygon III consists of 493.852 of FLUCCS 421 – Xeric Oak and 427 – Live Oak. Management goals include the preservation and the re-introduction of fire to upland sandhill communities dominated by oaks. Management activities include the introduction of fire using dormant season burns, and the eventual introduction of growing-season burns (anticipated 3 to 5-year and 5 to 7-year burn cycles), and the reduction of oak in portions of management unit as selected by QMS (Qualified Mitigation Supervisor), and monitoring for nuisance / exotic plant species. Other management activities may include the supplemental planting of longleaf pine (436 trees per acre) and wiregrass (6' centers or direct seeding as 2-5 pounds per acre as determined by the QMS. Live and turkey oaks were selectively harvested from portions of Management Unit 10, UMAM Polygon III in September of 2006. As a result the fuel load is high for most of these areas and a prescribed burn is scheduled for a dormant season burn in the winter of 2008/2009. Good coverage of wire grass was observed throughout Management Unit 10. Initial burns for portions of Management Unit 10 were conducted during the growing season. Wire grass was observed in flower for these areas. Continued warm season burns should ensure an increasing cover of wire grass throughout the polygon. Four transects were located within Polygon 10, M1, M2, M12 and M13 (Appendix 7). M2 was moved from the adjacent sand pine plantation as very little herbaceous cover was observed in any of the sand pine plantation transects. All transects had vegetation typical of the sand hills. Two transects M1 with 44 species (9 trees, 5 shrubs, 3 vines and 27 herbs) and M13 with 54 species (9 trees, 6 shrubs, 2 vines and 37 herbs) were species rich, while M2 with 29 species (6 trees, 6 shrubs, 3 vines and 14 herbs) and M12 with 26 species (12 trees, 3 shrubs, 3 vines and 8 herbs) were generally lacking a diverse herbaceous cover (Appendix 7). This may be due to the shading of the understory by overstory oaks. However, all of the transects had between 19 and 35 species in common. Scattered diamond oak and sand pine may also be reflective of a historic lack of fire within the transects. No nuisance exotic coverage was observed within any of the transects though a small patch of Bahia grass was observed at the gate adjacent to the road for the transect M1. This will be treated in the near future. In the transect M1, a Florida threatened species Gulf coast lupine (*Lupinus westianus*) was located throughout the sand hill upland while smooth barked St. John's wort, a Florida Endangered species, was located adjacent to the solution pond 1. Gopher tortoise

burrows were observed along pedestrian transects M12 and M13. Other wildlife observed included blue jay, deer, red bellied wood peckers, and a chickadee.

Interim Success Criteria:
Several interim success criteria have already been met, the exotic species cover (Bahia grass) is a small patch and well below the 2% per acre, and no nuisance native vegetation was observed. Several of these transects are already quite diverse and continued fire within these areas will ensure a diverse sand hill community.

Management Unit 11, UMAM Polygon II, **Upland Slash or Sand Pine Plantations**

Management Unit 11, UMAM Polygon II consists of 383.484 acres of FLUCCS 411 Longleaf Pine / Wiregrass restored from slash or sand pine plantations. The restoration goal for this area is to restore the sites to a sand hill community from a sand or slash pine plantation. Management activities will include the re-introduction of growing season burns, removal of planted pines, re-planting with 436 long leaf pine seedlings per acre and if needed the addition of wire grass tublings or seeding. Due to an inadequate road system, the harvesting the pine plantations and restoration work within this polygon will take place in 2007. Trees will be harvested and the site burned to stimulate the seed bank and also prep the site for planting longleaf pine. One transect (M5) was located within Management Unit 11, UMAM Polygon II (Appendix 7). This area had already undergone a warm season burn that greatly reduced the shrub cover. Overstory here is planted slash pine early on in the rotation. Much of the understory was in fairly good condition with good diversity typical of the sand hills. A total of 50 species (6 trees, 7 shrubs, 2 vines, and 35 herbaceous species) were observed (Appendix 7). Wire grass was the dominant grass species within the area. However, the emerging shrub layer was dominated by diamond oak. These trees should be removed with successive fires. A small patch of centipede grass was observed within this pedestrian transect and wildlife was limited to the observation of a squirrel nest.

Interim Success Criteria:
Several of the interim success criteria have already been met within this transect. A small patch of centipede grass was observed within this transect but the coverage would be well below the 2% per acre and no nuisance native species were observed. The ground cover is very diverse in this area and additional fires will continue to stimulate the ground cover while reducing the cover of woody shrubs and oaks. The slash pine should be harvested within the next year and the area planted with longleaf pine.

Management Unit 12, UMAM Polygon 1, Sand Hill

Management Unit 12, UMAM Polygon 1 consists of 263.52 acres of FLUCCS: 411 – Longleaf Pine / Wiregrass (Mesic Pine Flatwoods) restored from 421 –Xeric Oak habitat. The goal for this polygon is to restore a diverse sand hill from a turkey – live oak dominated system. Restoration activities include the re-introduction of growing season burns, removal of oak ≤ 12 inches DBH and herbicide treatment of stumps, planting of longleaf pine (436 trees per acre), and monitoring for nuisance / exotic plant species.

Oak eradication was conducted for Management Unit 12, UMAM Polygon 1 during the summer of 2005. A dormant season burn will be conducted between 2007 and the spring of 2008 to reduce fuel loads and the felled oaks. Fire was re-introduced to the polygon and cover of the once dominant shrub woody goldenrod has been greatly reduced. Wire grass is the dominant grass species within this polygon and flowering was observed following initial burns. The sand hill habitat within this polygon is diverse and typical of sand hills within the region. The majority of the polygon has was planted with longleaf pines in 2004, however, several areas on the north side of Green Head Branch will be planted with longleaf pines in 2007. Two transects (M3 and M4) were located within this polygon (Appendix 7). A total of 35 species (7 trees, 2 shrubs, 2 vines, and 24 herbs) were observed along pedestrian transect M3, while 68 species (8 trees, 9 shrubs, 2 vines and 49 herbs) were observed within M4 (Appendix 7). The species were typical of the sand hill though in wetter areas of M4 adjacent to Little Deep Edge Pond, more pine flatwood vegetation occurred. A total of 26 species were observed in common between the two transects. Wire grass is the dominant grass within both of these areas. The areas are of high quality and good diversity. Small patches of centipede grass were observed along the pedestrian transect M3. This polygon has already responded to the initial fires which greatly reduced the cover of the woody goldenrod and stimulated the wire grass. A state threatened species, Florida crab apple was observed near Cat Pond along the pedestrian walk path M3. Wildlife observed included a gopher tortoise burrow within M4 as well as a titmouse, blue jay, and red bellied wood pecker.

Interim Success Criteria:
This polygon has already reached many of the restoration goals set forth in the interim success criteria. Fire has been re-introduced and the cover of woody golden rod is already greatly reduced. Wire grass cover conversely has greatly increased since the re-introduction of fire. Oaks have been reduced to less than 150 trees per acre and the downed trees will be burned this dormant season. Longleaf pines have been planted within the majority of the polygon and are thriving.

Management Unit 14, portions of UMAM Polygon IV, Lakes

Management Unit 14, portions of UMAM Polygon IV consists of 164.958 acres of FLUCCS 520, lakes. The goal for this polygon is the preservation of the lake and aquatic habitat. One pedestrian transect (M6) was placed within the polygon around Garret Pond (Appendix **7**). The water levels at Garret pond were very low due to the summer drought. Much of the lake bottom was exposed and had been colonized by a variety of wetland grasses and sedges. Two small pools remained. A total of 36 species (5 trees, 7 shrubs, 1 vine and 23 herbs) were observed (Appendix 7). Vegetation was typical of a diverse pond within the region. A small patch of torpedo grass was observed at the boat ramp to the pond. A zone of Smooth barked St. John's wort and seedlings was observed just below the shrub layer surrounding the pond. Some species such as pickerel weed appear to have been set back by the drought and most of the leaves and stem have browned. Wildlife observed included deer, turkey, raccoon, and alligator tracks, snipe, and white ibis.

Interim Success Criteria:
Exotic vegetation cover is < 2% per acre and no nuisance native vegetation cover was observed. The site appears to be maintaining normal ecological functions and overall the vegetation appeared healthy.

Appendix: Aerial Oblique Photography

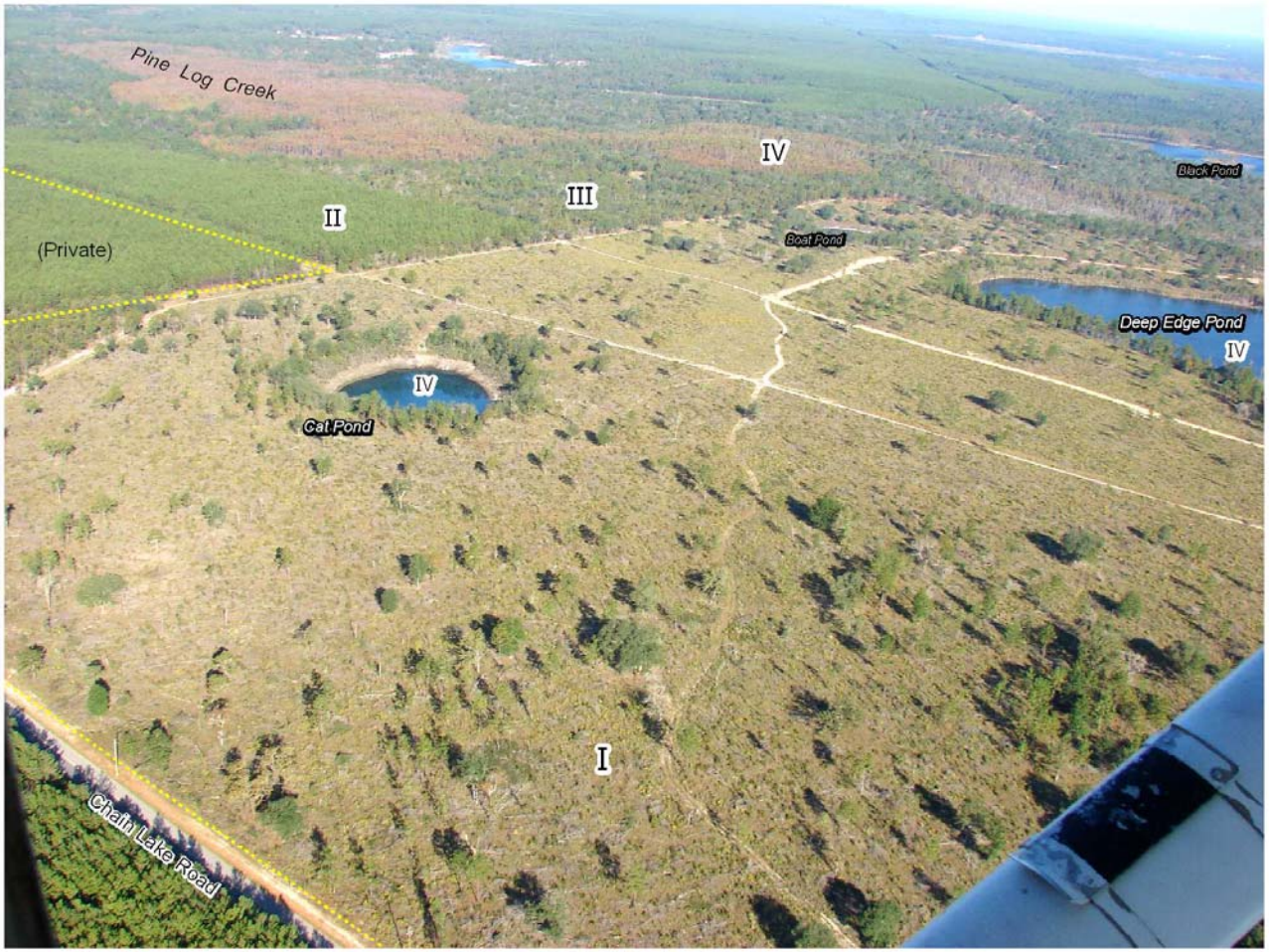
Oblique Aerial (10/23/06) Looking West of Southwest

Notes: Roman numerals represent Florida UMAM polygons. I = Longleaf/Wiregrass Restoration from Cutover Sandhills; II = Longleaf/Wiregrass Restoration from Sand Pine Plantation; III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation.

Oblique Aerial (10/23/06) Looking Northwest

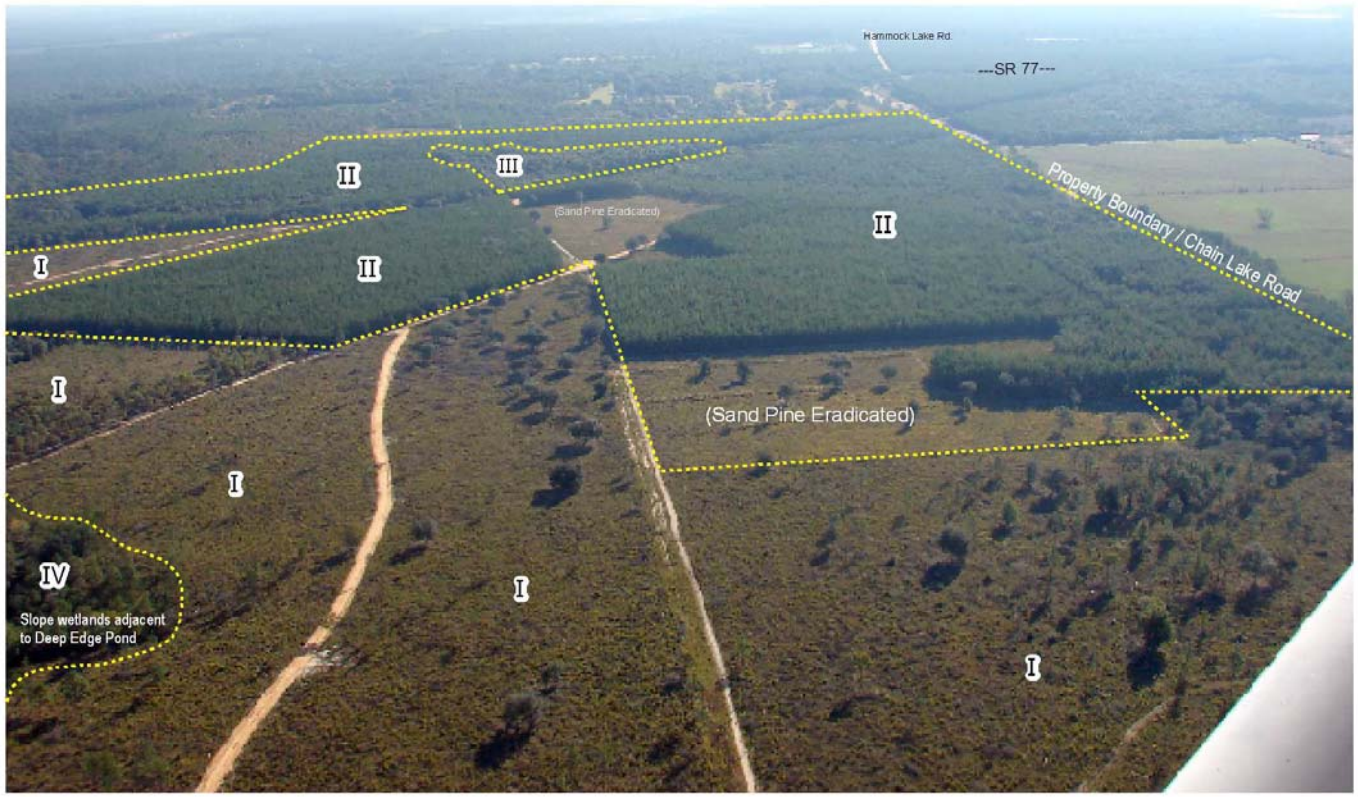
Notes: Roman numerals represent Florida UMAM polygons. I = Longleaf/Wiregrass Restoration from Cutover Sandhills; II = Longleaf/Wiregrass Restoration from Sand Pine Plantation; III = Uplands Preservation and Management.

Oblique Aerial (10/23/06) Looking Northwest Toward Cat Pond



Notes: Roman numerals represent Florida UMAM polygons. I = Longleaf/Wiregrass Restoration from Cutover Sandhills; II = Longleaf/Wiregrass Restoration from Sand Pine Plantation; III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation.

Oblique Aerial (10/23/06) Looking East Toward Southeast Corner of Property



Notes: Roman numerals represent Florida UMAM polygons. I = Longleaf/Wiregrass Restoration from Cutover Sandhills; II = Longleaf/Wiregrass Restoration from Sand Pine Plantation; III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation

Oblique Aerial (10/23/06) Looking South Across Cat Pond

Notes: Roman numerals represent Florida UMAM polygons. I = Longleaf/Wiregrass Restoration from Cutover Sandhills; IV = Wetlands/Pond Preservation.

Oblique Aerial (10/23/06) Looking Northeast

Notes: Roman numerals represent Florida UMAM polygons. I = Longleaf/Wiregrass Restoration from Cutover Sandhills; II = Longleaf/Wiregrass Restoration from Sand Pine Plantation; III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation.

Oblique Aerial (10/23/06) Looking North-Northeast

Notes: Roman numerals represent Florida UMAM polygons. I = Longleaf/Wiregrass Restoration from Cutover Sandhills; II = Longleaf/Wiregrass Restoration from Sand Pine Plantation; III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation.

Oblique Aerial (10/23/06) Looking Northeast Across Cypress Swamp

Notes: Roman numerals represent Florida UMAM polygons. IV = Wetlands/Pond Preservation (Notice Wave Crests on Dry Pond).

Oblique Aerial (10/23/06) Looking South Across Managed Uplands

Notes: Roman numerals represent Florida UMAM polygons. III = Uplands Preservation and Management (Oaks have been thinned in this area based on decision by QMS); IV = Wetlands/Pond Preservation.

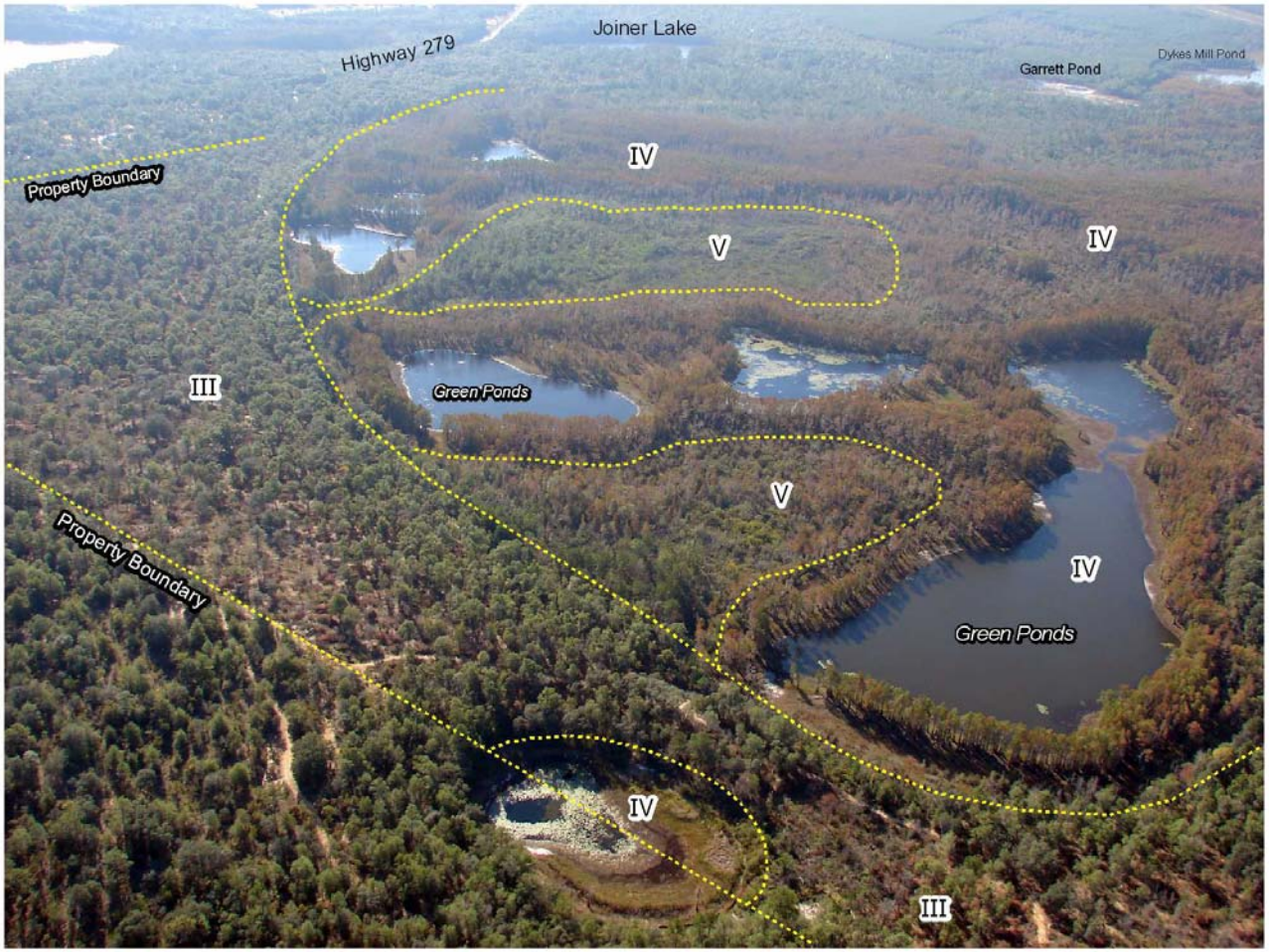
Oblique Aerial (10/23/06) Looking East Across Power Line Pond

Notes: Roman numerals represent Florida UMAM polygons. I = Longleaf/Wiregrass Restoration from Cutover Sandhills; II = Longleaf/Wiregrass Restoration from Sand Pine Plantation; III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation; VI = Cypress/Gum Restoration from Impoundment.

Oblique Aerial (10/23/06) Looking North-Northeast

Notes: Roman numerals represent Florida UMAM polygons. II = Longleaf/Wiregrass Restoration from Sand Pine Plantation; III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation; V = Hydric Pine Flatwoods Enhancement; VII = Hydric Pine Flatwoods Restoration from Slash Pine Plantation.

Oblique Aerial (10/23/06) Looking Southeast Across Green Ponds



Notes: Roman numerals represent Florida UMAM polygons. III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation; V = Hydric Pine Flatwoods Enhancement.

Oblique Aerial (10/23/06) Looking South Across Boat Pond

Notes: Roman numerals represent Florida UMAM polygons. I = Longleaf/Wiregrass Restoration from Cutover Sandhills; III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation.

Oblique Aerial (10/23/06) Looking Southwest Across Cat Pond and Oak Thinning/Eradication Areas

Notes: Roman numerals represent Florida UMAM polygons. I = Longleaf/Wiregrass Restoration from Cutover Sandhills; IV = Wetlands/Pond Preservation.

Oblique Aerial (10/23/06) Looking Northeast at Northern Boundary

Notes: Roman numerals represent Florida UMAM polygons. III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation.

Oblique Aerial (10/23/06) Looking East

Notes: Roman numerals represent Florida UMAM polygons. IV = Wetlands/Pond Preservation; V = Hydric Pine Flatwoods Enhancement; VII = Hydric Pine Flatwoods Restoration from Slash Pine Plantation.

Oblique Aerial (10/23/06) Looking North to Dykes Mill Pond

Notes: Roman numerals represent Florida UMAM polygons. I = Longleaf/Wiregrass Restoration from Cutover Sandhills; II = Longleaf/Wiregrass Restoration from Sand Pine Plantation; III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation; VI = Cypress/Gum Restoration from Impoundment. Oaks removed from Polygon I in April, 2006.

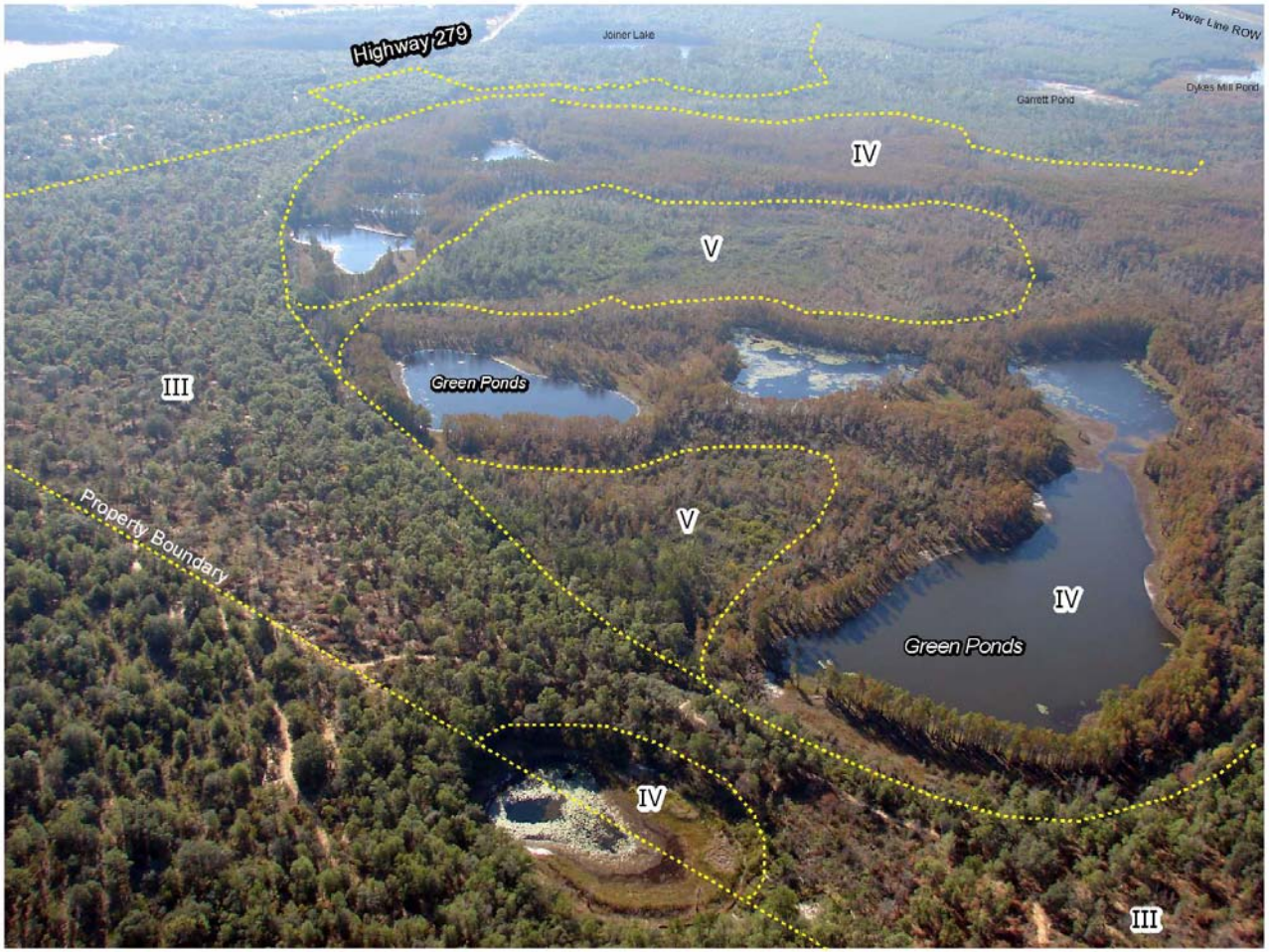
Oblique Aerial (10/23/06) Looking West Across Garrett Pond

Notes: Roman numerals represent Florida UMAM polygons. III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation; V = Hydric Pine Flatwoods Enhancement; VII = Hydric Pine Flatwoods Restoration from Existing Slash Pine Plantation.

Oblique Aerial (10/23/06) Looking Northeast Across Green Ponds

Notes: Roman numerals represent Florida UMAM polygons. III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation; V = Hydric Pine Flatwoods Enhancement.

Oblique Aerial (10/23/06) Looking Southeast Across Green Ponds



Notes: Roman numerals represent Florida UMAM polygons. III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation; V = Hydric Pine Flatwoods Enhancement.

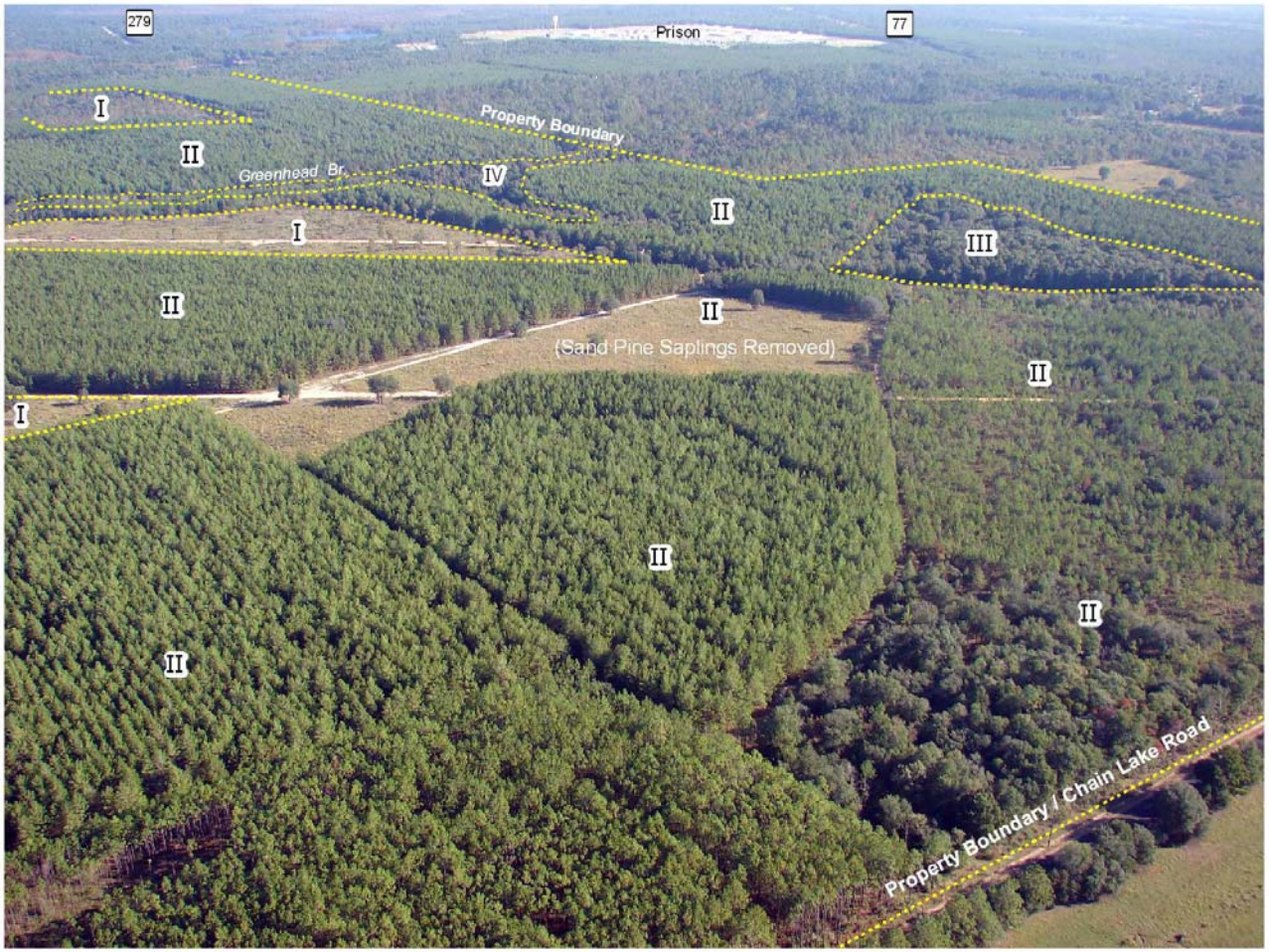
Oblique Aerial (10/23/06) Looking West Across Green Ponds

Notes: Roman numerals represent Florida UMAM polygons. III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation; V = Hydric Pine Flatwoods Enhancement.

Oblique Aerial (10/23/06) Looking West Across Ditch From Power Line Pond to Warmouth Pond

Notes: Roman numerals represent Florida UMAM polygons. III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation.

Oblique Aerial (10/23/06) Looking Northeast Across Sand Pine Plantation



Notes: Roman numerals represent Florida UMAM polygons. I = Longleaf/Wiregrass Restoration from Cutover Sandhills; II = Longleaf/Wiregrass Restoration from Sand or Slash Pine Plantation; III = Uplands Preservation and Management; IV = Wetlands/Pond Preservation.

Appendix: Pedestrian Surveys

Qualitative Field Assessment Form

Date: 10/25/2006 **Time:** 9:30 am **Data Collector:** David Clayton
Location: Pedestrian Transect # M1 near photo point 15
Management Unit: 10

Nuisance Species: Bahia grass at gate entrance
Fuel Load: Oak Trees have been thinned, area due to be burned this winter 2008/2009, fuel load high

Wildlife Observations: Blue jay, tufted titmouse, deer and raccoon tracks

T& E Species: Large population of Gulf Coast Lupine in sand hill and Smooth Barked St. John's Wort around pond

Community Description: Sandhill upland adjacent to a solution pond. Sandhill with good diversity and excellent groundcover. Marsh with excellent zonation consisting of an outer ring of myrtle leaved holly, and some black, then a dense zone of smooth barked St. John's wort, followed by maidencane, then open water and submerged aquatics.

Scientific Name	Common Name	Tree	Shrub	Vine	Herb
Agalinis setacea	Threadleaf false foxgloves				X
Amphicarpum muhlenbergianum	Blue maidencane				X
Andropogon glomeratus	Busy blue stem				X
Aristida stricta var. beyrichiana	Wiregrass				X
Baptisia lanceolata	Gopher weed				X
Baulduina angustifolia	Coastal plain honeycombhead				X
Centella asiatica	Centella				X
Cephalanthus occidentalis	Button bush		X		
Chrysoma pauciflosculosa	Woody Goldenrod				X
Cliftonia monoplylla	Black ti ti		X		
Crysopsis scabrella	Goldenaster				X
Cyrilla racemiflora	Titi		X		
Dalea pinatta	Summer farewell				X
Dicanthelium scoparium	Panic grass				X
Dicanthelium spp.	Panic grass				X
Eleocharis sp.	Eleocharis				X
Eriogonum tomentosum	Wild Buckwheat				X
Eupatorium capillifolium	Dog fennel				X
Eupatorium mohrii	Eupatorium				X
Euthamia caroliniana	Flat-topped goldenrod				X
Gaylussacia dumosa	Dwarf huckleberry		X		
Gelsemium sempervirens	Florida Jasmine			X	
Hypericum crux-andreae	St. Peter's wort				X
Hypericum reductum	Atlantic St. John's wort				X
Hypericum gentinoides	Pineweed				X
Hypericum lissophloeus	Smooth Bark St. John's wort		X		
Hypericum spp.	St. John's wort		X		
Ilex glabra	Gall berry		X		
Ilex myrtifolia	Myrtle leaf holly		X		
Ilex vomitoria	Yaupon		X		
Lachnocaulon ancepts	White topped bog buttons				X
Licania michauxii	Gopher apple				X

Scientific Name	**Common Name**	**Tree**	**Shrub**	**Vine**	**Herbaceous**
Lupinus diffusus	Sky-blue lupine				X
Lupinus westianus	Gulf Coast Lupine				X
Magnolia virginiana	Silver bay	X			
Myrica cerifera	Wax myrtle		X		
Opuntia humifusa	Pricklypear cactus				X
Panicum dichotimiflorum	Fall panic grass				X
Panicum hemitomon	Maidencane				X
Paspalum notatum	Bahia grass				X
Persea borbonia	Red Bay	X			
Polygonella gracillis	Wire weed				X
Pinus clausa	Sand Pine	X			
Pinus elliottii	Slash pine	X			
Pinus palustris	Longleaf pine	X			
Pityopsis graminifolia	Golden Aster				X
Polygonella gracilis	Wireweed				X
Quercus geminata	Sand Live Oak	X			
Quercus hemisphearica	Diamond oak	X			
Quercus incana	Blue jack oak	X			
Quercus laevis	Turkey oak	X			
Quercus virginiana	Live Oak	X			
Rhexia mariana	Pale meadow beauty				X
Rhus copallinum	Sumac		X		
Rubus cuneifolius	Sand blackberry		X		
Serenoa repens	Saw Palmetto		X		
Smilax sp.	Catbriar			X	
Stylisma patens	Coastal plain dawnflower				X
Utricularia floridana	Bladderwort				X
Vaccinium corymbosum	High bush blueberry		X		
Vaccinium myrsinites	Shiny blue berry		X		
Viburnum obovatum	Walter’s viburnum		X		
Vitus rotundifolia	Muscadine			X	
Xyris sp.	Yellow-eyed grass				X
Yucca filamentosa	Adam’s needle				X

Pedestrian Transect: Upland Sand Hill with oak eradication: Note: Gulf Coast Lupine in upper left photo

Marsh showing zonation and T & E species Smooth Barked St. John's Wort on right

Qualitative Field Assessment Form

Date: 10/28/2006 **Time:** 2:00 pm **Data Collector:** David Clayton
Location: Pedestrian Transect # M2 near photo point 3
Management Unit: 10

Nuisance Species: None
Fuel Load: Fuel load moderate

Wildlife Observations: **Chickadee, red bellied woodpecker**
T& E Species: None

Community Description: Sandhill upland overgrown with live and turkey oaks…good wiregrass cover, but allot of shade, recommend that oaks be thinned. Lots of deer moss on ground, a very dry site that grades down towards Pine Log Creek.

Scientific Name	Common Name	Tree	Shrub	Vine	Herb
Aristida stricta var. beyrichiana	Wiregrass				X
Baptisia lanceolata	Gopher weed				X
Chrysoma pauciflosculosa	Woody Goldenrod				X
Dichanthelium sp.	Witch grass				X
Diospyros virginiana	Persimmon	X			
Galactia sp.	Milk pea				X
Eriogonum tomentosum	Wild Buckwheat				X
Gelsemium sempervirens	Florida Jasmine			X	
Hypericum crux-andreae	St. Peter's-wort				X
Ilex vomitoria	Yaupon		X		
Liatris gracilis	Slender gayfeather				X
Licania michauxii	Gopher apple				X
Photinia pyrifolia	Red chokeberry		X		
Pinus clausa	Sand pine	X			
Pinus palustris	Long leaf pine	X			
Pityopsis graminifolia	Golden Aster				X
Polygonella gracilis	Wire weed				X
Quercus hemisphaerica	Diamond oak	X			
Quercus laevis	Turkey oak	X			
Quercus virginiana	Live oak	X			
Rhexia mariana	Pale meadow beauty				X
Serenoa repens	Saw-palmetto		X		
Scleria sp.	Scleria				X
Smilax sp.	Catbriar			X	
Sorghastrum secundum	Lopsided Indiangrass				X
Vaccinium arboreum	Farkleberry		X		
Vaccinium corymbosum	Highbush blueberry		X		
Vaccinium darrowii	Darrow's blueberry		X		
Vitis rotundifolia	Wild muscadine grape			X	

M2: Oaks with good wiregrass cover

Qualitative Field Assessment Form

Date: 10/16/2006 **Time:** 11:00 am **Data Collector:** David Clayton
Location: Pedestrian Transect # M3 near photo point 2
Management Unit: 12

Nuisance Species: None
Fuel Load: Fuel load high due to thinned oaks… will be burned in the winter of 2006/2007

Wildlife Observations: **none**
T& E Species: Southern crab apple

Community Description: Sandhill upland sloping down into the seepage area associated with Cat pond. Excellent diversity and groundcover. Wire grass bloomed this summer…area planted with long leaf pine

Scientific Name	Common Name	Tree	Shrub	Vine	Herb
Agalinis setacea	Threadleaf false foxgloves				X
Andropogon glomeratus	Busy blue stem				X
Andropogon gyrans	Elliot's blue stem				X
Aristida stricta var. beyrichiana	Wiregrass				X
Asclepias cinerea	Carolina milkweed				X
Asclepias humistrata	Pinewoods milkweed				X
Baptisia lanceolata	Gopher weed				X
Carphephorus odoratissimus	Vanilla leaf				X
Chrysoma pauciflosculosa	Woody Goldenrod				X
Dichanthelium sp.	Witch grass				X
Eriogonum tomentosum	Wild Buckwheat				X
Gaylussacia dumosa	Dwarf huckleberry		X		
Gelsemium sempervirens	Florida Jasmine			X	
Hieracium gronovii	Hawkweed				X
Hypericum gentianoides	Pineweed				X
Ilex vomitoria	Yaupon		X		
Liatris gracilis	Slender gayfeather				X
Liatris pauciflora	Few flowered gayfeather				X
Licania michauxii	Gopher apple				X
Lupinus diffusus	Skyblue lupine				X
Magnolia grandiflora	Southern magnolia	X			
Malus angustifolia	Southern crabapple	X			
Polygonella gracillis	Wire weed				X
Pinus elliottii	Slash pine	X			
Pinus palustris	Long leaf pine	X			
Pityopsis graminifolia	Golden Aster				X
Polygonella gracilis	Wireweed				X
Pteridium aquilinum	Bracken fern				X
Quercus laevis	Turkey oak	X			
Quercus margaretta	Sand post oak	X			
Quercus virginiana	Live oak	X			
Rhexia mariana	Pale meadow beauty				X
Smilax sp.	Catbriar			X	
Tradescantia hirsutiflora	Hairyflower spiderwort				X
Yucca filamentosa	Adam's needle				X

Pedestrian Transect M3: Cat pond and surrounding uplands

M3: Upland with good wiregrass cover

Qualitative Field Assessment Form

Date: 10/28/2006 **Time:** 4:00 pm **Data Collector:** David Clayton
Location: Pedestrian Transect # M4 near photo point 4
Management Unit: 12

Nuisance Species: None
Fuel Load: Fuel load low to moderate, area was burned but shrubs are returning...some kill off of oaks from previous burns…should be burned in the next year

Wildlife Observations: **Blue jay, titmouse, red bellied woodpecker, active gopher tortoise burrow near pond**
T& E Species: None observed

Community Description: Sandhill upland sloping down into the seepage area associated with Little Deep Edge pond. Excellent diversity and groundcover. Wire grass bloomed this summer…

Scientific Name	Common Name	Tree	Shrub	Vine	Herb
Agalinis setacea	Threadleaf false foxgloves				X
Andropogon glomeratus	Busy blue stem				X
Andropogon gyrans	Elliot's blue stem				X
Aristida stricta var. beyrichiana	Wiregrass				X
Asimina angustifolia	Slimleaf pawpaw		X		
Aster pilosus	Frost aster				X
Aster wateri	Walter's aster				X
Balduina angustifolia	Coastalplain honeycombhead				X
Baptisia lanceolata	Gopher weed				X
Carphephorus odoratissimus	Vanilla leaf				X
Ceanothus microphyllus	Littleleaf buckrush				X
Croton argyranthemus	Silver croton				X
Chrysoma pauciflosculosa	Woody Goldenrod				X
Crysopsis scabrella	Goldenaster				X
Cyperus sp.	Cyperus				X
Dalea pinatta	Summer farewell				X
Dicanthelium spp.	Panic grass				X
Digitaria filiformis	Slender crabgrass				X
Diospyros virginiana	Persimon	X			
Elephantopus carolinianus	Elephant's foot				X
Eremochloa ophiuroides	Centipede grass				X
Eriogonum tomentosum	Wild Buckwheat				X
Eryngium yuccifolium	Rattlesnake master				X
Eupatorium capillifolium	Dog fennel				X
Eupatorium hyssopifolium . var. laciniatum	Hyssopleaf thoroughwort				X
Eupatorium leucolepis	Justiceweed				X
Eupatorium serotinum	Late thoroughwort				X
Galactia volubilis	Milkpea				X
Gaura filipes	Slenderstalk beeblossom				X
Gelsemium sempervirens	Florida Jasmine			X	
Hieracium gronovii	Hawkweed				X
Helianthus radula	Rayless sunflower				X
Hypericum crux-andreae	St. Peter's wort				X
Hypericum gentianoides	Pineweed				X
Ilex glabra	Gall berry		X		

Scientific Name	Common Name	Tree	Shrub	Vine	Herb
Ilex vomitoria	Yaupon		X		
Liatris gracilis	Slender gayfeather				X
Liatris pauciflora	Few flowered gayfeather				X
Licania michauxii	Gopher apple				X
Lobelia glandulosa	Glade lobelia				X
Lupinus diffusus	Skyblue lupine				X
Opuntia humifusa	Pricklypear cactus				X
Paronychia rugelii	Sand-squares				X
Penstemon multiflorus	Penstemon				X
Polygonella gracilis	Wire weed				X
Pinus elliottii	Slash pine	X			
Pinus palustris	Long leaf pine	X			
Pityopsis graminifolia	Golden Aster				X
Polygonella gracilis	Wireweed				X
Pteridium aquilinum	Bracken fern				X
Quercus elliottii	Runner oak		X		
Quercus hemisphearica	Diamond oak	X			
Quercus incana	Blue jack oak	X			
Quercus laevis	Turkey oak	X			
Quercus margaretta	Sand post oak	X			
Quercus virginiana	Live oak	X			
Rhexia mariana	Pale meadow beauty				X
Rubus cuneifolius	Sand blackberry		X		
Serenoa repens	Saw palmetto		X		
Solidago odora var. chapmanii	Chapman's goldenrod				X
Seymeria cassioides	Senna seymaria				X
Smilax sp.	Catbriar			X	
Stillingia sylvatica	Queen's delight				X
Trichostema setaceum	Forked blue curls				X
Vaccinium arboreum	Sparkle berry		X		
Vaccinium corymbosum	High bush blueberry		X		
Vaccinium myrsinites	Shiny blue berry		X		
Viola sororia	Common blue violet				X
Yucca filamentosa	Adam's needle				X

Pedestrian Transect M4: Upland Sand Hill: Note: Wiregrass

M4: Upland with good wiregrass cover grading down towards seepage slope

Qualitative Field Assessment Form

Date: 10/28/2006 **Time:** 4:50 pm **Data Collector:** David Clayton
Location: Pedestrian Transect # M5 near photo point 1
Management Unit: 11

Nuisance Species: None
Fuel Load: Planted pine, fuel load moderate, area was burned but shrubs are returning...should be burned in the next year

Wildlife Observations: **squirrel nest**
T& E Species: None observed

Community Description: Sandhill upland upslope of black pond. Sandhill with good diversity and excellent groundcover. Wire grass bloomed this summer…area planted with long leaf pine.

Scientific Name	Common Name	Tree	Shrub	Vine	Herb
Agalinis setacea	Threadleaf false foxgloves				X
Andropogon glomeratus	Busy blue stem				X
Andropogon gyrans	Elliot's blue stem				X
Aristida stricta var. beyrichiana	Wiregrass				X
Asimina angustifolia	Slimleaf pawpaw		X		
Aster pilosus	Frost aster				X
Aster wateri	Walter's aster				X
Baptisia lanceolata	Gopher weed				X
Carphephorus odoratissimus	Vanilla leaf				X
Ceanothus microphyllus	Littleleaf buckrush				X
Croton argyranthemus	Silver croton				X
Chrysoma pauciflosculosa	Woody Goldenrod				X
Crysopsis scabrella	Goldenaster				X
Dalea pinatta	Summer farewell				X
Dicanthelium spp.	Panic grass				X
Digitaria filiformis	Slender crabgrass				X
Diospyros virginiana	Persimon	X			
Elephantopus carolinianus	Elephant's foot				X
Eremochloa ophiuroides	Centipede grass				X
Eriogonum tomentosum	Wild Buckwheat				X
Eupatorium capillifolium	Dog fennel				X
Eupatorium serotinum	Late thoroughwort				X
Galactia volubilis	Milkpea				X
Gelsemium sempervirens	Florida Jasmine			X	
Hieracium gronovii	Hawkweed				X
Hypericum crux-andreae	St. Peter's wort				X
Ilex glabra	Gall berry		X		
Ilex vomitoria	Yaupon		X		
Liatris gracilis	Slender gayfeather				X
Liatris pauciflora	Few flowered gayfeather				X
Licania michauxii	Gopher apple				X
Opuntia humifusa	Pricklypear cactus				X
Penstemon multiflorus	Penstemon				X
Pinus elliottii	Slash pine	X			
Pityopsis graminifolia	Golden Aster				X
Polygonella gracilis	Wireweed				X

Scientific Name	**Common Name**	**Tree**	**Shrub**	**Vine**	**Herb**
Quercus hemisphearica	Diamond oak	X			
Quercus incana	Blue jack oak	X			
Quercus laevis	Turkey oak	X			
Quercus margaretta	Sand post oak	X			
Rubus cuneifolius	Sand blackberry		X		
Solidago odora var. chapmanii	Chapman's goldenrod				X
Seymeria cassioides	Senna seymaria				X
Smilax sp	Catbriar			X	
Stillingia sylvatica	Queen's delight				X
Trichostema setaceum	Forked blue curls				X
Vaccinium arboreum	Sparkle berry		X		
Vaccinium corymbosum	High bush blueberry		X		
Vaccinium myrsinites	Shiny blue berry		X		
Yucca filamentosa	Adam's needle				X

Pedestrian Transect M5: Planted slash pine stand

Qualitative Field Assessment Form

Date: 10/16/2006 **Time** 11:15 am **Data Collector:** David Clayton
Location: Pedestrian Transect # M6
Management Unit: 14

Nuisance Species: scattered patches of torpedo grass at boat landing
Fuel Load: Low

Wildlife Observations: white ibis, snipe, turkey tracks, raccoon tracks, deer tracks, alligator tracks
T& E Species:.Smooth barked St. John's wort around the edge of pond

Community Description:Edge dominated by slash pine and shrubs with some black gun and cypress. Majority of pond has dried down and dominated by Rhynchospora and Eleocharis. Most species appear healthy though some have died from drought

Scientific Name	Common Name	Tree	Shrub	Vine	Herb
Andropogon glomeratus	Bushy blue stem				X
Bidens mitis	Bur marsh marigold				X
Brasenia schreberi	Water shield				X
Centella asiatica	Centella				X
Cephalanthus occidentalis	Button bush		X		
Cliftonia monoplylla	Black ti ti		X		
Cyrilla racemiflora	Red ti ti		X		
Dicanthelium spp.	Panic grass				X
Eleocharis sp.	Eleocharis				X
Eupatorium capillifolium	Dog fennel				X
Hypericum lissophloeus	Smooth barked St. John's wort		X		
Hypericum spp.	St. John's wort		X		
Ilex vomitoria	Yaupon		X		
Lachnanthese caroliniana	Red root				X
Lachnocaulon ancepts	White topped bog buttons				X
Lycopus rubellus	Water horehound				X
Numphar advena	Spatterdock				X
Nymphaea odorata	Fragrant water lily				X
Nyssa sylvatica	Black gun	X			
Panicum dichotimiflorum	Fall panic grass				X
Panicum hemitomon	Maidencane				X
Panicum repens	Torpedo grass				X
Persea palustris	Swam bay	X			
Pinus elliottii	Slash Pine	X			
Pontederia cordata	Pickerel weed				X
Quercus hemisphaerica	Diamond Oak	X			
Rhexia mariana	Pale meadow beauty				X
Rynchospora inundata	Horned beakrush				X
Sacciolepis striata	American cupscale				X
Sagittaria latifolia	Duck potato				X
Smilax sp.	Catbriar			X	
Taxodium ascendens	Cypress	X			
Triadeum virginicum	Marsh St. John's wort				X
Utricularia floridana	Bladderwort				X
Vaccinium corymbosum	High bush blue berry		X		
Xyris sp.	Yellow-eyed grass				X

Pedestrian Transect M6: Note: Garret Pond dry down

Qualitative Field Assessment Form

Date: 10/16/2006 **Time:** 1:15 pm **Data Collector:** David Clayton
Location: Pedestrian Transect # M7
Management Unit: 4

Nuisance Species: None
Fuel Load: Low

Wildlife Observations: Blue jay, raccoon tracks, deer tracks
T& E Species:.Hypericum lissophloeus (Smooth barked St. John's wort

Community Description: Water ponded due to dike. Floating mats of yellow eyed grass, sphagnum, and bur marsh marigold. Dominated by cypress with some black gum. Most species appear healthy

Scientific Name	Common Name	Tree	Shrub	Vine	Herb
Andropogon glomeratus	Bushy blue stem				X
Bidens mitis	Bur marsh marigold				X
Centella asiatica	Centella				X
Cephalanthus occidentalis	Button bush		X		
Cliftonia monoplylla	Black ti ti		X		
Cyrilla racemiflora	Red ti ti		X		
Dicanthelium spp.	Panic grass				X
Eleocharis sp.	Eleocharis				X
Eupatorium capillifolium	Dog fennel				X
Hypericum lissophloeus	Smooth barked St. John's wort		X		
Hypericum spp.	St. John's wort		X		
Ilex glabra	Gall berry		X		
Ilex vomitoria	Yaupon		X		
Lachnanthese caroliniana	Red root				X
Lachnocaulon ancepts	White topped bog buttons				X
Lycopus rubellus	Water horehound				X
Numphar advena	Spatterdock				X
Nymphaea odorata	Fragrant water lily				X
Nyssa sylvatica	Black gun	X			
Panicum dichotimiflorum	Fall panic grass				X
Panicum hemitomon	Maidencane				X
Persea palustris	Swam bay	X			
Pinus elliottii	Slash Pine	X			
Pontederia cordata	Pickerel weed				X
Quercus hemisphearica	Diamond Oak	X			
Rhexia mariana	Pale meadow beauty				X
Rynchospora inundata	Horned beakrush				X
Sagittaria latifolia	Duck potato				X
Smilax sp.	Catbriar			X	
Taxodium ascendens	Cypress	X			
Triadeum virginicum	Marsh St. John's wort				X
Utricularia floridana	Bladderwort				X
Vaccinium corymbosum	High bush blue berry		X		
Xyris sp.	Yellow-eyed grass				X

Pedestrian Transect M7: Note: floating mats

Qualitative Field Assessment Form

Date: 10/16/2006 **Time:** 12:15 pm **Data Collector:** David Clayton

Location: Pedestrian Transect # M8

Management Unit: 1 and parts of two…moved point into dry pond and adjacent wetland

Nuisance Species: None

Fuel Load: Low

Wildlife Observations: cardinal, white ibis, phoebe, towhee, red bellied wood pecker, deer and raccoon tracks

T& E Species:.One-toed amphiuma…listed by FNAI but not the state or feds

Community Description: Swamp dominated by pond cypress with a fringe of black gum…little water present due to drought. Trees healthy, numerous cypress seedlings. Some herbaceous plants have died from lack of water. Most species appear healthy

Scientific Name	Common Name	Tree	Shrub	Vine	Herb
Bidens mitis	Bur marsh marigold				X
Brasenia schreberi	Water shield				X
Campsis radicans	Trumpet vine			X	
Centella asiatica	Centella				X
Cephalanthus occidentalis	Button bush		X		
Cliftonia monoplylla	Black ti ti		X		
Cyrilla racemiflora	Red ti ti		X		
Dicanthelium spp.	Panic grass				X
Eleocharis sp.	Eleocharis				X
Erianthus giganteus	Giant plume grass				X
Eupatorium capillifolium	Dog fennel				X
Gelsemium sempervirens	Florida Jasmine			X	
Hypericum spp.	St. John's wort		X		
Ilex myrtifolia	Myrtle leaf holly		X		
Ilex vomitoria	Yaupon		X		
Itea virginica	Virginia willow		X		
Lachnanthese caroliniana	Red root				X
Lachnocaulon ancepts	White topped bog buttons				X
Lycopus rubellus	Taper leaf waterhorehound				X
Magnolia virginiana	Silver bay	X			
Myrica cerifera	Wax myrtle		X		
Numphar advena	Spatterdock				X
Nymphaea odorata	Fragrant water lily				X
Nyssa sylvatica	Black gun	X			
Panicum dichotimiflorum	Fall panic grass				X
Panicum hemitomon	Maidencane				X
Persea palustris	Swam bay	X			
Pinus taeda	Loblolly pine	X			
Pontederia cordata	Pickerel weed				X
Rynchospora inundata	Horned beakrush				X
Sagittaria latifolia	Duck potato				X
Smilax sp.	Catbriar			X	
Taxodium ascendens	Cypress	X			
Triadeum virginicum	Marsh St. John's wort				X
Utricularia floridana	Bladderwort				X
Vaccinium corymbosum	High bush blueberry		X		
Woodwardia aerolata	Netted chain fern				X
Xyris sp.	Yellow-eyed grass				X

Pedestrian Transect M8: Note: pond mostly dry

Qualitative Field Assessment Form

Date: 10/25/2006 **Time:** 4 pm **Data Collector:** David Clayton
Location: Pedestrian Transect # M9
Management Unit: 1

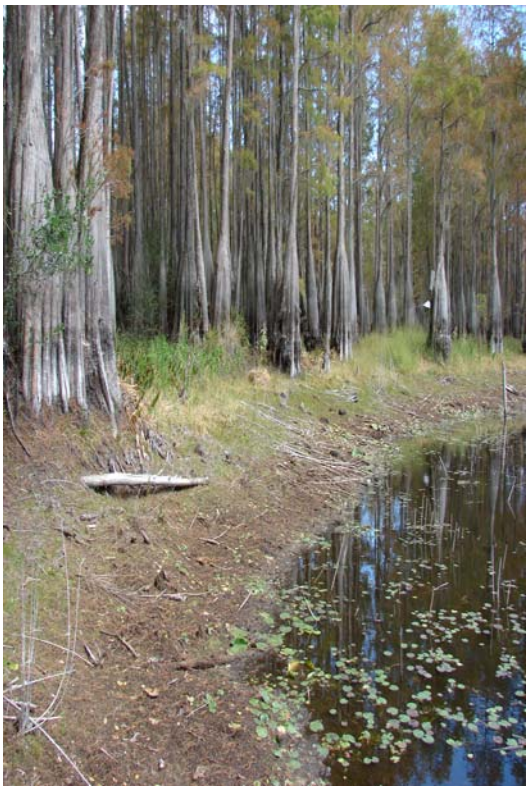
Nuisance Species: small patch of torpedo grass along shoreline
Fuel Load: Low

Wildlife Observations: Titmouse, wood duck, white ibis, deer tracks, anole, blue jay
T& E Species: None

Community Description: Green ponds: dominated by pond cypress…no water present due to drought, evidence of sublimation and some tree fall due to loss of peat. Most trees healthy, numerous cypress seedlings of 1 to several yeas of age. Some herbaceous plants such as pickerel weed brown from lack of water.

Scientific Name	Common Name	Tree	Shrub	Vine	Herb
Bidens mitis	Bur marsh marigold				X
Brasenia schreberi	Water shield				X
Carex glaucescens	Clustered Sedge				X
Centella asiatica	Centella				X
Cephalanthus occidentalis	Button bush		X		
Cliftonia monoplylla	Black ti ti		X		
Eleocharis inundata	Spikerush				X
Eleocharis sp.	Eleocharis				X
Eupatorium capillifolium	Dog fennel				X
Gelsemium sempervirens	Florida jasmine			X	
Hypericum sp.	St. John's wort		X		
Ilex myrtifolia	Myrtle leaf holly		X		
Itea virginica	Virginia willow		X		
Lachnanthese caroliniana	Red root				X
Lycopodium alopecuroides	Foxtail club-moss				X
Lycopus rubellus	Taper leaf water horehound				X
Magnolia virginiana	Silver bay	X			
Myrica cerifera	Wax myrtle		X		
Numphar advena	Spatterdock				X
Nymphaea odorata	Fragrant water lily				X
Panicum hemitomon	Maidencane				X
Panicum repens	Torpedo grass				X
Persea palustris	Swamp Bay	X			
Pontederia cordata	Pickerel weed				X
Rynchospora inundata	Horned beakrush				X
Rynchospora microcephala	Small headed beakrush				X
Sagittaria latifolia	Duck potato				X
Taxodium ascendens	Cypress	X			
Utricularia floridana	Bladderwort				X
Xyris sp.	Yellow-eyed grass				X

Pedestrian Transect: Green Ponds: Note: sunken wooden boat



Qualitative Field Assessment Form

Date: 10/282006 **Time:** 11:30 am **Data Collector:** David Clayton

Location: Pedestrian Transect # M10 near photo point 8

Management Unit: 1 **Due to species composition, analyzed under hydric pine flatwoods, Management Unit 2**

Nuisance Species: None
Fuel Load: Moderate

Wildlife Observations: Blue jay, kingfisher, red bellied wood pecker, catbird, red shouldered hawk
T& E Species:

Community Description: Overstory dominated by black ti ti, slash pine and red bay, understory composed of a wide variety of shrub and herbs…burned last year, good re-growth.

Scientific Name	Common Name	Tree	Shrub	Vine	Herb
Callicarpa americana	American beautyberry		X		
Clethra alnifolia	Sweet pepperbush		X		
Cliftonia monoplylla	Black ti ti		X		
Cyrilla racemiflora	Red ti ti		X		
Cuscuta gronovii	Scaldweed dodder			X	
Gelsemium sempervirens	Florida Jasmine			X	
Gordonia lasianthus	Loblolly bay	X			
Hypericum crux-andreae	St. John's wort				X
Ilex coriaceae	Big gallberry		X		
Ilex glabra	Gallbberry		X		
Ilex vomitoria	Yaupon		X		
Kalmia hirsuta	Wicki		X		
Leucothoe racemosa	Dog hobble		X		
Lyonia lucida	Fetterbush		X		
Myrica caroliniensis	Evergreen bayberry		X		
Osmunda regalis	Royal fern				X
Oxydendrom areboreum	Sourwood	X			
Persea borbonia	Red bay	X			
Pinus elliottii	Slash pine	X			
Quercus hemisphaerica	Diamond oak	X			
Quercus nigra	Water oak	X			
Quercus virginiana	Live oak	X			
Rhododendron viscosum	Swamp honeysuckle		X		
Rubus argutus	Black berry		X		
Serenoa repens	Saw-palmetto		X		
Smilax sp.	Catbriar			X	
Taxodium ascendens	Cypress	X			
Toxicodendron vernix	Poison sumac		X		
Vaccinium corymbosum	High bush blueberry		X		
Viburnum rufidulum	Rusty black haw		X		
Vitus rotundifolia	Wild muscadine grape			X	
Woodwardia aerolata	Netted chain fern				X

Pedestrian Transect M10: Note: red bay and pine overstory and understory dominated by shrubs

Qualitative Field Assessment Form

Date: 10/25/2006 **Time:** 11:30 am **Data Collector:** David Clayton
Location: Pedestrian Transect # M11 near photo point 12
Management Unit: 2

Nuisance Species: None observed
Fuel Load: medium, very hot fire last year, fair amount of deadfall due to fire, many oaks have died or are sprouting, wire grass in flower

Wildlife Observations: Blue jay, squirrel, red bellied woodpecker

T& E Species: Southern Crab Apple (Florida Threatened)

Community Description: Degraded wet flatwoods overgrown by hardwoods grading into a hardwood swamp. Many oaks killed by fire, some reprouting. Remnant sandhill and flatwood species

Scientific Name	Common Name	Tree	Shrub	Vine	Herb
Andropogon glomeratus	Busy blue stem				X
Andropogon gyrans	Giant blue stem				X
Aristida stricta var. beyrichiana	Wiregrass				X
Callicarpa americana	American Beautyberry		X		
Carphephorus paniculatus	Hairy trilisa				X
Cephalanthus occidentalis	Button bush		X		
Clethra alnifolia	Sweet pepper bush				X
Cliftonia monoplylla	Black ti ti		X		
Dicanthelium spp.	Panic grass				X
Eupatorium capillifolium	Dog fennel				X
Gaylussacia dumosa	Dwarf huckleberry		X		
Gelsemium sempervirens	Florida Jasmine			X	
Hypericum crux-andreae	St. Peter's wort				X
Ilex coriacea	Large gall berry		X		
Ilex glabra	Gall berry		X		
Ilex vomitoria	Yaupon		X		
Liquidambar styraciflua	Sweet gum	X			
Lyonia lucida	Fetter bush		X		
Magnolia virginiana	Silver bay	X			
Magnolia grandiflora	Southern magnolia	X			
Malus angustifolia	Southern crab apple	X			
Myrica cerifera	Wax myrtle		X		
Myrica caroliniensis	Evergreen bayberry		X		
Persea borbonia	Red Bay	X			
Persea palustris	Swamp Bay	X			
Pinus clausa	Sand Pine	X			
Pinus elliottii	Slash pine	X			
Osmanthus americanus	Wild olive		X		
Osmunda cinnamomea	Cinnamon fern				X
Oxydendrum arboreum	Sourwood	X			
Quercus geminata	Sand Live Oak	X			
Quercus hemisphearica	Diamond oak	X			
Quercus margaretta	Sand post oak	X			
Quercus nigra	Water oak	X			
Quercus virginiana	Live oak	X			
Rubus cuneifolius	Sand blackberry		X		
Scleria sp.	Scleria				X
Sebastiana fruticosa	Sebastain bush		X		
Serenoa repens	Saw Palmetto		X		

Scientific Name	**Common Name**	**Tree**	**Shrub**	**Vine**	**Herbaceous**
Smilax sp.	Catbriar			X	
Symplocos tinctoria	Horse Sugar		X		
Trichostema setaceum	Blue curls				X
Vaccinium arboreum	Farkle berry		X		
Vaccinium corymbosum	High bush blueberry		X		
Vaccinium myrsinites	Shiny blue berry		X		
Vitus rotundifolia	Muscadine			X	

Pedestrian Transect: Wet flatwoods overgrown with shrubs

Qualitative Field Assessment Form

Date: 10/25/2006 **Time:** 10:30 am **Data Collector:** David Clayton
Location: Pedestrian Transect # M12 near photo point 11
Management Unit: 10

Nuisance Species: None observed
Fuel Load: Oak Trees have been thinned, area due to be burned winter 2007/2008, fuel load high

Wildlife Observations: Blue jay, red bellied wood pecker, deer tracks, active gopher tortoise burrow

T& E Species: Active gopher tortoise burrow

Community Description: Sand hill that has been overgrown with diamond and live oak. Good wire grass cover remains throughout the majority of the site. All oaks under 8" in diameter have been cut down. Few sand hill understory species remain. Quite a few secondary or weedy species such as persimmon and black cherry

Scientific Name	Common Name	Tree	Shrub	Vine	Herb
Andropogon glomeratus	Busy blue stem				X
Aristida stricta var. beyrichiana	Wiregrass				X
Diorospyros virginiana	Persimon	X			
Eupatorium capillifolium	Dog fennel				X
Gelsemium sempervirens	Florida jasmine			X	
Ilex opaca	American holly	X			
Licania michauxii	Gopher apple				X
Opuntia humifusa	Pricklypear cactus				X
Pinus clausa	Sand Pine	X			
Pinus elliottii	Slash pine	X			
Pinus palustris	Longleaf pine	X			
Prunus caroliniana	Cherry laurel	X			
Prunus serotina	Black cherry	X			
Quercus geminata	Sand live oak	X			
Quercus hemisphearica	Diamond oak	X			
Quercus incana	Blue jack oak	X			
Quercus laevis	Turkey oak	X			
Quercus virginiana	Live oak	X			
Scleria sp.	Scleria				X
Smilax sp.	Catbriar			X	
Trichostema setaceum	Blue curls				X
Vaccinium arboreum	Farkleberry		X		
Vaccinium corymbosum	High bush blueberry		X		
Vaccinium myrsinites	Shiny blue berry		X		
Vitus rotundifolia	Muscadine			X	
Yucca filamentosa	Adam's needle				X

Pedestrian Transect: Upland Sand Hill with oak eradication

Qualitative Field Assessment Form

Date: 10/16/2006 **Time:** 1:11 pm **Data Collector:** David Clayton

Location: Pedestrian Transect # M13 near photo point 7, Management Unit 10

Nuisance Species: None

Fuel Load: Oak Trees have been thinned, area due to be burned winter 2007/2008, fuel load high

Wildlife Observations: **Blue jay, gopher tortoise burrow , 6 pt buck**

T& E Species: None observed

Community Description: Sandhill upland upslope of black pond. Sandhill with good diversity and excellent groundcover. Wire grass bloomed this summer…area planted with long leaf pine.

Scientific Name	Common Name	Tree	Shrub	Vine	Herb
Agalinis setacea	Threadleaf false foxgloves				X
Andropogon glomeratus	Busy blue stem				X
Andropogon gyrans	Elliot's blue stem				X
Aristida stricta var. beyrichiana	Wiregrass				X
Aster wateri	Walter's aster				X
Baptisia lanceolata	Gopher weed				X
Baulduina angustifolia	Coastal plain honeycombhead				X
Bulbostylis ciliatifolia	Capillary hair sedge				X
Carphephorus odoratissimus	Vanilla leaf				X
Carphephorus paniculatus	Hairy trilisa				X
Croton argyranthemus	Silver croton				X
Chrysoma pauciflosculosa	Woody Goldenrod				X
Cnidoscolus stimulosus	Tread softly				X
Crysopsis scabrella	Goldenaster				X
Dalea pinatta	Summer farewell				X
Dicanthelium spp.	Panic grass				X
Eriogonum tomentosum	Wild Buckwheat				X
Eupatorium capillifolium	Dog fennel				X
Eupatorium mohrii	Eupatorium				X
Galactia volubilis	Milkpea				X
Gaylussacia dumosa	Dwarf huckleberry		X		
Gelsemium sempervirens	Florida Jasmine			X	
Haplopappus divaricatus	Scratch daisy				X
Hieracium gronovii	Hawkweed				X
Hypericum crux-andreae	St. Peter's wort				X
Ilex opaca	American holly	X			
Ilex vomitoria	Yaupon		X		
Liatris gracilis	Slender gayfeather				X
Liatris pauciflora	Few flowered gayfeather				X
Licania michauxii	Gopher apple				X
Lupinus diffusus	Sky-blue lupine				X
Opuntia humifusa	Pricklypear cactus				X
Panicum dichotimiflorum	Fall panic grass				X
Polygonella gracilis	Wire weed				X
Pinus clausa	Sand Pine	X			
Pinus elliottii	Slash pine	X			
Pinus palustris	Longleaf pine	X			
Pityopsis graminifolia	Golden Aster				X

Scientific Name	**Common Name**	**Tree**	**Shrub**	**Vine**	**Herb**
Polygonella gracilis	Wireweed				X
Pteridium aquilinum	Bracken fern				X
Quercus geminata	Sand Live Oak	X			
Quercus hemisphearica	Diamond oak	X			
Quercus incana	Blue jack oak	X			
Quercus laevis	Turkey oak	X			
Quercus margaretta	Sand post oak	X			
Rhexia mariana	Pale meadow beauty				X
Seymeria cassioides	Senna seymaria				X
Serenoa repens	Saw Palmetto		X		
Smilax sp	Catbriar			X	
Stylisma patens	Coastal plain dawnflower				X
Vaccinium arboreum	Sparkle berry		X		
Vaccinium corymbosum	High bush blueberry		X		
Vaccinium myrsinites	Shiny blue berry		X		
Yucca filamentosa	Adam’s needle				X

Pedestrian Transect: Upland Sand Hill with oak eradication: Note: Wiregrass and felled oaks