

Year 2006 Annual Monitoring Report

Devils Swamp Mitigation Bank

Bay & Walton Counties, Florida

Prepared for:

Devils Swamp Mitigation Bank,
St. Joe Company

Submitted to:

The Florida Department of Environmental Protection
Mitigation Bank Instrument Number 0227473-001

U.S. Army Corps of Engineers
Mitigation Bank Instrument Number SAJ-2004-1865

U.S. Fish and Wildlife Service

St. Joe Company

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YEAR 2006 ANNUAL MONITORING REPORT

Results from the 2006 Monitoring at Devils Swamp Mitigation Bank

DEVILS SWAMP MITIGATION BANK
BAY COUNTY, FLORIDA
ACOE Permit No.: SAJ-2004-1865
FDEP Permit No.: 0227473-001

Applicant: Devils Swamp
Mitigation Bank
St. Joe Company
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Summary

Management of the Devils Swamp Mitigation Bank (DSMB) continued in 2006. Restoration activities, annual monitoring, evaluation of data, and report writing were carried out as per the DSMB instrument. The purpose for these actions was the continued restoration of the landscape and the assessment of biological responses to restoration activities. Results were compiled and evaluated with respect to measuring landscape changes and assessing progress toward performance criteria. Two comprehensive tables (Tables 3A and 3B) restate the interim and final performance criteria for each phase, report the corresponding results, and assess the status and trend in each case. Tables 1 and 2 (in the document below) report the schedule of current and future activities and proposed credit releases, respectively. Restoration activities have progressed successfully with positive results, and all performance standards are trending toward success.

I. PROJECT OVERVIEW

Devils Swamp Mitigation Bank began management in 2004 and is comprised of 3,049 acres. Ditches, roads, and silvicultural activities have altered the hydrology and generally affected the ecology of the site. Historic 1949 aerials suggest a landscape dominated by wet savanna, seepage slopes, cypress swamps, longleaf pine flatwoods, long-leaf pine – xeric oaks or sandhills, mesic pine flatwoods, and hydric pine flatwoods. Management of the site has been divided into three areas (Phase 1, Phase 2, and Phase 3) to facilitate restoration activities and credit releases. For specific discussions of site history, landscape characteristics, goals and objectives, and materials and methods see First Annual Monitoring Report – Baseline (2004).

Baseline monitoring was completed for all phases in 2004. With respect to restoration activities, Phases 1 and 2 are currently in active management and proceeding successfully; activities in Phase 3 are pending (see Schedule of Tasks, Table I). Prescribed burns have been conducted and mechanical treatments have been initiated in both phases (see Restoration and Maintenance Activities, below). Annual monitoring has been conducted in Phases 1 and 2 to evaluate the effects of restoration activities with respect to performance criteria.

Purpose

The following is an Annual Report of restoration and monitoring results for Devils Swamp Mitigation Bank, 2006. The report provides restoration and monitoring results and an analysis of these results with respect to the performance standards (as per the Devils Swamp Mitigation Bank / MBI / Mitigation Plan Documentation, 2005). Semiannual progress reports for 2006 are also included (Attachment E).

Location, Perimeter, Directions

The Devils Swamp Mitigation Bank site is in the St. Andrew's Bay Watershed, north of the Intercoastal Waterway, Bay County, FL. The site can be accessed by following Hwy 79 north to Steelefield Road, then east on Steelefield Road approximately 6 miles. Devils Swamp Mitigation Bank is adjacent to and crosses Steelefield Road.

Restoration and Maintenance Activities

Restoration and maintenance activities have progressed successfully in 2006. (see Table 1 for a complete list of activities and their status; see also the semiannual reports in Appendix E). Through a combination of mechanical treatments (e.g. roller chopping, chipping, timber activities and walk down) and prescribed burns, canopy was reduced in the areas treated. Exotic plant species [e.g. torpedo grass (*Panicum repens*)] were also reduced by treatments with herbicide.

- *Phases 1 and 2*

Burning, logging, and brush reduction activities were completed for Phase 2, and are near completion for Phase 1. In addition, "walk down" of ecotones was completed in Phase 2 to help remove dense stands of titi (primarily *Cliftonia*), and wood chipping is currently being utilized to reduce canopy density in Phase 1. A low water crossing was also constructed in Phase 2. Torpedo grass (*Panicum repens*) was the only exotic species observed in Phase 2 and was eradicated. For maps illustrating specific treatment areas see Figure 3. Further timber harvesting and prescribed burning are scheduled for 2007 (Table 1, below).

- *Phase 3*

Initiation of activities in Phase 3 have been delayed by management and scheduling decisions with regard to unforeseeable and uncontrollable weather patterns. As a result, the schedule of activities for Phase 3 has been reassessed. To make the most efficient use of limited personnel and equipment resources, the initiation schedule for Phase 3 has been moved to 2008.

- *Adjustment to Methods*

We have implemented a change in methods used to estimate tree densities (First Annual Monitoring Report – Baseline, 2004, p. 12). The 10 x 10m Plot Method used for nonrandomly spaced trees (e.g. planted pine) has been replaced with a Tenth Acre Plot Method to achieve more realistic estimations when trees are at low densities (e.g. as a result of mechanical reductions).

Table I. Schedule of Tasks, DSMB

| Phase | Task | Years | | | | | | | |
|-------|---|----------|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| 1 | Financial Assurance & Conservation Easement | | x | | | | | | |
| 1 | Selective Logging\ Vegetation Removal | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 1 | Hazard Reduction Burn | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 1 | Photodocument Prescribed Burn | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 1 | Prescribed Burn | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 1 | Hydrologic Improvments | | | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 1 | Exotic Species Identification and Location | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 1 | Exotic removal\control | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 1 | Establish Monitoring Stations | Sept-Dec | | | | | | | |
| 1 | Bi-Monthly Permit Compliance Inspections | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 1 | Annual Monitoring | Sept-Dec | Sept-Dec | Sept-Dec | Sept-Dec | Sept-Dec | Sept-Dec | Sept-Dec | Sept-Dec |
| 1 | Biannual Progress Report | | Jan, July | Jan, July | Jan, July | Jan, July | Jan, July | Jan, July | Jan, July |
| 1 | Annual Report | | Jan | Jan | Jan | Jan | Jan | Jan | Jan |
| 1 | Hydrologic Monitoring | | Baseline Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 2 | Financial Assurance & Conservation Easement | | x | | | | | | |
| 2 | Selective Logging\ Vegetation Removal | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 2 | Hazard Reduction Burn | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 2 | Photodocument Prescribed Burn | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 2 | Prescribed Burn | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 2 | Hydrologic Improvments | | | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 2 | Exotic Species Identification and Location | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 2 | Exotic removal\control | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 2 | Establish Monitoring Stations | Sept-Dec | | | | | | | |
| 2 | Bi-Monthly Permit Compliance Inspections | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| | Annual Monitoring | | Sept-Dec | Sept-Dec | Sept-Dec | Sept-Dec | Sept-Dec | Sept-Dec | Sept-Dec |
| 2 | Biannual Progress Report | | Jan, July | Jan, July | Jan, July | Jan, July | Jan, July | Jan, July | Jan, July |
| 2 | Annual Report | | Jan | Jan | Jan | Jan | Jan | Jan | Jan |
| 2 | Hydrologic Monitoring | Baseline | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 3 | Financial Assurance & Conservation Easement | | | | x | | | | |
| 3 | Selective Logging\ Vegetation Removal | | | | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 3 | Hazard Reduction Burn | | | | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 3 | Photodocument Prescribed Burn | | | | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 3 | Prescribed Burn | | | | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 3 | Hydrologic Improvments | | | | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 3 | Exotic Species Identification and Location | | | | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 3 | Exotic removal\control | | | | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| 3 | Establish Monitoring Stations | Sept-Dec | | | | | | | |
| 3 | Bi-Monthly Permit Compliance Inspections | | | | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |
| | Annual Monitoring | | | | | Sept-Dec | Sept-Dec | Sept-Dec | Sept-Dec |
| 3 | Biannual Progress Report | | | | | Jan, July | Jan, July | Jan, July | Jan, July |
| 3 | Annual Report | | | | | Jan | Jan | Jan | Jan |
| 3 | Hydrologic Monitoring | Baseline | Jan-Dec | Jan-Dec | | Jan-Dec | Jan-Dec | Jan-Dec | Jan-Dec |

II. REQUIREMENTS / RESULTS

Performance standards as per the MBI (see Devils Swamp Mitigation Bank MBI, MBI Permit, p. 8) are summarized below and detailed in two tables (see below). Within the tables, the results for each annual monitoring event (by Phase) to date are reported next to the appropriate performance standard, and an evaluation of the status and/or current trend of the plant community with respect to each performance standard is reported. Status and trends are further evaluated by Phase below. A proposed credit release schedule based on the completed tasks is also shown below (Table 2).

Table 2. DSMB Proposed Credit Release Schedule

| Release Activity | Permit Section | % Credits Released | Credits Phase 1 | Credits Phase 2 | Credits Phase 3 |
|--|----------------|--------------------|-----------------|-----------------|-----------------|
| Record Conservation Easement, Financial Assurances | III-D, III-E | 10% | 20.6 | 25.7 | 6.4 |
| Logging, Selective Clearing, Brush Reduction, Exotic Control | III-F | 20% | 41.2 | 51.3 | 12.8 |
| Prescribe Burn | III-G | 15% | 30.9 | 38.5 | 9.6 |
| Hydrologic Improvements | III-H | 5% | 10.3 | 12.8 | 3.2 |
| Performance Standards, Year 1 attained | IV-E(3) | 10% | 20.6 | 25.7 | 6.4 |
| Performance Standards, Year 2 attained | IV-E(3) | 10% | 20.6 | 25.7 | 6.4 |
| Performance Standards, Year 3 attained | IV-E(3) | 10% | 20.6 | 25.7 | 6.4 |
| Performance Standards, Year 4 attained | IV-E(3) | 10% | 20.6 | 25.7 | 6.4 |
| Performance Standards, Final attained | IV-E(2) | 10% | 20.6 | 25.7 | 6.4 |
| Total | | 100% | 206.0 | 256.8 | 64.0 |
| Pending release | | | | | |
| Potential credit release for tasks completed in 2006* | | | | | |

* A request for credit release has not been submitted. It is anticipated that a request for credit release, as per IV. Operation of the Bank, Section F.1. Credit Release Schedule, will be submitted some time in 2007.

Community Requirements / Performance Standards

• Phase 1 (Table 3A)

Quantitative Results

In Phase 1, all performance standards are trending toward success, and final performance standards were completed in many categories. Final standards for reducing nuisance or exotic species are completed in all four plant communities. Plants are reproducing normally in all communities. In all cases tree canopy has either met final standards or is close to meeting final standards. Only groundcover and relative graminoid cover appear to be low or decreasing in their respective plant communities; however, this reflects the timing of restoration activities and is not a true trend. Management challenges resulted in late season prescribed burns, which allowed little time for growth of groundcover and graminoid species prior to monitoring. Consequently, the positive effects of these prescribed burns will not be measurable or show a true trend until the 2007 growing season. Considerable increases and positive trends can be expected at that time as a result of treatments.

In all, the performance standards for increasing species richness, reduction of woody species to coppice sprouts, increasing groundcover coverage, increasing basal area of remaining canopy species, and normal reproduction of groundcover species are trending toward success in all plant communities.

Qualitative Results

In phase 1 qualitative transects 1, 2, 3 (in part), 8, 9, 10, 11, and 12 bisect a large portion of the treated and managed landscape. These transects include all the plant communities recorded within DSMB: Treeless Hydric Savanna, Hydric Pine Flatwoods, Mixed Forested Wetland, Cypress Swamp, and Upland Pine. A large portion of this landscape has been received prescribed burns, mechanically thinning, and in some places roller chopping. Woody shrubs have been reduced to coppice sprouts and appropriate native groundcover species are responding appropriately to the mechanical treatments and prescribed burns. The graminoids such as wiregrass and sedges are reproducing normally. Although there are logs on the ground in some of the knockdown areas, these are expected to quickly rot as many were partially burned during the prescribed fire. The canopy has been thinned and is trending toward appropriate density.

TABLE 3A. PHASE 1. Final and Interim Performance Standards are summarized and results are given. Status and Trend with respect to each performance standard are evaluated.

| COLOR KEY |
|---------------------------|
| Final standard complete |
| Interim standard complete |
| Standard not complete |

| MIXED FORESTED WETLAND | | | | |
|--|--|--|--|--|
| Final Performance Standard | Interim Performance Standard Year 2 | Results - Year 1 (Baseline) | Results - Year 2 | Success / Trend |
| Groundcover shall be 75% or greater (except in open water areas) when canopy cover is less than 30% due to immature trees | NONE | Coverage = 9% | Coverage = 13% | Standard not complete |
| The desirable canopy trees cover is increasing. Success is achieved with at least 30% canopy cover, excluding shrubs and titi | NONE | 25% coverage by woody species | 25% coverage by woody species | Standard not complete |
| Plants reproducing naturally by normal vegetative spread or seedling establishment | NONE | Normal reproduction observed | Normal reproduction observed | Final standard complete |
| Nuisance and exotic species limited to 5% or less coverage/ac; exotic spp. limited to 1% or less coverage/ac | NONE | No nuisance species recorded, 0% exotic species recorded | No nuisance species recorded, 0% exotic species recorded | Final standard complete |
| CYPRESS SWAMP | | | | |
| Final Performance Standard | Interim Performance Standard Year 2 | Results - Year 1 (Baseline) | Results - Year 2 | Success / Trend |
| Groundcover shall be 75% or greater (except in open water areas) when canopy cover is less than 30% due to immature trees | NONE | Coverage = 5% | Coverage = 22% | Standard not complete |
| The desirable canopy trees cover is increasing. Success is achieved with at least 30% canopy cover, excluding shrubs and titi | NONE | 21% relative coverage by desirable woody species | 21% relative coverage by woody species | Standard not complete |
| Plants reproducing naturally by normal vegetative spread or seedling establishment | NONE | Normal reproduction observed | Normal reproduction observed | Final standard complete |
| Nuisance and exotic species limited to 5% or less coverage/ac; exotic spp. limited to 1% or less coverage/acre | NONE | No nuisance species recorded, 0% exotic species recorded | No nuisance species recorded, 0% exotic species recorded | Final standard complete |
| HYDRIC PINE FLATWOODS | | | | |
| Final Performance Standard | Interim Performance Standard Year 2 | Results - Year 1 (Baseline) | Results - Year 2 | Success / Trend |
| 75 desirable (native) species per transect | 25 desirable species / 40% cover non-nuisance vegetation | Average species/transect = 21 40% cover non-nuisance vegetation | Average species/transect = 23 40% cover non-nuisance vegetation | Interim standard complete (in part) / average number of species increasing |
| Woody shrubs shall be no taller than coppice sprouts. | NONE | Average height of shrubs = 1.5 m | Average height of shrubs = 1.5 m | Standard not complete |
| Average cover of graminoids shall be 75% or greater with no one quadrat having less than 50% cover; each quadrat will have at least 85% coverage with graminoid species (or clear trend of increasing graminoid coverage). | 20% of non-nuisance vegetation is graminoid | Relative coverage of graminoids = 6% | Relative coverage of graminoids = 5.5% | Standard not complete / relative coverage increasing |
| Plants reproducing naturally by normal vegetative spread or seedling establishment | NONE | Groundcover suppression observed | Groundcover suppression observed | Standard not complete |
| Nuisance and exotic species limited to 5% or less coverage/ac; exotic spp. limited to 1% or less coverage/ac | NONE | No nuisance species recorded, 0% exotic species recorded | No nuisance species recorded, 0% exotic species recorded | Final standard complete |
| Desirable canopy trees trending toward a basal area of 40-70 sq.ft./ac and 60-112 | NONE | Over 800 trees/acre on average | Over 539 trees/acre on average | Standard not complete |
| SAVANNAS | | | | |
| Final Performance Standard | Interim Performance Standard Year 2 | Results - Year 1 (Baseline) | Results - Year 2 | Success / Trend |
| 75 desirable (native) species per transect | 25 desirable species / 40% cover non-nuisance vegetation | Average species/transect = 26 63% cover non-nuisance vegetation | Average species/transect = 34 36% cover non-nuisance vegetation | Interim standard complete (in part) / average number of species increasing |
| Woody shrubs shall be no taller than coppice sprouts. | NONE | Average height of shrubs = 1.5 m | Average height of shrubs = 0.25 m | Final standard complete |
| Average cover of graminoids shall be 75% or greater with no one quadrat having less than 50% cover; each quadrat will have at least 85% coverage with graminoid species (or clear trend of increasing graminoid coverage). | 20% of non-nuisance vegetation is graminoid | Relative coverage of graminoids = 31% | Relative coverage of graminoids = 21% | Interim standard complete / relative coverage increasing |
| Plants reproducing naturally by normal vegetative spread or seedling establishment | NONE | Groundcover suppression observed | Normal reproduction observed | Final standard complete |
| Nuisance and exotic species limited to 5% or less coverage/ac; exotic spp. limited to 1% or less coverage/ac | NONE | No nuisance species recorded, 0% exotic species recorded | No nuisance species recorded, 0% exotic species recorded | Final standard complete |
| Desirable canopy trees trending toward a basal area of 40 sq.ft./ac and less than 28 | NONE | Over 800 trees/acre on average | Canopy = 20 trees/acre | Final standard complete |
| UPLAND PINES | | | | |
| Final Performance Standard | Interim Performance Standard Year 2 | Results - Year 1 (Baseline) | Results - Year 2 | Success / Trend |
| 25 desirable (native) species per transect | 10 desirable species / 30% cover non-nuisance vegetation | Average species/transect = 47 39% cover non-nuisance vegetation | Average species/transect = 27 19% cover non-nuisance vegetation | Final standard complete / coverage increasing |
| Average cover of graminoids shall be at least 30%, with no one quadrat having less than 20% cover; each quadrat will have at least 50% coverage with graminoid species (or clear trend of increasing graminoid coverage). | 20% of non-nuisance vegetation is graminoid | Relative coverage of graminoids = 9% | Relative coverage of graminoids = 3.4% | Standard not complete |
| Plants reproducing naturally by normal vegetative spread or seedling establishment | NONE | Groundcover suppression observed | Normal reproduction observed | Final standard complete |
| Nuisance and exotic species limited to 5% or less coverage/ac; exotic spp. limited to 1% or less coverage/ac | NONE | No nuisance species recorded, 0% exotic species recorded | No nuisance species recorded, 0% exotic species recorded | Final standard complete |
| Desirable canopy trees trending toward a basal area of 40-70 sq.ft./ac and approx. 60-112 trees/ac | | Over 800 trees/acre on average | Canopy = 60 trees/acre | Final standard complete |

• Phase 2 (Table 3B)*Quantitative Results*

Final and/or interim performance standards are complete in all categories, except groundcover in Mixed Forested Wetland, desirable species in Hydric Pine Flatwoods and Savannas, and graminoids in Hydric Pine Flatwoods Upland Pines. However, the increasing trend is strong for the groundcover. The other categories are close to meeting interim standards and have been affected by late season burns as in Phase 1. These statistics can be expected to increase substantially in the coming growing season after plants have had time to respond to restoration treatments.

As in Phase 1, the overall trend in Phase 2 is very good. The performance standards for increasing species richness, reduction of woody species to coppice sprouts, increasing groundcover coverage, increasing basal area of remaining canopy species, and normal reproduction of groundcover species are trending toward success in all plant communities.

Qualitative Results

In phase 2 qualitative transects 4, 5, 6, 7 and a portion of 3 bisect a large portion of the treated and managed landscape. These transects include all the plant communities recorded within DSMB: Treeless Hydric Savanna, Hydric Pine Flatwoods, Mixed Forested Wetland, Cypress Swamp, and Upland Pine. This landscape has received prescribed burns, mechanically thinning and in some places roller chopping, enough throughout to qualify for all credit releases associated with these activities (see Table 2, above). Woody shrubs have been reduced to coppice sprouts and appropriate native groundcover species have been disturbed by the mechanical treatments and prescribed burns. The graminoids such as wiregrass and sedges are reproducing normally. Although there are logs on the ground in some of the knockdown areas these are expected to quickly rot as many were partially burned during the prescribed fire. The canopy has been thinned and is trending toward appropriate density.

COLOR KEY

TABLE 3B. PHASE 2. Final and Interim Performance Standards are summarized and results are given. Status and Trend with respect to each performance standard are evaluated.

| |
|---------------------------|
| Final standard complete |
| Interim standard complete |
| Standard not complete |

| MIXED FORESTED WETLAND | | | | |
|--|--|--|---|--|
| Final Performance Standard | Interim Performance Standard Year 1 | Results - Baseline | Results - Year 1 | Success / Trend |
| Groundcover shall be 75% or greater (except in open water areas) when canopy cover is less than 30% due to immature trees | NONE | Coverage = 18% | Coverage = 68% | Standard not complete / coverage increasing |
| The desirable canopy trees cover is increasing. Success is achieved with at least 30% canopy cover, excluding shrubs and titi | NONE | 37% relative coverage by desirable canopy species | 37% relative coverage by desirable canopy species | Final standard complete |
| Plants reproducing naturally by normal vegetative spread or seedling establishment. | NONE | Normal reproduction observed | Normal reproduction observed | Final standard complete |
| Nuisance and exotic species limited to 5% or less coverage/ac; exotic spp. limited to 1% or less coverage/ac | NONE | No nuisance species recorded, 0% exotic species recorded | No nuisance species recorded, 0% exotic species recorded | Final standard complete |
| HYDRIC PINE FLATWOODS | | | | |
| Final Performance Standard | Interim Performance Standard Year 1 | Results - Baseline | Results - Year 1 | Success / Trend |
| 75 desirable (native) species per transect | 25 desirable species / 40% cover non-nuisance vegetation | Average species/transect = 11 35% cover non-nuisance vegetation | Average species/transect = 17 20% cover non-nuisance vegetation | Standard not complete / average number of species increasing |
| Woody shrubs shall be no taller than coppice sprouts. | NONE | Average height of shrubs = 1.05 m | Average height of shrubs = 0.25 m as coppice | Final standard complete |
| Average cover of graminoids shall be 75% or greater with no one quadrat having less than 50% cover; each quadrat will have at least 85% coverage with graminoid species (or clear trend of increasing graminoid coverage). | 20% of non-nuisance vegetation is graminoid | Relative coverage of graminoids = 11% | Relative coverage of graminoids = 16% | Standard not complete / relative coverage increasing |
| Plants reproducing naturally by normal vegetative spread or seedling establishment. | NONE | Groundcover suppression observed | Normal reproduction observed | Final standard complete |
| Nuisance and exotic species limited to 5% or less coverage/ac; exotic spp. limited to 1% or less coverage/ac | NONE | No nuisance species recorded, 0% exotic species recorded | No nuisance species recorded, 0% exotic species recorded | Final standard complete |
| Desirable canopy trees trending toward a basal area of 40-70 sq.ft./ac and 60-112 | NONE | Over 800 trees/acre on average | 60 trees/acre on average | Final standard complete |
| SAVANNAS | | | | |
| Final Performance Standard | Interim Performance Standard Year 1 | Results - Baseline | Results - Year 1 | Success / Trend |
| 75 desirable (native) species per transect | 25 desirable species / 40% cover non-nuisance vegetation | Average species/transect = 14 63% cover non-nuisance vegetation | Average species/transect = 8.5 36% cover non-nuisance vegetation | Standard not complete / coverage increasing |
| Woody shrubs shall be no taller than coppice sprouts. | NONE | Average height of shrubs = 1.05 m | Average height of shrubs = 0.1 m as coppice | Final standard complete |
| Average cover of graminoids shall be 75% or greater with no one quadrat having less than 50% cover; each quadrat will have at least 85% coverage with graminoid species (or clear trend of increasing graminoid coverage). | 20% of non-nuisance vegetation is graminoid | Relative coverage of graminoids = 13% | Relative coverage of graminoids = 62.5% | Interim standard complete / relative coverage increasing |
| Plants reproducing naturally by normal vegetative spread or seedling establishment. | NONE | Groundcover suppression observed | Normal reproduction observed | Final standard complete |
| Nuisance and exotic species limited to 5% or less coverage/ac; exotic spp. limited to 1% or less coverage/ac | NONE | No nuisance species recorded, 0% exotic species recorded | No nuisance species recorded, 0% exotic species recorded | Final standard complete |
| Desirable canopy trees trending toward a basal area of 40 sq.ft./ac and less than 28 | NONE | Over 800 trees/acre on average | Canopy = less than 28 trees/acre | Final standard complete |
| UPLAND PINES | | | | |
| Final Performance Standard | Interim Performance Standard Year 1 | Results - Baseline | Results - Year 1 | Success / Trend |
| 25 desirable (native) species per transect | 10 desirable species / 30% cover non-nuisance vegetation | Average species/transect = 20 45% cover non-nuisance vegetation | Average species/transect = 25 8.5% cover non-nuisance vegetation | Final standard complete / coverage increasing |
| Average cover of graminoids shall be at least 30%, with no one quadrat having less than 20% cover; each quadrat will have at least 50% coverage with graminoid species (or clear trend of increasing graminoid coverage). | 20% of non-nuisance vegetation is graminoid | Relative coverage of graminoids = 5.5% | Relative coverage of graminoids = 2% | Standard not complete |
| Plants reproducing naturally by normal vegetative spread or seedling establishment. | NONE | Groundcover suppression observed | Normal reproduction observed | Final standard complete |
| Nuisance and exotic species limited to 5% or less coverage/ac; exotic spp. limited to 1% or less coverage/ac | NONE | No nuisance species recorded, 0% exotic species recorded | No nuisance species recorded, 0% exotic species recorded | Final standard complete |
| Desirable canopy trees trending toward a basal area of 40-70 sq.ft./ac and approx. 60-112 trees/ac | NONE | Over 800 trees/acre on average | Canopy = 47 trees/acre | Final standard complete |

Compliance (Hydrological Improvements)

Hydrologic monitoring at DSMB will continue through January 2008. Data collected during the 2006 reporting period includes on-site precipitation, temporal change in surface water elevation at five (5) surface water monitoring locations, and temporal change in groundwater elevation at five (5) groundwater monitoring locations. Examples of hydrologic data are shown in Exhibits 1 and 2. Continued measurement of these parameters will occur during the 2007 monitoring period.

A primary goal of the DSMB hydrologic monitoring effort is to collect a dataset sufficient to allow recommendations regarding the need for hydrologic improvements/modifications at the bank. During the 2007 monitoring period, hydrologic modeling of surface water flow with and without proposed hydrologic improvements (culverts, low-water crossings, ditch blocks) will be performed, using the DSMB hydrologic dataset to calibrate model input.

Devil's Swamp SW

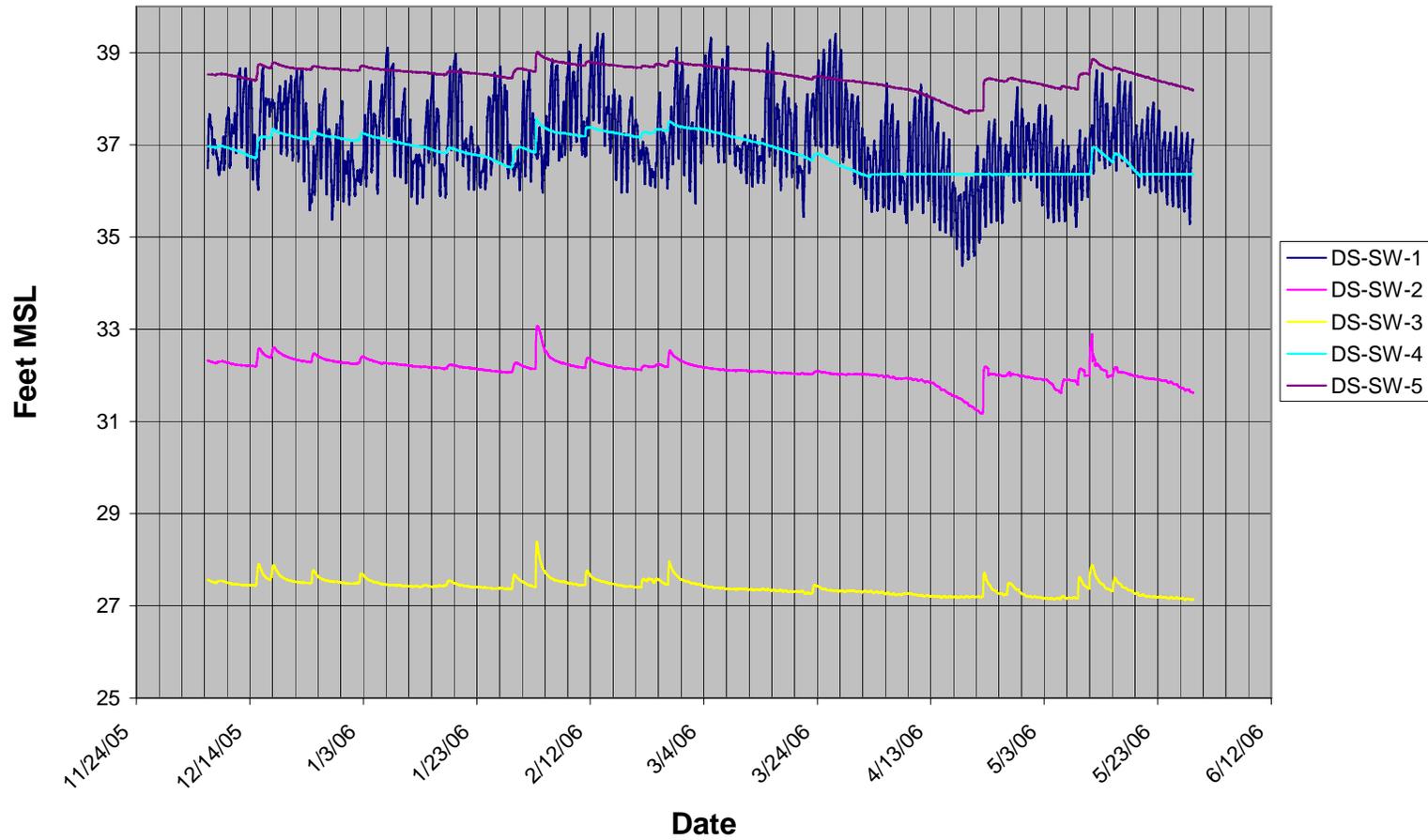


Exhibit 1. Example data from DSMB surface water monitoring locations.

Devil's Swamp GW Elevations

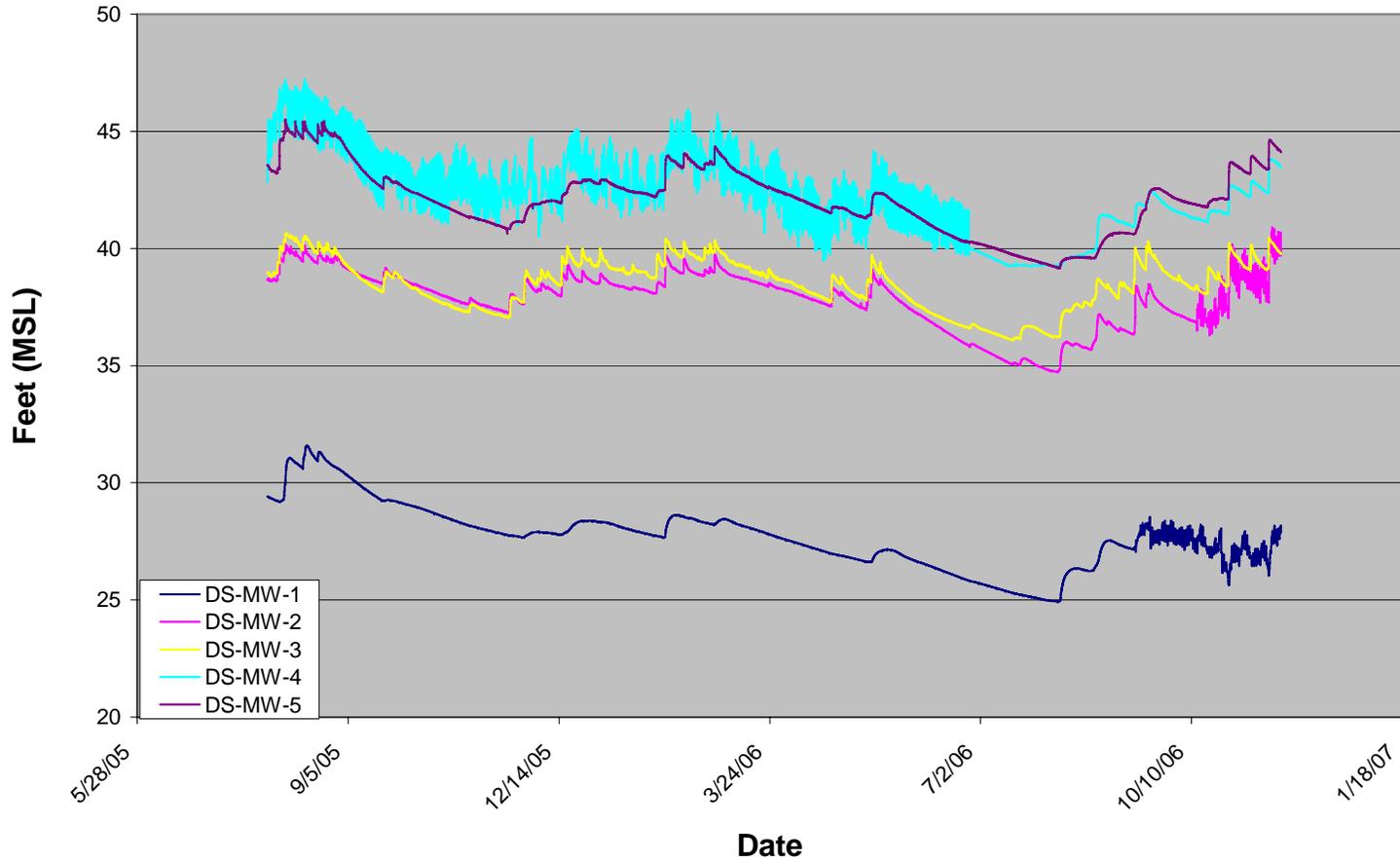


Exhibit 2. Example data from DSMB groundwater monitoring locations.

III. SUMMARY DATA

1. Summary quantitative and qualitative data collected from the field in 2006 are included in Appendices A and B.
2. Photographs of quantitative and qualitative transects are included in Appendices C and D.
3. Semiannual reports are included in Appendix E.

IV. CONCLUSIONS

Two years of active management have produced a dramatically changed landscape in Phases 1 and 2. High density pine plantations with little groundcover and unnaturally dense vegetation resulting from fire suppression have been restored to an open landscape. Groundcover species are reproducing normally, shrubs have been reduced to coppice sprouts, graminoids and forbs are increasing in coverage, and the remaining canopy species are increasing in basal area. Quantitative data calculations illustrate these trends – importance values are *increasing* for appropriate native groundcover species and for relative coverage of herbaceous groundcover species, and importance values are *decreasing* for relative coverage of shrubs. There is also evidence of normal flowering, fruiting, and reproduction of the groundcover species.

Additional timber harvesting and prescribed burning are scheduled for Phases 1 and 2. Additional walkdown of the ecotones in Phases 1 and 2 are also scheduled. The uncertainty of weather patterns combined with regulatory restrictions on the timing of burns caused some restoration treatment delays. A regional drought in 2006 combined with County imposed burn bans caused some restoration treatment delays. Adaptive management will continue to be employed to move toward meeting final performance standards.

Monitoring of system hydrology is progressing positively at DSMB. A significant dataset of temporal behavior of surface water, groundwater, and precipitation has been and is continuing to be collected. Preliminary modeling of proposed hydrologic improvements has begun using this dataset to calibrate and test the hydrologic models. It is anticipated that initial recommendations regarding the need for hydrologic improvements/modifications will become available during the 2007 monitoring period.

In summary, quantitative and qualitative results indicate that current management activities (prescribed fire, canopy reduction/timber activities, exotic species control, and mechanical reduction) have produced a landscape trending toward appropriate native plant community structure. Shrubs have been reduced to coppice sprouts, canopy has been thinned to appropriate density, sunlight and

air circulation have increased, and groundcover grasses and forbs are reproducing normally and increasing in coverage. Continued efforts to reduce shrubs in the groundcover (through mechanical means and prescribed burning) will be the key to continued successful regeneration of appropriate species. Overall, the landscape is trending toward the final performance standards.

Appendix A: Summary of 2006 Quantitative Transect Monitoring Conditions

Devils Swamp transect DS1T1-CS - Cypress Swamp

Relative Percent Cover by vegetative classification:

| | |
|--------------|--------|
| Vines | 6.84% |
| Woody Plants | 93.15% |

Average Percent Cover of Bare Ground and Standing Water:

| | |
|-------------|--------|
| Bare ground | 77.07% |
|-------------|--------|

| | |
|---------------------------|------------|
| Species Richness: | 14 species |
| Average height of Shrubs: | 0.6 meters |
| Trees per acre: | 500 |

Devils Swamp transect DS1T2-HPF - Hydric Pine Flatwoods

Relative Percent Cover by vegetative classification:

| | |
|--------------|--------|
| Forbs | 24.95% |
| Graminoids | 0.68% |
| Vines | 0.07% |
| Woody Plants | 74.3% |

Average Percent Cover of Bare Ground and Standing Water:

| | |
|-------------|--------|
| Bare ground | 65.63% |
|-------------|--------|

| | |
|---------------------------|------------|
| Species Richness: | 21 species |
| Average height of Shrubs: | 0.6 meters |
| Trees per acre: | 280 |

Devils Swamp transect DS1T3-HPF - Hydric Pine Flatwoods

Relative Percent Cover by vegetative classification:

| | |
|--------------|--------|
| Forbs | 6.88% |
| Graminoids | 0.75% |
| Vines | 0.53% |
| Woody Plants | 91.86% |

Average Percent Cover of Bare Ground and Standing Water:

| | |
|-------------|--------|
| Bare ground | 66.43% |
|-------------|--------|

| | |
|---------------------------|------------|
| Species Richness: | 20 species |
| Average height of Shrubs: | 0.6 meters |
| Trees per acre: | 340 |

Devils Swamp transect DS1T4-HPF - Hydric Pine Flatwoods

Relative Percent Cover by vegetative classification:

| | |
|--------------|--------|
| Forbs | 19.31% |
| Graminoids | 15.85% |
| Vines | 0.39% |
| Woody Plants | 64.49% |

Average Percent Cover of Bare Ground and Standing Water:

| | |
|-------------|-------|
| Bare ground | 94.6% |
|-------------|-------|

| | |
|---------------------------|------------|
| Species Richness: | 28 species |
| Average height of Shrubs: | 0.6 meters |
| Trees per acre: | 20 |

Devils Swamp transect DS1T5-THS - Treeless Hydric Savanna

Relative Percent Cover by vegetative classification:

| | |
|--------------|--------|
| Forbs | 34.35% |
| Graminoids | 21.45% |
| Vines | 0.53% |
| Woody Plants | 43.7% |

Average Percent Cover of Bare Ground and Standing Water:

| | |
|-------------|-------|
| Bare ground | 64.2% |
|-------------|-------|

| | |
|---------------------------|------------|
| Species Richness: | 34 species |
| Average height of Shrubs: | 0.6 meters |
| Trees per acre: | 20 |

Devils Swamp transect DS1T6-UP - Upland Pine

Relative Percent Cover by vegetative classification:

| | |
|--------------|--------|
| Forbs | 8.33% |
| Graminoids | 6.21% |
| Vines | 2.46% |
| Woody Plants | 82.98% |

Average Percent Cover of Bare Ground and Standing Water:

| | |
|-------------|-------|
| Bare ground | 81.8% |
|-------------|-------|

| | |
|---------------------------|------------|
| Species Richness: | 27 species |
| Average height of Shrubs: | 0.6 meters |
| Trees per acre: | 50 |

Devils Swamp transect DS1T7-MFW - Mixed Forested Wetland

Relative Percent Cover by vegetative classification:

| | |
|--------------|--------|
| Forbs | 3.95% |
| Vines | 5.44% |
| Woody Plants | 90.62% |

Average Percent Cover of Bare Ground and Standing Water:

| | |
|-------------|--------|
| Bare ground | 87.33% |
|-------------|--------|

| | |
|---------------------------|------------|
| Species Richness: | 16 species |
| Average height of Shrubs: | 1.7 meters |
| Trees per acre: | 500 |

Devils Swamp transect DS1T8-UP - Upland Pine

Relative Percent Cover by vegetative classification:

| | |
|--------------|--------|
| Forbs | 2.52% |
| Graminoids | 0.63% |
| Vines | 5.03% |
| Woody Plants | 91.82% |

Average Percent Cover of Bare Ground and Standing Water:

| | |
|-------------|-------|
| Bare ground | 1.33% |
|-------------|-------|

| | |
|---------------------------|------------|
| Species Richness: | 6 species |
| Average height of Shrubs: | 0.6 meters |
| Trees per acre: | 30 |

Devils Swamp transect DS2T1-UP - Upland Pine

Relative Percent Cover by vegetative classification:

| | |
|--------------|--------|
| Forbs | 17.18% |
| Graminoids | 1.38% |
| Vines | 6.9% |
| Woody Plants | 74.57% |

Average Percent Cover of Bare Ground and Standing Water:

| | |
|-------------|--------|
| Bare ground | 89.67% |
|-------------|--------|

| | |
|---------------------------|--------------|
| Species Richness: | 40 species |
| Average height of Shrubs: | 0.625 meters |
| Trees per acre: | 47 |

Devils Swamp transect DS2T2-MFW - Mixed Forested Wetland

Relative Percent Cover by vegetative classification:

| | |
|--------------|-------|
| Forbs | 3.41% |
| Vines | 9.09% |
| Woody Plants | 87.5% |

Average Percent Cover of Bare Ground and Standing Water:

| | |
|-------------|--------|
| Bare ground | 32.57% |
|-------------|--------|

| | |
|---------------------------|------------|
| Species Richness: | 14 species |
| Average height of Shrubs: | 1.0 meters |
| Trees per acre: | 400 |

Devils Swamp transect DS2T3-HPF - Hydric Pine Flatwoods

Relative Percent Cover by vegetative classification:

| | |
|--------------|--------|
| Forbs | 37.41% |
| Graminoids | 1.64% |
| Vines | 14.33% |
| Woody Plants | 46.61% |

Average Percent Cover of Bare Ground and Standing Water:

| | |
|-------------|--------|
| Bare ground | 80.77% |
|-------------|--------|

| | |
|---------------------------|------------|
| Species Richness: | 17 species |
| Average height of Shrubs: | 0.6 meters |
| Trees per acre: | 28 |

Devils Swamp transect DS2T4-THS - Treeless Hydric Savanna

Relative Percent Cover by vegetative classification:

| | |
|--------------|--------|
| Forbs | 34.29% |
| Graminoids | 48.58% |
| Woody Plants | 17.14% |

Average Percent Cover of Bare Ground and Standing Water:

| | |
|-------------|-------|
| Bare ground | 94.6% |
|-------------|-------|

| | |
|---------------------------|-------------|
| Species Richness: | 6 species |
| Average height of Shrubs: | 0.6 meters |
| Trees per acre: | 0 clear cut |

Devils Swamp transect DS2T5-UP - Upland Pine

Relative Percent Cover by vegetative classification:

| | |
|--------------|--------|
| Forbs | 49.09% |
| Graminoids | 2.73% |
| Vines | 5.46% |
| Woody Plants | 42.73% |

Average Percent Cover of Bare Ground and Standing Water:

| | |
|-------------|-------|
| Bare ground | 94.6% |
|-------------|-------|

| | |
|---------------------------|-------------|
| Species Richness: | 10 species |
| Average height of Shrubs: | 0.6 meters |
| Trees per acre: | 0 clear cut |

Devils Swamp transect DS2T6-THS - Treeless Hydric Savanna

Relative Percent Cover by vegetative classification:

| | |
|--------------|--------|
| Forbs | 16.13% |
| Graminoids | 77.41% |
| Vines | 3.23% |
| Woody Plants | 3.23% |

Average Percent Cover of Bare Ground and Standing Water:

| | |
|-------------|-------|
| Bare ground | 94.6% |
|-------------|-------|

| | |
|---------------------------|-------------|
| Species Richness: | 11 species |
| Average height of Shrubs: | 0.6 meters |
| Trees per acre: | 0 clear cut |

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp

Plant community type: Wet Prairie / Seepage Slope

Transect ID: DSQTI-P1

Date and time (am/pm): 10/25/2006 AM PM

1. Weather: Full Sun Part Sun

Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F

71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant TREE species observed in canopy:

1. 2. 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant SUBCANOPY species observed:

1. 2. 3.

6. SHRUBS % cover:

List 3 dominant SHRUB species observed:

1. 2. 3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common SHRUB and/or TREE seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant GROUNDCOVER species observed:

1. Ilex glabra 2. Pteridium aquilinum
3. Aristida spiciformis 4. Dicanthelium ensifolium

List 3 of the most common GROUNDCOVER seedlings observed:

1. 2. 3.

List the WEEDY or RUDERAL species observed:

1. absent 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

northern cardinal; Orb weaver, yellow jackets

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

recently burned and planted pines removed

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:
 Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Recently burned - most of the woody vegetation has been killed by fire. Continue prescribed fire and reduce canopy as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other: adaptive management

Specific notes on restoration, observations, or adaptive management techniques:

Allow prescribed fire to burn into ecotone of mixed forested wetlands as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp **Plant community type:** Hydric Pine Flatwoods
Transect ID: DSQT2-P1 **Date and time (am/pm):** 10/25/2006 AM PM
1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog
2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F
3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%
4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **TREE** species observed in canopy:

1. Pinus elliotii 2. 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **SUBCANOPY** species observed:

1. 2. 3.

6. SHRUBS % cover: absent

List 3 dominant **SHRUB** species observed:

1. 2. 3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common **SHRUB** and/or **TREE** seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant **GROUNDCOVER** species observed:

1. Ilex glabra 2. Serenoa repens
3. Pteridium aquilinum 4. Quercus minima

List 3 of the most common **GROUNDCOVER** seedlings observed:

1. 2. 3.

List the **WEEDY** or **RUDERAL** species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other: adaptive management remove/tin pines out

Specific notes on restoration, observations, or adaptive management techniques:

Recently burned and thinned, continue prescribed fire and canopy reduction as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Allow prescribed fire to burn through cypress flat as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp **Plant community type:** Cypress Flat
Transect ID: DSQT2-P3 **Date and time (am/pm):** 10/25/2006 AM PM
1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog
2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F
3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%
4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **TREE** species observed in canopy:

1. *Nyssa biflora* 2. *Cliftonia monophylla* 3. *Taxodium ascendens*

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **SUBCANOPY** species observed:

1. *Cliftonia monophylla* 2. *Taxodium ascendens* 3. *Cyrilla racemiflora*

6. SHRUBS % cover: absent

List 3 dominant **SHRUB** species observed:

1. *Cyrilla racemiflora* 2. *Ilex coriacea* 3. *Lyonia lucida*

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common **SHRUB** and/or **TREE** seedlings observed:

1. 2. *Ilex coriacea* 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant **GROUNDCOVER** species observed:

1. *Gaylussacia mosieri* 2. *Sarracenia leucophylla*
 3. *Smilax laurifolia* 4. *Eriocaulon decangulare*

List 3 of the most common **GROUNDCOVER** seedlings observed:

1. 2. 3.

List the **WEEDY** or **RUDERAL** species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:
 Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

All prescribed fire to burn into cypress flat as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:
 Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Recently burned but not thinned. Reduce canopy and continue prescribed burning as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
 Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp **Plant community type:** Mixed Forested Wetland
Transect ID: DSQT3-P2 **Date and time (am/pm):** 10/26/2006 AM PM
1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog
2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F
3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%
4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **TREE** species observed in canopy:

1. Taxodium ascendens 2. 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **SUBCANOPY** species observed:

1. Taxodium ascendens 2. Nyssa biflora 3. Cyrilla racemiflora

6. SHRUBS % cover: 26-50%

List 3 dominant **SHRUB** species observed:

1. Nyssa biflora 2. Lyonia lucida 3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common **SHRUB** and/or **TREE** seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant **GROUNDCOVER** species observed:

1. sphagnum moss 2. Sarracenia leucophylla
 3. 4.

List 3 of the most common **GROUNDCOVER** seedlings observed:

1. 2. 3.

List the **WEEDY** or **RUDERAL** species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/buttressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

- | | | |
|----|----|----|
| 1. | 2. | 3. |
| 4. | 5. | 6. |

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:
 Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Allow prescribed fire to burn into swamp, this plant community is best called a forested wetland.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp **Plant community type:** Hydric Pine Flatwoods

Transect ID: DSQT4-P1 **Date and time (am/pm):** 10/26/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **TREE** species observed in canopy:

1. Pinus elliotii 2. 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **SUBCANOPY** species observed:

1. 2. 3.

6. SHRUBS % cover: 0%

List 3 dominant **SHRUB** species observed:

1. 2. 3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common **SHRUB** and/or **TREE** seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant **GROUNDCOVER** species observed:

1. Pteridium aquilum 2. Quercus minima
3. Serenoa repens 4. Ilex glabra

List 3 of the most common **GROUNDCOVER** seedlings observed:

1. 2. 3.

List the **WEEDY** or **RUDERAL** species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:
 Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Prescribed fire has reduced shrubs and subcanopy to coppice. Continue prescribed fires and reduce canopy as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp

Plant community type: Mixed Forested Wetland

Transect ID: DSQT4-P2

Date and time (am/pm): 10/26/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant TREE species observed in canopy:

1. Pinus elliotii 2. 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant SUBCANOPY species observed:

1. Nyssa biflora - coppiced by fire 2. Cyrilla racemiflora - coppiced by fire 3.

6. SHRUBS % cover: absent

List 3 dominant SHRUB species observed:

1. 2. 3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common SHRUB and/or TREE seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant GROUNDCOVER species observed:

1. 2.
3. 4.

List 3 of the most common GROUNDCOVER seedlings observed:

1. 2. 3.

List the WEEDY or RUDERAL species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:
 Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

This landscape is best referred to as a wet prairie. Allow fire to burn through this landscape as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:
 Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Best referred to as a wet prairie or bog. Allow fire to burn through landscape as per the mitigation plan.

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Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Prescribed fire has reduced to the shrubs to coppice. Groundcover coverage is increasing. Continue prescribed fire and reduce canopy as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

crickets heard

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Best described as wet prairie, allow prescribed fire to burn across landscape as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
 Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp

Plant community type: Mixed Forested Wetland

Transect ID: DSQT5-P3

Date and time (am/pm): 10/24/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **TREE** species observed in canopy:

1. Taxodium ascendens 2. Pinus elliottii 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **SUBCANOPY** species observed:

1. Taxodium ascendens 2. Nyssa sylvatica 3. Cyrilla racemiflora

6. SHRUBS % cover:

List 3 dominant **SHRUB** species observed:

1. 2. 3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common **SHRUB** and/or **TREE** seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant **GROUNDCOVER** species observed:

1. 2.
3. 4.

List 3 of the most common **GROUNDCOVER** seedlings observed:

1. 2. 3.

List the **WEEDY** or **RUDERAL** species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate **Why?:** too dense too sparse
11. Tree health: trees healthy trees stressed **Why?:** too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/buttressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface **Standing water:** present absent
14. Water color: tannic non-tannic/clear cloudy **If cloudy, why?** suspended sediments other:
15. Water column: sphagnum present utricularia present
16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1.

2.

3.

4.

5.

6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

white-eyed vireo, eastern tohoe, yellow throat, turkey vulture
monarch, Gulf fritilarg, crickets heard

18. Exotic species: present absent

If present **must be georeferenced** and include the following information:

| | | | |
|--|------------------|-----------------|------------------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no **and:** species appropriate supplemental planting/seeding needed
Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
If planted: bedded and planted not bedded but managed for pine **~Tree age:** 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
Recommendations for restoration: prescribed burn mechanical treatment **other:**

Specific notes on restoration, observations, or adaptive management techniques:

Allow prescribed fire to burn across landscape and into swamps as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate **Why?:** too dense too sparse
11. Tree health: trees healthy trees stressed **Why?:** too dense too wet
12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles
13. Water table: at the surface below surface **Standing water:** present absent
14. Water color: tannic non-tannic/clear cloudy **If cloudy, why?** suspended sediments other:
15. Water column: sphagnum present utricularia present
16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

white-eyed vireo; black and white warbler

18. Exotic species: present absent

If present **must be georeferenced** and include the following information:

| | | | |
|--|------------------|-----------------|------------------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no **and:** species appropriate supplemental planting/seeding needed
Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
If planted: bedded and planted not bedded but managed for pine **~Tree age:** 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
Recommendations for restoration: prescribed burn mechanical treatment **other:**

Specific notes on restoration, observations, or adaptive management techniques:

Best described as a wet prairie or hydric pine flatwoods. Allow fire to burn through landscape and reduce canopy as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp **Plant community type:** Mixed Forested Wetland

Transect ID: DSQT6-P2 **Date and time (am/pm):** 10/24/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **TREE** species observed in canopy:

1. Pinus elliotii 2. Magnolia virginiana 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **SUBCANOPY** species observed:

1. Cyrilla racemiflora 2. Ilex coriacea 3. Cliftonia monophylla

6. SHRUBS % cover:

List 3 dominant **SHRUB** species observed:

1. 2. 3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common **SHRUB** and/or **TREE** seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant **GROUNDCOVER** species observed:

1. 2. 3. 4.

List 3 of the most common **GROUNDCOVER** seedlings observed:

1. 2. 3.

List the **WEEDY** or **RUDERAL** species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

bluejay

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:
 Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Best described as a wet prairie or hydric pine flatwoods, allow prescribed fire to burn across landscape as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp **Plant community type:** Mixed Forested Wetland

Transect ID: DSQT6-P3 **Date and time (am/pm):** 10/24/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **TREE** species observed in canopy:

1. Cliftonia monophylla 2. Pinus elliottii 3. Magnolia virginiana

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **SUBCANOPY** species observed:

1. Cliftonia monophylla 2. Nyssa biflora 3.

6. SHRUBS % cover: 26-50%

List 3 dominant **SHRUB** species observed:

1. Ilex coriacea 2. Cyrilla racemiflora 3. Lyonia lucida

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common **SHRUB** and/or **TREE** seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant **GROUNDCOVER** species observed:

1. Eriocaulon decangulare 2. sphagnum moss
3. 4.

List 3 of the most common **GROUNDCOVER** seedlings observed:

1. 2. 3.

List the **WEEDY** or **RUDERAL** species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

crickets; dragonflies; red tail fox

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Best described as a wet prairie or hydric pine flatwoods, allow prescribed fire to burn across landscape as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp

Plant community type: Mesic Pine Flatwoods

Transect ID: DSQT7-P1

Date and time (am/pm): 10/24/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant TREE species observed in canopy:

1. Pinus elliotii 2. 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant SUBCANOPY species observed:

1. 2. 3.

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant SHRUB species observed:

1. Ilex glabra - fire coppiced 2. Quercus minima - fire coppiced 3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common SHRUB and/or TREE seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant GROUNDCOVER species observed:

1. Pteridium aquilinum 2.
3. 4.

List 3 of the most common GROUNDCOVER seedlings observed:

1. 2. 3.

List the WEEDY or RUDERAL species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate **Why?:** too dense too sparse
11. Tree health: trees healthy trees stressed **Why?:** too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface **Standing water:** present absent
14. Water color: tannic non-tannic/clear cloudy **If cloudy, why?** suspended sediments other:

15. Water column: sphagnum present utricularia present
16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

- | | | |
|----|----|----|
| 1. | 2. | 3. |
| 4. | 5. | 6. |

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present **must be georeferenced** and include the following information:

| | | | |
|--|------------------|-----------------|------------------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no **and:** species appropriate supplemental planting/seeding needed
Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
If planted: bedded and planted not bedded but managed for pine **~Tree age:** 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
Recommendations for restoration: prescribed burn mechanical treatment **other:**

Specific notes on restoration, observations, or adaptive management techniques:

Recently burned, continue prescribed fires and continue canopy reduction as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp **Plant community type:** Mixed Forested Wetland

Transect ID: DSQT7-P2 **Date and time (am/pm):** 10/24/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **TREE** species observed in canopy:

1. Cliftonia monophylla 2. Pinus elliotii 3. Taxodium ascendens

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **SUBCANOPY** species observed:

1. Nyssa sylvatica 2. Magnolia virginiana 3. Cliftonia monophylla

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant **SHRUB** species observed:

1. Ilex coriacea 2. Lyonia lucida 3. Ilex glabra

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common **SHRUB** and/or **TREE** seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant **GROUNDCOVER** species observed:

1. Sarracenia leucophylla 2. Osmunda cinnamomea
3. sphagnum moss 4.

List 3 of the most common **GROUNDCOVER** seedlings observed:

1. 2. 3.

List the **WEEDY** or **RUDERAL** species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

white-eyed vireo; yellow throat

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other: and thin

Specific notes on restoration, observations, or adaptive management techniques:

Best described as a fire suppressed wet prairie. Allow prescribed fire to burn across the landscape, reduce canopy as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp **Plant community type:** Hydric Pine Flatwoods
Transect ID: DSQT8-P1 **Date and time (am/pm):** 10/25/2006 AM PM
1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog
2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F
3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%
4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **TREE** species observed in canopy:

1. Pinus elliotii 2. 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **SUBCANOPY** species observed:

1. Pinus elliotii 2. Cliftonia monophylla 3.

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant **SHRUB** species observed:

1. Ilex coriacea 2. Cliftonia monophylla 3. Magnolia virginiana

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common **SHRUB** and/or **TREE** seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant **GROUNDCOVER** species observed:

1. Serenoa repens 2.
3. 4.

List 3 of the most common **GROUNDCOVER** seedlings observed:

1. 2. 3.

List the **WEEDY** or **RUDERAL** species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/buttressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
15. Water column: sphagnum present utricularia present

16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife usage observed:

white-eyed vireo; green tree frog

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occurring? yes no and: species appropriate supplemental planting/seeding needed
Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Allow fire to burn across landscape and reduce canopy as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp

Plant community type: Mixed Forested Wetland

Transect ID: DSQT8-P2

Date and time (am/pm): 10/25/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant TREE species observed in canopy:

1. Pinus elliotii 2. Taxodium ascendens 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant SUBCANOPY species observed:

1. Cyrilla racemiflora 2. Ilex mytifolia 3. Nyssa biflora

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant SHRUB species observed:

1. Hypericum fasciculatum 2. Ilex mytifolia 3. Nyssa biflora

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common SHRUB and/or TREE seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant GROUNDCOVER species observed:

1. Sarracenia leucophylla 2. Rhynchospora plumosa
3. sphagnum moss 4. Scleria triglomerata

List 3 of the most common GROUNDCOVER seedlings observed:

1. 2. 3.

List the WEEDY or RUDERAL species observed:

1. 2. 3.

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Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

crickets; frogs; dragonflies

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Allow fire to burn across landscape as per the mitigation plan.

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Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp **Plant community type:** Hydric Pine Flatwoods
Transect ID: DSQT9-P1 **Date and time (am/pm):** 10/24/2006 AM PM
1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog
2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F
3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%
4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **TREE** species observed in canopy:

1. Pinus elliotii 2. 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **SUBCANOPY** species observed:

1. 2. 3.

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant **SHRUB** species observed:

1. Cliftonia monophylla 2. Ilex coriacea 3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common **SHRUB** and/or **TREE** seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant **GROUNDCOVER** species observed:

1. Serenoa repens 2. Cliftonia monophylla
3. Lyonia lucida 4. Ilex glabra

List 3 of the most common **GROUNDCOVER** seedlings observed:

1. 2. 3.

List the **WEEDY** or **RUDERAL** species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

hawk; monarch

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Site has been mechanically treated, continue prescribed fire treatments as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp

Plant community type: Mesic Pine Flatwoods

Transect ID: DSQT9-P2

Date and time (am/pm): 10/25/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant TREE species observed in canopy:

1. Pinus elliotii 2. 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant SUBCANOPY species observed:

1. Pinus elliotii 2. Cliftonia monophylla 3.

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant SHRUB species observed:

1. Ilex coriacea 2. Lyonia lucida 3. Cliftonia monophylla

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common SHRUB and/or TREE seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant GROUNDCOVER species observed:

1. Ilex glabra 2. Lyonia lucida
3. Serenoa repens 4. Cliftonia monophylla

List 3 of the most common GROUNDCOVER seedlings observed:

1. 2. 3.

List the WEEDY or RUDERAL species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
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10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

crickets; deer

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Continue to reduce canopy and prescribed fires as per the mitigation plan.

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Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp

Plant community type: Cypress Flat

Transect ID: DSQT10-P1

Date and time (am/pm): 10/24/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant TREE species observed in canopy:

1. Pinus elliotii 2. Taxodium ascendens 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant SUBCANOPY species observed:

1. Pinus elliotii 2. Cliftonia monophylla 3.

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant SHRUB species observed:

1. Hypericum chapmanii 2. Cliftonia monophylla 3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common SHRUB and/or TREE seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant GROUNDCOVER species observed:

1. Andropogon virginicus 2. Sarracenia leucophylla
3. Hypericum chapmanii 4. Lachnanthes caroliniana

List 3 of the most common GROUNDCOVER seedlings observed:

1. 2. 3.

List the WEEDY or RUDERAL species observed:

1. 2. 3.

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Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate **Why?:** too dense too sparse
11. Tree health: trees healthy trees stressed **Why?:** too dense too wet
12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles
13. Water table: at the surface below surface **Standing water:** present absent
14. Water color: tannic non-tannic/clear cloudy **If cloudy, why?** suspended sediments other:
15. Water column: sphagnum present utricularia present
16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

deer; hawk call, crow; dragonfly, crickets

18. Exotic species: present absent

If present **must be georeferenced** and include the following information:

| | | | |
|--|------------------|-----------------|------------------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no **and:** species appropriate supplemental planting/seeding needed
Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
If planted: bedded and planted not bedded but managed for pine **~Tree age:** 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
Recommendations for restoration: prescribed burn mechanical treatment **other:**

Specific notes on restoration, observations, or adaptive management techniques:

Allow fire to burn across landscape as per the mitigation plan.

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Site Name: Devils Swamp

Plant community type: Mesic Pine Flatwoods

Transect ID: DSQT10-P2

Date and time (am/pm): 10/24/2006 AM PM

1. Weather: Full Sun Part Sun

Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F

71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows)

Managed for Pine Natural Forest

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **TREE** species observed in canopy:

1. Pinus elliotii

2.

3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **SUBCANOPY** species observed:

1. Pinus elliotii

2.

3.

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant **SHRUB** species observed:

1. Ilex glabra

2. Quercus minima

3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common **SHRUB** and/or **TREE** seedlings observed:

1.

2.

3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant **GROUNDCOVER** species observed:

1. Hypericum reductum

2. Serenoa repens

3.

4.

List 3 of the most common **GROUNDCOVER** seedlings observed:

1.

2.

3.

List the **WEEDY** or **RUDERAL** species observed:

1.

2.

3.

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10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet
12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles
13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

deer; monarch

18. Exotic species: present absent

If present must be georeferenced and include the following information:

- | | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

- Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Recently mechanically treated, canopy is now appropriately reduced, continue prescribed fires across landscape as per the mitigation plan.

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10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet
12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles
13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

sparrow

18. Exotic species: present absent

If present must be georeferenced and include the following information:

- | | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

- Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Recently mechanically treated, canopy is now appropriately reduced, continue prescribed fires across landscape as per the mitigation plan.

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Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp

Plant community type: Wet Prairie / Seepage Slope

Transect ID: DSQT11-P2

Date and time (am/pm): 10/25/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant TREE species observed in canopy:

1. 2. 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant SUBCANOPY species observed:

1. Pinus elliotii 2. 3.

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant SHRUB species observed:

1. Cliftonia monophylla 2. Gaylussacia moseri 3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common SHRUB and/or TREE seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant GROUNDCOVER species observed:

1. Aristida stricta 2. Sarracenia leucophylla
3. 4.

List 3 of the most common GROUNDCOVER seedlings observed:

1. 2. 3.

List the WEEDY or RUDERAL species observed:

1. 2. 3.

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10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

crickets

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

This site needs mechanical and /or prescribed fire as per the mitigation plan.

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10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet
12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles
13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

deer; monard, crickets, yellow flies

18. Exotic species: present absent

If present must be georeferenced and include the following information:

- | | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

- Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Continue canopy reduction and prescribed burning as per the mitigation plan. Site has rebounded after prescribed fire. Woody shrubs and subcanopy have been red

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp

Plant community type: Hydric Pine Flatwoods

Transect ID: DSQT12-P2

Date and time (am/pm): 10/25/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant TREE species observed in canopy:

1. Taxodium ascendens 2. Pinus elliottii 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant SUBCANOPY species observed:

1. Pinus elliottii 2. Taxodium ascendens 3.

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant SHRUB species observed:

1. Cliftonia monophylla - reduced to coppice 2. Hypericum chapmanii 3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common SHRUB and/or TREE seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant GROUNDCOVER species observed:

1. Sarracenia leucophylla 2. Eriocaulon spp.
3. Andropogon virginicus 4. Cliftonia monophylla - reduced to coppice

List 3 of the most common GROUNDCOVER seedlings observed:

1. 2. 3.

List the WEEDY or RUDERAL species observed:

1. 2. 3.

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Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet
12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles
13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

turkey vulture

18. Exotic species: present absent

If present must be georeferenced and include the following information:

- | | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

- Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Site has been mechanically treated, woody shrubs have been reduced to coppice, allow prescribed fire to burn across landscape as per the mitigation plan.

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Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:
 Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Recently prescribed burned. Continue prescribed fires, reduce canopy as per the mitigation plan.

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Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp

Plant community type: Mixed Forested Wetland

Transect ID: DSQT13-P2

Date and time (am/pm): 10/25/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant TREE species observed in canopy:

1. Magnolia virginiana 2. Nyssa sylvatica 3. Pinus elliotii

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant SUBCANOPY species observed:

1. Magnolia virginiana 2. Nyssa sylvatica 3. Cliftonia monophylla

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant SHRUB species observed:

1. Cliftonia monophylla 2. Clethra alnifolia 3. Lyonia lucida

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common SHRUB and/or TREE seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant GROUNDCOVER species observed:

1. Sphagnum moss 2.
3. 4.

List 3 of the most common GROUNDCOVER seedlings observed:

1. 2. 3.

List the WEEDY or RUDERAL species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet
12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles
13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

bear; woodpecker

18. Exotic species: present absent

If present must be georeferenced and include the following information:

- | | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

- Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Fire suppressed. Allow prescribed fire to burn across landscape and into wetlands as per the mitigation plan.

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Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp

Plant community type: Mesic Pine Flatwoods

Transect ID: DSQT13-P3

Date and time (am/pm): 10/25/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant TREE species observed in canopy:

1. Pinus elliotii 2. 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant SUBCANOPY species observed:

1. 2. 3.

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant SHRUB species observed:

1. Cliftonia monophylla 2. 3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common SHRUB and/or TREE seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant GROUNDCOVER species observed:

1. Quercus minima 2. Ilex glabra
3. Serenoa repens 4. Pteridium aquilinum

List 3 of the most common GROUNDCOVER seedlings observed:

1. 2. 3.

List the WEEDY or RUDERAL species observed:

1. 2. 3.

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10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet
12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles
13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

deer (doe)

18. Exotic species: present absent

If present must be georeferenced and include the following information:

- | | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

- Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Reduce canopy and continue prescribed burning as per the mitigation plan.

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Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp **Plant community type:** Wet Prairie / Seepage Slope
Transect ID: DSQT14-P1 **Date and time (am/pm):** 10/25/2006 AM PM
1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog
2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F
3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%
4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **TREE** species observed in canopy:

1. 2. 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **SUBCANOPY** species observed:

1. Magnolia virginiana 2. 3.

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant **SHRUB** species observed:

1. Cliftonia monophylla 2. Magnolia virginiana 3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common **SHRUB** and/or **TREE** seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant **GROUNDCOVER** species observed:

1. Aristida stricta 2. Cliftonia monophylla
 3. Sarracenia leucophylla 4. Sarracenia flava

List 3 of the most common **GROUNDCOVER** seedlings observed:

1. 2. 3.

List the **WEEDY** or **RUDERAL** species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

red-shouldered hawk; crickets, flies

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Best described as a wet prairie the site is fire suppressed. Continue prescribed fire and allow to burn across the landscape as per the mitigation plan.

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Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:
 Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Site is fire suppressed, allow prescribed fire to burn across the landscape and into wetlands as per the mitigation plan.

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10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet
12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles
13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

deer; crickets, dragonflies, bumblebees, carpenter ants

18. Exotic species: present absent

If present must be georeferenced and include the following information:

- | | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

- Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Planted in sand pine. Remove sand pine and replant with longleaf pine, use prescribed fire to reduce woody shrubs to coppice as per the mitigation plan.

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Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp

Plant community type: Wet Prairie / Seepage Slope

Transect ID: DSQT15-P1

Date and time (am/pm): 10/26/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant TREE species observed in canopy:

1. Cliftonia monophylla 2. Pinus elliotii 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant SUBCANOPY species observed:

1. Cliftonia monophylla 2. Pinus elliotii 3.

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant SHRUB species observed:

1. Cliftonia monophylla 2. Lyonia lucida 3. Ilex coriacea

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common SHRUB and/or TREE seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant GROUNDCOVER species observed:

1. Serenoa repens 2.
3. 4.

List 3 of the most common GROUNDCOVER seedlings observed:

1. 2. 3.

List the WEEDY or RUDERAL species observed:

1. 2. 3.

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10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:
 Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Fire suppressed wet prairie. Allow prescribed fire to burn across landscape and into wet prairie as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp

Plant community type: Wet Prairie / Seepage Slope

Transect ID: DSQT15-P2

Date and time (am/pm): 10/26/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant TREE species observed in canopy:

1. Nyssa ursina 2. Magnolia virginiana 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant SUBCANOPY species observed:

1. Magnolia virginiana 2. Nyssa ursina 3. Pinus elliotii

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant SHRUB species observed:

1. Cliftonia monophylla 2. Myrica heterophylla 3. Lyonia lucida

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common SHRUB and/or TREE seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant GROUNDCOVER species observed:

1. Aristida stricta 2. Osmunda regalis
3. Sarracenia sp. 4. Lyonia lucida

List 3 of the most common GROUNDCOVER seedlings observed:

1. 2. 3.

List the WEEDY or RUDERAL species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Best described as a bog or wet prairie. Fire suppressed allow prescribed fire to burn across landscape and into bogs and wet prairies as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp

Plant community type: Cypress Flat

Transect ID: DSQT15-P3

Date and time (am/pm): 10/26/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant TREE species observed in canopy:

1. Pinus elliotii 2. Taxodium ascendens 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant SUBCANOPY species observed:

1. Ilex myrtifolia 2. Taxodium ascendens 3. Cliftonia monophylla

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant SHRUB species observed:

1. Cliftonia monophylla 2. Ilex myrtifolia 3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common SHRUB and/or TREE seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant GROUNDCOVER species observed:

1. Rhynchospora inundata 2. Cliftonia monophylla
3. Hypericum chapmanii 4. sphagnum

List 3 of the most common GROUNDCOVER seedlings observed:

1. 2. 3.

List the WEEDY or RUDERAL species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate **Why?:** too dense too sparse
11. Tree health: trees healthy trees stressed **Why?:** too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface **Standing water:** present absent
14. Water color: tannic non-tannic/clear cloudy **If cloudy, why?** suspended sediments other:

15. Water column: sphagnum present utricularia present
16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

- | | | |
|----|----|----|
| 1. | 2. | 3. |
| 4. | 5. | 6. |

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

deer

18. Exotic species: present absent

If present **must be georeferenced** and include the following information:

| | | | |
|--|------------------|-----------------|------------------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no **and:** species appropriate supplemental planting/seeding needed
Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
If planted: bedded and planted not bedded but managed for pine **~Tree age:** 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
Recommendations for restoration: prescribed burn mechanical treatment **other:**

Specific notes on restoration, observations, or adaptive management techniques:

Fire supressed landscape, allow prescribed fire to burn across landscape as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Mechanically remove planted sandpine, replant with longleaf pine, continue prescribed burning and reduced woody shrubs to coppice as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp **Plant community type:** Mixed Forested Wetland
Transect ID: DSQT16-P2 **Date and time (am/pm):** 10/25/2006 AM PM
1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog
2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F
3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest
 Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%
4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **TREE** species observed in canopy:

1. *Nyssa sylvatica* 2. *Magnolia virginica* 3. *Pinus elliotii*

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant **SUBCANOPY** species observed:

1. *Acer rubrum* 2. *Cliftonia monophylla* 3. *Nyssa biflora*

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant **SHRUB** species observed:

1. *Ilex coriacea* 2. *Lyonia lucida* 3. *Cliftonia monophylla*

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common **SHRUB** and/or **TREE** seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant **GROUNDCOVER** species observed:

1. *Lyonia lucida* 2. *Rhododendron* spp.
 3. *Myrica heterophylla* 4. *Smilax* spp.

List 3 of the most common **GROUNDCOVER** seedlings observed:

1. 2. 3.

List the **WEEDY** or **RUDERAL** species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/butressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

crickets; eastern diamondback

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Allow prescribed fire to burn across landscape as per the mitigation plan.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

Site Name: Devils Swamp

Plant community type: Hydric Pine Flatwoods

Transect ID: DSQT16-P3

Date and time (am/pm): 10/25/2006 AM PM

1. Weather: Full Sun Part Sun Cloudy Cloudy and Rain/Fog

2. Temperature: 20-50 F 51-70 F 71-90 F 91-110 F

3. CANOPY % cover: Pine Plantation (Rows) Managed for Pine Natural Forest

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

4. Estimated height class of the majority of TREES using the following scale: absent 3-5m 6-10m >10m

List 3 dominant TREE species observed in canopy:

1. Pinus elliotii 2. 3.

5. Estimated height class of the majority of SUBCANOPY using the following scale: absent 3-5m 6-10m >10m

List 3 dominant SUBCANOPY species observed:

1. Nyssa ursina 2. Pinus elliotii 3. Cliftonia monophylla

6. SHRUBS % cover: Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 3 dominant SHRUB species observed:

1. Cliftonia monophylla 2. Ilex coriacea 3.

7. Estimated height class of the majority of SHRUBS using the following scale: absent 0-.5m .6-1.5m 1.6-3m

List 3 of the most common SHRUB and/or TREE seedlings observed:

1. 2. 3.

8. GROUNDCOVER % cover of graminoids (grasses, sedges and rushes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

9. TOTAL GROUNDCOVER % cover (including graminoids and forbes):

Absent 0-1% 1-5% 6-25% 26-50% 51-75% 76-100%

List 4 dominant GROUNDCOVER species observed:

1. Lyonia lucida 2. Magnolia virginiana
3. Cliftonia monophylla 4. Ilex coriacea

List 3 of the most common GROUNDCOVER seedlings observed:

1. 2. 3.

List the WEEDY or RUDERAL species observed:

1. 2. 3.

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix B: Qualitative Monitoring Data Results

10. Tree density: appropriate inappropriate Why?: too dense too sparse
 11. Tree health: trees healthy trees stressed Why?: too dense too wet

12. Hydrologic indicators: hydric soils sediment deposition algal mat/aufwuchs aquatic bryotphytes aquatic plants
 rafted debris elevated lichen lines aquatic fauna tussocks/hummocks secondary flow channels
 water stained vegetation/ stain lines morphological plant adaptations/adventitious roots/buttressed trunks/hypertrophied lenticles

13. Water table: at the surface below surface Standing water: present absent
 14. Water color: tannic non-tannic/clear cloudy If cloudy, why? suspended sediments other:
 15. Water column: sphagnum present utricularia present
 16. Altered hydrology: soil subsidence / oxidation of muck exposed roots abnormal tree fall due to soil subsidence
 inappropriate vegetation lichen lines: typical abnormal

List inappropriate vegetation:

1. 2. 3.
4. 5. 6.

17. Wildlife usage and natural history observations: footprints scat herbivory observed bird nests/calls fish observed
 animal remains scratch marks frog calls arthropods observed reptiles observed mammals observed

Notes on wildlife useage observed:

deer; roosters; crickets, yellow juackets

18. Exotic species: present absent

If present must be georeferenced and include the following information:

| | | | |
|--|-----------|----------|-----------|
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |
| Species: | Location: | latitude | longitude |
| % cover: <input type="checkbox"/> 0-1% <input type="checkbox"/> 1-5% <input type="checkbox"/> 6-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% | | | |

19. Notes on the general aspect of the site/techniques to meet restoration goals:

Is natural regeneration occuring? yes no and: species appropriate supplemental planting/seeding needed
 Site is/has: fire suppressed appropriately managed secondary growth planted clear-cut
 If planted: bedded and planted not bedded but managed for pine ~Tree age: 0-5 yrs 6-10 yrs 11-20 yrs 20+ yrs
 Recommendations for restoration: prescribed burn mechanical treatment other:

Specific notes on restoration, observations, or adaptive management techniques:

Best described as a bog or wet prairie, allow prescribed fire to burn across landscape as per the mitigation plan. Might need mechanical treatment.



Devil's Swamp Transect 1 Reference Point 1
Hydric Pine Flatwoods (DSQT1 P1 HPF)

Devil's Swamp Mitigation Bank Qualitative Photographs



Devil's Swamp Transect 1 Reference Point 2
Hydric Treeless Savanna (DSQT1 P2 HTS)



Devil's Swamp Transect 1 Reference Point 3
Mixed Forested Wetland (DSQT1 P3 MFW)



Devil's Swamp Transect 2 Reference Point 1
Hydric Pine Flatwoods (DSQT2 P1 HPF)



Devil's Swamp Transect 2 Reference Point 2
Cypress Swamp (DSQT2 P2 CS)



Devil's Swamp Transect 2 Reference Point 3
Cypress Swamp (DSQT2 P3 CS)

Devil's Swamp Mitigation Bank Qualitative Photographs



Devil's Swamp Transect 3 Reference Point 1 Hydric
Pine Flatwoods (DSQT3 P1 HPF)



Devil's Swamp Transect 4 Reference Point 1
Hydric Pine Flatwoods (DSQT4 P1 HPF)



Devil's Swamp Transect 3 Reference Point 2
Hydric Treeless Savanna (DSQT3 P2 HTS)



Devil's Swamp Transect 4 Reference Point 2
Mixed Forested Wetland (DSQT4 P2 MFW)





**Devil's Swamp Transect 4 Reference Point 3
Mixed Forested Wetland (DSQT4 P3 MFW)**

Devil's Swamp Mitigation Bank Qualitative Photographs



**Devil's Swamp Transect 5 Reference Point 1 Mesic
Pine Flatwoods (DSQT5 P1 MPF)**



**Devil's Swamp Transect 5 Reference Point 2
Hydric Pine Flatwoods (DSQT5 P2 HPF)**



**Devil's Swamp Transect 5 Reference Point 3
Mixed Forested Wetland (DSQT5 P3 MFW)**



**Devil's Swamp Transect 6 Reference Point 1
Hydric Pine Flatwoods (DSQT6 P1 HPF)**



Devil's Swamp Transect 6 Reference Point 2
Mixed Forested Wetland (DSQT6 P2 MFW)

Devil's Swamp Mitigation Bank Qualitative Photographs



Devil's Swamp Transect 6 Reference Point 3 Mixed
Forested Wetland (DSQT6 P3 MFW)



Devil's Swamp Transect 7 Reference Point 1
Upland Pine (DSQT7 P1 UP)



Devil's Swamp Transect 7 Reference Point 2
Mixed Forested Wetland (DSQT7 P2 MFW)



Devil's Swamp Transect 8 Reference Point 1
Hydric Pine Flatwoods (DSQT8 P1 HPF)



Devil's Swamp Transect 8 Reference Point 2
Mixed Forested Wetland (DSQT8 P2 MFW)

Devil's Swamp Mitigation Bank Qualitative Photographs



Devil's Swamp Transect 9 Reference Point 1 Hydric
Treeless Savanna (DSQT9 P1 HTS)



Devil's Swamp Transect 9 Reference Point 2
Hydric Pine Flatwoods (DSQT9 P2 HPF)



Devil's Swamp Transect 10 Reference Point 1
Hydric Treeless Savanna (DSQT10 P1 HTS)



Devil's Swamp Transect 10 Reference Point 2
Hydric Pine Flatwoods (DSQT10 P2 HPF)



Devil's Swamp Transect 11 Reference Point 1
Upland Pine (DSQT11 P1 UP)

Devil's Swamp Mitigation Bank Qualitative Photographs



Devil's Swamp Transect 11 Reference Point 2
Hydric Treeless Savanna (DSQT11 P2 HTS)



Devil's Swamp Transect 12 Reference Point 1
Upland Pine (DSQT12 P1 UP)



Devil's Swamp Transect 12 Reference Point 2
Hydric Treeless Savanna (DSQT12 P2 HTS)



Devil's Swamp Transect 13 Reference Point 1
Hydric Treeless Savanna (DSQT13 P1 HTS)





Devil's Swamp Transect 13 Reference Point 2
Mixed Forested Wetland (DSQT13 P2 MFW)

Devil's Swamp Mitigation Bank Qualitative Photographs



Devil's Swamp Transect 13 Reference Point 3
Upland Pine (DSQT13 P3 UP)



Devil's Swamp Transect 14 Reference Point 1
Mixed Forested Wetland (DSQT14 P1 MFW)



Devil's Swamp Transect 14 Reference Point 2
Cypress Swamp (DSQT14 P2 CS)



Devil's Swamp Transect 14 Reference Point 3
Hydric Pine Flatwoods (DSQT14 P3 HPF)



Devil's Swamp Transect 15 Reference Point 1
Hydric Pine Flatwoods (DSQT15 P1 HPF)

Devil's Swamp Mitigation Bank Qualitative Photographs



Devil's Swamp Transect 15 Reference Point 2
Mixed Forested Wetland (DSQT15 P2 MFW)



Devil's Swamp Transect 15 Reference Point 3
Cypress Swamp (DSQT15 P3 CS)





Devil's Swamp Transect 16 Reference Point 1
Upland Pine (DSQT16 P1 UP)

Devil's Swamp Mitigation Bank Qualitative Photographs



Devil's Swamp Transect 16 Reference Point 2
Mixed Forested Wetland (DSQT16 P2 MFW)



Devil's Swamp Transect 16 Reference Point 3
Hydric Pine Flatwoods (DSQT16 P3 HPF)



Year 2006 Semi-annual Progress Report
July 2006
Devils Swamp Mitigation Bank
Bay and Walton Counties, Florida
Prepared for:
Devils Swamp Mitigation Bank,
St. Joe Company

Submitted to:

The Florida Department of Environmental Protection
Mitigation Bank Instrument Number 0227475-001

U.S. Army Corps of Engineers
Mitigation Bank Instrument Number SAJ-2004-1864

U.S. Fish and Wildlife Service

U.S. Environmental Protection Agency, Region IV

St. Joe Company

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Tallahassee, Florida 32303

I. Introduction

A. Purpose

This bi-annual progress report summarizes the activities that have occurred at the Devils Swamp Mitigation Bank (DSMB) since the annual report of January 2006. These semi-annual progress reports are required as per the mitigation bank instrument. The outline for the progress reports is contained the monitoring provisions of the instrument. All information below concerns all activities that have taken place at the DSMB between February 1, 2005 and June 30, 2006.

II. Progress Report

A. Itemized checklist of requested information as per the DSMB instrument.

1. Date permitted activities were begun or anticipated to begin.
2. Brief description and extent of work completed since the previous report.
3. Copies of permit drawings indicating areas where work has been completed.
4. A description of problems encountered and solutions undertaken.
5. A brief description of the work and/or site management the Sponsor anticipates commencing, continuing or completing in the next six months.

B. Summary of itemized checklist.

1. Permitted activities

- a. No prescribed burning activities were conducted at the DSMB in the period of this report. This is due to extremely dry and hot weather that occurred throughout the spring. The Florida Division of Forestry does not issue burn permits during these conditions. Also, Bay County enacted a 90 day burn ban effective June 6, 2006. Phase 1 and 2 were mechanically treated in preparation for proposed prescribed fire scheduled for summer 2006. This is per the MBI permit III.G, the compensatory mitigation plan Section 6 restoration implementation and Attachment B-2. There was an *Emergency Ban on Burning*, by order of the Bay County Board of County Commissioners, June 6, 2006.

2. Brief description and extent of work completed since the previous report
All work completed within this section, is per the MBI permit community requirements IV.E.2.a and the compensatory mitigation plan Section 6 restoration implementation.

- a. Mechanical walk down of titi and fire suppressed woody vegetation in Phase 1. Mechanical walk down was conducted in Phase 1 from 25 of May to the 30 of June. This was carried out in the wet prairie ecotones and the wet prairie

- plant communities to facilitate prescribed burning. Prescribed burning of Phase 1 is scheduled for the growing season of 2006.
- b. Mechanical walk down of titi and other fire suppressed woody vegetation in Phase 2. Mechanical walk down was conducted in Phase 2 from 25 of February to the 30 of April. This was carried out in the wet prairie ecotones and the wet prairie plant communities to facilitate prescribed burning. Prescribed burning is scheduled for the growing season of 2006.
3. Weather related postponement of prescribed burns has been and continues to be a significant issue. Due to dry and hot weather, The Florida Division of Forestry did not permit any prescribed burning after April 2006. Bay County also enacted a 90 day county wide burn ban beginning June 6, 2006, see referenced attachment in B.1.a, above. Weather permitting, the burn ban should be lifted August 2006. Proactive adaptive management has been discussed with the USFWS and the FDEP and areas that were scheduled to be burned in 2005 will be burned in 2006. In addition we have used mechanical means to further prepare areas scheduled to be prescribed burned in 2006. This use of adaptive management is per the MBI permit III.G, the compensatory mitigation plan Section 6 restoration implementation and Attachment B-2.
 4. The following is a brief description of the work and/or site management the sponsor anticipates commencing, continuing or completing in the next six months.
 - a. Qualitative and quantitative vegetative monitoring transects in Phases 1 and 2 of the DSMB will be sampled in the Fall of 2006, assuming that weather and permit conditions allow for scheduled prescribed burns. This activity is per the MBI permit Maintenance and monitoring of the bank V.B, and the compensatory mitigation plan Attachment B-8.
 - b. When torpedo grass or any other invasive exotic growth resumes during the growing season of 2006, invasive exotics will be treated with the appropriate herbicide. This activity is per the compensatory mitigation plan Section 6 restoration implementation.
 - c. Additional timber harvesting is scheduled for both Phase 1&2 when appropriate conditions allow silvicultural activities to occur. Weather permitting, the plan is to resume timber harvesting on the DSMB during the remainder of 2006. This activity is per the MBI permit establishment of the bank III. F and community requirements IV.E.2.a, and the compensatory mitigation plan Section 6 restoration implementation.
 - d. Phases 1 and 2 are scheduled to be prescribed burned during the growing season of 2006, weather permitting. This activity is per the MBI permit III.G, the compensatory mitigation plan Section 6 restoration implementation and Attachment B-2.

- e. Photographic reference of burn units is planned immediately after scheduled prescribed fires in phases 1 and 2. This activity is per the MBI permit establishment of the bank section III. G.

Semi-annual Progress Report

December, 2006

Devils Swamp Mitigation Bank Bay County, Florida

Submitted to:

The Florida Department of Environmental Protection
Mitigation Bank Instrument Number 0227475-001

U.S. Army Corps of Engineers
Mitigation Bank Instrument Number SAJ-2004-1864

U.S. Fish and Wildlife Service

U.S. Environmental Protection Agency, Region IV

St. Joe Company

Prepared by:

Ecological Resource Consultants, Inc.
410B East 6th Avenue
Tallahassee, Florida 32303

Semiannual Report - 2006

Purpose

This semiannual progress report summarizes restoration and maintenance activities at the Devils Swamp Mitigation Bank (DSMB) between July 1, 2006 and December 31, 2006 (since the last semiannual report). Semi-annual progress reports are requirements as per the Mitigation Bank Instrument (MBI), and this document responds specifically to the information requests in that instrument.

Restoration and Management Activities

Activities completed or pending are discussed below for each Phase, and as per the Devils Swamp Mitigation Bank / MBI (2005, Section MBI Permit, p. 15). Each information request in the MBI is restated in bold and followed by a response. Permitted activities are recorded chronological order, as indicated.

a. Date permitted activities were begun or anticipated to begin.

Dates are included with each completed and anticipated activity below.

b. Brief description and extent of work completed since the previous report.

Each activity is discussed in chronological order, and includes reference to the applicable section(s) of the MBI Permit.

June 2006: Low water crossing was constructed in phase 2 using BMPs.

August-September, 2006: Conducted prescribed burns in Phase 2. (MBI Permit, Section V.A.2.a.; Section III.G.; Attachment B-1: Compensatory Mitigation Plan; Attachment B-2: Fire Management Plan).

Authorized burn permits:

8/31/06 - #092636*

*Plan attached below

9/2/06 - #092962

9/27/06 - #101540

9/28/06 - #101978**

**Not executed - mop-up of spot fires from 9/27 burn instead of burning 80+ acres in Phase II.

September-October 2006: Mechanical vegetation reduction. Ecotone walk-down was continued in phases 1 and 2 (MBI permit Part V, 2. and Part IV, section E.)

September - October, 2006: Photographic references of burn units were recorded immediately after prescribed fires in Phase 1 (MBI Permit, Section III. G.)

October, 2006: Qualitative and quantitative vegetative monitoring transects in Phases 1 and 2 of the DSMB were sampled (MBI Permit, Part V.B.; Attachment B-1: Compensatory Mitigation Plan).

October - December 2006: Timber activities. Timber harvesting occurred in phase 2 and chipping operations were used to phase 1 (MBI permit Part V, 2. and Part IV, section E.).

July-December, 2006: Hydrological Improvement / Assessment Activities. Five (5) permanent groundwater monitoring wells, five (5) surface water wells and one (1) precipitation gauge collected near-continuous hydrologic data.

c. A description of problems encountered and solutions undertaken.

An early summer burn ban delayed prescribed burning as DSMB. Prescribed burning resumed in phase 2 in September 2006 when conditions allowed. Burn ban documentation was provided in the semiannual report of June 2006.

Standing logs killed from earlier prescribed burns were removed from landscapes that needed a reduction of the standing woody vegetation by salvage timber operation in phase 2.

d. A brief description of the work and/or site management the Sponsor anticipates commencing, continuing or completing in the next six months.

Additional timber harvesting is scheduled for Phases 1 and 2 as appropriate conditions allow. Timber harvesting will resume on the DSMB during 2007 with appropriate weather (MBI Permit, Section III.F; Section IV.E.2.a; Table B-4).

Phases 1 and 2 are scheduled for a prescription burn during the growing season of 2007 (as per MBI Permit, Section III.G; Attachment B-1 and Attachment B-2).

Photographic reference of burn units is planned immediately after scheduled prescribed fires (MBI Permit Section III. G).

Additional walk down of ecotones using a bulldozer is scheduled to continue in 2007 in phases 1 and 2 (MBI Permit, Section III.F and Section IV.E.2.a)

Continued hydrologic assessment activities are planned until 2008.

Devils Swamp Mitigation Bank 2006 Annual Report
 Appendix E: July & December 2006 Semiannual Reports

SN 4461 FC5400-15



| | |
|---|---|
| District: Chipola District | Authorization # : 092636 |
| Landowner: St. Joe Timberland Company Address: 14500 School Drive, Panama City Beach, Florida 32413 | |
| Telephone #: 850.234-2204 850.227-4352 cell | Sections: 31, 32 5, 6, 7 |
| T: 1S T: 2S | R: 17W R: 17W (NW corner of sec. 5 contains most of the burn acres) |
| County: Bay | |
| Acres to Burn: 200 acres | Distance to Plow: Previous Burn Date: NA |
| Stand Description: Wet Flatwoods | Burn Compartment: Phase II, NE Stands |
| Burn Area: Devil's Swamp Mitigation Area | |
| Overstory Type: Slash/Cypress/Titi/Gum. | Height to Bottom of Crown: 10 - 30 feet, depending on age of planted/natural stand. |
| Understory Type: Mixed gallberry/titi. Many wetland herbaceous species present. Dense ground fuels due to thinning of pines. | |
| Fuel Description: Pine duff with grass/shrub/herbaceous fuels. Topography and Soil: Flat topo with interspersed wet depressions, wetland/organic soils | |
| Purpose of Burn: Wetland Restoration and fuel reduction | |
| Burn Objectives: Kill hardwood/shrub understory and canopy to enhance and promote herbaceous wetland species. Reduce fuels produced by silviculture operations of younger slash pine stands. Goal is wetland restoration. | |
| Firing Techniques & Ignition Methods: Hand ignition used for strip-head firing, back firing and possible flanking fire to burn individual stands | |
| Burn the northeast half of Phase II to create a black-line buffer for future aerial ignition burns. | |
| Needs 50' black-line back-fire to reduce spot-fire potential. Expect heavy smoke due to rough fuel loads and higher fuel moisture on all compartments. | |
| Watch for spot fires into adjacent to the east and north of burn stands. | |
| Season: Growing Season - spring and summer. Mortality of young slash pine expected due to scorching and cambium burn. | |

Devils Swamp Mitigation Bank 2006 Annual Report
Appendix E: July & December 2006 Semiannual Reports

| | |
|---|---|
| Personnel Needs: 4 ground crew and burn boss. | Equipment Needs: Two fire plows and operators, two 4-wheelers for ground crew. |
| Maximum Crown Scorch Acceptable: up to 100 % | Passed Smoke Screening System: Yes, but watch Steelfield and Hwy 79. |
| Listed Possible Smoke-Sensitive Areas: Hwy 79 with westerly winds. Steelfield Road on northern burn boundary. | |
| Special Precautions: 'Smoke' signs ready if needed on Steelfield Road. Notify local fire and law enforce. Depts. | |
| Adjacent Landowners to Notify: None Inform FL DOF. Notify Walton and Bay County Sheriff/fire departments. | |

MONITORING & EVALUATION PROCEDURES

| PRE-BURN | BURN | POST BURN |
|----------------------------|--|---------------------------|
| Maximum KBDI of 500 | Check DOF fire readiness level! Level 1 or 2 preferred. | |
| WEATHER FACTORS | PREFERRED | ACTUAL |
| Surface Winds | 5 to 15 MPH, westerly winds | SEE ATTACHED FIRE WEATHER |
| Transport Winds | 8 to 14, west - watch for SEA BREEZE | |
| Minimum Mixing Height | 2000 ft | |
| Dispersion Index (DAY) | 40-70 | |
| Dispersion Index (NIGHT) | 1-3 | |
| Maximum Temperature | 95 F | |
| Minimum Relative Humidity | 40 % | |
| Fine Fuel Moisture | >25 % | |
| Rate of Spread | 1 chain/hour- Back, 5-7 C/hr head | |
| Starting Time | 9:00 AM | |
| Burn Technique | Backing fire, followed by strip head | |
| Flame Length | 3-5' Backing, Some 10-12 expected | |
| Days Since Rain: | 2-3 days, depending on rainfall amt. | |
| Burn Manager: | Date Burned: | |

PRE-BURN CHECKLIST

- FIRE BOSS: Initial each item to indicate compliance.
- All prescription requisites met (preparation and day of burn).
 - Authorization obtained.
 - Adjacent landowners notified within past seven days of plan to burn.
 - Local contacts made day of burn to advise (FHP, SO, Fire Dept., media, etc.)
 - Smoke screening performed and documented.
 - All equipment required on scene and fully operational.
 - Each crew member has proper personal gear and clothing.

CREW BRIEFING

- Objectives of burn.
- Exact area of burn.
- Hazards discussed (volatile fuels, spotting potential, weak points in perimeter lines, terrain features, etc.)

Devils Swamp Mitigation Bank 2006 Annual Report
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- Crew Assignments made.
- Ignition technique and pattern. Holding method(s).
- Location of extra equipment, fuel, water, vehicle keys.
- Authority and communications.
- Contingencies covered including escape routes or procedures.
- Sources of nearest assistance. Nearest phone and emergency numbers.
- Special instructions regarding smoke management, contact with the public and others.
- Questions.
- Crew members given opportunity to decline participation (is there anything that is going to prevent full physical performance?).

Prescription Done by: Jim Moyers Certification number: Fire Boss – James Moyers Customer #: **1312342**

Title: Wildlife Biologist Date: Prescription written 7/7/06, modified 8-30-06.



CERTIFIED BURN MANAGER SIGNATURE:

Fire Weather : , 2006 – Afternoon forecast

FLZ007-009>019-026-027-011130-
 BAY-CALHOUN-FRANKLIN-GADSDEN-GULF-HOLMES-INLAND WALTON-JACKSON-
 JEFFERSON-LEON-LIBERTY-MADISON-WAKULLA-WASHINGTON-
 INCLUDING THE CITIES OF...APALACHICOLA...BLOUNTSTOWN...BONIFAY...
 BRISTOL...CHIPLEY...CRAWFORDVILLE...DE FUNIAK SPRINGS...MADISON...
 MARIANNA...MONTICELLO...PANAMA CITY...PORT ST JOE...QUINCY...
 TALLAHASSEE
 330 PM EDT (230 PM CDT) THU AUG 31 2006

| | TONIGHT | FRI | FRI NIGHT | SAT |
|---------------------|-------------|-------------|-----------|--------|
| CLOUD COVER | PCLDY | PCLDY | MCLEAR | PCLDY |
| CHANCE PRECIP(%) | 20 | 20 | 0 | 0 |
| PRECIP TYPE | SHWRS/TSTMS | SHWRS/TSTMS | NONE | NONE |
| TEMP | 69 | 91 | 68 | 91 |
| RH(%) | 94 | 44 | 96 | 42 |
| 20FT WND MPH(AM) | | W 3 | | W 1 |
| 20FT WND MPH(PM) | W 5 | W 8 | SW 3 | SW 6 |
| PRECIP DURATION | <1 | 1 | 0 | 0 |
| PRECIP BEGIN | CONTINUING | 12 PM | | |
| PRECIP END | 10 PM | 6 PM | | |
| PRECIP AMOUNT | <0.10 | <0.10 | 0.00 | 0.00 |
| LAL | 3 | 3 | 1 | 1 |
| CEILING | NO CIG | NO CIG | NO CIG | NO CIG |
| MIXING HGT(FT-AGL) | 400 | 4900 | 400 | 4900 |
| TRANSPORT WIND(MPH) | W 7 | W 9 | W 5 | W 9 |
| DISPERSION INDEX | 2 | 50 | 1 | 51 |
| MAX LVORI | 7 | 4 | 7 | 4 |

REMARKS...PATCHY FOG POSSIBLE EARLY FRIDAY MORNING IN THE FLORIDA
 BIG BEND.

Fire Weather : 9-1-2006 – Morning forecast

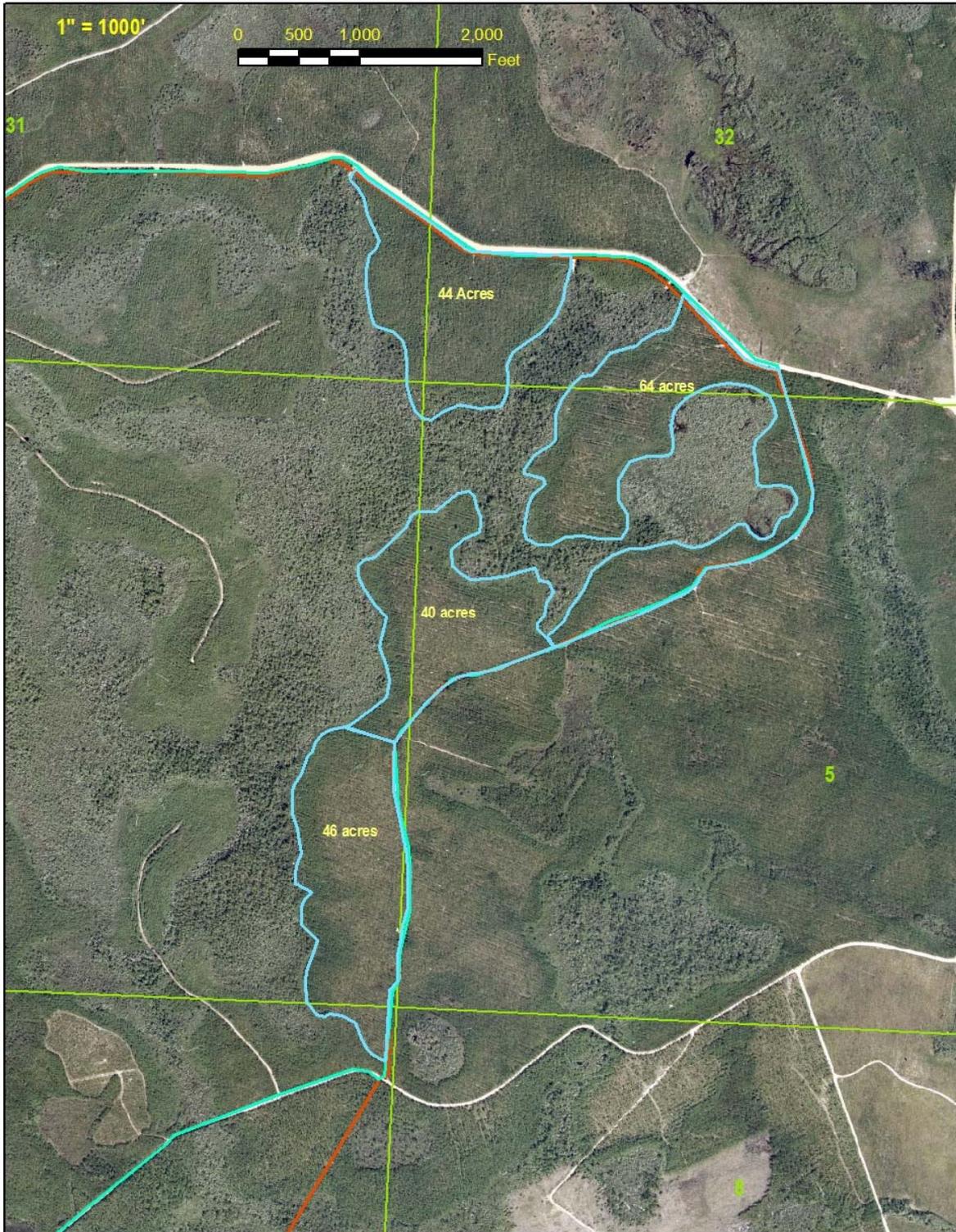
FLZ007-009>018-026-027-011930-

Devils Swamp Mitigation Bank 2006 Annual Report
 Appendix E: July & December 2006 Semiannual Reports

BAY-CALHOUN-FRANKLIN-GADSDEN-GULF-HOLMES-INLAND WALTON-JACKSON-
 JEFFERSON-LEON-LIBERTY-WAKULLA-WASHINGTON-
 INCLUDING THE CITIES OF...APALACHICOLA...BLOUNTSTOWN...BONIFAY...
 BRISTOL...CHIPLEY...CRAWFORDVILLE...DE FUNIAK SPRINGS...MARIANNA...
 MONTICELLO...PANAMA CITY...PORT ST JOE...QUINCY...TALLAHASSEE
 544 AM EDT (444 AM CDT) FRI SEP 1 2006

| | TODAY | TONIGHT | SAT |
|---------------------|-------------|---------|--------|
| CLOUD COVER | PCLDY | PCLDY | PCLDY |
| CHANCE PRECIP(%) | 10 | 0 | 0 |
| PRECIP TYPE | SHWRS/TSTMS | NONE | NONE |
| TEMP | 92 | 69 | 93 |
| RH(%) | 48 | 95 | 44 |
| 20FT WND MPH(AM) | NW 3 | | W 2 |
| 20FT WND MPH(PM) | W 8 | SW 5 | W 8 |
| PRECIP DURATION | 1 | 0 | 0 |
| PRECIP BEGIN | 8 AM | | |
| PRECIP END | 6 PM | | |
| PRECIP AMOUNT | <0.10 | 0.00 | 0.00 |
| LAL | 3 | 1 | 1 |
| CEILING | NO CIG | NO CIG | NO CIG |
| MIXING HGT(FT-AGL) | 4700 | 300 | 5200 |
| TRANSPORT WIND(MPH) | W 12 | W 6 | W 10 |
| DISPERSION INDEX | 62 | 3 | 61 |
| MAX LVORI | 4 | 8 | 4 |

REMARKS...PATCHY INLAND FOG POSSIBLE DURING THE EARLY MORNING.



Map depicting burn areas in phase 2, DSMB.



Gulf of Mexico

Legend

- Site Boundary
- Roads



0 15,000 30,000 60,000
 Feet

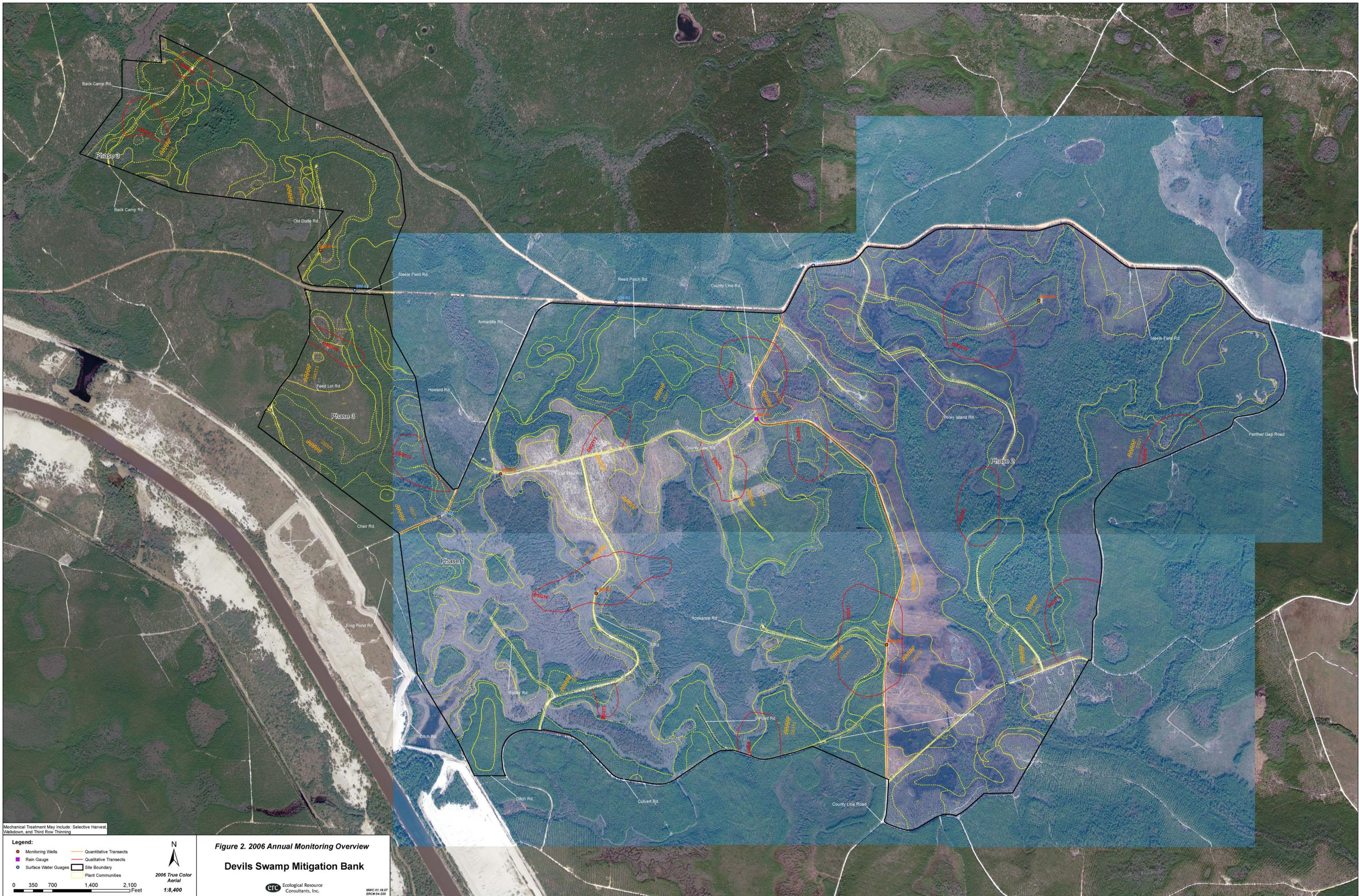
1:360,000

Figure 1. Location Map

Devils Swamp Mitigation Bank

erc Ecological Resource
 Consultants, Inc.

MWC 01.18.07
 ERC# 04-255



Mechanical Treatment May Include: Selective Harvest
Walkdown, and Third Row Thinning

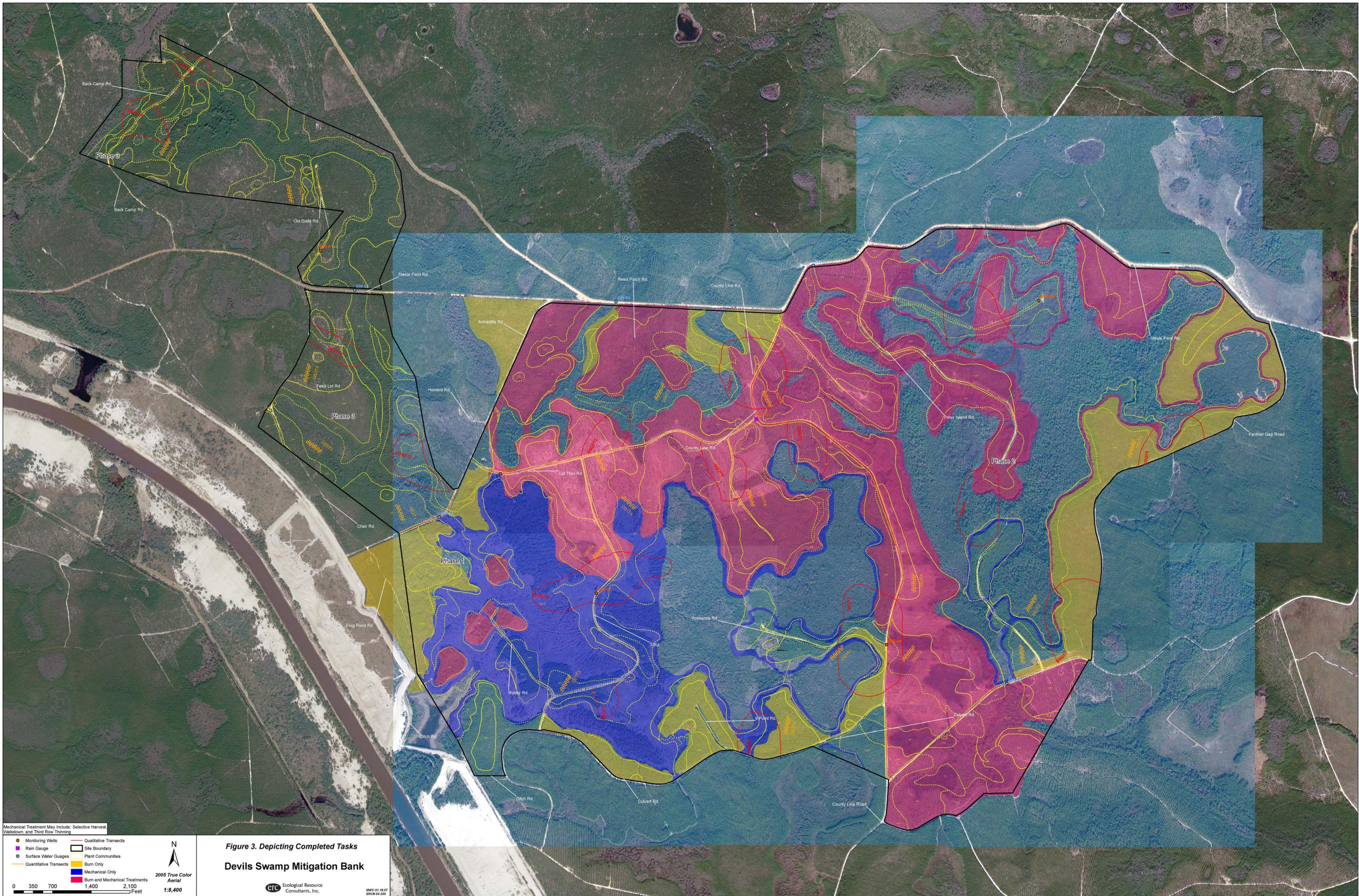
Legend:

- Monitoring Wells
- Rain Gauge
- Surface Water Gauges
- Quantitative Transects
- Qualitative Transects
- Site Boundary
- Plant Communities

0 350 700 1,400 2,100 Feet

2006 True Color Aerial
1:8,400

Figure 2. 2006 Annual Monitoring Overview
Devils Swamp Mitigation Bank



Mechanical Treatment May Include: Selective Harvest, Walkdown, and Third Row Thinning

- Monitoring Wells
- Rain Gauge
- Surface Water Gauges
- Quantitative Transects
- Qualitative Transects
- Site Boundary
- Plant Communities
- Burn Only
- Mechanical Only
- Burn and Mechanical Treatments

0 350 700 1,400 2,100 Feet

2005 True Color Aerial 1:8,400

Figure 3. Depicting Completed Tasks Devils Swamp Mitigation Bank