



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

October 24, 2016

Stella Davis 2006 Trust
c/o Mr. Michael W. Dentzau, PhD, PWS, Authorized Agent
Dentzau & Associates, Inc.
801 Day Lake Drive
Midland, Georgia 31820

Dear Dr. Dentzau:

RE: Nokuse Plantation Mitigation Bank
---Permit #0283695-001, Walton County
---Approval of Modification #0283695-024

Your request to modify this permit has been received and reviewed by Department staff. This modification revises construction activities, specific conditions, elements of the credit release schedule, and certain success criteria. There are no changes to the target communities, mitigation service area, or the number mitigation credits assigned. This permit modification requires revisions to certain figures and specific conditions. The attached modified permit, figures, and attachments will replace the original permit.

The original permit for the Nokuse Plantation Mitigation Bank (NPMB) was issued on July 3, 2008 and was later modified on April 20, 2010 and on February 12, 2014. As the project was being constructed, the permittee and its Qualified Mitigation Supervisor (QMS) identified several changes to the construction and the land management plans that they believe will better achieve the goals of the mitigation bank. These changes include complete backfilling of certain ditches, installation of several additional low-water crossings, elimination of one box car bridge, removal of soil/debris berms surrounding certain depressional wetlands, and exercising selective re-contouring of certain pine bedding areas to preserve areas of intact ground cover. The modification also seeks to eliminate a success criterion that requires gopher tortoises (*Gopherus polyphemus*) to be present at a location that appears to be sub-optimal for the species.

It is the Department's intent to issue this permit modification pursuant to the requirements of Sections 373.4135 and 373.4136, F.S. and Rule 62-342, F.A.C. By copy of this letter and attached permit, we are notifying interested parties of the modification.

The Department's file on this matter is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at

Nokuse Plantation Mitigation Bank
Modified Permit No. 283695-024, Walton County
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the Florida Department of Environmental Protection, Submerged Lands and Environmental Resource Coordination Program, 2600 Blair Stone Road, MS 2500, Tallahassee, Florida 32399-2400.

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. Upon the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. Or at Agency_Clerk@dep.state.fl.us. Petitions filed by the permittee and the parties listed below must be filed within 21 days of receipt of this letter. Petitioner shall mail a copy of the petition to the permittee at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, F.S.

The Petition shall contain the following information:

- (a) The name, address, and telephone number of each petitioner, the permittee's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action; or proposed action;
- (d) A statement of the material facts disputed by petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
- (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this letter. Persons whose substantial interests will be affected by any decision of the Department with regard to the permit have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above

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and be filed (received) within 21 days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This Notice constitutes final agency action unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition. Upon timely filing of a petition or a request for an extension of time this Notice will not be effective until further Order of the Department.

Any party to this letter has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000; and by filing a copy with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Notice of Permit Modification is filed with the Clerk of the Department.

Sincerely,

A handwritten signature in blue ink, appearing to read "Timothy Rach", with a large, sweeping flourish above the name.

Timothy Rach
Program Administrator
Submerged Lands and Environmental Resources Coordination Program

Attachments:

Modified Permit (with figures and attachments);

Copies furnished to the following persons via email

Marie Huber; Mitigation Bank Team – USACE (Email)
Erin Gawera – USFWS (Email)
Ron Miedema – USEPA (Email)
Conservation Planning Services – FFWCC (Email)
Connie Bersok; Larry Olney; Tim Rach – FDEP (Email)
Mitigation Banking Section File



Florida Department of Environmental Protection

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Tallahassee, Florida 32399-2400

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Modified Mitigation Bank /Environmental Resource Permit

Permittee: Stella Davis 2006 Trust

Project: Nokuse Plantation Mitigation Bank

Permit No: 0283695-001, Originally Issued July 3, 2008

Modification No. 0283695-024

Modification Date: October 24, 2016

Expiration Date: Perpetual

County: Walton

PROJECT LOCATION:

The Nokuse Plantation Mitigation Bank (NPMB) site is in Sections 26-29 and 32-35, Township 1 South, Range 18 West, Walton County just south of State Road 20 and 5 miles east of US 331 near Bruce, FL (Figures 1 and 2), Class III waters, and has a service area that includes portions of Walton, Washington, Holmes, Jackson, Bay and Okaloosa Counties (Figure 3). The NPMB is bordered by Black Creek, Camp Creek, and conservation properties that form an essential link in the Northwest Florida Greenway initiative.

PROJECT DESCRIPTION:

The project is to establish the NPMB on a $\pm 2,206$ -acre parcel. The project includes the restoration or enhancement of wet prairie, wet flatwoods, forested depressional wetlands, mixed wetland forests, mesic flatwoods and sandhills communities. Restoration and enhancement will be accomplished by the removal of planted pine, reestablishment of historic fire regimes, planting of longleaf pine and wiregrass, controlling erosion, treating and managing exotic and nuisance species, elimination of timber roads, installation of 1 railcar bridge, blocking and/or backfilling several ditches, removal of several culverts, construction of several low-water crossings, grading of some certain bedding furrows, and the implementation of a long-term management and prescribed burn program. The mitigation was assessed by the Uniform Mitigation Assessment Method (UMAM) (Chapter 62-345, F.A.C.) as having a potential of 273.83 credits (242.20 wet prairie/wet flatwoods credits and 31.63 forested wetlands credits).

AUTHORIZATIONS

Environmental Resource Permit

The Department has determined that the activity qualifies for a Mitigation Bank/Environmental Resource Permit. Therefore, the Mitigation Bank/Environmental Resource Permit is hereby granted, pursuant to Part IV of Chapter 373, Florida Statutes (F.S.), Chapter 62-342, F.A.C., and Chapter 62-330, F.A.C.

Sovereignty Submerged Lands Authorization

As staff to the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees), the Department has determined the activity is not on submerged lands owned by the State of Florida. Therefore, your project is not subject to the requirements of Chapter 253, F.S., or Rule 18-21, F.A.C.

Federal Authorization

Your proposed activity as outlined on your application and attached drawings **does not qualify** for Federal authorization pursuant to the State Programmatic General Permit and a **SEPARATE permit** or authorization **may be required** from the Corps. A copy of your permit application has been forwarded to the Corps for their review. **Failure to obtain Corps authorization prior to construction could subject you to federal enforcement action by that agency.**

Coastal Zone Management

Issuance of this authorization also constitutes a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the Coastal Zone Management Act.

Water Quality Certification

This permit also constitutes a water quality certification under Section 401 of the Clean Water Act, 33 U.S.C. 1341.

Other Authorizations

You are advised that authorizations or permits for this activity may be required by other federal, state, regional, or local entities including but not limited to local governments or municipalities. This permit does not relieve you from the requirements to obtain all other required permits or authorizations.

The activity described may be conducted only in accordance with the terms, conditions and attachments contained in this document. Issuance and granting of the permit and authorizations herein do not infer, nor guarantee, nor imply that future permits, authorizations, or modifications will be granted by the Department.

PERMIT CONDITIONS

The mitigation bank activities described must be conducted in accordance with:

- **The General Conditions**
- **The Specific Conditions**
- **The limits, conditions and locations of work shown in the attached drawings**
- **The term limits of this authorization**

You are advised to read and understand these conditions and drawings prior to beginning the authorized activities, and to ensure the work is conducted in conformance with all the terms, conditions, and drawings herein. If you are using a contractor, the contractor also should read and understand these conditions and drawings prior to beginning any activity. Failure to comply with these conditions, including any mitigation requirements, shall be grounds for the Department to revoke the permit and authorization and to take appropriate enforcement action.

Operation of the facility is not authorized except when determined to be in conformance with all applicable rules and this permit, as described.

GENERAL CONDITIONS FOR INDIVIDUAL ENVIRONMENTAL RESOURCE PERMITS

The following general conditions are binding on all individual permits issued under chapter 62-330, F.A.C., except where the conditions are not applicable to the authorized activity, or where the conditions must be modified to accommodate project-specific conditions.

1. All activities shall be implemented following the plans, specifications and performance criteria approved by this permit. Any deviations must be authorized in a permit modification in accordance with Rule 62-330.315, F.A.C. Any deviations that are not so authorized may subject the permittee to enforcement action and revocation of the permit under Chapter 373, F.S.
2. A complete copy of this permit shall be kept at the work site of the permitted activity during the construction phase, and shall be available for review at the work site upon request by the Agency staff. The permittee shall require the contractor to review the complete permit prior to beginning construction.
3. Activities shall be conducted in a manner that does not cause or contribute to violations of state water quality standards. Performance-based erosion and sediment control best management practices shall be installed immediately prior to, and be maintained during and after construction as needed, to prevent adverse impacts to the water resources and adjacent lands. Such practices shall be in accordance with the *State of Florida Erosion and Sediment Control Designer and Reviewer Manual (Florida Department of Environmental Protection and Florida Department of Transportation June 2007)*, and the *Florida Stormwater Erosion and Sedimentation Control Inspector's Manual (Florida Department of Environmental Protection, Nonpoint Source Management Section, Tallahassee, Florida, July 2008)*, which are both incorporated by reference in subparagraph 62-330.050(9)(b)5., F.A.C., unless a project-specific erosion and sediment control plan is approved or other water quality control measures are required as part of the permit.
4. At least 48 hours prior to beginning the authorized activities, the permittee shall submit to the Agency a fully executed Form 62-330.350(1), "Construction Commencement Notice," [October 1, 2013], which is incorporated by reference [in](#) paragraph 62-330.350(1)(d), F.A.C., indicating the expected start and completion dates. A copy of this form may be obtained from the Agency, as described in subsection 62-330.010(5), F.A.C. If available, an Agency website that fulfills this notification requirement may be used in lieu of the form.

5. Unless the permit is transferred under Rule 62-330.340, F.A.C., or transferred to an operating entity under Rule 62-330.310, F.A.C., the permittee is liable to comply with the plans, terms and conditions of the permit for the life of the project or activity.
6. Within 30 days after completing construction of the entire project, or any independent portion of the project, the permittee shall provide the following to the Agency, as applicable:
 - a. For an individual, private single-family residential dwelling unit, duplex, triplex, or quadruplex – “Construction Completion and Inspection Certification for Activities Associated With a Private Single-Family Dwelling Unit” [Form 62-330.310(3)]; or
 - b. For all other activities – “As-Built Certification and Request for Conversion to Operational Phase” [Form 62-330.310(1)].
 - c. If available, an Agency website that fulfills this certification requirement may be used in lieu of the form.
7. If the final operation and maintenance entity is a third party:
 - a. Prior to sales of any lot or unit served by the activity and within one year of permit issuance, or within 30 days of as- built certification, whichever comes first, the permittee shall submit, as applicable, a copy of the operation and maintenance documents (see sections 12.3 thru 12.3.3 of Volume I) as filed with the Department of State, Division of Corporations and a copy of any easement, plat, or deed restriction needed to operate or maintain the project, as recorded with the Clerk of the Court in the County in which the activity is located.
 - b. Within 30 days of submittal of the as- built certification, the permittee shall submit “Request for Transfer of Environmental Resource Permit to the Perpetual Operation Entity” [Form 62-330.310(2)] to transfer the permit to the operation and maintenance entity, along with the documentation requested in the form. If available, an Agency website that fulfills this transfer requirement may be used in lieu of the form.
8. The permittee shall notify the Agency in writing of changes required by any other regulatory agency that require changes to the permitted activity, and any required modification of this permit must be obtained prior to implementing the changes.
9. This permit does not:
 - a. Convey to the permittee any property rights or privileges, or any other rights or privileges other than those specified herein or in Chapter 62-330, F.A.C.;
 - b. Convey to the permittee or create in the permittee any interest in real property;
 - c. Relieve the permittee from the need to obtain and comply with any other required federal, state, and local authorization, law, rule, or ordinance; or
 - d. Authorize any entrance upon or work on property that is not owned, held in easement, or controlled by the permittee.
10. Prior to conducting any activities on state-owned submerged lands or other lands of the state, title to which is vested in the Board of Trustees of the Internal Improvement Trust

Fund, the permittee must receive all necessary approvals and authorizations under Chapters 253 and 258, F.S. Written authorization that requires formal execution by the Board of Trustees of the Internal Improvement Trust Fund shall not be considered received until it has been fully executed.

11. The permittee shall hold and save the Agency harmless from any and all damages, claims, or liabilities that may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any project authorized by the permit.
12. The permittee shall notify the Agency in writing:
 - a. Immediately if any previously submitted information is discovered to be inaccurate; and
 - b. Within 30 days of any conveyance or division of ownership or control of the property or the system, other than conveyance via a long-term lease, and the new owner shall request transfer of the permit in accordance with Rule 62-330.340, F.A.C. This does not apply to the sale of lots or units in residential or commercial subdivisions or condominiums where the stormwater management system has been completed and converted to the operation phase.
13. Upon reasonable notice to the permittee, Agency staff with proper identification shall have permission to enter, inspect, sample and test the project or activities to ensure conformity with the plans and specifications authorized in the permit.
14. If any prehistoric or historic artifacts, such as pottery or ceramics, stone tools or metal implements, dugout canoes, or any other physical remains that could be associated with Native American cultures, or early colonial or American settlement are encountered at any time within the project site area, work involving subsurface disturbance in the immediate vicinity of such discoveries shall cease. The permittee or other designee shall contact the Florida Department of State, Division of Historical Resources, Compliance and Review Section, at (850) 245-6333 or (800) 847-7278, as well as the appropriate permitting agency office. Such subsurface work shall not resume without verbal or written authorization from the Division of Historical Resources. If unmarked human remains are encountered, all work shall stop immediately and notification shall be provided in accordance with Section 872.05, F.S.
15. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under Rule 62-330.201, F.A.C., provides otherwise.
16. The permittee shall provide routine maintenance of all components of the stormwater management system to remove trapped sediments and debris. Removed materials shall be disposed of in a landfill or other uplands in a manner that does not require a permit under Chapter 62-330, F.A.C., or cause violations of state water quality standards.

17. This permit is issued based on the applicant's submitted information that reasonably demonstrates that adverse water resource-related impacts will not be caused by the completed permit activity. If any adverse impacts result, the Agency will require the permittee to eliminate the cause, obtain any necessary permit modification, and take any necessary corrective actions to resolve the adverse impacts.

18. A Recorded Notice of Environmental Resource Permit may be recorded in the county public records in accordance with subsection 62-330.090(7), F.A.C. Such notice is not an encumbrance upon the property.

SPECIFIC CONDITIONS:

Please note that some specific conditions may further define or substitute for some of the requirements of the general conditions listed above.

1. The permittee is hereby advised that Florida law states: "No person shall commence any excavation, construction, or other activity involving the use of sovereign or other lands of the state, title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund or the Department of Environmental Protection under Chapter 253, until such person has received from the Board of Trustees of the Internal Improvement Trust Fund the required lease, license, easement, or other form of consent authorizing the proposed use." Pursuant to Florida Administrative Code Rule 18-14, if such work is done without consent, or if a person otherwise damages state land or products of state land, the Board of Trustees may levy administrative fines of up to \$10,000 per offense.

2. Prior to conducting the restoration activities involving soil disturbance authorized by this permit, a cultural resource survey shall be conducted consistent with the Department of Historical Resources (DHS) letter dated January 30, 2008 (Attachment J). The findings of this survey shall be reported to the Department as well as DHS, and additional avoidance and minimization measures may be required. Further, if, at any time, historical or archaeological artifacts, such as Indian canoes, are discovered at any time within the project site the permittee shall immediately notify the Department and the Bureau of Historic Preservation, Division of Historical Resources, at (800) 847-7278, R. A. Gray Building, 500 S. Bronough St., Tallahassee, Florida 32399-0250.

Commencement requirements:

3. At least 48 hours prior to commencement of work authorized by this permit, the permittee shall notify the Department of Environmental Protection, Submerged Lands and Environmental Resources Coordination Program, MS 2500, 2600 Blair Stone Road, Tallahassee, Florida 32399, and the Northwest District Office, Submerged Lands and Environmental Resource Permitting, 160 Governmental Center, Pensacola, FL 32502 in writing of this commencement.

4. Unless otherwise specified, all reports and other information required for this permit shall be submitted to the Florida Department of Environmental Protection, Submerged Lands and Environmental Resources Coordination Program, MS 2500, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

5. No credits may be released until the following requirements are completed:

- a. A qualified mitigation supervisor (QMS) is retained as required in Specific Condition 7;
- b. The site has been protected in accordance with Specific Condition 8; and
- c. The applicant is in compliance with Specific Condition 9 regarding documentation of financial assurance.

6. This mitigation bank permit shall automatically expire five years from the date of issuance if the permittee has not recorded a conservation easement in accordance with the permit and Rule 62-342.750 (2) F.A.C. Except as provided above, this mitigation bank permit shall be perpetual unless revoked or modified.

7. Project Oversight. Prior to commencement of mitigation activities authorized in Specific Conditions 10-14 of this permit, the permittee shall retain a qualified mitigation supervisor (QMS) to oversee all aspects of mitigation bank site implementation, management, monitoring, and corrective actions in this permit until final success criteria are met and a long-term management entity is established.

- a. The QMS will serve as the principle contact and manager regarding mitigation activities, including reporting; however, the permittee shall have ultimate responsibility to ensure that the mitigation bank requirements are conducted in accordance with the permit.
- b. Within 30 days of issuance of this permit the permittee shall submit the name of the QMS retained to oversee the mitigation work and provide supporting documentation demonstrating that the QMS is authorized and qualified to oversee this work. The QMS must be approved by the Department prior to commencement of the mitigation activities.
- c. Within 30 days of the discharge of any approved QMS, the permittee shall submit the name and supporting documentation of a new QMS to the Department for its review and approval.
- d. The permittee shall have the approved QMS review the conditions of this permit that pertain to environmental improvement. The purpose of this review is to ascertain whether any criteria need to be modified to ensure ecological success. If the Department concurs that any proposed modifications would improve the likelihood of mitigation success, these changes shall be incorporated into this permit as a minor modification.

8. Protection and Preservation. The Nokuse Plantation area shown in Figure 2 has already been protected with a conservation easement that was granted to the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida, a copy of which is contained in the permit application file. This easement restricts development on the site but does not require restoration or enhancement of the property. Thus, prior to the release of credits, the Nokuse

Plantation Mitigation Bank area shall be preserved and protected in accordance with an additional conservation easement granted to the Department of Environmental Protection. A copy of draft language is contained in the permit application file; however, prior to recording the conservation easement, the permittee shall provide the final draft of the easement, survey and title commitment to the Department for approval.

After recording the conservation easement, the permittee shall provide original copies of the following:

- a. A title insurance policy for the easement.
- b. Copies of subordination, release, or joinder agreements for any lien on the property, as identified by the Title Commitment, unless such lien does not adversely affect the ecological viability of the Bank.
- c. A specific purpose survey and sketches of the conservation easement signed by a Florida registered land surveyor.
- d. A clerk-of-the-court certified copy of the conservation easement.

The preservation of the lands has not been assigned any environmental lift in this permit and has not been used to generate credits. Locked gates, fencing as appropriate, signage identifying the Bank, and monitoring shall be implemented in accordance with Attachment A – Security Plan, no later than 30 days after permit issuance.

9. Financial Assurance. The permittee shall provide the Department with the financial responsibility mechanisms required by Rule 62-342.700 F.A.C. The permittee shall secure financial assurance for implementation (construction activities, monitoring, maintenance, and reporting prior to success), and for long-term management activities.

- a. The permittee shall establish the financial assurance for implementation prior to a credit release (Rule 62-342.700 (4), F.A.C.). The permittee may request a partial reduction in the amount of the implementation assurance after the successful completion significant mitigation activities, based upon a revised cost estimate. The permittee may request a release from its implementation financial assurance obligation upon the determination that the bank has attained final success criteria and the long-term management has been properly funded.

- b. The permittee shall establish the financial assurance for perpetual management at least 60 days prior to the withdrawal of credits from the Mitigation Bank (Rule 62-342.700(9), F.A.C.). The amount of financial responsibility provided shall be sufficient to generate annual revenue equal to the anticipated annual cost of perpetual management at an assumed average rate of return of 6% per annum, in accordance with Attachment B and Specific Condition 9.c. below. Prior to the determination of final success in accordance with Specific Condition 22, the long-term management trust fund shall be fully funded in cash.

- c. All cost-estimates shall be reviewed and appropriate financial responsibility adjustments shall be conducted by the banker on a minimum of two-year intervals, in

accordance with Rule 62-342.700 (11) F.A.C. and prior to the final credit release. The cost estimate for the restoration and management activities defined in this permit are provided in Attachment B – Cost Estimate.

d. The Department may draw upon the financial mechanisms required for the bank when the permittee has materially failed to comply with the terms and conditions of the permit and continues to be in noncompliance after thirty (30) days written notice has been provided to the permittee.

e. The interest earned from the principal deposited in the perpetual management trust may be withdrawn for use for long-term management purposes once the mitigation bank has been determined to have attained success criteria and received the final credit release. Disbursement shall be made by the trustee at the written direction of the Department in accordance with the trust agreement.

Mitigation Activities:

Figure 4 shows the existing community types and configuration. The goals of the mitigation activities, schematically represented in Figures 5 and 5a, and defined in Specific Conditions 10-13, are to establish native wetland and upland habitats in the existing silviculture property resulting in the community configuration shown in Figure 6, and described in Attachment C – Target Natural Community Descriptions. The mitigation activities are to be initially implemented by management units as represented in Figure 7 which have been determined based upon existing management roads and fire breaks. Once communities have been re-established, these management units will blend into larger areas based upon the roads and trails which need to be left in place (Figure 8). The mitigation activities are to include harvesting of silviculture pines, planting of longleaf pine, prescribed fire management, abandonment of roads, removal of culverts, herbaceous augmentation, leveling of pine beds, installation of timber bridges, and installation of ditch blocks.

10. Community restoration activities are as follows: (also see Attachment L - 2/12/14 Adaptive Management Addendum – mod -008)

a. Pine and Brush Reduction.

1. Pine Plantation to Wet Flatwoods: Approximately 820 acres of wet pine plantation are shown in Figure 4. Prior to credit release for pine and brush reduction, the planted pine within the wet pine plantation shall be reduced to no more than 75 trees/acre in a manner that is consistent with “Silviculture Best Management Practices for Florida”, 1993, Florida Department of Agriculture and Consumer Services, 98 pp., herein referenced as silviculture “BMPs”. Within the 100-foot area of plantation surrounding the depressional hardwood wetlands (Figure 5), the trees will be further reduced to no more than 35 trees/acre. Precautions to minimize disturbance of groundcover and non-target species will be implemented. These activities will be completed during dry times, to the greatest extent possible, to minimize soil disturbance. Nothing herein

prevents the Bank under the direction of the QMS to further reduce pine canopy in the effort to maximize herbaceous coverage and environmental benefit.

2. Wet Prairie/ Wet Flatwoods Enhancement: Approximately 273 acres of wet prairie and flatwoods are shown in Figure 4. Prior to credit release for pine and brush reduction, the pine within this area shall be thinned/reduced to no more than 35 trees/acre. Given the substantial groundcover in this community, this thinning will be conducted by hand through either girdling and leaving in place or chain saw felling in place. Nothing herein prevents the Bank under the direction of the QMS to further reduce pine canopy in the effort to maximize herbaceous coverage and environmental benefit.
3. Pine Plantation to Mesic Flatwoods: Approximately 618 acres of upland pine plantation are shown in Figure 4. Prior to credit release for pine and brush reduction, the planted pine shall be thinned/reduced to no more than 100 trees/acre using accepted BMPs. Nothing herein prevents the Bank under the direction of the QMS to further reduce pine canopy in the effort to maximize herbaceous coverage and environmental benefit.
4. Hardwood Depressional Wetlands Enhancement: Approximately 27 acres of Depressional Wetlands (gum swamps) are shown in Figure 4. Prior to credit release for pine and brush reduction, the pine shall be thinned/reduced to no more than 15 trees/acre. Trees on the perimeter of these areas will be cut and removed, while those in the interior will be girdled and left standing to minimize impacts to soils.
5. Brush Reduction. Brush reduction will be completed within approximately 82 acres surrounding the Depressional Wetlands (gum swamps), to the greatest degree possible using a combination of mechanical cutting followed by herbicide treatment to retard growth. In addition, where possible and feasible without causing additional rutting, the Bank will either breach or otherwise lower organic berms surrounding the Depressional Wetlands to facilitate the movement of surface water and ground dwelling animals. The areas that are expected to benefit from this additional work are reflected in Figure 5a. This additional work needs to be completed during extremely dry conditions to minimize adverse impacts. This work should be completed prior to the second interim credit release, at the latest.

b. Recontouring of Elevations.

1. Wet Flatwoods. While inspections to date have not revealed substantial adverse effect, in those areas outside of the 100' buffer surrounding the depressional wetlands, the QMS will continue to evaluate need for recontouring of pine beds. In the event inspections suggest they may be contributing to drainage, the QMS will coordinate minor blading perpendicular to the beds in a manner that excavates

elevated ridges and fills depressions, if such activities can be completed in a manner that minimizes impacts to existing herbaceous cover.

2. Wet Flatwoods Surrounding Depressional Wetlands. The pine bedding within 100' surrounding the Depressional Wetlands (Figure 9) will be re-contoured during a period of extreme low rainfall conditions that will allow an excavator to access the areas without causing unnecessary rutting of the soils. This will be accomplished by excavating the ridges of the beds and filling the depressions of the beds in a perpendicular fashion a minimum of 10' wide every 100'. Once completed, these areas will be replanted with wiregrass plugs at a density of 4,000 plugs/acre. The QMS reserves the right to determine on a case-by-case basis if the above activities are expected to result in unacceptable groundcover impacts and should be avoided in a particular area. All areas excluded from this activity will be identified on an exhibit after completion of the other sites. This activity shall be completed prior to a determination of final success.

c. Planting and Seeding.

1. Mesic Flatwoods from Plantation. After the reduction of pines to less than 100 trees/acre as outlined in 10(a)(3) above, but no later than 6 years after permit issuance, 100 longleaf pine seedlings/acre will be planted over approximately 618 acres (total of 61,800 longleaf seedlings) in an irregular pattern.
2. Wet Flatwoods (Hydric Pine Flatwoods) from Plantation. Subsequent to pine reduction as outlined in 10(a)(1) above and two (2) prescribed fires, but no later than 5 years from issuance of permit, the herbaceous ground cover will be reviewed to determine the percent cover of fire dependent herbaceous species. If this cover/density is less than 35%, then the Groundcover Restoration protocol provided in Attachment D, will be implemented in the next planting/seeding season. Herbaceous augmentation is not required at this time. However, the Department reserves the right to re-visit this issue at a later date in the event it is deemed appropriate to augment groundcover to attain final success.
3. Depressional Wetlands and Surrounding Flatwoods in 100' Buffer. Within 2 years of the pine, brush and bedding removal and at least one prescribed burn, the Groundcover Restoration protocol provided in Attachment D will be implemented where herbaceous cover/density is less than 45% (Figure 5). Herbaceous augmentation is not required at this time. However, the Department reserves the right to re-visit this issue at a later date in the event it is deemed appropriate to augment groundcover to attain final success.

11. Exotic and nuisance vegetation control. Invasive exotic and nuisance vegetation, including but not limited to Chinese tallow (*Sapium sebiferum*), cogon grass (*Imperata cylindrica*) and Japanese climbing fern (*Lygodium japonicum*) shall be controlled by appropriate measures including herbicide application and/or physical removal. Exotic and nuisance species control will be conducted under the direction of the QMS. Prior to any treatment event, it will be the

responsibility of the QMS to review the current status of the science to determine the most effective treatment that minimizes non-target impact. These efforts will be fully documented in the monitoring reports detailed in Specific Condition Nos. 26 and 27. An initial survey for exotic coverage shall be completed within 30 days of issuance of the permit. This will entail the identification and GPS location of areas of infestation by species and a recommended action plan which will be submitted to the Department and the MBRT prior to execution for review and approval. Invasive exotic and nuisance species of concern shall be those listed by the Florida Exotic Pest Plant Council (FLEPPC), 2007 (attached and also at Internet: http://fleppc.org/list/2007/07list_ctrfld.pdf) in Category I and II.

12. Fire Management Plan. Prescribed fire shall be implemented in the upland, wet flatwoods and wet prairie communities on a 1-3 year schedule to attain the proposed enhancement, and as a long-term management tool to sustain the proposed communities and function. The site has initially been divided into 28 burn units that have been determined by natural fire breaks (flood plain systems) and existing roads/trails. These burn units correspond to the Management Units defined in Figure 7, and burning shall be in accordance with the approved fire management plan in Attachment E.

Each management unit shall be burned with a maximum return interval of 4 years. If, for any reason, all or portions of the upland, wet flatwoods or wet prairie management units are not burned within 4 years of the day of the previous burn in that management unit(s), the permittee shall provide a report to the Department within 30 days that documents why this permit criterion could not be attained, and assesses the condition and suggested remedies for the management unit.

A conceptual fire prescription is included in the fire management plan; however, each prescribed burn activity will be developed and supervised by a certified burn specialist. Within 30 days following each prescribed burn activity conducted at the bank, the permittee shall submit documentation, signed by the QMS and certified burn specialist, that a burn was conducted, and provide a summary of the unit(s) and acres treated with assessment of burn success, including photographs. For the purposes of this permit, a successful burn shall mean the fire shall carry over a minimum of 70% of each targeted community within the burn unit, and the herbaceous groundcover is regenerating ("greening up") in the burned area.

After substantial community restoration has been completed and roads for timber harvesting are abandoned, these fire management units will coalesce into larger units as depicted in Figure 8.

13. Hydrologic Enhancements. Within 3 years of permit issuance, hydrologic enhancements including the abandonment and removal of approximately 10 acres of dirt roads, the removal of road fill and culverts at 6 creek crossings, the installation of railroad box car bridges at 2 locations, and the placement of ditch blocks in any roadside ditches that prevent flow into natural drainage sloughs or stringers shall be conducted in accordance with Figures 10-14 and the following conditions. During all construction activities, BMPs including silt fences and staked hay bales shall be used as necessary to prevent turbid runoff into adjacent surface waters.

- a. After pine removal activities described in Specific Condition 10.a. have been completed, approximately 10 acres of dirt roads within wetlands will be abandoned and removed as necessary (Figures 10 and 11). This will involve an inspection of each road to determine the specific requirements for removal, which will consist, at a minimum, of grading elevated portions of roads into adjacent borrow ditches, removing fill and culverts from floodplain crossings, and the filling of vehicular ruts. Following this inspection, the final plan for removal will be submitted to the Department as a modification of the permit. In addition, any and all areas that have been negatively impacted by the timber removal will be graded and stabilized to enhance re-vegetation and reduce the potential for future erosion.
- b. Twelve road crossings where the flow is currently impeded to various degrees will be restored by the removal of culverts or the installation of low-water crossings (Figure 10). For culvert removal, the road fill and the culverts shall be excavated to attain adjacent natural grades and the access point will be stabilized (Figure 13A). In either case, fill material shall be removed to an appropriate upland site and care will be taken to leave a surface area that has appropriate soils for colonization by native plants outside any areas of rock, geotextile webbing or filter fabric required for the stability of the crossing.
- c. A railroad boxcar bridge shall be installed at one stream crossing to maintain access within minimal impact on natural contours and vegetation (Figures 10 and 13).
- d. Ditches that appear to have a negative impact on hydrology will either be blocked or filled using existing material onsite to match adjacent elevations, as shown on Figures 10 and 14.
- e. All culverts and rubbish shall be removed from the site to an appropriate upland disposal area. Silt fence shall remain as necessary until such time as all grades have been stabilized, then removed.
- f. The permittee shall submit a detailed report of all restorations within 60 days of completion of the work at each site noted above. In addition, when all hydrologic enhancements are substantially completed, and prior to the credit release associated with the completion of construction, the permittee shall arrange a post-construction site visit that includes the Department, QMS, and any Mitigation Bank Review Team (MBRT) members that are available to review the activities. The permittee shall submit a summary of the site visit for the file to facilitate future compliance reviews.

14. Turbidity Controls. Best Management Practices for the control of turbidity and erosion, and for silviculture associated with pine harvesting, shall be implemented on site. Erosion and turbidity control measures shall be inspected regularly and turbidity monitored as necessary until work has been completed to ensure that the water quality standards are not violated.

The graded areas shall be stabilized within 48 hours of attaining final grades and at any other time necessary to prevent erosion, siltation and turbid discharges into surface waters in violation of state water quality standards.

The following measures shall be taken by the permittee whenever construction activities result in the turbidity levels in surface waters surrounding the project site exceed state water quality standards pursuant to Rule 62-302, F.A.C.:

- a. Immediately cease work contributing to the water quality standard exceedance.
- b. Modify the work procedures that were responsible for the exceedance, install more turbidity controls if necessary, and repair any non-functioning turbidity containment devices.
- c. Notify the Submerged Lands and Environmental Resources Coordination Program at 850-245-8336, or Northwest Florida Office of the Department, within 24 hours of the time the exceedance is first detected.

15. Work schedule. Mitigation activities are expected to occur over a 6-10 year period. The sequence of activities and dates given below are relative estimates to be used as guidelines. Variation in this schedule may be authorized with concurrence of the Department upon written request from the permittee.

Activity	Estimated Completion Date
► Baseline assessments of vegetation.	2007/2008
► Selection/approval of QMS (SC #7)	Completed 5/08
► Fencing and signage of site (SC #8)	Completed 5/08
► Implementation of Security Plan (SC #8)	4/08 and Ongoing
► First Prescribed Fire in Management Units 8 (SC#12)	2008
► Inspect Site for Exotic and Nuisance Species	Spring '08
► Exotic and Nuisance Species Control, as necessary	2008 and Ongoing
► Pine and Brush Reduction (SC #10)	2010
► Monitoring Year 1 / Annual Report Preparation	Fall 2009
► Recontouring of Pine Beds as Necessary (SC #10)	2011
► Installation of 2 Railcar Bridges (SC #13)	2010
► Groundcover Augmentation in Depressional Wetlands and Surrounding Wet Flatwoods (SC #10)	2012
► Monitoring Year 2 / Annual Report Preparation	Fall 2010
► Remove Fill-Road Crossings; Install Ditch Blocks (SC #13)	2011
► First Prescribed Fire in Management Units 1-7, 9-28	2010-2011
► Second Prescribed Fire in Management Units 8	2011
► Monitoring Year 3 / Annual Report Preparation	Fall 2011
► Monitoring Year 4 / Annual Report Preparation	Fall 2012

▶ Second Prescribed Fire in Management Units 9-27	2013
▶ Monitoring Year 5 / Annual Report Preparation	Fall 2013
▶ Groundcover Augmentation in Wet Flatwoods (SC #10)	2014
▶ Monitoring Year 6 / Annual Report Preparation;	Fall 2014
▶ Groundcover/Longleaf Planting-Mesic Flatwoods (SC10)	2015
▶ Monitoring Year 7 / Annual Report Preparation	Fall 2015
▶ Monitoring Year 8 / Annual Report Preparation	Fall 2016
▶ Monitoring Year 9/ Annual Report Preparation	Fall 2017
▶ Monitoring Year 10/Annual Report Preparation.	Fall 2018
▶ Perpetual ecological management.	2018+

After the initiation of the mitigation bank described in Specific Condition 5, the permittee is obligated to perform certain actions. A material part of the reasonable assurances the Department is relying upon in issuing this permit is that the permittee will timely and completely implement all of the conditions in this permit. Failure to timely and completely comply with all of the conditions of this permit may result in a revocation or suspension of the permit, and release and withdrawal of mitigation credits may be suspended.

Banking Operations:

16. As specified in Rule 62-342.470(4) F.A.C., if at any time the bank is not in material compliance with the terms of this permit or subsequent modifications, no mitigation credits may be released or withdrawn. Mitigation credits shall again be available if the permittee comes back into compliance.

17. Assessment of Credits: As a result of mitigation activities, the Nokuse Plantation Mitigation Bank has the potential to provide for a total of 273.83 credits (242.20 Wet Prairie/Wet Flatwoods mitigation credits and 31.63 Forested Wetland mitigation credits) following final bank wide success. Credits were assessed using the Unified Mitigation Assessment Method (UMAM), Chapter 62-345, F.A.C., as shown in Attachment F. These credits will be released incrementally, as detailed in Specific Condition 19.

18. Ledger: In order to track credit releases and withdrawals, the Department and permittee shall keep a ledger indicating all potential, released, withdrawn and available credits. The format for the ledger, indicating potential credits, is attached as Attachment G.

19. Credit Release Schedule. Mitigation credits will be released for use according to the following Credit Release Schedule table based on the timeframes anticipated in Specific Condition 15. The actual credit release will be determined by when the specified activity is completed or criteria achieved, which may be before or after the estimated date. Credit releases shall be in accordance with the following table.

Successive interim credit releases are anticipated to be 2 years apart; however, they may be released on an annual basis provided the criteria in Specific Condition 23 are met.

Task	Specific Conditions	%Credit Release	Flatwoods/Wet Prairie	Mixed Hardwoods	Total Credits
CE; Security; QMS; Financial Assurances	5, 7, 8, 9	10.0	24.22	3.16	27.38
Exotics Control; Pine and Brush Reduction	10,11	10.0	24.22	3.16	27.38
1 st Prescribed Fire; Recontour Beds.	10,12	10.0	24.22	3.16	27.38
Hydrologic Work;	13,14	10.0	24.22	3.16	27.38
Second Prescribed Fire; Groundcover planting	10, 12	10.0	24.22	3.16	27.38
1 st Interim Success	23	10.0	24.22	3.16	27.38
2 nd Interim Success/Brush Reduction	23, 10.a.5	10.0	24.22	3.16	27.38
3 rd Interim Success	23	10.0	24.22	3.16	27.38
Re-assess					
4 th Interim Success	23	10.0	24.22	3.16	27.38
Attainment of final success criteria	22, 10.b.2	10.0	24.22	3.19	27.41
TOTALS		100.0	242.2	31.63	273.83

Upon completion of a credit release activity, the permittee may submit a minor modification request (with fee), along with supporting documentation, for the release of the appropriate number of credits. The Department shall review the documentation, conduct a site visit to determine if the documentation is representative of on-site conditions, and perform a compliance review of the permit, prior to the issuance or denial of the minor modification to release credits. An updated ledger indicating the additional available credits shall be attached to the minor modification.

Prior to the modification request for the forth interim credit release, the permittee shall meet with the Department to re-evaluate permit figures (community configuration) and criteria to determine whether current site conditions accurately reflect permit conditions and are expected to attain success criteria by January 2020. If not, the permittee shall submit a modification request to the Department for any requisite figure, criteria, credit assessment or release schedule revisions before the Department releases additional credits. If the permittee has not attained a modification for final credit release by January 2025, or otherwise obtained a permit modification to revise the schedule, figures, criteria, credit assessment, or management to adjust for revised expectations, in accordance with the permit re-assessment in Specific Condition 21, any potential credits that have not been released shall be forfeited.

20. Mitigation Credit Withdrawal: Withdrawal of the mitigation bank credits as mitigation for wetland impacts shall be accomplished through a minor modification of this permit. Modification requests for credit withdrawal shall not require a modification fee. Minor modification requests shall be submitted by the bank permittee within 60 days of issuance of the permit or agency action requiring credits. The modification request shall include:

- a. a complete list of all Department or Water Management District permits (or other applicable regulatory actions) that require mitigation credits from the NPMB,
- b. the permit number, issue date and environmental permit processor/reviewer,
- c. an identification of the number and type of wetland credits required under each of these permits.

An updated mitigation bank credit ledger sheet shall be included by the Department as an attachment to each minor modification approval for credit withdrawal.

21. Mitigation Service Area: The mitigation service area (MSA) is the geographic area within which adverse impacts may be offset by the bank. The MSA for the Nokuse Plantation Mitigation Bank is depicted in Figure 3. The MSA includes lands within Walton, Washington, Holmes, Jackson, Bay and Okaloosa Counties. The Bank will not be used as mitigation for areas of South Walton County that drain southerly into either the Gulf of Mexico or the Coastal Dune Lakes.

Release and Success Criteria:

22. Final Success. The goal of the mitigation is to rehabilitate or enhance the existing communities shown in Figure 4 into the target communities shown in Figure 6 and as described in Attachment C. The bank shall be deemed successful when all of the following criteria, in addition to the community descriptions in Attachment C, have been met for one full year without intervention in the form of nuisance and exotic vegetation treatment, pine harvesting or replanting of desirable vegetation.

For the purposes of success determination, “woody shrubs” includes those species, typically reduced by fire to coppice, such as gallberry (*Ilex glabra*), fetterbush (*Leucothoe racemosa*, *Lyonia* spp.), yaupon (*Ilex vomitoria*), titi (*Cyrilla racemiflora* and *Cliftonia monophylla*), and wax myrtle (*Myrica cerifera*) that tend to become dominant (weedy) and reduce the diversity of herbaceous species and desirable trees and shrubs in a fire suppressed system. Slash pine is *Pinus elliottii*, loblolly pine is *Pinus taeda*, and longleaf pine is *Pinus palustris*.

- a. Entire Site. Nuisance exotic species listed in FLEPPC are restricted to less than 1% cover in any one acre.
- b. Uplands – Mesic Flatwoods and Sandhills.

1. Less than 100 trees/acre of slash (*Pinus elliottii*) and loblolly pines (*Pinus taeda*) with a d.b.h. $\geq 4''$;
2. A minimum of 50 longleaf pine (*Pinus palustris*) subcanopy and/or canopy trees/acre, but no more than 150/ac. of planted longleaf pine.
3. Fire-adapted, native herbaceous species are of adequate density to carry a prescribed fire over an average of at least 70% of the upland communities.
4. Subcanopy shrub cover/density ($>1''$ and $<4''$ d.b.h.) is less than 35% as determined by a combination of density and coverage estimates.

c. Wet Flatwoods (from Pine Plantation).

1. Less than 75 trees/acre canopy pines (*Pinus* spp.) with a d.b.h. $\geq 4''$.
2. Gallberry, yaupon, wax myrtle, fetterbush, titi and other woody shrubs shall be no taller than the coppice sprouts that could have arisen from root crowns following the most recent successful fire. Areas dominated by woody shrubs (i.e. areas with shrubs averaging 1.5 meters in height and a collective canopy coverage of over 50%) shall be limited to random spots of 1 ac. or less where fire did not burn and shall represent an insignificant feature in this community type.
3. The average cover/density of herbaceous groundcover (including graminoids, forbs and ferns) shall be 70% or greater, with no one monitoring quadrat having less than 50% cover/density, and the collective coverage of *Andropogon* spp. (except *A. liebmannii*) shall not exceed 25% in any one quadrat.
4. Prescribed fire routinely carries over a minimum of 70% of the community type after each burn. The exception to this would be for extremely wet years in which a burn was implemented to comply with the maximum burn intervals stated in the permit even though the conditions were not ideal from a hydrologic standpoint.
5. There is an average of at least of 40 species typical of wet flatwoods and prairie such as those listed in Attachment H). Species may be added to the list with the written consent of the Department.
6. Evidence of flowering by helophytic plant species.

d. Wet Prairie/Wet Flatwoods Enhancement Area.

1. Less than 35 trees/acre canopy pines (*Pinus* spp.) with a d.b.h. $\geq 4''$.
2. Gallberry, yaupon, wax myrtle, fetterbush, titi and other woody shrubs shall be no taller than the coppice sprouts that could have arisen from root crowns following the most recent successful fire. Areas dominated by woody shrubs (i.e. areas with shrubs averaging 1.5 meters in height and a collective canopy coverage of over 50%) shall be limited to random spots of 1 ac. or less where fire did not burn and shall represent an insignificant feature in this community type.
3. The average cover/density of herbaceous groundcover (including graminoids, forbs and ferns) shall be 70% or greater, with no one

monitoring quadrat having less than 50% cover/density, and the collective coverage of *Andropogon spp.* (except *A. liebmannii*) shall not exceed 25% in any one quadrat.

4. Prescribed fire routinely carries over a minimum of 70% of the community type after each burn. The exception to this would be for extremely wet years in which a burn was implemented to comply with the maximum burn intervals stated in the permit even though the conditions were not ideal from a hydrologic standpoint.
5. There is an average of at least of 40 species typical of wet flatwoods and prairie such as those listed in Attachment H. Species may be added to the list with the written consent of the Department.
6. Evidence of flowering by helophytic plant species.

e. Hardwood Depression Wetlands & 100' Buffer Surrounding Depressions.

1. Less than 15 trees/acre canopy pines (*Pinus spp.*) with a d.b.h. ≥ 4 " on average within the Depressional Wetlands and less 35 trees/acre on average within the surrounding 100' buffer.
2. Subcanopy shrub (>1 " and <4 " d.b.h.) cover/density within the buffer and into the edge of the Depressional Wetlands is less than 20%.
3. The average cover/density of herbaceous groundcover (including graminoids, forbs and ferns) shall be 70% or greater, with no one monitoring quadrat having less than 50% cover/density, and the collective coverage of *Andropogon spp.* (except *A. liebmannii*) shall not exceed 25% in any one quadrat.
4. Prescribed fire routinely carries over a minimum of 70% of the perimeter of the depression area and may burn into the depression on occasion. The exception to this would be for extremely wet years in which a burn was implemented to comply with the maximum burn intervals stated in the permit even though the conditions were not ideal from a hydrologic standpoint.
5. Pine bedding within the 100' buffer surrounding each depressional wetland has been re-contoured or evaluated and excluded from re-contouring, in accordance with Specific Condition 10.b.2.

f. Mixed Forest Wetlands and Baygall.

1. Inspections shall indicate that conditions are not exhibiting signs of degradation or impact.
2. Management is appropriate to ensure that plants are reproducing naturally, either by normal, healthy vegetative spread (in ways that would be normal for each wetland species) or through seedling establishment, growth and survival.

g. Hydrologic Enhancements (stream crossing, road removal, ditch blocks).

1. Non-vegetated open water area shall be less than 20%.

2. All slopes are stabilized with native vegetation.
3. Restored/abandoned areas shall not be substantially distinct topographically from the surrounding undisturbed areas.
4. Recruitment of native vegetation is demonstrated.
5. Ditch blocks are in place and stabilized and successfully eliminating water flow through or around the block.

h. UAM Assessment: Using monitoring data and reports and in conjunction with the permittee and available members of the Mitigation Bank Review Team, the Department shall inspect the site and conduct a UAM analysis to ensure that all communities have reached, or are expected to reach and maintain, the “with bank” scores in Attachment F or community descriptions in Attachment C, under the permitted management requirements in Specific Condition 24.

i. Compliance:

1. The permittee has conducted inspections, monitoring and management, including the appropriate schedule of prescribed burns, as defined herein and in the attachments, and has submitted all required reports to the satisfaction of the Department.
2. All security measures are established and in working order.
3. A long term management plan as defined in Specific Condition 24.f. and long term management entity has been submitted and approved, and the long term management trust fund has been funded in compliance with Specific Condition 9.

23. Interim release criteria. Ecological enhancement over time or “trending toward success” provides environmental lift for which credit may be released incrementally prior to achieving all the final success criteria delineated in Specific Condition 22. Forty percent of the total potential credits are reserved for interim credit releases, anticipated for years 2, 4, 6 and 8. However, credits may be released on an annual basis whenever representative monitoring data provided in Annual Reports, as verified by a Department site inspection, indicate that:

- a. There is less than 1% FLEPPC nuisance exotic vegetation cover per acre;
- b. Preservation areas are maintaining or improving in function;
- c. Target pine density in the Mesic Flatwoods, Sandhills, Wet Flatwoods, Wet Prairie and Depressional Wetlands is maintained.
- d. Prescribed burns have been conducted in accordance with the season and schedule described in Attachment E;
- e. The project is in compliance with this permit and subsequent modifications.
- f. For the 1st interim success period, there is at least 35% cover by herbaceous species within wet flatwoods community and ditch blocks and railcar bridges have been installed.

- g. For the 2nd interim success period, there is at least 40% cover by herbaceous species and at least one successful prescribed fire within wet flatwoods community, and all hydrologic enhancements in Specific Condition 13 have been completed and stabilized.
- h. For the 3rd interim success period, there is at least 45% cover by herbaceous species within wet flatwoods community.
- i. For the 4th interim success period, a permit re-assessment, and, as necessary, a modification request as described in Specific Condition 20, shall be submitted, and there is at least 50% cover by herbaceous species and at least two successful prescribed fires within wet flatwoods community.

24. Management and Long-term Maintenance. Monitoring data, observation and the QMS's professional judgment will dictate the type and frequency of management activities described below. Additional brush reduction, exotic species treatment, vegetation seeding or planting, along with fire management, may be required to achieve success and shall be conducted as necessary to ensure that success criteria are maintained in perpetuity. At a minimum, the following activities are required:

- a. Conducting prescribed burns in accordance with the attached plan at a frequency and season optimal to promote desirable vegetation and wildlife, with a minimum of one growing season burn every 4 years;
- b. Conducting exotic and nuisance plant control, as necessary, to avoid infestation of these species. At no time shall the cover of these species exceed 5% in any one acre prior to remedial eradication activities;
- c. Quarterly inspection of the property for signs of trespassing, poaching or dumping and to ensure that the structures and security features are in good working order;
- d. Reporting and timely maintenance, restoration, stabilization or repair of any damaged structures, fencing, equipment, roads or erosion areas identified in the quarterly inspection;
- e. Removing feral/exotic animals that threaten the mitigation activities or success, such as feral hogs;
- f. Re-planting or augmentation of vegetation to maintain or surpass vegetation success criteria; and
- g. Prior to final release, the permittee shall prepare a Department-approved, updated, stand-alone management plan for long-term management to be used as enforceable conditions for the long-term manager.

25. Monitoring. Qualitative and quantitative monitoring of vegetation and community structure shall be conducted for the baseline condition and annually thereafter until the bank is determined to have achieved the success criteria in Specific Condition 22. The Department has reviewed the proposed monitoring plan in Attachment I. This plan has been determined to be substantively adequate to evaluate progress toward restoration goals, identify potential roadblocks or impacts that may hamper attaining those goals, provide opportunities for scientific assessment of wetland functions and processes, and ultimately demonstrate that the Bank's success criteria have been

met. However, after completing the initial baseline monitoring and reporting, and in consultation with the Department, the permittee shall submit, for the Department's written approval, an updated monitoring plan prior to conducting the next annual monitoring for this permit. This plan shall include the following attributes:

- a. a figure showing all sampling locations;
- b. a table indicating all sampling frequencies and/or dates;
- c. a detailed description of all sampling methodologies to be utilized;
- d. samples of field and data tables;
- e. photographic information.

In addition, this monitoring plan shall include a section detailing the proposed analyses and reporting that will be conducted utilizing the collected data. This section shall include:

- f. proposed reporting format;
- g. sample data summary tables and graphs;
- h. proposed analytical assessments and discussion contents; and
- i. a success/progress assessment.

26. Progress Reports. Beginning the first June or December after permit issuance and every 6 months thereafter, the permittee shall submit semi-annual status reports or letters containing the following information regarding the project:

- a. Date permitted activities were begun or are anticipated to begin;
- b. Brief description and extent of construction or management work completed since the previous report or since the permit was issued;
- c. Copies of permit drawings indicating areas where work has been completed;
- d. A description of problems encountered and solutions undertaken;
- e. A brief description of the work and/or site management the permittee anticipates commencing, continuing or completing in the next six months; and
- f. Site management undertaken, including type of management and dates each type was undertaken.

27. Annual Reports. The Annual Report is a summary of the yearly monitoring for success and an assessment of the degree to which the bank is attaining success. This report shall be submitted after completion of the vegetation monitoring (conducted in October or November) and shall be prepared according to the format required and approved in accordance with Specific Condition 25. This report is due by January 31 and shall be submitted annually until the Bank site has been determined to be successful. The Annual Report included with a request for determination of final success in accordance with Specific Condition 22 shall also include the following information:

- a. a summary of all previous Annual Reports, including, as appropriate, timeline graphics;
- b. a list of each success criterion and documentation of how and when it was attained;
- c. a notation of problems encountered in attaining the success criteria and how the problems were solved, and a notation of any exceptionally successful management activity;

- d. a summary of compliance and/or enforcement submittals or actions during the implementation of the bank; and
- e. a stand-alone, updated long term management plan for approval.

This final report shall be submitted to both the Department and the long-term manager.

28. Compliance: Prior to the initial credit release, the permittee shall prepare a checklist showing all compliance activities required in this permit, and the actual or relative dates for these activities. This checklist, with appropriate items “checked”, shall be included with each annual monitoring report submittal and credit release modification request.

FLAWAC Review

The applicant, or any party within the meaning of Section 373.114(1)(a) or 373.4275, F.S., may also seek appellate review of this order before the Land and Water Adjudicatory Commission under Section 373.114(1) or 373.4275, F.S. Requests for review before the Land and Water Adjudicatory Commission must be filed with the Secretary of the Commission and served on the Department within 20 days from the date when this order is filed with the Clerk of the Department.

Judicial Review

Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this action is filed with the Clerk of the Department.

Permit Figures:

- Figure 1 – Position of Bank in Walton County (2/18/2010)
- Figure 2 – Bank Location (STR) in Relationship to Florida Forever CE (2/18/2010)
- Figure 3 – Mitigation Bank Service Area (2/18/2010)
- Figure 4 – Existing Communities Described Using FNAI & FLUCCS (9/24/2016)
- Figure 5 – Proposed Restoration Activities (9/24/2016)
- Figure 5a – Brush Reduction (5/2016)
- Figure 6 – Proposed Communities Described Using FNAI & FLUCCS (2/18/2010)
- Figure 7 – Initial Management Units (2/18/2010)
- Figure 8 – Long-Term Management Units (2/18/2010)
- Figure 9 – Typical Pine Bed Restoration N.T.S.
- Figure 10 – Hydrologic Enhancement Activities (9/24/16)
- Figure 11 – Typical Road Abandonment
- Figure 12 – Typical Wetland/Stream Crossing Restoration (NTS)
- Figure 13 – Typical Box Car Bridge Crossing
- Figure 13A – At Grade Low Water Crossing (5/2016)
- Figure 14 – Typical Ditch Block N.T.S.

Permit Attachments:

Attachment A – Security Plan
Attachment B – Cost Estimates
Attachment C – Target Natural Community Descriptions
Attachment D – Groundcover Restoration
Attachment E – Prescribed Fire Management Plan
Attachment F – UMAM Credit Summary
Attachment G – Mitigation Credit Ledger
Attachment H – Desirable Flatwoods/Prairie Species
Attachment I – Monitoring Plan
Attachment J - January 30 DHS letter
Attachment K - FLEPPC species list
Attachment L - 2/12/14 Adaptive Management Addendum – mod -008

Recommended by: Matt Wilson, ESIII, Submerged Lands and Environmental Resources Coordination Program

Executed in LEON COUNTY Florida.

STATE OF FLORIDA, DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Timothy Rach
Program Administrator
Submerged Lands and Environmental
Resources Coordination Program

Copies furnished to:

DEP, Office of General Counsel
U.S. Army Corps of Engineers
Mitigation Banking Section File

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this modification and all copies were mailed before the close of business on, October 24, 2016, to the above listed persons.

FILING AND ACKNOWLEDGEMENT

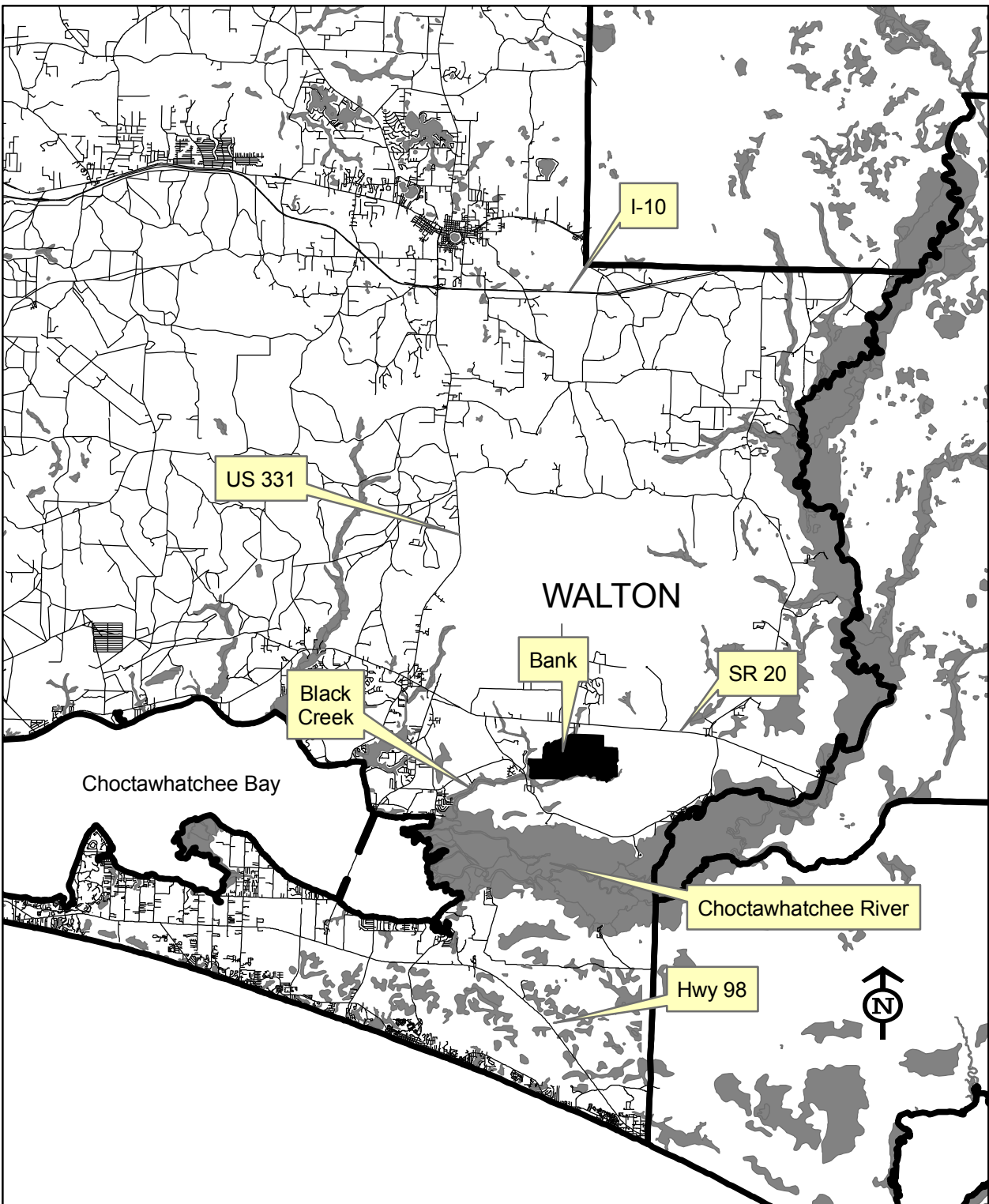
FILED, on this date with the designated Department Clerk, pursuant to §120.52(11), Florida Statutes, receipt of which is hereby acknowledged.



Deputy Clerk

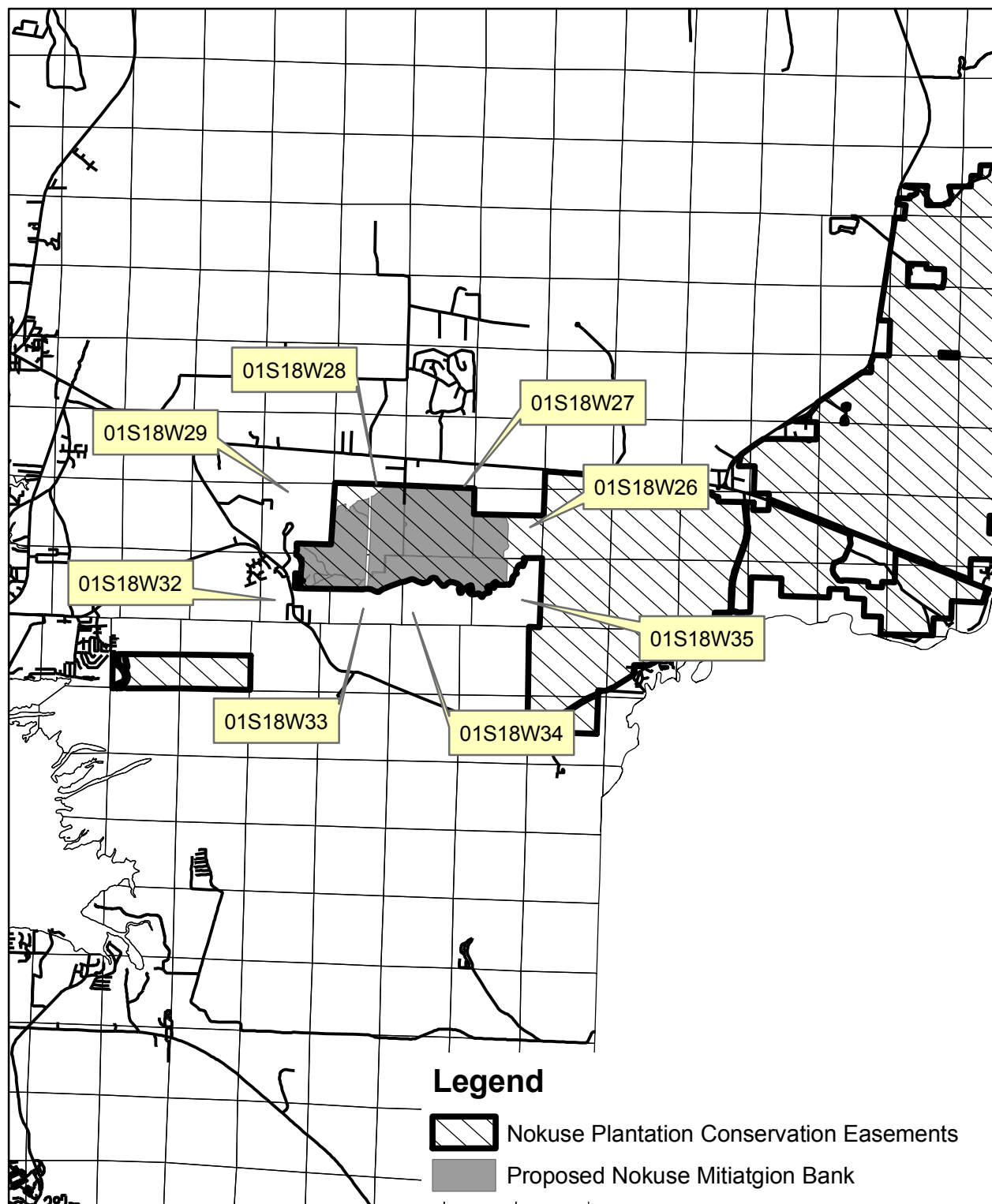
October 24, 2016

Date



Bosso, Dentzau & Imhof, Inc.
1882 Log Ridge Trail
Tallahassee, FL 32312
850-893-7238

Figure 1 - Position of Bank in Walton County
Revised February 18, 2010



0 0.5 1 2 Miles

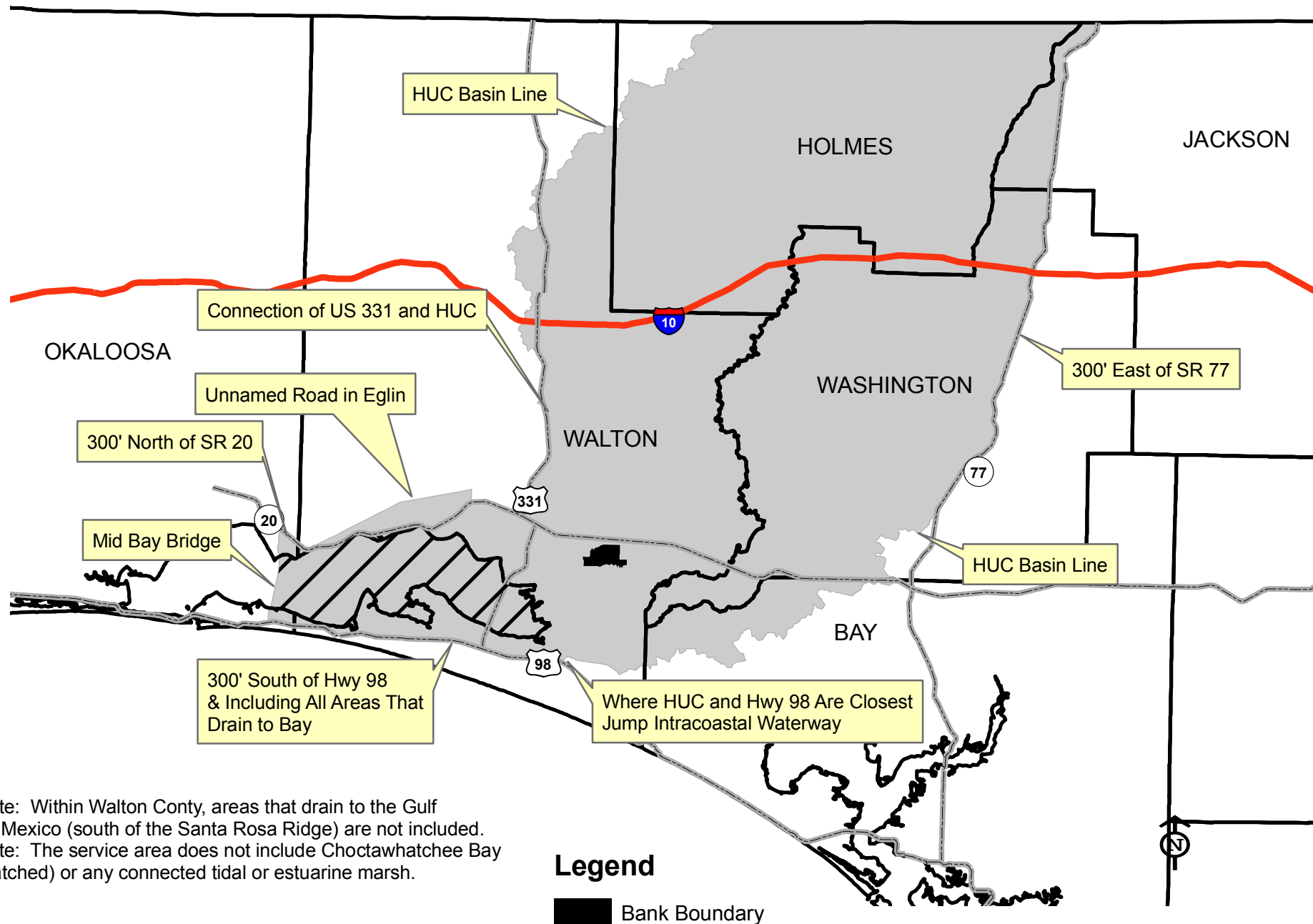


Figure 3 - Mitigation Bank Service Area
 Revised February 18, 2010



Legend

- | | | |
|--|--|--|
|  Boundary |  Ditch |  Baygall - FLUCCS 611/Bay Swamps |
|  Timber Roads/Trails - FLUCCS 8146 |  Upland/Mesic Pine Plantation - FLUCCS 441 |  Mixed Forest Wetlands - FLUCCS 610/Wetland Hardwood Forest |
|  Hardwood Depressional Wetlands - FLUCCS 613/Gum Swamps |  Sandhill Uplands - FLUCCS 412/Longleaf-Oak |  Hydric Pine Plantation - FLUCCS 441 |
| | |  Wet Prairie/Wet Flatwoods - FLUCCS 625/Hybrid Pine Flatwoods |



Dentzau & Associates, Inc.
801 Day Lake Drive
Midland, GA 31820
850-510-1047

Figure 4 - Existing Communities Described Using FNAI Classification and FLUCCS
September 24, 2016

0 900 1,800 3,600 Feet

Legend

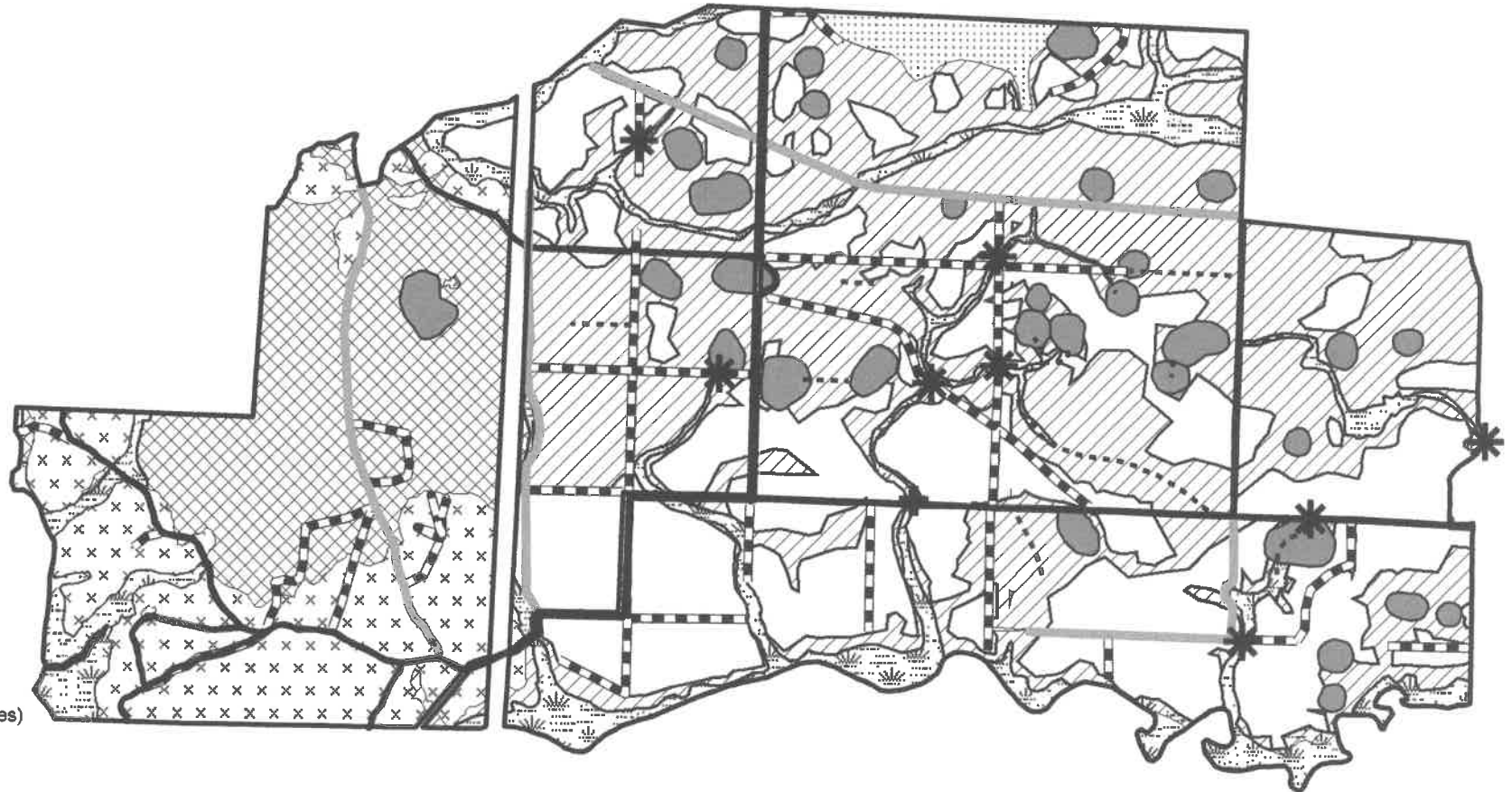
-  Rail Car Bridge
-  Boundary (2,206 acres)
-  Culvert Removal
-  Ditch Fill Completed
-  Ditch Fill Proposed
-  Roads Abandoned Except for Fire Management
-  Roads Abandoned
-  Roads/Trails to Remain for Access
-  Depressional Hardwoods and 100' Buffer - Fire; Pine Reduction (<75-100 trees/acre); Grading of Pine Beds; Herbaceous Augmentation; Mechanical Cutting of Woody Material
-  Sandhill/Mesics Flatwoods - Fire; Pine Reduction to < 100 trees/acre
-  Mixed Forest Wetlands - FLUCCS 610/Wetland Hardwood Forest
-  Baygall/Mixed Wetland Forest - Fire Into Transitional Zones
-  Plantation to Mesic Flatwoods - Fire; Slash/Loblolly Reduction; Longleaf Planting
-  Plantation to Wet Flatwoods - Pine Harvesting; Prescribed Fire; De-bedding and Herbaceous Augmentation (as necessary)
-  Wet Prairie/Wet Flatwoods - Prescribed Fire; Pine Reduction to <35 trees/acre

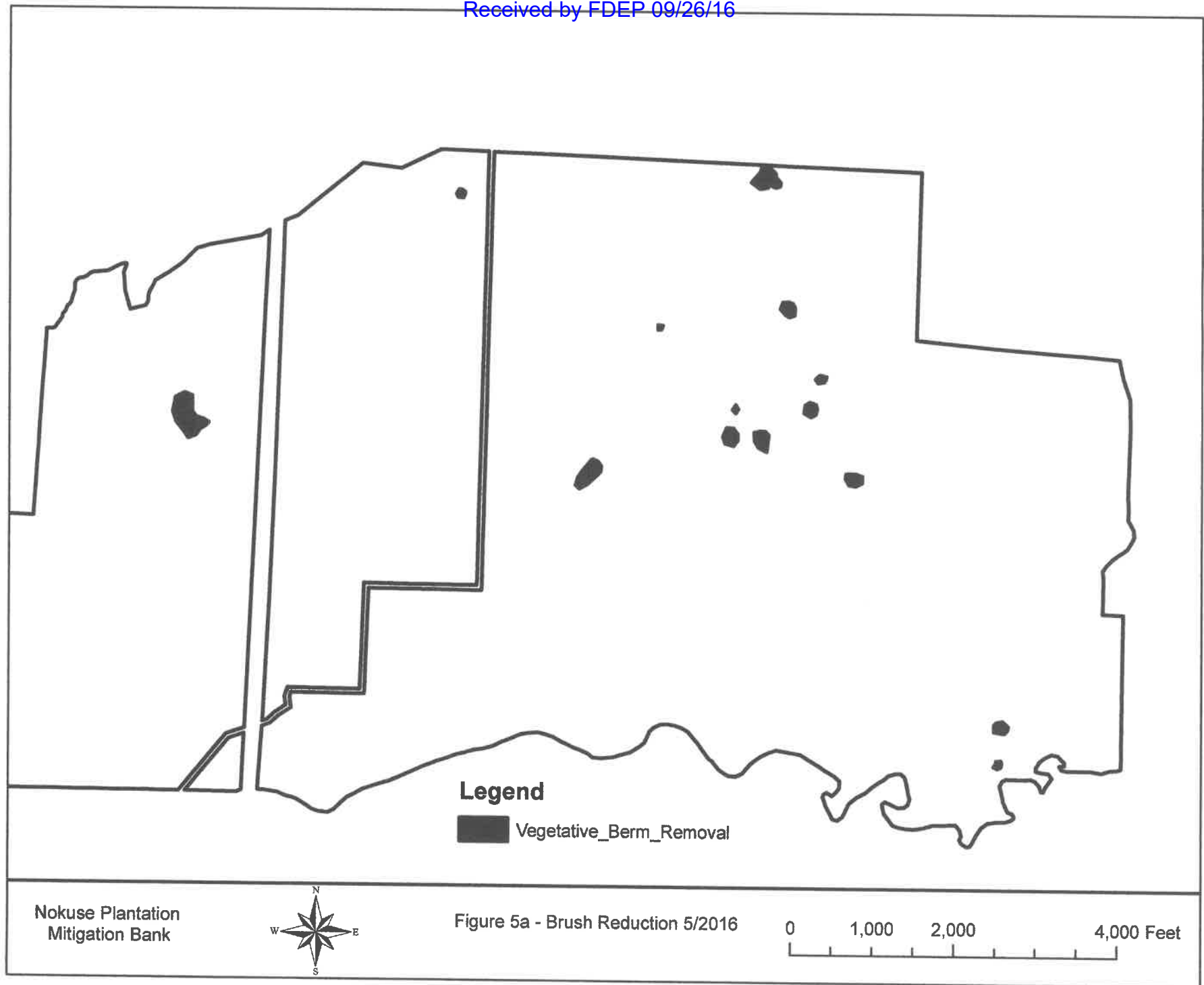


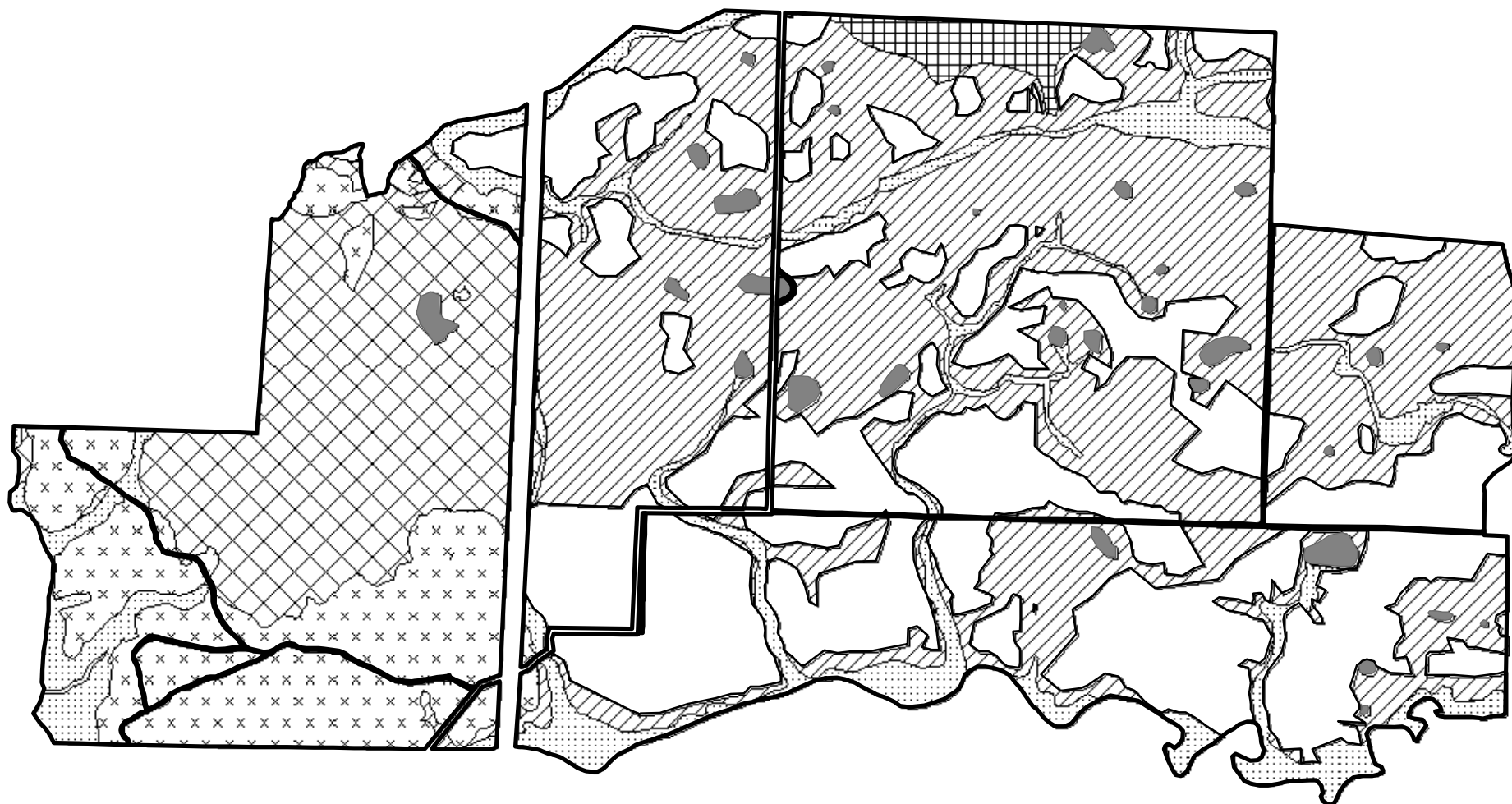
Dentzau & Associates, Inc.
801 Day Lake Drive
Midland, GA 31820
850-510-1047

Figure 5 - Proposed Restoration Activities
September 24, 2016

0 1,000 2,000 4,000 Feet





-  Boundary
-  Timber Roads/Trails Remaining - FLUCCS 8146 (11.7 acres)
-  Proposed Mesic Flatwoods (from plantation)/ FLUCCS 411; Upland Pine Plantation to Flatwoods (618.5 acres)
-  Proposed Hardwood Depressional Wetlands - FLUCCS 613/Gum Swamps (27.6 acres)
-  Proposed Sandhill Uplands/FLUCCS 412; Upland Flatwoods and Sandhill Enhancement (242.1 acres)
-  Proposed Baygall - FLUCCS 611/Bay Swamps (27.9 acres)
-  Proposed Mixed Forested Wetlands - FLUCCS 610/Wetland Hardwood Forest (185.0 acres)
-  Proposed Wet Flatwoods (from plantation)/FLUCCS 625; Pine Plantation to Wet Flatwoods and Prairie (820.1 acres)
-  Proposed Wet Prairie/Wet Flatwoods - FLUCCS 626/Hydric Pine Savanna (273.1 acres)



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 1882 Log Ridge Trail
 Tallahassee, FL 32312
 850-893-7238

Figure 6 - Proposed Communities Described Using FNAI Classification
 and FLUCCS
 Revised February 18, 2010

0 1,000 2,000 4,000 Feet



Area Excluded from Bank but Still Managed

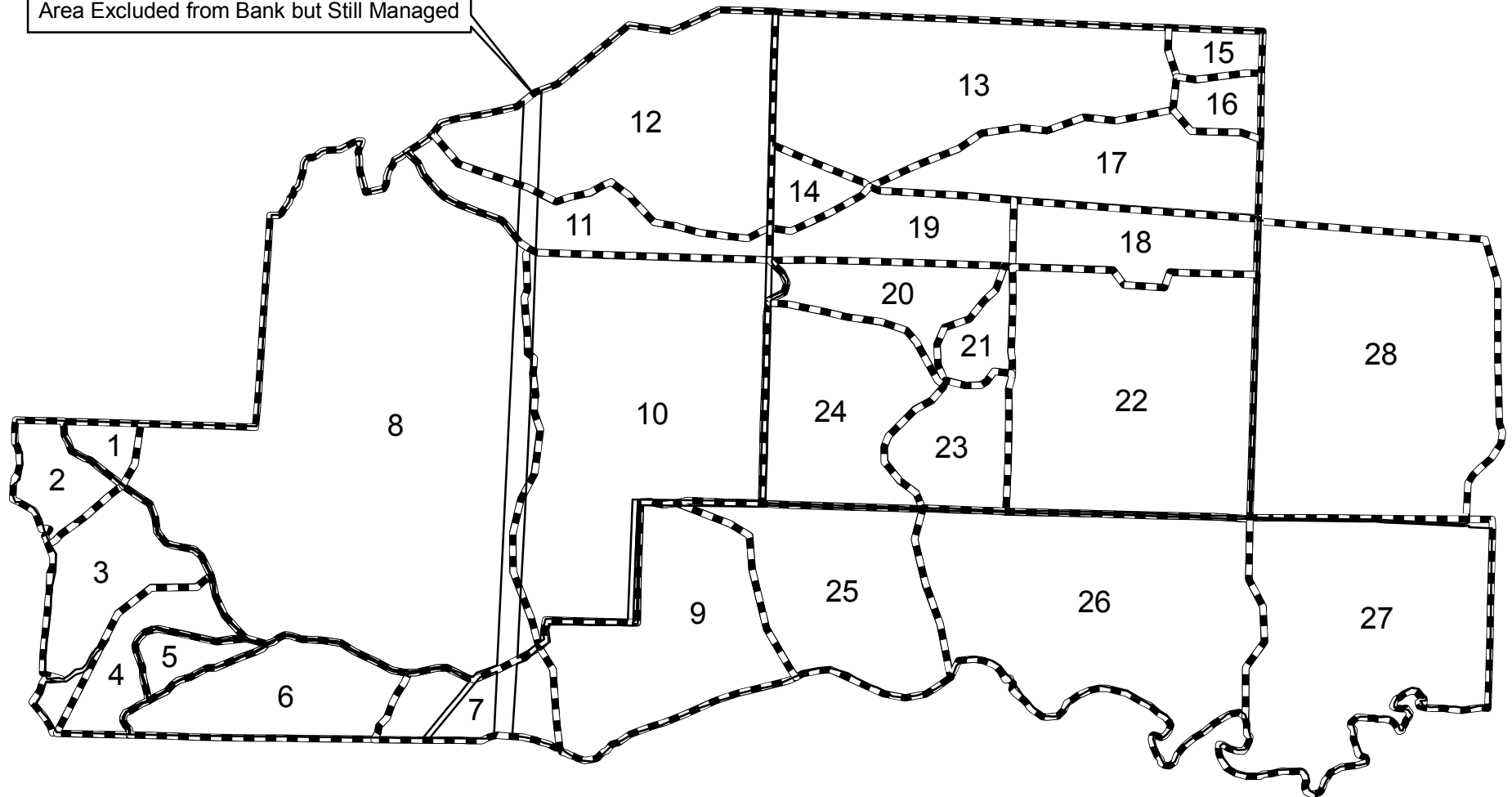


Figure 7 - Initial Management Units
Revised February 18, 2010

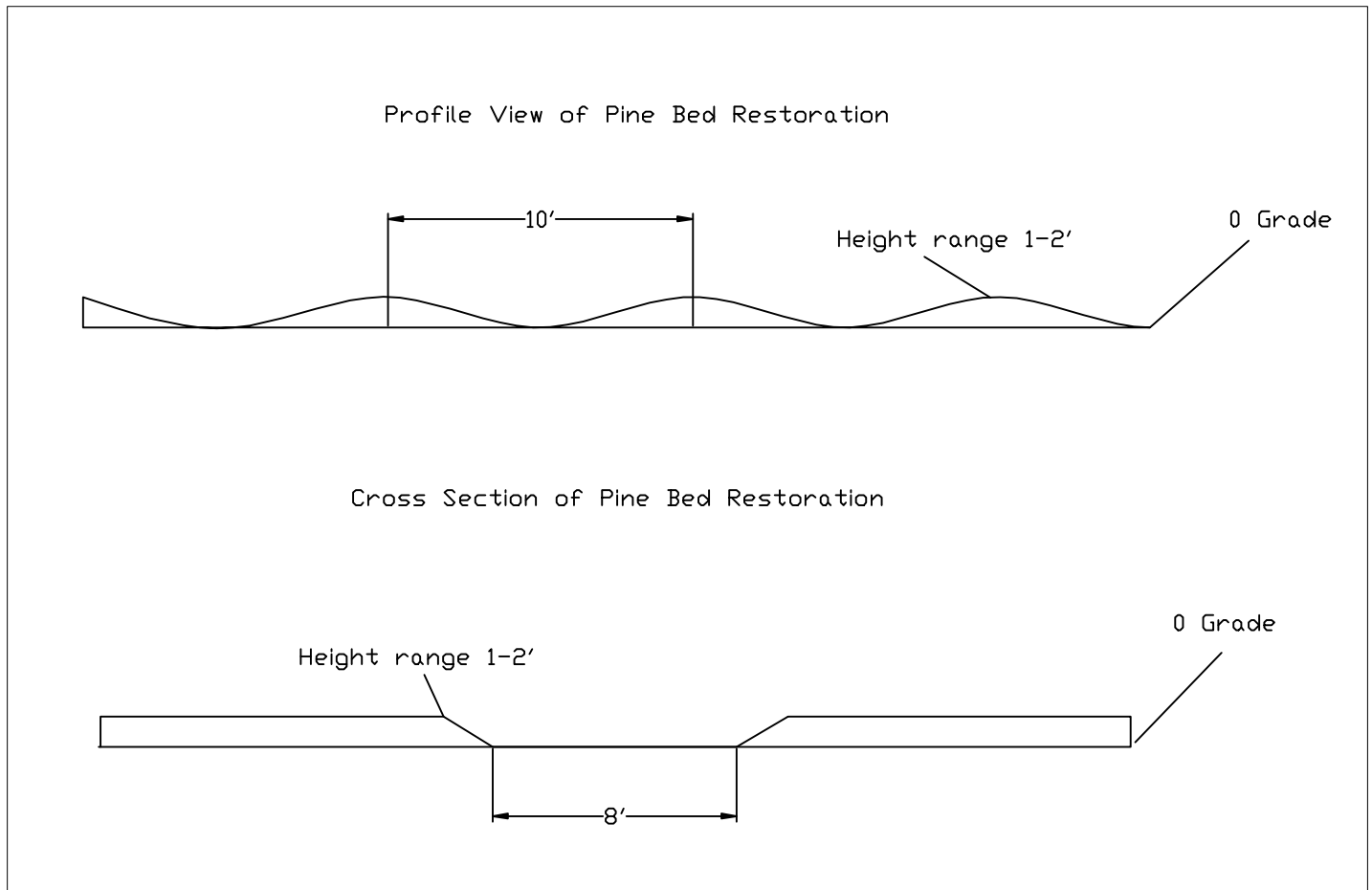
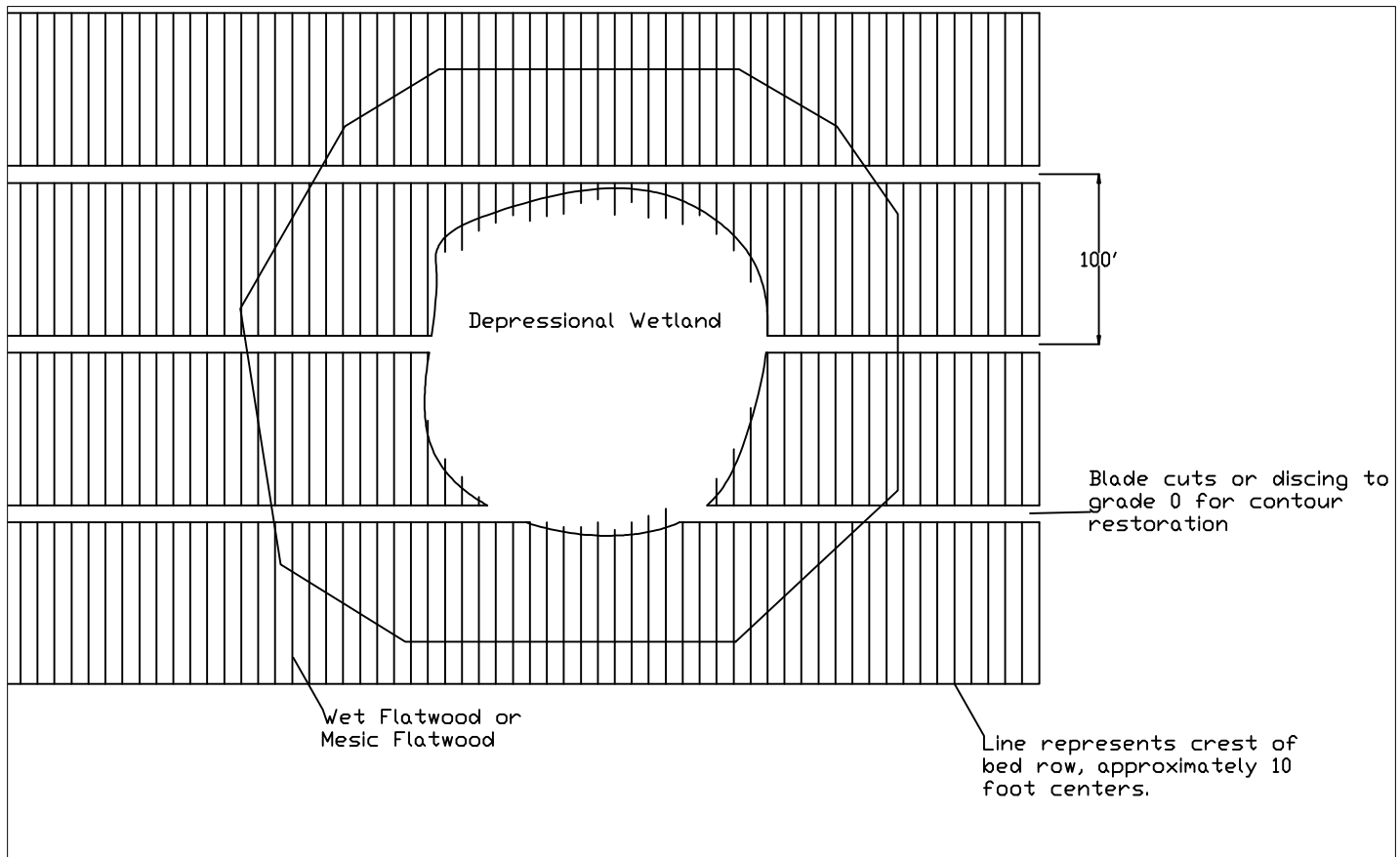
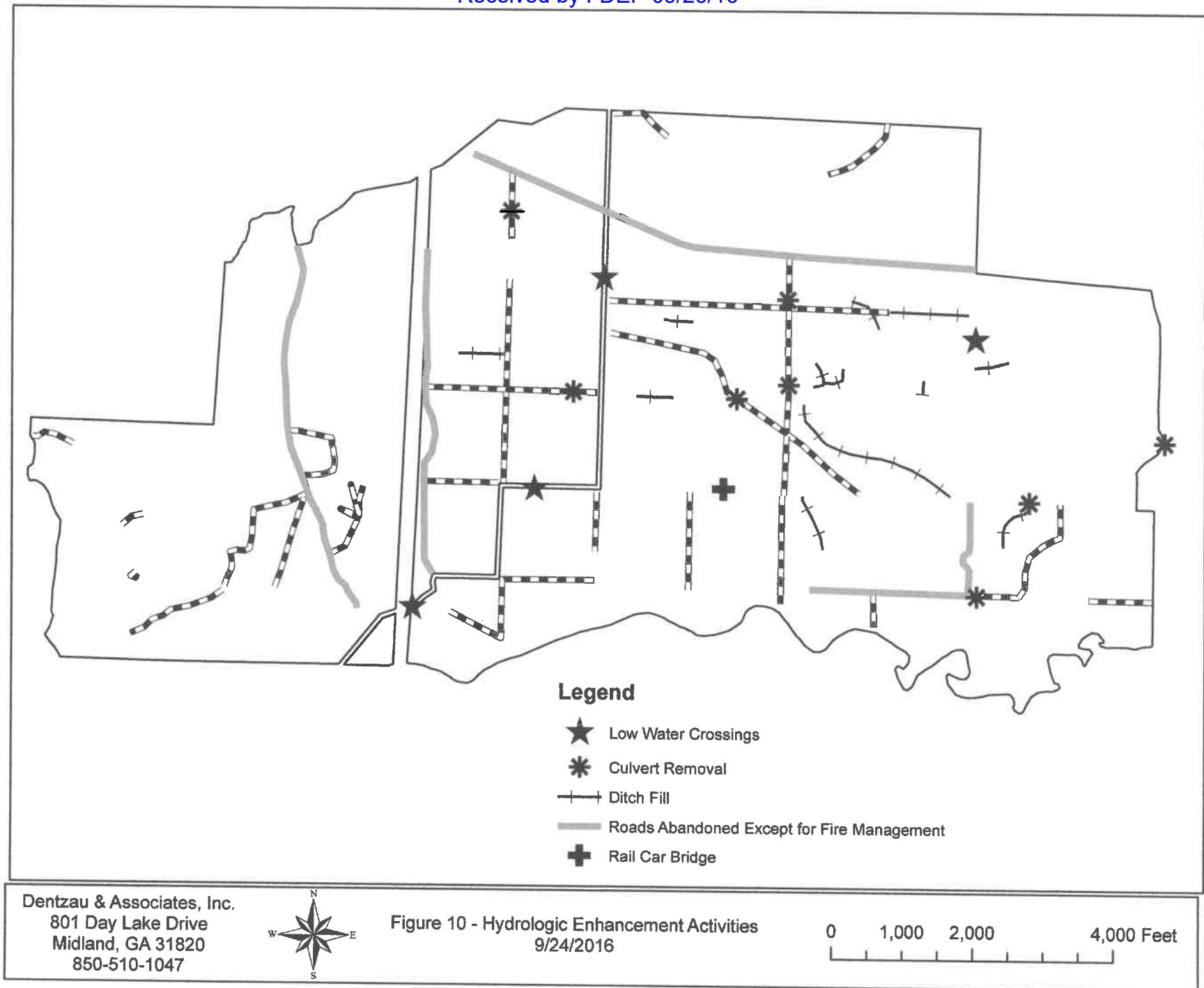
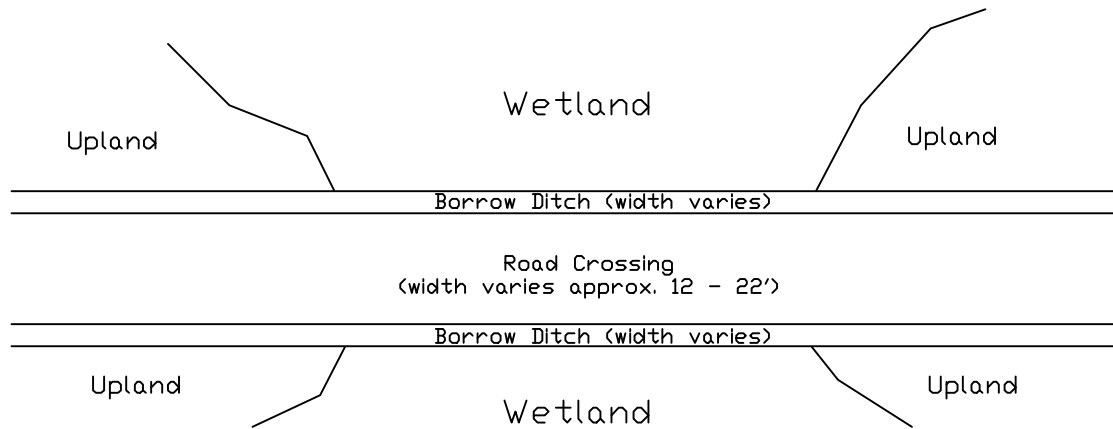


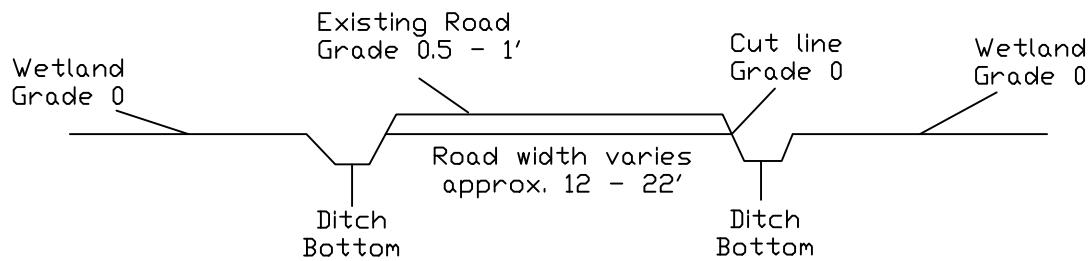
Figure 9 - Typical Pine Bed Restoration N.T.S.



Existing Conditions - Wetland Road Crossing



Existing Condition - Profile View



Completed Conditions - Profile View

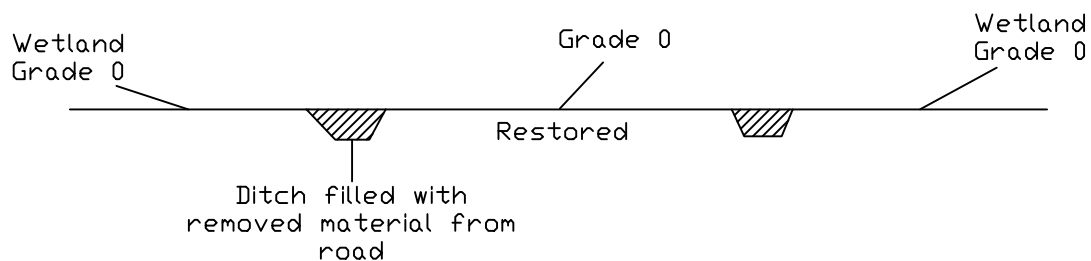
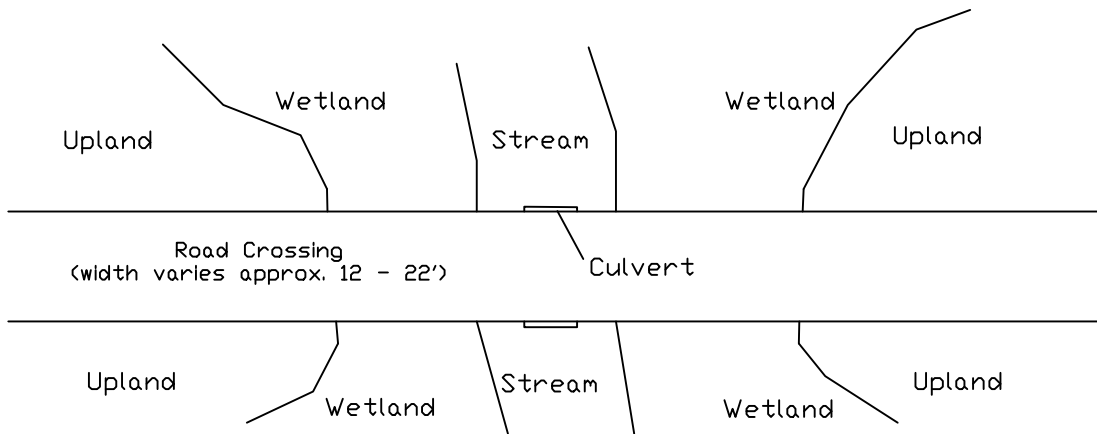
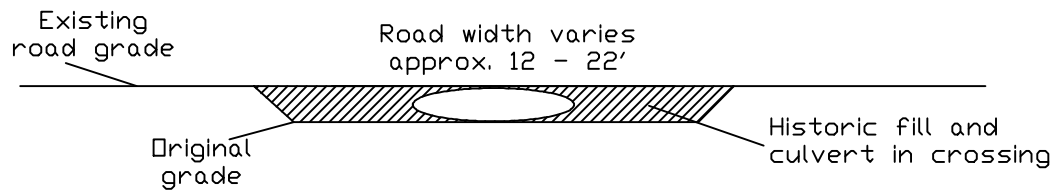


Figure 11 - Typical Road Abandonment

Existing Conditions - Culverted Wetland Road Crossing



Existing Condition - Profile View



Completed Conditions - Profile View

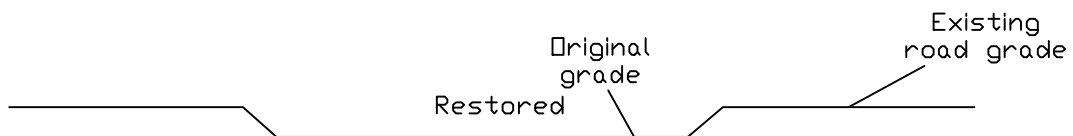
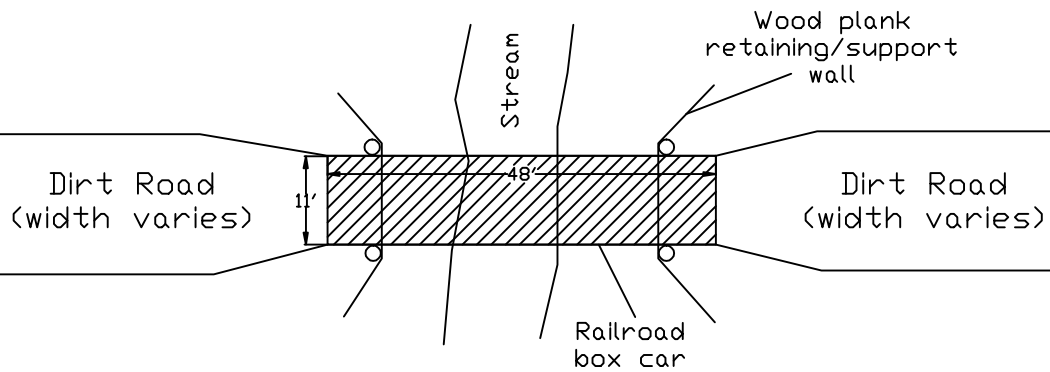


Figure 12 - Typical Wetland/Stream Crossing Restoration (NTS)

Plan View - Boxcar Bridge Crossing



Profile View - Boxcar Bridge Crossing

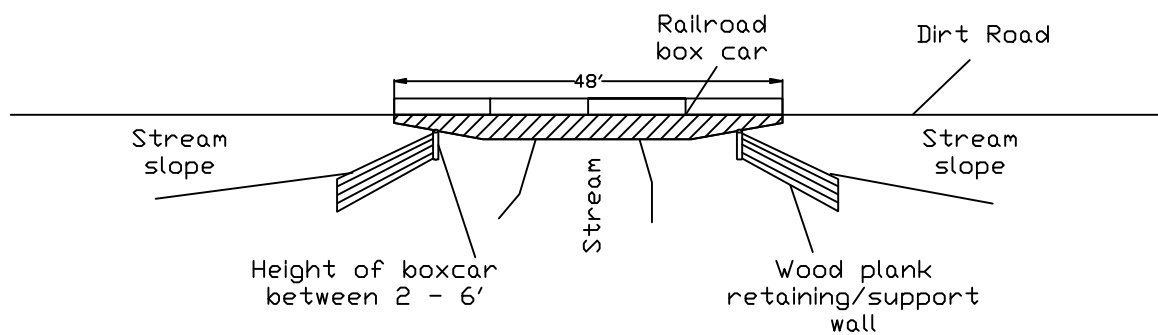
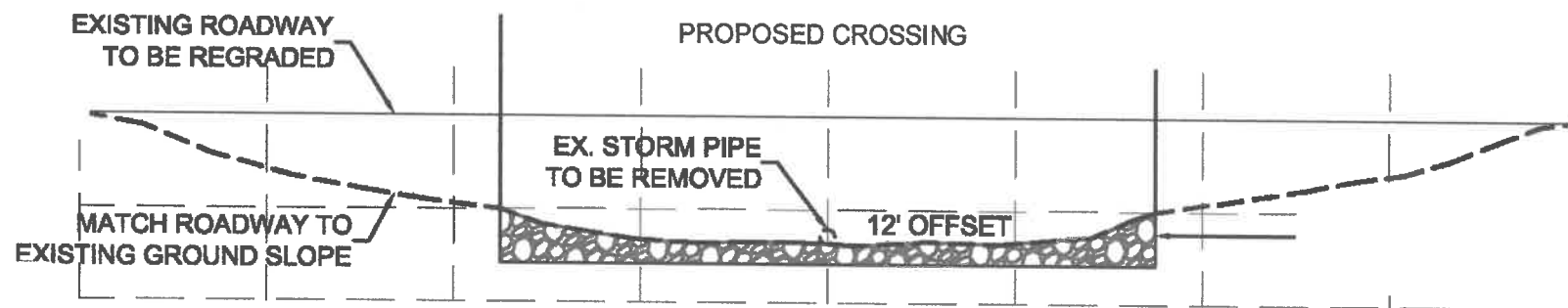


Figure 13 - Typical Box Car Bridge Crossing

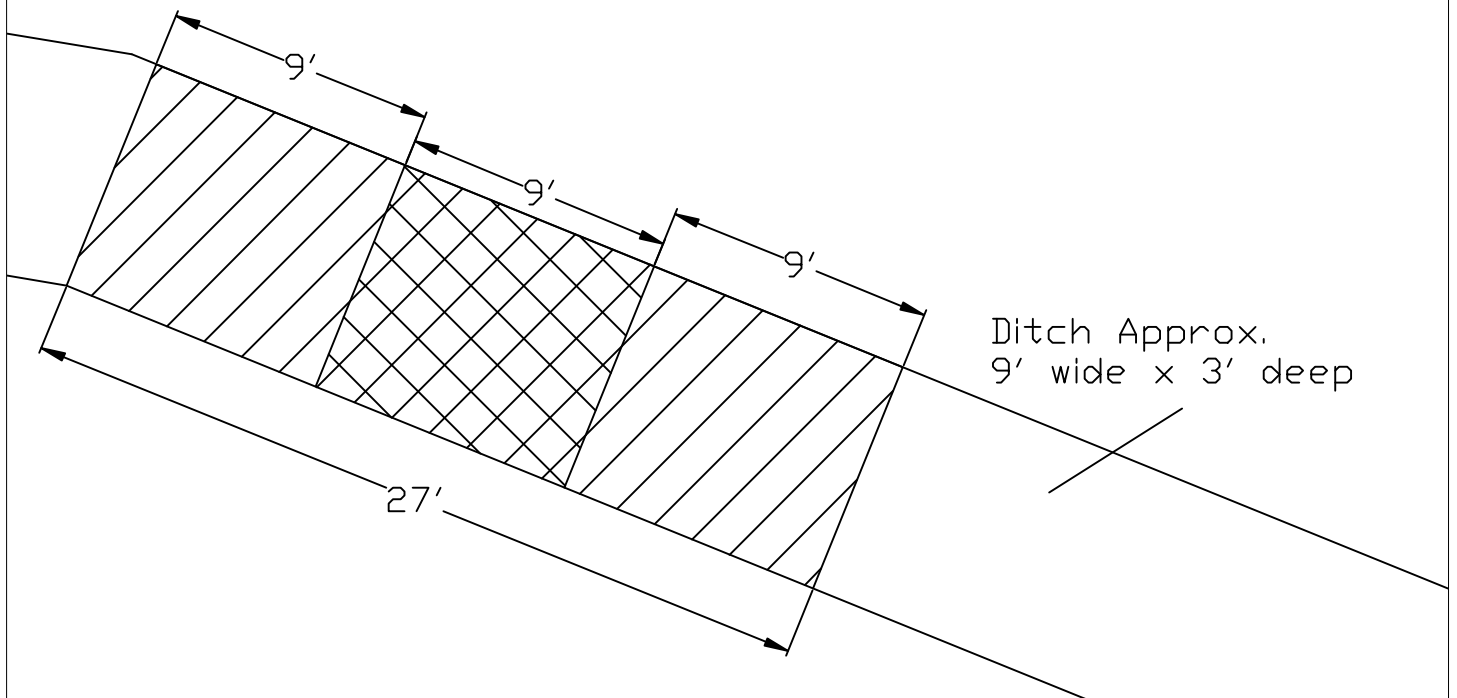
FIGURE 13 A - 5/2016

PROFILE VIEW

AT GRADE LOW WATER CROSSING



Ditch Block Plan View



Ditch Block Profile View

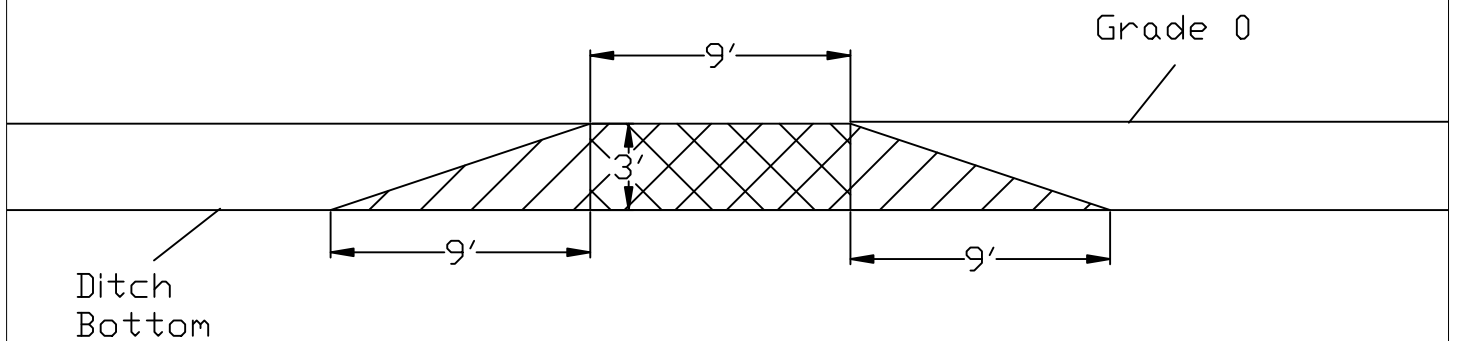


Figure 14 - Typical Ditch Block N.T.S.

Attachment A – Security Plan

The Nokuse Plantation Mitigation Bank (Bank) boundary will be posted on 500' intervals with signage containing the following text:

NO TRESSPASSING
Nokuse Plantation Mitigation Bank Boundary
MC Davis 2006 Trust
SAJ-2007-2663 (MB-DEB)
DEP Permit 283695-001

The Bank will be part of a larger wildlife corridor and the fencing of the perimeter of the boundary is not desirable. Since access to the Bank is through other lands owned by the MC Davis 2006 Trust or by water from Camp or Black Creeks, unauthorized access to the property is unlikely. The attached figure shows the location of locked gates at all roads that might be used for access to the Bank. The Bank will implement the following inspection schedule:

- ▶ Twice monthly inspection of northern and eastern boundaries of Bank that could be accessed by timber roads.
- ▶ Quarterly inspections of the remainder of the Bank boundary, including water frontage.

A log of these inspections (see attached) will be completed and available for review by the Department or the MBRT. A summary of these inspections, incidents documented, gates maintained, etc. will be provided with each semi-annual report to the Department.

Nokuse Plantation Mitigation Bank Security Inspection Report

Date: _____

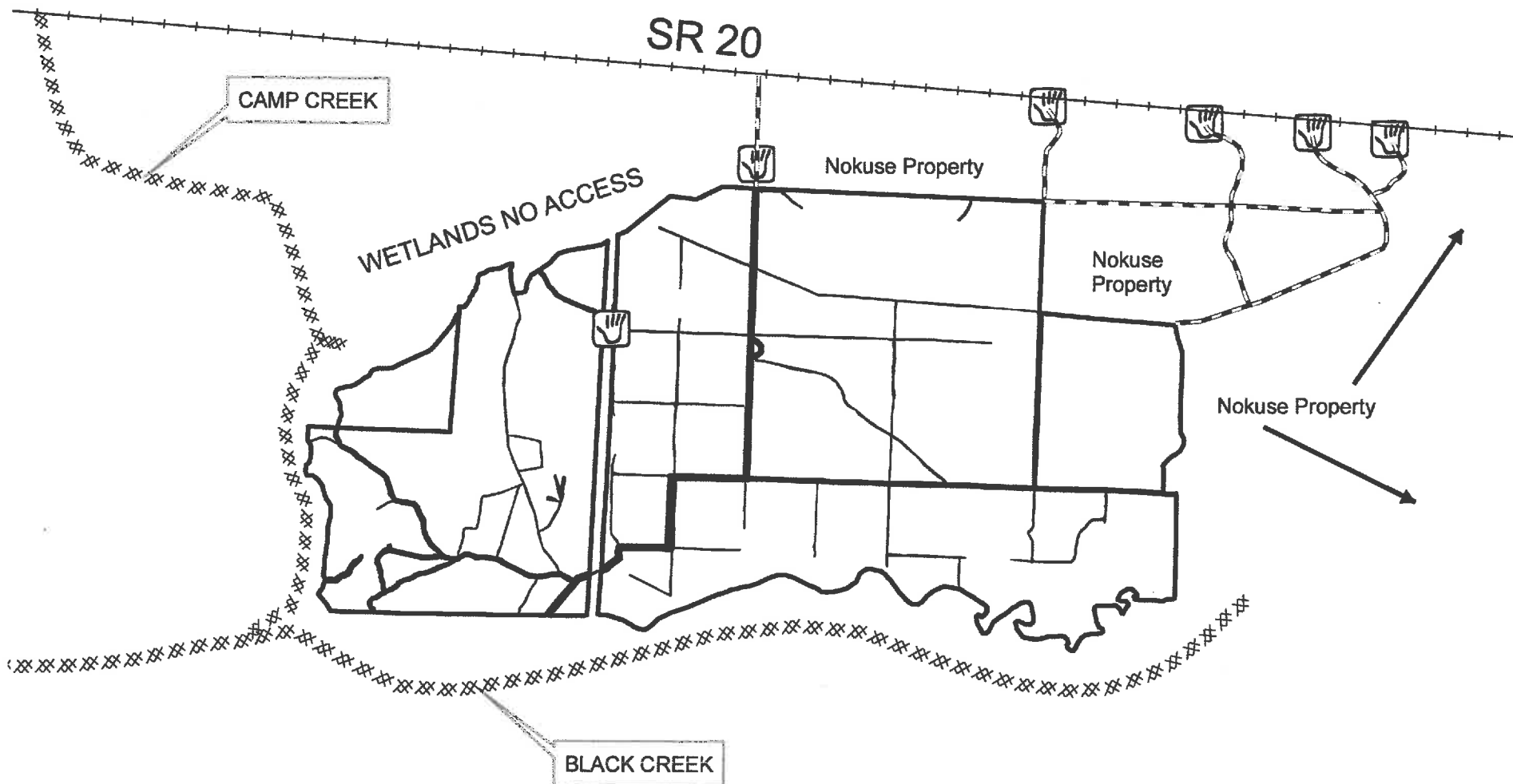
Inspector: _____

Contact Phone No.: _____

Description of Findings:

Signature

Date



Legend

-  Locked Gates
-  Bank Boundary
-  Timber Roads/Trails



Bosso, Dentzau & Imhof, Inc.
 1882 Log Ridge Trail
 Tallahassee, FL 32312
 850-893-7238

Locked Gates to NPMB

0 1,600 3,200 6,400 Feet



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

February 8, 2016

Via Email

Return Receipt Requested

Nokuse Plantation Mitigation Bank
c/o Michael W. Dentzau, PhD
Dentzau & Associates, Inc.
801 Day Lake Dr.
Midland, GA 31820
mike.dentzau@aol.com

Dear Mr. Dentzau:

RE: Nokuse Plantation Mitigation Bank

---ERP No. 283695-001, Walton County

---Approval of Updated Cost Estimates

On January 25, 2016, the Florida Department of Environmental Protection (Department) received your submittal of updated cost estimates for 1) remaining construction and implementation and 2) perpetual management of the Nokuse Plantation Mitigation Bank (NPMB). Additional information was requested by the Department on January 25, 2016. Additional information was provided by NPMB on January 31, 2016. The updated cost estimates were submitted in accordance with Specific Condition 9 of ERP No. 283695-001 and rule 62-342.700(10 and 11), Florida Administrative Code (F.A.C.).

The Department has completed its review of the updated cost estimates and has determined that they are sufficient to fulfill the requirements of rule 62-342.700(10), F.A.C.

Based on the revised cost estimates, the financial assurance required for the remaining construction and implementation of the NPMB is adjusted to **\$271,001.50**, and the required financial assurance for the perpetual management of the BMB is hereby adjusted to **\$251,000.00**. The approved cost estimate is attached to this letter.

Pursuant to rule 62-342.700(11), F.A.C., cost estimates must be updated every two years. Therefore, your next cost estimate update for this mitigation bank will be due by February 8, 2018.

Modified Permit No. 283695-024, Attachment B: Cost Estimates

Nokuse Plantation Mitigation Bank, Walton County

2016 Cost Estimate Update

Page 2 of 2

Please be aware that this update to the financial assurance applies to your State permit only, and does not alter any cost estimates or other financial assurance obligations you may be subject to under federal requirements. It is therefore recommended that you coordinate with the U.S. Army Corps of Engineers prior to making alterations to financial assurance mechanisms that are needed to satisfy Federal requirements.

If you have any questions please feel free to contact me via email or by phone at 850.245.7575.

Sincerely,



Matt Wilson

Environmental Specialist

Copies furnished via E-Mail:

Marie Huber; Mitigation Team - USACE

Matthew Aresco, PhD – NPMB

Mitigation Section File

Nokuse Plantation Mitigation Bank

c/o Michael W. Dentzau, PhD
Dentzau & Associates, Inc.
801 Day Lake Drive
Midland, GA 31820

January 31, 2016

Matt Wilson
Environmental Specialist
Florida Department of Environmental Protection
Mining and Mitigation Program
2600 Blair Stone Road, MS 3577
Tallahassee, Florida 32399-2400

Re: Email Dated 1/27/16

Dear Mr. Wilson,

I am in receipt of your email requesting additional information. I will address issues below and will try to elaborate on our position. When this estimate was originally completed for the Mitigation Bank Permit we discussed that the costs associated would be for a third party to execute in the case that the Bank did not fulfill its obligations and the Department needed to take over the management. Many of these activities are not sourced by a professional engineer and in fact the costs were based upon my firm completing the work. This does not apply to all of the items and I will discuss individually below. I do, however, request that you consider that those activities which are completed by an ecologist should not necessarily require the “stamp of approval” of a PE (which was not required when we received our permit). All the engineer is going to do is ask me – and charge me – and honestly those estimates are not binding under their professional licensure. With that in mind, please see below:

Yes, you are correct, the C&I estimate needs to include another prescribed fire. Also, the total has been adjusted to include the 110% estimate. Please refer to revised table below where new or modified items are highlighted.

Year	Activity	Cost (\$)	
6-10	Third prescribed fire.	27,615.00	This is not a cost that a PE would know or that requires a licensed professional to complete. Given the large acreage, the distance from highways, etc., a value of \$15/acre is appropriate.
6-10	Annual security monitoring (\$7,000/yr.)	35,000.00	Currently this work is completed by Wildlife Officers for the State of Florida in association with other duties they provide to the overall security of the Plantation. As such a separate contract/invoice is not available. If DAI were to assume these responsibilities the monthly monitoring

			would be completed for \$250/event (\$6,000/year), and the quarterly for \$500 (\$1,000/year since events two would be associated with monitoring).
6-10	Quarterly report; w/ecological progress review	12,500.00	This is the current agreed upon price for DAI to complete the work. Since our activities are wrapped in invoices that are more encompassing we have nothing to show for this.
6-10	Exotic control	7,500.00	We virtually have no exotics to deal with so getting a hard contract on this is not possible. This was included as gross over-estimate of what may be needed. If the Department feels it needs to be adjusted upwards we will accommodate.
6	Vegetation monitoring	20,000.00	This is currently the price paid to DAI for the vegetative monitoring and annual report.
6-7	Recontouring around depressional wetlands	20,000.00	This is not something a PE can estimate or certify for us since it varies from site to site and the degree of difficulty relates to the ease of access (drought like conditions). Therefore, if required to get such, it would be extremely inflated to capture any possible scenario. Also, I would like to add, this is not something that the Department has provided any lift for in the UMAM calculations and credit generation. As the goal of Nokuse Plantation is the restoration of native habitats, we believe it is important and request authorization under the instrument to complete the work. Since we currently are receiving no hardwood lift for these activities we believe in reality they should not even need to be part of the estimate. If, however, the Department is inclined to provide some substantial lift that will generate more hardwood credits, we may need to pursue this further. Please consider this and let's discuss further.
6-7	Additional ditch filling	10,000.00	In a similar vein as above, this goes beyond the requirements of the Bank Permit and we received no specific lift for this extra work. Again, we believe it is the best thing to do for the site and are more concerned with having our activities align with the

			permit document.
7-8	Onsite plugging to enhance herbaceous should it be deemed required (\$0.75 plug/installed)	33,750.00	DAI has completed other projects with large amounts of wiregrass plugging for \$.60/plug. The current price of \$.75 allows for a price of \$.55/plug and \$.20 installation – which far exceeds the standard amount.
7-10	Vegetation monitoring/annually	20,000.00	Same argument as above. This price has been set by the Bank and DAI for the first 10 years.
8	Vegetation monitoring	20,000.00	
9	Vegetation monitoring	20,000.00	
10	Vegetation monitoring	20,000.00	
	TOTAL	246,365.00	
	110%	271,001.50	

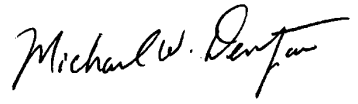
With respect to the perpetual management, please see the table below which has been revised to increase clarity. Prescribed fires should occur on a 2-3 year cycle. This is not always possible due to weather, but we have selected an average 2.5 year return interval. The total cost (today's dollars) for the management was divided by 2.5 to get an annual cost. This is an increase over the earlier estimate. The \$500/event monitoring fee has some extra padding in it based on today's dollars. The exotic infestation is minimal on the site, and treatment every 3-4 years is expected. Of the \$2,000 of contingency provided, \$1,000 was allowed for exotics (gross overestimation).

Activity	Frequency	Annual Cost (\$)
Prescribed Fire Management	2.5 years (\$27,615/event)	11,046.00
Patrolling/Inspection/Status Letters	4 times/year	2,000.00
Repairs/Treatment/Contingency – includes exotic treatment identified and unexpected issues	yearly	2,000.00
Annual Expenditure		15,046.00
Minimum Principal		250,767.00
TOTAL ENDOWMENT		251,000.00

I hope this helps explain our numbers and our position a little better. If you need the Bank to generate contracts for DAI with those items falling under our purview to add strength to this submittal, please let me know. Also, I appreciate your promptness on my submittals and the only reason I have taken to this letter approach versus an immediate email is that my other job duties at the university force me to concentrate these types of discussions to the weekend. I am sure you will thoroughly enjoy your upcoming site visit with Dr. Aresco. I am also sure that you will see that the commitment to the Bank and our goal

Thanks for your consideration in these issues.

Sincerely,

A handwritten signature in black ink, reading "Michael W. Dentzau". The signature is written in a cursive style with a horizontal line underneath it.

Michael W. Dentzau, PhD, PWS

Attachment C- Target Native Communities

The following native communities are targeted after all Bank restoration activities have been completed. Descriptions include FLUCCS codes and the Florida Natural Areas Inventory (FNAI) classification system.

FLUCCS 411 - Pine Flatwoods. This community is synonymous with FNAI Mesic Flatwoods and is proposed to total approximately 618 acres. Currently, these areas are pine plantation uplands, and restoration will reduce the offsite pine species density from over 700 trees/acre to 100 trees/acre. Subsequent to that reduction, 100 longleaf pine seedlings will be established. The ultimate composition is to consist of a mixture of mixture of at least 50% longleaf pine with the remaining canopy being represented primarily by the offsite pines (40%) and scattered hardwoods (10%). After the natural fire regime is re-established, longleaf will continue to regenerate, while the slash and loblolly seedlings produced will be eliminated by fire. In the long-term this will therefore transition into a predominately longleaf flatwood system with herbaceous groundcover adequate to carry fire and maintain the community structure. Groundcover could be expected to contain desirable species as provided in Attachment H, and that are suitable to carry fire in conjunction with the pine needle fuels. Prescribed fires are scheduled to select for woody shrub reduction and wiregrass flowering and enhancement, thus, where wiregrass is currently present, there should be evidence of flowering and gradually increasing cover. Coverage by shrubs will vary depending upon the fire cycle and weather conditions, but shall generally consist of native shrubs that are kept < 1.5m in height and <25% density/cover as a result of fire.

FLUCCS 412 - Longleaf Pine/Oak. This community is synonymous with FNAI Sandhills and is proposed to total approximately 242 acres. Currently these areas are already classified as Sandhills but have an increasing representation by turkey oak, live oak, water oak and laurel oak. The prescribed fire plan, plus selective mechanical removal of hardwoods, will be utilized to generate the target community. The mature restoration will include a canopy represented by at least 66% longleaf, with an understory of shrubs and herbaceous dominated groundcover suitable to carry fire. Since this community type has not been converted to pine plantation, the groundcover would be expected to be more diverse than the Pine Flatwoods referenced above, and include upland representatives from Attachment H, and that are suitable to carry fire in conjunction with the pine needle fuels. Prescribed fires are scheduled to select for woody shrub reduction and wiregrass flowering and enhancement, thus, where wiregrass is currently present, there should be evidence of flowering and gradually increasing cover. . Coverage by shrubs will vary depending upon the fire cycle and weather conditions, but shall generally consist of native shrubs that are kept < 1.5m in height and <25% density/cover as a result of fire.

FLUCCS 610 – Wetland Hardwood Forests. This community is most closely classified as Mixed Forested Wetlands using the FNAI system, and is proposed to total approximately 185 acres. Dominant species include cypress, sweetbay, blackgum, tulip poplar and titi, but these communities also contain scattered pine. Total canopy density is generally greater than 75%. Groundcover would be sparse and consist of seedlings of the canopy species and assorted native ferns. There should be evidence of fruiting and seedling establishment appropriate to the species and cover.

FLUCCS 611 – Bay Swamps. This community is most closely classified as Baygall using the FNAI system, and is proposed to total approximately 28 acres on the bank site, although the system extends further northward. Dominant species include pine, titi and sweetbay with a canopy density generally greater than 75%. Groundcover is minimal except at the ecotonal perimeter.

FLUCCS 613 – Gum Swamps. This community is most closely classified as Depressional Wetlands that are dominated by blackgum and cypress. A total of 27 acres of this community is targeted to be present upon completion of the Bank. These wetland systems are typically depressions located within other wetland systems and have full leaf canopies generally greater than 66%. Groundcover species would typically include species from Attachment H, and would be expected to be found in the transitional zone extending from the flatwoods into the edges of the depressional wetlands.

FLUCCS 625 – Hydric Pine Flatwoods. This community is synonymous with FNAI Wet Flatwoods and is proposed to represent 820 acres. Currently, these areas are pine plantation wetlands and restoration will reduce the pine density initially to 75 trees/acre. The ultimate composition is to consist of a sparse canopy of pines with no more than 75 trees/acre with a mixture of longleaf, slash and loblolly pines. Groundcover could be expected to contain desirable species as provided in Attachment H at an average cover/density of 70% or greater. Coverage by shrubs will vary depending upon the fire cycle and weather conditions, but shall generally consist of native shrubs that are kept < 1.5m in height and <25% density/cover as a result of fire.

FLUCCS 626 – Hydric Pine Savanna. This community is synonymous with FNAI Wet Prairie and is proposed to represent approximately 273 acres. This area is currently represented by increasing pine coverage which will be reduced by fire and mechanical operations. The ultimate composition is to consist of a sparse canopy of pines with no more than 35 trees/acres with a mixture of longleaf and slash pines. Groundcover could be expected to contain desirable species as provided in Attachment H at an average cover/density of 70% or greater. Coverage by shrubs will vary depending upon the fire cycle and weather conditions, but shall generally consist of native shrubs that are kept <1 m in height and <15% density/cover as a result of fire.

Attachment D – Groundcover Restoration

Groundcover restoration will consists of a varied approach depending upon availability of seeds and the specific site conditions. When possible, the Bank proposes to utilize direct seeding from material collected onsite. When this is not possible, the Bank may select to plant plugs either grown from onsite material or from a commercial provider.

Direct Seeding

In order to utilize the direct seeding approach, there must be a viable onsite source of suitable seed. The Bank proposes to utilize the higher quality areas on the western portion of the bank to generate seed for further restoration activities. The following protocol will be adopted:

1. Prescribed fire in donor sites will be completed to the greatest degree possible in July and August to maximize seed production¹.
2. Donor sites will be utilized for 2 collection schedules, and then will be provided a period in which burning will be completed but seed will not be removed. This “regeneration interval” will consist of at least one prescribed fire.
3. Seed will be collected in December following the burn predominately through the use of Flail-Vac Seed Stripper².
4. Seed will be dried under cover for a minimum of 7 days before being transferred to paper bag containers for later distribution.
5. Seed will be “cleaned” of stalks and debris to the greatest extent possible to prevent complications in the sowing aspect of the project.
6. Seed will be separated into “upland collected seed” and “wetland collected seed” to the greatest degree feasible.
7. Prior to seed sowing, the area will be prepared to accept the seed by the removal of woody debris and the scarification of the soils.
8. Only areas that are predominately devoid of wiregrass and other native groundcover will be targeted for direct seeding restoration given the need to “prepare” the soil.
9. Sowing of the seeds will be completed with a Grasslander hauled with a tractor. This provides not only for seed distribution, but also provides rollers to increase the seed-soil contact, and thereby increase the germination rates.
10. Sowing will be completed in late winter following seed collection.
11. A portion of the seed collected will be reserved for a Bank greenhouse to generate plugs of wiregrass and other species.

¹ Outcalt, KW. 1994. Seed Production of Wiregrass in Central Florida Following Growing Season Prescribed Burns. *Int. J. Wildland Fire* 4(1) 123-125.

² A Flail-Vac collection system attached to the front of an all-terrain vehicle was determined by The Nature Conservancy at the Apalachicola Bluffs and Ravines Preserve in Liberty County to provide the best seed collection results.

Planting

In those areas where there is spotty native ground cover that would benefit from augmentation, but would not lend themselves to the intensive preparation needed for direct seeding, the planting of plugs will be potentially utilized. The following protocol will be adopted for plug installation.

1. Plugs shall preferable be grown from native seed collected on Nokuse Plantation or from a local source within 100 miles of the Bank.
2. Plugs will be established in early summer after the resumption of a typical summer rain pattern to minimize the shock of planting.
3. Plugs will be established in the summer following the last prescribed fire in the management unit.
4. Plugs will generally be cluster planted on 1' centers to maximize the amount of blade overlap occurring within the first three years of growth.
5. Since this is only an augmentation method and not designed for denuded areas, it is anticipated that the greatest density required will average less than 1,000 plugs/acre.

Attachment E – Fire Management Plan

Prescribed fire will be the primary long-term management tool employed at the Bank. Recent information suggests that the best control of woody species occurred with frequent burns. As a result, the goal will be to return fire to the individual management units as soon as possible – 1 to 3 years. Of course, fire is weather dependent and it may need to be postponed if there are severe conditions, therefore, we have established a maximum 4 year return interval.

Burns will be completed to the greatest extent possible during the growing season April – September; however, burns in the period of October – March will also be completed to ensure the most frequent burn regime as fuel conditions will allow. Given the bulk of the surrounding properties are also under some type of conservation management, there are not expected to be any long-term restrictions to the application of fire within the various management units.

The following specifics are provided:

1. A prescription will be completed for each burn unit immediately prior to the anticipated burn date.
2. All prescription and burning activities will be completed by a Certified Prescribed Fire Manager.
3. Burning authorization will be requested only if the predicted weather conditions are within the specific prescription parameters, unless deemed appropriate by the Certified Prescribed Fire Manager.
4. When attempting to maximize seed production in a donor management unit, burning will be completed primarily May through August to allow the seed opportunity to mature for a fall/winter harvest.
5. Prescribed fires will be allowed to burn into the hardwood wetlands (both connected and isolated) to the maximum degree possible given the hydrology at the time of the scheduled burn. In extremely dry periods, fire may be prevented from entering connected wetlands for the fear of generating an organic/peat fire.

Prescription Parameters:

Parameter	Low	High
Temperature	50°	95°
Relative Humidity	40%	85%
Wind Direction	Any	N/A
Wind Speed (20 ft. forecast)	3 mph	20 mph
Transport Wind	9 mph	20 mph
Transport Wind Direction	Any	N/A
Mixing Height	1,700	6,500
Day Time Dispersion Index	30	70
KKBDI	200	700

A sample burn prescription follows.

PRESCRIBED BURNING PLAN

Nokuse Mitigation Bank Management Area _____

Forestry District: <u>Chipola</u>		Authorization Number:	
Landowner: MC Davis			
Address: 11490 Emerald Coast Parkway, Suite 300, Miramar Beach, FL 32550		Telephone Number: (850)424-3240 ext:	
- LOCATION -			
County: Walton	Section	Township	Range
	28, 29, 32, 33	1 S	18 W
Latitude		Longitude	
Deg:	Min:	Sec:	Deg:
Acres to Burn: 300	Distance to Plow: 4 miles	Previous Burn Date: 6/9/03	
Stand Description: Wet flatwoods and mesic flatwoods. Mostly herbaceous fuels, 30% shrub cover; 10% pine/oak cover			
Overstory Type: Pine, oak, some black titi	Understory Type: pine, oak, gallberry, titi	Height to Bottom of Crown: 35' to pine crown	
Fuel Description: mostly grasses and herbs.		Fuel Model: 2	Topography and Soil:
Purpose of the Burn: ecological burn/wiregrass seeding		Burn Objectives: maximum coverage; shrub reduction;	
Firing Techniques & Ignition Methods: backing, followed by strip head fires.			
Personnel Needs: 3 burners, 2 spotters		Equipment Needs: 5 radios, 3 dt, 2 4x4 ORV, weather gear, axe, flappers, first aid kit,	
Maximum Crown Scorch Acceptable: 50		Passed Smoke Screening System: ☐ YES ☐ NO	
List Possible Smoke-Sensitive Areas: Possible smoke sensitive buffer area to the south. Use a south, southeastern or southwester wind to minimize. See attached map.			
Special Precautions: KBDI < 650; < 10 DAYS SINCE LAST RAIN			
Adjacent Landowners to Notify: Miller Family			

WEATHER FACTORS	PREFERRED	ACTUAL
Surface Winds	SW, S, SE	
Transport Winds	SW, S, SE > 4mi/hr.	
Minimum Mixing Height	1,700 FT	
Dispersion Index (DAY)	30-75	
Dispersion Index (NIGHT)	NA	
Maximum Temperature	95	
Minimum Relative Humidity	40%	
Fine Fuel Moisture	>6%	
Rate of Spread		
Starting Time	9:00	
Burn Technique	backing; strip head	
Flame Length	<15	
MONITORING & EVALUATION PROCEDURES		
PRE-BURN	BURN	POST BURN
Days Since Rain:	Date Burned:	Distance Plowed:
BURN CHECK LIST		
FIRE BOSS: Check 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. ☐ Low Visibility Risk Index checked. ☐ Smoke on the Highway signs in place, if needed. ☐ Test burn performed and fire behavior within expectations.		
CREW BRIEFING		
☐ Objectives of burn. ☐ Exact area of burn. ☐ Hazards discussed (volatile fuels, spotting potential, weak points in perimeter lines, terrain features, etc.). ☐ 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:	Certification Number:	
Title:	Date:	
CERTIFIED BURN MANAGER SIGNATURE:		

Within 14 days following each prescribed fire, a post-burn review of each affected management unit will be completed. This will consist of pedestrian transect along the perimeter of each during which the following information will be collected:

- ▶ Estimate of percent cover of the burn over the unit.
- ▶ Initial estimate of the percentage top kill of hardwoods, as appropriate.
- ▶ Amount of penetration of the burn into long-frequency communities, such as hardwoods and baygall.
- ▶ General comments and conditions.
- ▶ Representative photographs.

These data will be collected on a post-burn monitoring form (see below) and archived in a log book concerning the fire management program to be maintained by the QMS. A summary of these events will be included in the monitoring reports submitted to the Department.

Post Burn Monitoring

Management Unit: _____

Date Burned: _____

Successful Burn ☐ Yes ☐ No

Burn Boss: _____

Date of Follow-up Inspection: _____

Inspected By: _____

1. Estimate the effective percent cover of the burn.
2. Estimate percentage top kill of woody material.
3. If fire is adjacent to hardwoods, did it penetrate into those systems? ☐ Yes ☐ No
4. Herbaceous material exhibiting "greening up". ☐ Yes ☐ No
5. Do any problem areas exist? ☐ Yes ☐ No
If Yes, please explain:

6. Any fire containment issues? ☐ Yes ☐ No
If Yes, please explain:

7. General Observations (attach photographs):

Prepared By: _____
Name Signature Date

Credit Assessment - DEP UMAM

Nokuse Mitigation Bank - UMAM Assessment														
Assessment Area	AREA (acres)	SCORE						UMAM W/OUT MIT.	UMAM WITH MIT.	DELTA	TIME LAG	RISK	RFG	CREDIT
		AND LANDSCAPE		WATER ENVIRONMEN		COMMUNITY STRUCTURE								
		W/OUT or CUR.	WITH MIT.	W/OUT or CUR.	WITH MIT.	W/OUT or CUR.	WITH MIT.							
Pine Plantation to Wet Flatwoods/Prairie	820.10	8.00	9.00	8.00	10.00	3.00	8.00	0.63	0.90	0.27	1.14	1.25	0.19	153.47
Mixed Wetland Hardwoods Enhancement	185.00	9.00	10.00	9.00	10.00	9.00	10.00	0.90	1.00	0.10	1.14	1.00	0.09	16.23
Depression Wetland Enhancement	27.60	8.00	10.00	9.00	10.00	8.00	10.00	0.83	1.00	0.17	1.14	1.00	0.15	4.04
Baygall Enhancement	27.90	8.00	9.00	10.00	10.00	9.00	10.00	0.90	0.97	0.07	1.14	1.00	0.06	1.63
Upland Pine Plantation to Sandhill/Flatwoods*	618.50	8.00	9.00			6.00	8.00	0.70	0.85	0.15	1.00	1.25	0.12	74.22
Wet Prairie Enhancement	273.10	9.00	9.00	9.00	10.00	9.00	10.00	0.90	0.97	0.07	1.00	1.25	0.05	14.57
Upland Flatwoods/Sandhill Enhancement*	242.10	10.00	10.00			8.00	9.00	0.90	0.95	0.05	1.00	1.25	0.04	9.68
TOTALS**		2194.30												273.83
Yellow = direct wet flatwoods/wet prairie credits Green = direct forested wetland credits														
* Credits derived from uplands (total 83.90) are considered as flatwoods/prairie (74.17) and forested (9.73) in the same proportion as the direct flatwoods/prairie:forested wetland credits for an overall total of 242.20 (88.45%) flatwoods/prairie credits and 31.63 (11.55%) forested wetland credits														
** Actual total project acreage of ±2206 includes ~11.7 ac. of roadways to remain, not included in credit acreage.														

Nokuse Plantation Mitigation Bank
Permit # 283695 - Ledger
Modified October 11, 2016

Freshwater Wet Flatwoods/Wet Prairie Credits: Total Potential Credits = 242.2

Release Mod./ Impact Permit	Permit Date	Issuing Agency	Ledger Modification	Credits Added	Credits Used	Balance	Notes
Initial Release	n/a	DEP	02/11/11	24.22		24.22	CE, QMS, Financial
Credit Release	n/a	DEP	03/22/12	24.22		48.44	Pine/brush reduction;exotics
1475	04/09/13	NWFWMD	07/02/13		0.10	48.34	Miramar self storage
1232	12/29/11	NWFWMD	06/24/14		3.14	45.20	FDOT-US 331, Seg 2
1603	07/10/14	NWFWMD	11/03/14		1.11	44.09	Wash Co. Schools-KateSmith
66-192177-004	07/03/14	DEP	11/03/14		2.07	42.02	Gulf Power Co
66-145111-004	09/26/14	DEP	12/12/14		0.10	41.92	Robert Osborn
1664	12/08/14	NWFWMD	01/28/15		1.29	40.63	Retreat at Miramar/Wadleigh
1631	09/30/14	NWFWMD	02/02/15		2.45	38.18	FDOT - us331-Phase C
66-0333933-001	08/28/15	DEP	09/01/15		0.11	38.07	Mark Holloway
66-334082-001-E1	11/17/15	DEP	12/14/15		0.05	38.02	Urbina-Ramirez
66-334084-001-E1	11/17/15	DEP	12/14/15		0.05	37.97	Urbina-Ramirez
IND-131-16960-1	11/18/15	NWFWMD	12/14/15		2.93	35.04	Chandler Huff, HBC Invest. Hold.
Credit Release	n/a	DEP	02/17/16	24.22		59.26	Second Prescribed Fire:ground
IND-091-16869-1	12/08/15	NWFWMD	04/18/16		1.46	57.80	SR 30/Emerald Bay to Tang-O-Me
IND-091-9801-2	02/09/16	NWFWMD	06/24/16		0.24	57.56	Peter Bos, Regatta Bay
66-0255548-001-DF	04/03/15	FDEP	09/07/16		2.95	54.61	WSJS Florida, LLC, dba Rosa del
66-0344870-001-E1	08/30/16	FDEP	10/11/16		0.03	54.58	Glen Eldredge/Alden Lane

Freshwater Forested Wetlands Credits: Total Potential Credits = 31.63

Release Mod./ Impact Permit	Permit Date	Issuing Agency	Ledger Modification	Credits Added	Credits Used	Balance	Notes
Initial Release	n/a	DEP	02/11/11	3.16		3.16	CE, QMS, Financial
Credit Release	n/a	DEP	03/22/12	3.16		6.32	Pine/brush reduction;exotics
313344-001	09/12/12	DEP	11/20/12		0.10	6.22	Kaniaris-Lot 10
1381	08/15/12	NWFWMD	12/14/12		0.20	6.02	Transition Holdings
323056-001	01/14/14	DEP	06/24/14		0.10	5.92	Kaniaris-lot 9
1573	04/25/14	NWFWMD	07/28/14		1.45	4.47	FDOT- 331 fm 20 to OwlsHead
1631	09/30/14	NWFWMD	02/02/15		3.36	1.11	FDOT - us331-Phase C
IND-131-16775-1	08/03/15	NWFWMD	09/28/15		0.09	1.02	Clary-Glenn Funeral Home
Credit Release	n/a	DEP	02/17/16	3.16		4.18	Second Prescribed Fire:ground
IND-091-16869-1	12/08/15	NWFWMD	04/18/16		1.11	3.07	SR 30/Emerald Bay to Tang-O-Me
IND-133-17232-1	04/07/16	NWFWMD	07/28/16		0.53	2.54	SR 77 Phase A from CR 279 to N

Attachment H - Desirable Flatwoods/Prairie Species

<u>Trees (Flatwoods)</u>	<u>COMMON NAME</u>
<i>Acer rubrum</i>	red maple
<i>Ilex cassine</i>	dahoon holly
<i>Ilex myrtifolia</i>	myrtle holly
<i>Magnolia virginiana</i>	sweetbay
<i>Nyssa aquatica</i>	water tupelo
<i>Nyssa sylvatica</i> var. <i>biflora</i>	black gum
<i>Pinus elliottii</i>	slash pine
<i>Pinus palustris</i>	longleaf pine
<i>Taxodium ascendens</i>	pond cypress
<i>Taxodium distichum</i>	bald cypress
<u>SHRUBS (Flatwoods)</u>	
<i>Aronia arbutifolia</i>	red chokeberry
<i>Baccharis angustifolia</i>	false-willow
<i>Clethra alnifolia</i>	sweet pepperbush
<i>Gaylussacia dumosa</i>	dwarf huckleberry
<i>Gaylussacia mosieri</i>	wooly-berry
<i>Hypericum brachyphyllum</i>	St. John's Wort
<i>Hypericum cistifolium</i>	St. John's Wort
<i>Hypericum crux-andreae</i>	St. John's Wort
<i>Hypericum tetrapetalum</i>	St. John's Wort, four-petal
<i>Ilex coriacea</i>	Tall gallberry
<i>Ilex vomitoria</i>	yaupon
<i>Lyonia lucida</i>	fetterbush
<i>Myrica cerifera</i>	wax myrtle
<i>Myrica heterophylla</i>	bayberry
<i>Myric inodora</i>	odorless wax myrtle
<u>FORBES (monocots)</u>	
<i>Aletris aurea</i>	colic-root
<i>Aletris lutea</i>	colic-root
<i>Burmannia capitata</i>	burmannia
<i>Calopogon pallidus</i>	grass-pinks
<i>Calopogon tuberosus</i>	grass-pinks
<i>Cleistes divaricata</i>	rosebud
<i>Eriocaulon compressum</i>	pipewort
<i>Eriocaulon decangulare</i>	pipewort
<i>Hypoxis micrantha</i>	stargrasses, yellow
<i>Hypoxis rigida</i>	stargrasses, yellow
<i>Juncus dichotomus</i>	rush

<i>Juncus effusus</i>	rush
<i>Juncus elliotii</i>	rush
<i>Lachnanthes caroliniana</i>	redroot
<i>Lachnocaulon anceps</i>	bogbutton, white-head
<i>Lophiola americana</i>	golden-crest
<i>Pogonia ophioglossoides</i>	pogonia, rose
<i>Sisyrinchium nashii</i>	blue-eye-grass
<i>Tofieldia racemosa</i>	false-asphodel, coastal
<i>Xyris ambigua</i>	yellow-eyed grass
<i>Xyris baldwiniana</i>	yellow-eyed grass
<i>Xyris caroliniana</i>	yellow-eyed grass, Carolina
<i>Xyris drummondii</i>	yellow-eyed grass
<i>Xyris fimbriata</i>	yellow-eyed grass
<i>Xyris stricta</i>	yellow-eyed grass
<i>Zigadenus densus</i>	crow poison
<i>Zigadenus glaberrimus</i>	deathcamas, atlantic
FORBES (dicots)	
<i>Agalinis aphylla</i>	false-foxglove, scale-leaf
<i>Asclepias longifolia</i>	milkweed, long-leaf
<i>Aster adnatus</i>	
<i>Aster dumosus</i>	aster, bushy
<i>Aster subulatus</i>	aster, saltmarsh
<i>Balduina uniflora</i>	honeycomb-head, one-flower
<i>Bartonia paniculata</i>	screwstem
<i>Bigelovia nudata</i>	golden-rod, rayless
<i>Carphephorus odoratissimus</i>	vanilla plant
<i>Carphephorus pseudoliatris</i>	chaffhead, bristle-leaf
<i>Centella erecta</i>	
<i>Chaptalia tomentosa</i>	sunbonnet; pineland daisy
<i>Cirsium nuttallii</i>	thistle, Nuttall's
<i>Coreopsis linifolia</i>	tickseed, Texas
<i>Desmodium tenuifolium</i>	
<i>Drosera capillaris</i>	sundew, pink
<i>Drosera tracyi</i>	sundew, Gulf coast
<i>Erigeron vernus</i>	fleabane, early whitetop
<i>Eryngium integrifolium</i>	coyote-thistle, blue-flower
<i>Eupatorium leucolepis</i>	thoroughwort, white-bract
<i>Eupatorium mohrii</i>	thoroughworts
<i>Euphorbia inundata</i>	spurge, Florida
<i>Gratiola pilosa</i>	hedgelyssop
<i>Helenium brevifolium</i>	sneezeweed
<i>Helianthus angustifolius</i>	sunflower, swamp

<i>Helianthus heterophyllus</i>	sunflower, wetland
<i>Liatris spicata</i>	gayfeather, spiked
<i>Linum floridanum</i>	flax, Florida yellow
<i>Lobelia brevifolia</i>	lobelia
<i>Ludwigia linearis</i>	ludwigia; water-primrose
<i>Ludwigia linifolia</i>	ludwigia; water-primrose
<i>Ludwigia maritima</i>	seedbox, seaside
<i>Ludwigia pilosa</i>	ludwigia; water-primrose
<i>Oxypolis filiformis</i>	water drop-wort
<i>Pinguicula lutea</i>	butterwort
<i>Polygala cruciata</i>	milkwort
<i>Polygala lutea</i>	milkwort
<i>Polygala ramosa</i>	milkwort
<i>Proserpinaca pectinata</i>	mermaid-weed
<i>Rhexia alifanus</i>	meadow-beauty
<i>Rhexia lutea</i>	meadow-beauty
<i>Rhexia petiolata</i>	meadow-beauty
<i>Sabatia campanulata</i>	rose-gentian
<i>Sarracenia alata</i>	pitcher-plant
<i>Sarracenia psittacina</i>	pitcher-plant
<i>Solidago fistulosa</i>	golde-rod, marsh
<i>Solidago odora</i>	golden-rod
<i>Solidago stricta</i>	golden-rod, willow-leaf
<i>Stokesia laevis</i>	stokesia
<i>Stylosanthes biflora</i>	
<i>Utricularia subulata</i>	bladderwort
<i>Viola lanceolata</i>	violet, lance-leaf
<i>Viola primulifolia</i>	violet, primrose-leaf
<i>Viola septemloba</i>	
FORBES (ferns)	
<i>Lycopodium alopecuroides</i>	clubmoss
<i>Lycopodium carolinianum</i>	clubmoss
<i>Lycopodium prostratum</i>	clubmoss
<i>Osmunda cinnamomea</i>	fern, cinnamon
GRAMINOIDS	
<i>Andropogon capillipes</i>	
<i>Andropogon glomeratus</i>	bluestem, bushy
<i>Andropogon gyrans</i>	bluestem
<i>Andropogon liebmanni</i>	bluestem. Mohr's
<i>Andropogon perangustatus</i>	bluestem, slim
<i>Anthraenantia rufa</i>	silky-scale, purple
<i>Aristida palustris</i>	three-awn grass

<i>Aristida purpurascens</i>	three-awn grass, wand-like
<i>Aristida stricta</i>	three-awn grass, pineland
<i>Arundinaria gigantea</i>	giant cane
<i>Ctenium aromaticum</i>	toothache grass
<i>Dichanthelium aciculare</i>	
<i>Dichanthelium acuminatum</i>	
<i>Dichanthelium consanguineum</i>	
<i>Dichanthelium scabriusculum</i>	
<i>Dichanthelium strigosum</i>	
<i>Dichromena latifolia</i>	white-top sedge, giant
<i>Eleocharis baldwinii</i>	spikerush
<i>Eleocharis quadrangulata</i>	spikerush
<i>Eragrostis elliottii</i>	lovegrass
<i>Eragrostis refracta</i>	lovegrass
<i>Fuirena breviseta</i>	umbrella-sedge
<i>Muhlenbergia capillaris</i>	muhly grass
<i>Panicum anceps</i>	panicum, beaked
<i>Panicum longifolium</i>	panicum, tall thin
<i>Panicum verrucosum</i>	panicum, warty
<i>Panicum virgatum</i>	switchgrass
<i>Paspalum floridanum</i>	paspalum, Florida
<i>Paspalum plicatulum</i>	paspalum, brown-seed
<i>Rhynchospora baldwinii</i>	beakrush
<i>Rhynchospora cephalantha</i>	beakrush, clustered
<i>Rhynchospora chapmanii</i>	beakrush, Chapman's
<i>Rhynchospora ciliaris</i>	beakrush
<i>Rhynchospora compressa</i>	beakrush
<i>Rhynchospora gracilentia</i>	beakrush
<i>Rhynchospora microcephala</i>	beakrush
<i>Rhynchospora oligantha</i>	beakrush, few-flower
<i>Rhynchospora plumosa</i>	beakrush
<i>Rhynchospora rariflora</i>	beakrush
<i>Rhynchospora stenophylla</i>	beakrush, Chapman's
<i>Schizachyrium scoparium</i>	bluestem
<i>Schizachyrium tenerum</i>	bluestem
<i>Scleria baldwinii</i>	nutrush
<i>Scleria ciliata</i> var. <i>elliottii</i>	nutrush
<i>Scleria pauciflora</i>	nutrush
<i>Scleria reticularis</i>	nutrush

Attachment I – Monitoring Plan

The monitoring plan for the Nokuse Plantation Mitigation Bank shall include a combination of quantitative, qualitative monitoring and fixed point photography. Monitoring will include:

1. Qualitative Random Pedestrian Transects
2. Quantitative Assessments Pine Density.
3. Permanent Quantitative Transects of Herbaceous and Shrub Densities.
4. Fixed Point/Fixed Perspective Photographic Stations.

Qualitative Pedestrian Transect

The goal of the Qualitative Pedestrian Transect is to provide the maximum amount of qualitative information over the largest variable area to document the success of the restoration and management activities. A Qualitative Assessment will have the following components:

1. Eleven (11) meandering ~ 1,500 linear foot transects completed annually during October and November.
2. The transects will be randomly located at the start of monitoring in the following proportions:
 - a. Four (4) within Wet Flatwoods.
 - b. One (1) covering Depressional Wetlands and the surrounding Wet Flatwoods.
 - c. One (1) within Wet Prairie.
 - d. Two (2) along the perimeter of Mixed Forested Hardwoods/Baygall.
 - e. Two (2) within Mesic Flatwoods.
3. Once selected the starting points of each will be GPS located and permanently marked with rebar and pvc poles. A general compass heading will be established for each transect that will be followed in subsequent monitoring events. See attached figure for locations of pedestrian transects.
4. Transects will provide comments on listed species, nuisance species, health and reproductive status of vegetation, cover estimates, dominant species, recruitment of new species, hydrologic condition, fuel loads and general condition with respect to target community type.
5. Locations of nuisance species and listed species observed will be GPS located and mapped.
6. For estimates of burn coverage, observations along the entire transect will be used.

7. For estimates concerning herbaceous cover, three (3) random points will be selected prior to commencement and herbaceous cover will be estimated based upon the cover classifications in the attached monitoring form. The area inspected will be approximately 3 m².
8. For estimates concerning shrub cover, the same three (3) points selected above will be used to estimate cover based upon the classifications in the attached monitoring form. The area inspected will be approximately 4 m². Shrubs are to include all woody material greater than 1' in height.
9. Each transect will be accompanied by a data sheet (see below).
10. The purpose of the qualitative information is to provide a visual monitoring of the events over a prolonged period. Sites will be evaluated as to how representative they are of the community being measured, and the degree to which the site is attaining community success. Potential problems and appropriate solutions will be identified.

Qualitative Monitoring Form

Management Unit: _____ Date of Transect: _____

Community Type: _____

Person Completing Monitoring: _____

General Condition of Community Type:

Approximate Coverage of Most Recent Burn:

____ 0-35% ____ 36-70% ____ 71-90% ____ 90%+

Species Present:

Dominant Species:

Exotics Present:

Approximate Herbaceous Ground Cover at Three (3) Random Points along Transect:

Point 1

____ <1% ____ 1-10% ____ 11-35% ____ 36-50% ____ 51-75% ____ 76-90% ____ >90%

Point 2

____ <1% ____ 1-10% ____ 11-35% ____ 36-50% ____ 51-75% ____ 76-90% ____ >90%

Point 3

____ <1% ____ 1-10% ____ 11-35% ____ 36-50% ____ 51-75% ____ 76-90% ____ >90%

Approximate Shrub Cover at Three (3) Random Points along Transect:

Point 1

____ <1% ____ 1-10% ____ 11-35% ____ 36-50% ____ 51-75% ____ 76-90% ____ >90%

Point 2

____ <1% ____ 1-10% ____ 11-35% ____ 36-50% ____ 51-75% ____ 76-90% ____ >90%

Point 3

____ <1% ____ 1-10% ____ 11-35% ____ 36-50% ____ 51-75% ____ 76-90% ____ >90%

Evidence of Flowering By Helophytic Species: _____ YES _____ NO

Ecological Functions Being Maintained: _____ YES _____ NO

Comments:

Permanent Quantitative Quadrants

The Permanent Quantitative Quadrats (PQQ) will consist of the following:

1. Permanently marked and GPS located 60 x 30 meter quadrat. How marked? is there a change to this - something about not leaving rebar around?
2. Nine (9) quadrats within Wet Flatwoods, two (2) quadrats within Wet Prairie, two (2) quadrats within Mesic Flatwoods, and one (1) quadrat within Sandhills (See Figure).
3. Quadrats will be located to the greatest degree possible to cover a uniform representation of the community being sampled (ie. transitional zones between communities will be avoided).
4. Counting the number of canopy pines, by species, with a d.b.h. greater than 4".
5. Counting the number of subcanopy pines, by species, with a d.b.h. between 1" and 4".
6. List of exotic or nuisance species in overall quadrat and estimation of % cover.
7. List of all species within overall quadrat.
8. Within each quadrat, ten (10) randomly selected and permanently located 1 meter squared sub-quadrats to determine herbaceous cover and shrub cover. Percent cover will be determined for the following categories:
 - a. Graminoid
 - b. Herbaceous
 - c. Woody/Shrub
 - d. Wiregrass
 - e. Individual Species of Interest

The interval ranges for cover shall be as follows:

Class	Range of Cover (%)	Mean
6	91-100	95.5
5	76-90	83.0
4	51-75	63.0
3	36-50	43.0
2	11-35	23.0
1	1-10	5.5
0	<1%	0.5

9. List of species in each sub-quadrat.
10. List of exotic or nuisance species in each sub-quadrat.
11. Documentation of listed species within overall quadrat.
12. Sampling will be completed between October and November of any given year, to the greatest extent feasible.
13. The boundary of each 60x30 m quadrat will also be used to establish a line-intercept sampling program. Points at 1 meter intervals along the line will be

monitored, recording all vegetation species intercepting the point. This data will be used to demonstrate density and will be compared to the estimates of cover generated in the individual sub-quadrats. Recording shall be by species.

Herbaceous/Shrub Transects

Three (3) transects will be established that assess restoration surrounding the Gum Swamps and adjacent communities (See Figure). The transects will be a minimum of 100' and will be permanently marked with rebar and pvc.

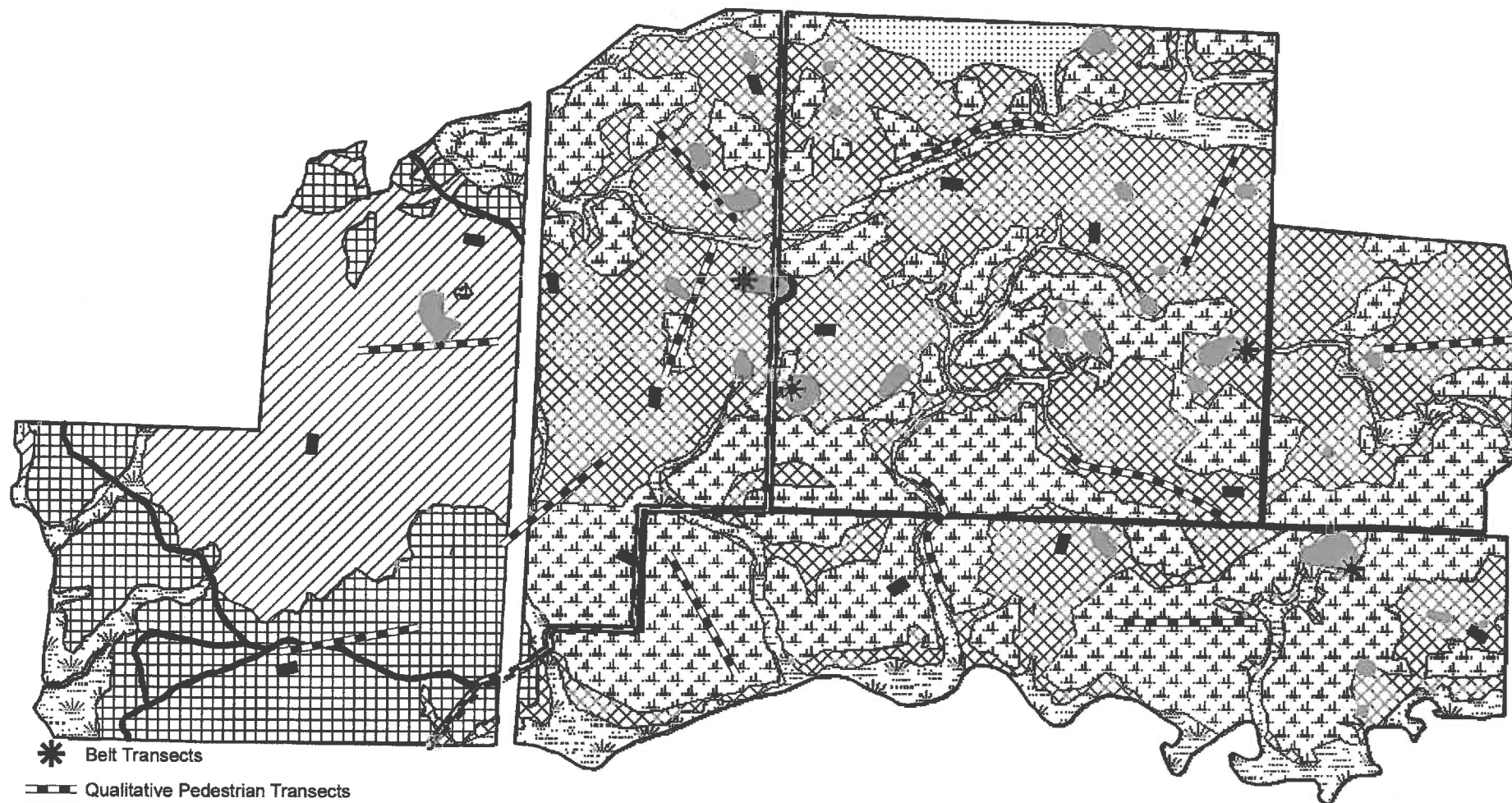
The following data will be collected along the transects:

- Frequency of herbaceous species within a 3' belt.
- Percent cover of herbaceous species within a 3' belt.
- Frequency of subcanopy species within a 3' belt.
- Percent cover of subcanopy species within a 3' belt.
- Frequency of canopy species within a 20' belt.
- Cover of canopy species within a 20' belt.

Permanent Photo Points

Permanent photographic points will be established as follows:

1. Two opposite corners of each permanent 30 x 30 m quadrat, collected annually.
2. Aerially (to the greatest degree possible) of each 10 m subquadrat, collected annually.
3. The beginning and end of each transect, collected annually.
4. Twenty (20) additional locations showing landscape conditions using permanent orientation and perspective that are outside of the above. These stations will be conveniently located along trails and access and will be sampled quarterly.
5. Aerial photographs will be provided whenever the county or other entity releases updates to the public.



Belt Transects

Qualitative Pedestrian Transects

200' x 100' Quadrats

Boundary (2,206 acres)

Proposed Hardwood Depressional Wetlands - FLUCCS 613/Gum Swamps (27.6 acres)

Proposed Sandhill Uplands/FLUCCS 412; Upland Flatwoods and Sandhill Enhancement (242.1 acres)

Proposed Mixed Forested Wetlands - FLUCCS 610/Wetland Hardwood Forest (185.0 acres)

Proposed Baygall - FLUCCS 611/Bay Swamps (27.9 acres)

Proposed Mesic Flatwoods (from plantation)/ FLUCCS 411; Upland Pine Plantation to Flatwoods (618.5 acres)

Proposed Wet Flatwoods (from plantation)/FLUCCS 625; Pine Plantation to Wet Flatwoods and Prairie (820.1 acres)

Proposed Wet Prairie/Wet Flatwoods - FLUCCS 626/Hydric Pine Savanna (273.1 acres)



Bosso, Dentzau & Imhof, Inc.
1882 Log Ridge Trail
Tallahassee, FL 32312
850-893-7238

Monitoring Plan
October 15, 2009

0 1,000 2,000 4,000 Feet



RECEIVED

FEB 06 2008

OFFICE OF SUBMERGED LANDS
AND ENVIRONMENTAL RESOURCES

FLORIDA DEPARTMENT OF STATE

Kurt S. Browning

Secretary of State

DIVISION OF HISTORICAL RESOURCES

Ms. Vicki Tauxe
Florida Department of Environmental Protection
Northwest District
160 Governmental Center
Pensacola, Florida 32502-5794

January 30, 2008

Re: DHR Project File No.: 2007-9338B
Additional Information Received: January 25, 2008
Application No.: 0283695-001
Applicant: MC Davis 2006 Trust
Project: Nokuse Mitigation Bank
County: Walton

Dear Ms. Tauxe:

After reviewing the additional information supplied by Michael Dentzau of Bosso, Dentzau & Imhof, Inc., and discussing the project with staff members, this agency adjusted our requested cultural resource assessment survey. There are eight previously recorded prehistoric and/or historic archaeological sites within the Nokuse Mitigation Bank (Bank), all but one located near the Black Creek drainage (see enclosed USGS quadrangle map indicating the eight sites in the Bank).

Therefore, in order to determine if any of the restoration activities may impact cultural resources in the Bank, we request a professional reconnaissance level cultural resource assessment survey for the southern one-third of the Bank. In addition, these investigations should confirm the location of the eight recorded sites for the Bank land managers and conduct historical archival research for the Bank tract. The pedestrian survey of the southern one-third of the Bank should focus on the Black Creek and Camp Creek drainages, their tributaries, and the immediate upland landforms adjacent to them. After a review of the proposed restoration activities by the consultant identify potential adverse impacts to any of the eight sites and any newly discovered sites, recommendations for avoidance or minimization measures should be generated. If any sites will be adversely impacted because of the nature of the proposed actions, Phase II site testing and evaluations conducted to determine the significance of the sites impacted may be required. The resultant survey report(s) must be sent to this agency for review.

500 S. Bronough Street • Tallahassee, FL 32399-0250 • <http://www.flheritage.com>

☐ Director's Office
(850) 245-6300 • FAX: 245-6436

☐ Archaeological Research
(850) 245-6444 • FAX: 245-6452

☒ Historic Preservation
(850) 245-6333 • FAX: 245-6437

☐ Historical Museums
(850) 245-6400 • FAX: 245-6433

☐ South Regional Office
(561) 416-2115 • FAX: 416-2149

☐ North Regional Office
(850) 245-6445 • FAX: 245-6435

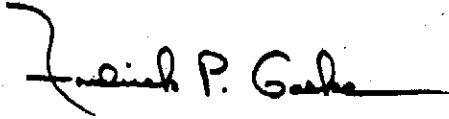
☐ Central Regional Office
(813) 272-3843 • FAX: 272-2340

Attachment J

Ms. Vicki Tauxe
January 30, 2008
Page 2

Therefore, with the condition that the above measures are carried out, the proposed permit project should have no adverse impact on Florida's historic resources. For any questions concerning our comments, please contact Laura Kammerer or Robert Conn by phone at (850) 245-6333.

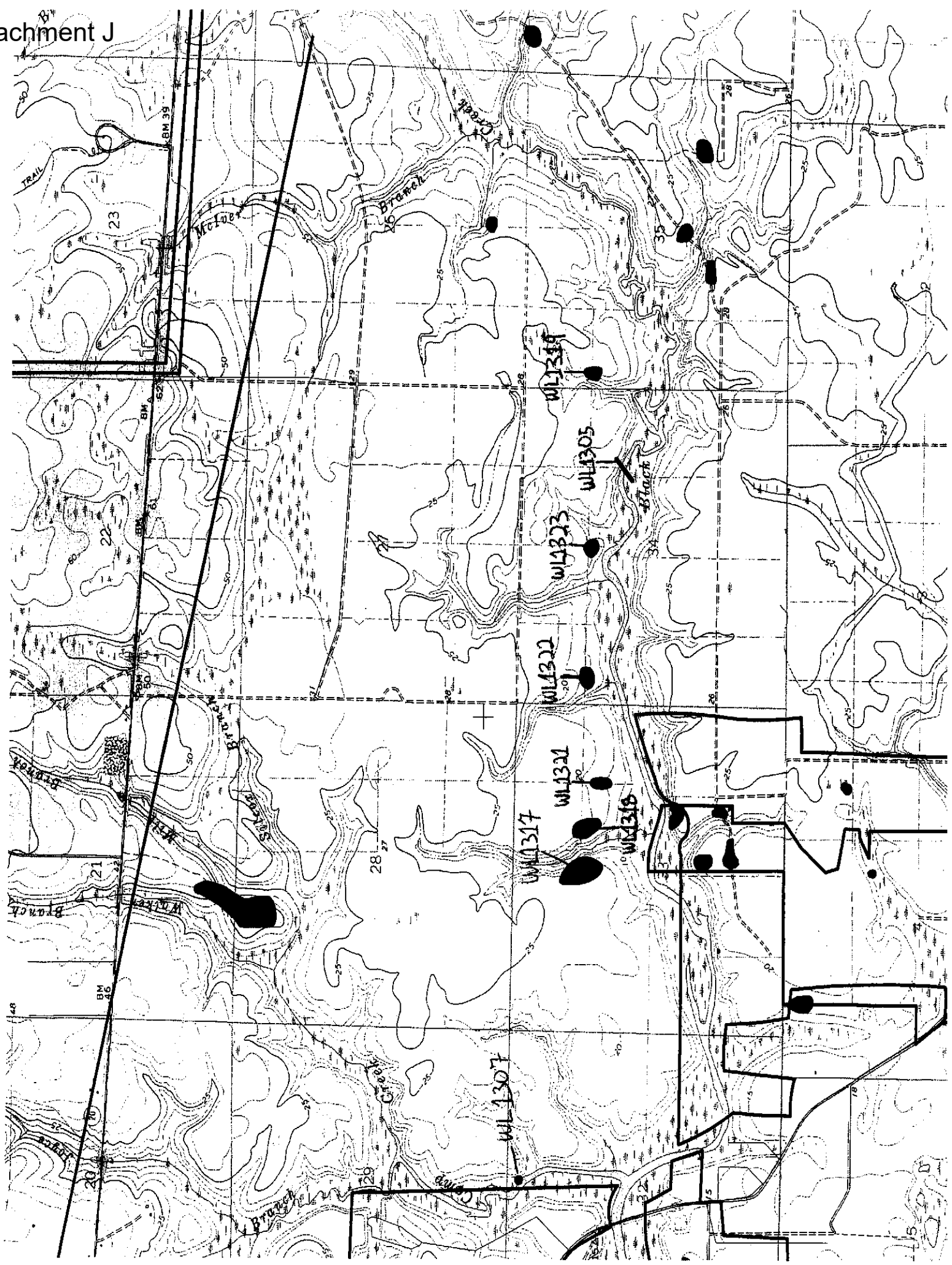
Sincerely,

A handwritten signature in black ink, appearing to read "Frederick P. Gaske", with a long horizontal line extending to the right.

Frederick P. Gaske, Director, and
State Historic Preservation Officer

Xc: Michael Dentzau, Bosso, Dentzau, & Imhof, Inc.

Enclosure



Florida Exotic Pest Plant Council's 2007 List of Invasive Plant Species

Purpose of the List: *To focus attention on —*

- ▶ the adverse effects exotic pest plants have on Florida's biodiversity and plant communities,
- ▶ the habitat losses from exotic pest plant infestations,
- ▶ the impacts on endangered species via habitat loss and alteration,
- ▶ the need to prevent habitat losses through pest-plant management,
- ▶ the socio-economic impacts of these plants (e.g., increased wildfires in certain areas),
- ▶ changes in the seriousness of different pest plants over time,
- ▶ the need to provide information that helps managers set priorities for control programs.

CATEGORY I

Invasive exotics that are altering native plant communities by displacing native species, changing community structures or ecological functions, or hybridizing with natives. *This definition does not rely on the economic severity or geographic range of the problem, but on the documented ecological damage caused.*

Scientific Name	Common Name	FLEPPC Cat.	Gov. List	Reg. Dist.
<i>Abrus precatorius</i>	rosary pea	I	N	C, S
<i>Acacia auriculiformis</i>	earleaf acacia	I		C, S
<i>Albizia julibrissin</i>	mimosa, silk tree	I		N, C
<i>Albizia lebeck</i>	woman's tongue	I		C, S
<i>Ardisia crenata</i> (=A. <i>crenulata</i> misapplied)	coral ardisia	I		N, C, S
<i>Ardisia elliptica</i> (=A. <i>humilis</i> misapplied)	shoebutton ardisia	I	N	C, S
<i>Asparagus aethiopicus</i> (=A. <i>sprengeri</i> ; A. <i>densiflorus</i> misapplied)	asparagus-fern	I		N, C, S
<i>Bauhinia variegata</i>	orchid tree	I		C, S
<i>Bischofia javanica</i>	bishopwood	I		C, S
<i>Calophyllum antillanum</i> (=C. <i>calaba</i> and C. <i>inophyllum</i> misapplied)	santa maria (names "mast wood," "Alexandrian laurel" used in cultivation)	I		S
<i>Casuarina equisetifolia</i>	Australian-pine, beach sheoak	I	P, N	N, C, S
<i>Casuarina glauca</i>	suckering Australian-pine, gray sheoak	I	P, N	C, S
<i>Cinnamomum camphora</i>	camphor tree	I		N, C, S
<i>Colocasia esculenta</i>	wild taro	I		N, C, S
<i>Colubrina asiatica</i>	lather leaf	I	N	S
<i>Cupaniopsis anacardioides</i>	carrotwood	I	N	C, S
<i>Dioscorea alata</i>	winged yam	I	N	N, C, S
<i>Dioscorea bulbifera</i>	air-potato	I	N	N, C, S
<i>Eichhornia crassipes</i>	water-hyacinth	I	P	N, C, S
<i>Eugenia uniflora</i>	Surinam cherry	I		C, S
<i>Ficus microcarpa</i> (F. <i>nitida</i> and F. <i>retusa</i> var. <i>nitida</i> misapplied)	laurel fig	I		C, S
<i>Hydrilla verticillata</i>	hydrilla	I	P, U	N, C, S
<i>Hygrophila polysperma</i>	green hygro	I	P, U	N, C, S
<i>Hymenachne amplexicaulis</i>	West Indian marsh grass	I		C, S
<i>Imperata cylindrica</i> (I. <i>brasiliensis</i> misapplied)	cogon grass	I	N, U	N, C, S
<i>Ipomoea aquatica</i>	waterspinach	I	P, U	C
<i>Jasminum dichotomum</i>	Gold Coast jasmine	I		C, S
<i>Jasminum fluminense</i>	Brazilian jasmine	I		C, S
<i>Lantana camara</i>	lantana, shrub verbena	I		N, C, S
<i>Ligustrum lucidum</i>	glossy privet	I		N, C
<i>Ligustrum sinense</i>	Chinese privet, hedge privet	I		N, C, S

FLEPPC List Definitions:

Exotic – a species introduced to Florida, purposefully or accidentally, from a natural range outside of Florida.

Native – a species whose natural range included Florida at the time of European contact (1500 AD).

Naturalized exotic – an exotic that sustains itself outside cultivation (it is still exotic; it has not "become" native).

Invasive exotic – an exotic that not only has naturalized, but is expanding on its own in Florida native plant communities.

Abbreviations:

Government List (Gov. List):

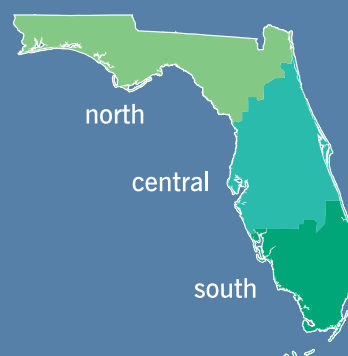
P = Prohibited by Florida

Department of Environmental Protection;

N = Noxious weed listed by Florida Department of Agriculture & Consumer Services;

U = Noxious weed listed by U.S. Department of Agriculture.

Regional Distribution (Reg. Dist.):
N = north, C = central, S = south, referring to each species' current distribution in general regions of Florida (not its potential range in the state). Please refer to the map below.



Attachment K

Changes to the 2007 List:

Ludwigia peruviana added to list as Category I

Peruvian primrose willow (*Ludwigia peruviana*) is a shrub known from at least 48 Florida counties, from the Panhandle to the Keys. It is also known in the United States from North Carolina, Georgia, Alabama, Mississippi, and Texas. While always known as an aggressive weed in wetlands in Florida, there has been debate about its nativity. After an evaluation of available data, the Committee now agrees that this species was introduced into Florida, probably from South America, by the late 1800s, and has subsequently spread throughout the state and to other states. It can form monospecific stands in both disturbed and undisturbed wetlands, especially river and lake edges, and dramatically change ecosystem structure.

Tradescantia spathacea moved from Category I to Category II

Oyster plant (*Tradescantia spathacea*) is an herb known from at least 12 counties in southern Florida, although many populations have not been documented. A native of tropical America, this species was a very common ornamental plant decades ago, and is still grown occasionally for its green and purple foliage. The species spreads readily, both by vegetation offshoots and by seed. In urban areas, plants often appear on rooftops or on rock walls. It does spread into natural areas, but Committee members are unaware of sites where it has invaded natural areas and displaced native species to the extent of other Category I species. It has been moved to Category II.

Scientific Name	Common Name	FLEPPC Cat.	Gov. List	Reg. Dist.
<i>Lonicera japonica</i>	Japanese honeysuckle	I		N, C, S
<i>Ludwigia peruviana</i>	Peruvian primrosewillow	I		N, C, S
<i>Lygodium japonicum</i>	Japanese climbing fern	I	N	N, C, S
<i>Lygodium microphyllum</i>	Old World climbing fern	I	N	C, S
<i>Macfadyena unguis-cati</i>	cat's claw vine	I		N, C, S
<i>Manilkara zapota</i>	sapodilla	I		S
<i>Melaleuca quinquenervia</i>	melaleuca, paper bark	I	P, N, U	C, S
<i>Mimosa pigra</i>	catclaw mimosa	I	P, N, U	C, S
<i>Nandina domestica</i>	nandina, heavenly bamboo	I		N, C
<i>Nephrolepis cordifolia</i>	sword fern	I		N, C, S
<i>Nephrolepis multiflora</i>	Asian sword fern	I		C, S
<i>Neyraudia reynaudiana</i>	Burma reed, cane grass	I	N	S
<i>Paederia cruddasiana</i>	sewer vine, onion vine	I	N	S
<i>Paederia foetida</i>	skunk vine	I	N	N, C, S
<i>Panicum repens</i>	torpedo grass	I		N, C, S
<i>Pennisetum purpureum</i>	Napier grass	I		N, C, S
<i>Pistia stratiotes</i>	waterlettuce	I	P	N, C, S
<i>Psidium cattleianum</i> (=P. littorale)	strawberry guava	I		C, S
<i>Psidium guajava</i>	guava	I		C, S
<i>Pueraria montana</i> var. <i>lobata</i> (=P. lobata)	kudzu	I	N	N, C, S
<i>Rhodomyrtus tomentosa</i>	downy rose-myrtle	I	N	C, S
<i>Rhynchelytrum repens</i> (=Melinis repens)	Natal grass	I		N, C, S
<i>Ruellia tweediana</i> (= R. brittoniana , R. coerulea)	Mexican petunia	I		N, C, S
<i>Sapium sebiferum</i> (=Triadica sebifera)	popcorn tree, Chinese tallow tree	I	N	N, C, S
<i>Scaevola taccada</i> (=Scaevola sericea, S. frutescens)	scaevola, half-flower, beach naupaka	I	N	C, S
<i>Schefflera actinophylla</i> (=Brassaia actinophylla)	schefflera, Queensland umbrella tree	I		C, S
<i>Schinus terebinthifolius</i>	Brazilian pepper	I	P, N	N, C, S
<i>Senna pendula</i> var. <i>glabrata</i> (=Cassia coluteoides)	climbing cassia, Christmas cassia, Christmas senna	I		C, S
<i>Solanum tampicense</i> (=S. houstonii)	wetland nightshade, aquatic soda apple	I	N, U	C, S
<i>Solanum viarum</i>	tropical soda apple	I	N, U	N, C, S
<i>Syngonium podophyllum</i>	arrowhead vine	I		N, C, S
<i>Syzygium cumini</i>	jambolan plum, Java plum	I		C, S
<i>Tectaria incisa</i>	incised halberd fern	I		S
<i>Thespesia populnea</i>	seaside mahoe	I		C, S
<i>Tradescantia fluminensis</i>	white-flowered wandering jew	I		N, C
<i>Urochloa mutica</i> (= Brachiaria mutica)	Para grass	I		C, S

CATEGORY II

Invasive exotics that have increased in abundance or frequency but have not yet altered Florida plant communities to the extent shown by Category I species. *These species may become ranked Category I, if ecological damage is demonstrated.*

Scientific Name	Common Name	FLEPPC Cat.	Gov. List	Reg. Dist
<i>Adenanthera pavonina</i>	red sandalwood	II		S
<i>Agave sisalana</i>	sisal hemp	II		C, S
<i>Aleurites fordii</i> (=Vernicia fordii)	tung oil tree	II		N, C
<i>Alstonia macrophylla</i>	devil tree	II		S
<i>Alternanthera philoxeroides</i>	alligator weed	II	P	N, C, S
<i>Antigonon leptopus</i>	coral vine	II		N, C, S
<i>Aristolochia littoralis</i>	calico flower	II		N, C, S

Attachment K

Scientific Name	Common Name	FLEPPC Cat.	Gov. List	Reg. Dist.
<i>Asystasia gangetica</i>	Ganges primrose	II		C, S
<i>Begonia cucullata</i>	wax begonia	II		N, C, S
<i>Blechum pyramidatum</i>	green shrimp plant, Browne's blechum	II		N, C, S
<i>Broussonetia papyrifera</i>	paper mulberry	II		N, C, S
<i>Callisia fragrans</i>	inch plant, spironema	II		C, S
<i>Casuarina cunninghamiana</i>	river sheoak, Australian-pine	II	P	C, S
<i>Cecropia palmata</i>	trumpet tree	II		S
<i>Cestrum diurnum</i>	day jessamine	II		C, S
<i>Chamaedorea seifrizii</i>	bamboo palm	II		S
<i>Clematis terniflora</i>	Japanese clematis	II		N, C
<i>Cryptostegia madagascariensis</i>	rubber vine	II		C, S
<i>Cyperus involucratus</i> (<i>C. alternifolius</i> misapplied)	umbrella plant	II		C, S
<i>Cyperus prolifer</i>	dwarf papyrus	II		C, S
<i>Dalbergia sissoo</i>	Indian rosewood, sissoo	II		C, S
<i>Elaeagnus pungens</i>	silverthorn, thorny olive	II		N, C
<i>Epipremnum pinnatum</i> cv. Aureum	pothos	II		C, S
<i>Ficus altissima</i>	false banyan, council tree	II		S
<i>Flacourtia indica</i>	governor's plum	II		S
<i>Hemarthria altissima</i>	limpo grass	II		C, S
<i>Hibiscus tiliaceus</i> (= <i>Talipariti tiliaceum</i>)	mahoe, sea hibiscus	II		C, S
<i>Ipomoea fistulosa</i> (= <i>I. carnea</i> ssp. <i>fistulosa</i>)	shrub morning-glory	II	P	C, S
<i>Jasminum sambac</i>	Arabian jasmine	II		S
<i>Kalanchoe pinnata</i>	life plant	II		C, S
<i>Koelreuteria elegans</i> ssp. <i>formosana</i> (= <i>K. formosana</i> ; <i>K. paniculata</i> misapplied)	flamegold tree	II		C, S
<i>Leucaena leucocephala</i>	lead tree	II	N	N, C, S
<i>Limnophila sessiliflora</i>	Asian marshweed	II	P, U	N, C, S
<i>Livistona chinensis</i>	Chinese fan palm	II		C, S
<i>Melia azedarach</i>	Chinaberry	II		N, C, S
<i>Melinis minutiflora</i>	Molassesgrass	II		C, S
<i>Merremia tuberosa</i>	wood-rose	II		S
<i>Murraya paniculata</i>	orange-jessamine	II		S
<i>Myriophyllum spicatum</i>	Eurasian water-milfoil	II	P	N, C, S
<i>Nymphoides cristata</i>	snowflake	II		C, S
<i>Panicum maximum</i>	Guinea grass	II		N, C, S
<i>Passiflora biflora</i>	two-flowered passion vine	II		S
<i>Pennisetum setaceum</i>	green fountain grass	II		S
<i>Phoenix reclinata</i>	Senegal date palm	II		C, S
<i>Phyllostachys aurea</i>	golden bamboo	II		N, C
<i>Pittosporum pentandrum</i>	Philippine pittosporum, Taiwanese cheesewood	II		S
<i>Pteris vittata</i>	Chinese brake fern	II		N, C, S
<i>Ptychosperma elegans</i>	solitaire palm	II		S
<i>Rhoeo spathacea</i> (see <i>Tradescantia spathacea</i>)				
<i>Ricinus communis</i>	castor bean	II		N, C, S
<i>Rotala rotundifolia</i>	roundleaf toothcup, dwarf Rotala,	II		S
<i>Sansevieria hyacinthoides</i>	bowstring hemp	II		C, S
<i>Scleria lacustris</i>	Wright's nutrush	II		C, S
<i>Sesbania punicea</i>	purple sesban, rattlebox	II		N, C, S
<i>Solanum diphyllum</i>	two-leaf nightshade	II		N, C, S
<i>Solanum jamaicense</i>	Jamaica nightshade	II		C
<i>Solanum torvum</i>	susumber, turkey berry	II	N, U	N, C, S

Changes to the 2007 List:

Melinis minutiflora
added to list as Category II

Molasses grass (*Melinis minutiflora*) is a grass known from at least 6 Florida counties, mostly along the lower eastern coast. It is native to Africa and western Asia and was originally introduced as a forage grass in southern Florida. While it has been known to be established for some time, its populations have been expanding recently into undisturbed natural areas, especially pine rocklands in Miami-Dade County. Once established, it forms locally dense stands and excludes other herbs and graminoids. The strong molasses smell given off by the plants makes it especially easy to identify, particularly when it is stepped on.

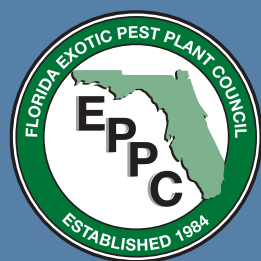
Rotala rotundifolia
added to list as Category II

Roundleaf toothcup (*Rotala rotundifolia*) is an aquatic herb known from at least three Florida counties in southern Florida (Broward, Lee, and Palm Beach). It is also introduced in Alabama. It is native to India and Southeast Asia. The species is commonly grown as an aquarium plant and has been introduced after aquarium grown plants were discarded into Florida wetlands. It has become established in canals and along rivers. It reproduces readily through sexual and asexual means and is expected to spread within the state. It is also known as dwarf rotala.

Attachment K Use of the FLEPPC List

FLEPPC encourages use of the Invasive Species List for prioritizing and implementing management efforts in natural areas, for educating lay audiences about environmental issues, and for supporting voluntary invasive plant removal programs. When a non-native plant species is to be restricted in some way by law, FLEPPC encourages use of the List as a first step in identifying species worth considering for particular types of restriction. For more information on using the FLEPPC List of Invasive Plant Species, see *Wildland Weeds* Summer 2002 issue (Vol. 5, No. 3), pp. 16-17.

NOTE: Not all exotic plants brought into Florida become pest plants in natural areas. The FLEPPC List of Invasive Plant Species represents only about 10% of the 1,300+ exotic species that have been introduced into Florida and subsequently established outside of cultivation. Most escaped exotics usually present only minor problems in highly disturbed areas (such as roadsides). And there are other exotics cultivated in Florida that are “well-behaved” — that is, they don’t escape cultivation at all.



www.fleppc.org

Scientific Name	Common Name	FLEPPC Cat.	Gov. List	Reg. Dist.
<i>Sphagneticola trilobata</i> (= <i>Wedelia trilobata</i>)	wedelia	II		N, C, S
<i>Stachytarpheta cayennensis</i> (= <i>S. urticifolia</i>)	nettle-leaf porterweed	II		S
<i>Syagrus romanzoffiana</i> (= <i>Arecastrum romanzoffianum</i>)	queen palm	II		C, S
<i>Syzygium jambos</i>	rose-apple	II		C, S
<i>Terminalia catappa</i>	tropical-almond	II		C, S
<i>Terminalia muelleri</i>	Australian-almond	II		C, S
<i>Tradescantia spathacea</i> (= <i>Rhoeo spathacea</i> , <i>Rhoeo discolor</i>)	oyster plant	II		S
<i>Tribulus cistoides</i>	puncture vine, burr-nut	II		N, C, S
<i>Urena lobata</i>	Caesar's weed	II		N, C, S
<i>Vitex trifolia</i>	simple-leaf chaste tree	II		C, S
<i>Washingtonia robusta</i>	Washington fan palm	II		C, S
<i>Wedelia</i> (see <i>Sphagneticola</i> above)				
<i>Wisteria sinensis</i>	Chinese wisteria	II		N, C
<i>Xanthosoma sagittifolium</i>	malanga, elephant ear	II		N, C, S

Citation example:

FLEPPC. 2007. List of Florida's Invasive Plant Species. Florida Exotic Pest Plant Council. Internet: <http://www.fleppc.org/07list.htm> or *Wildland Weeds* Vol. 10(4), Fall 2007.

The 2007 list was prepared by the FLEPPC Plant List Committee:

Keith A. Bradley – Chair (2006-present), The Institute for Regional Conservation, 22601 S.W. 152nd Ave., Miami, FL 33170

Kathy Craddock Burks – Chair (2001-2006)

Nancy Craft Coile, Botanist Emerita, Division of Plant Industry, Florida Department of Agriculture and Consumer Services, 22804 N.W. County Road 2054, Alachua, FL 32615

Janice A. Duquesnel, Florida Park Service, Florida Department of Environmental Protection, P.O. Box 1052, Islamorada, FL 33036

David W. Hall, Private Consulting Botanist, 3666 N.W. 13th Place, Gainesville, FL 32605

Roger L. Hammer, Miami-Dade Parks Department, Castellow Hammock Nature Center, 22301 S.W. 162nd Ave., Miami, FL 33030

Patricia L. Howell, Broward County Parks, Environmental Section, 950 NW 38th Street, Oakland Park, FL 33309

Colette C. Jacono, U. S. Geological Survey, Center for Aquatic Resources Studies, 7920 NW 71st Street, Gainesville, FL 32653

Kenneth A. Langeland, Center for Aquatic and Invasive Plants, IFAS, University of Florida, 7922 N.W. 71st St., Gainesville, FL 32606

Chris Lockhart, Florida Natural Areas Inventory, c/o P.O. Box 243116, Boynton Beach, FL 33424-3116

Gil Nelson, Gil Nelson Associates, 157 Leonard's Drive, Thomasville, GA 31792

Robert W. Pemberton, Invasive Plants Research Lab, U.S. Dept. of Agriculture, 3225 College Ave., Ft. Lauderdale, FL 33312

Jimi L. Saddle, Everglades National Park, 40001 State Road 9336, Homestead, FL 33034

Robert W. Simons, 1122 S.W. 11th Avenue, Gainesville, FL 32601-7816

Sandra M. Vardaman, Alachua County Forever Land Conservation Program, Alachua County Environmental Protection Dept., 201 SE 2nd Avenue, Suite 201, Gainesville, Florida 32601

Daniel B. Ward, Department of Botany, University of Florida, 220 Bartram Hall, Gainesville, FL 32611

Richard P. Wunderlin, Institute for Systematic Botany, Dept. of Biological Sciences, University of South Florida, Tampa, FL 33620

FLEPPC Database – The Florida Exotic Pest Plant Database contains over 6,000 sight records of infestations of FLEPPC Category I and Category II species in Florida public lands and waters. 360 species are recorded. Nearly all of the records are from local, state, and federal parks and preserves; a few records document infestations in regularly disturbed public lands such as highway or utility rights-of-way. Natural area managers and other veteran observers of Florida's natural landscapes submit these records, with many supported further by voucher specimens housed in local or regional herbaria for future reference and verification. New and updated observations can be submitted online at www.fleppc.org/EDDMapS/. This database, along with other plant-data resources such as the University of South Florida Atlas of Florida Vascular Plants at www.plantatlas.usf.edu, the Florida Natural Areas Inventory database at www.fnai.org, and The Institute for Regional Conservation Floristic Inventory of South Florida database at www.regionalconservation.org, provides important basic supporting information for the FLEPPC List of Invasive Plant Species.

Images of FLEPPC-listed species may be found at one or more of the following websites: University of South Florida Atlas of Florida Vascular Plants, www.plantatlas.usf.edu; the “Introduced Species” page on the University of Florida Herbarium website, www.flmnh.ufl.edu/herbarium/cat/digitalimagingprojects.htm; at Fairchild Tropical Garden's Virtual Herbarium, www.virtualherbarium.org/vhportal.html, The Robert K. Godfrey Herbarium at FSU, <http://herbarium.bio.fsu.edu/index.php>; and at the University of Florida's Center for Aquatic and Invasive Plants, <http://plants.ifas.ufl.edu>. Please note that greater success and accuracy in searching for plant images is likely if you search by scientific name rather than a common name. Common names often vary in cultivation and across regions. For additional information on plants included in this list, see related links and pages at www.fleppc.org.



**FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION**

BOB MARTINEZ CENTER
2600 BLAIRSTONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

RICK SCOTT
GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

February 12, 2014

Matthew Aresco for MC Davis 2006 Trust, via Email

re. Nokuse Plantation Mitigation Bank
Permit # 283695 (modification -008), Walton County

Dear Dr. Aresco:

Your request to modify the adaptive management plan for the above referenced permit has been reviewed and approved by Department staff. By this letter and the attached Adaptive Management Plan dated February 3, 2014, we are notifying all necessary parties of the modification.

The attached Adaptive Management Plan was provided by the land manager as part of the Department-approved Qualified Mitigation Specialist (QMS) team in conjunction with Specific Condition 7 requirements to oversee mitigation plan implementation. The QMS, in consultation with the Department on a December 17, 2014 site inspection, determined that in order to attain the interim and final success criteria in Specific Conditions 23 and 22, respectively, in a timely manner, there needed to be a further reduction of the slash pine canopy, and supplemental planting of wiregrass (and potentially other prairie/flatwoods species) in many areas of the bank. Although Specific Condition 10 directed the removal of most slash pine, up to ~75 trees/ac were left to provide fuel for prescribed burns; however, the remaining pine appear to inhibit, rather than promote groundcover recovery. The proposed changes do not conflict with success criteria that specify "*no more than*" 75 slash pine per acre; but the Department, by this modification, endorses the proposed addendum to the management requirements defined in Specific Conditions 10 and 24.

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. Petitions filed by the permittee and the parties listed below must be filed within 21 days of receipt of this letter. Petitioner shall mail a copy of the petition to the permittee at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, F.S.

The Petition shall contain the following information:

- (a) The name, address, and telephone number of each petitioner, the permittee's name and address, the Department file number (193232-048) and the county in which the project is proposed;

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Nokuse Plantation Mitigation Bank
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- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action; or proposed action;
- (d) A statement of the material facts disputed by petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
- (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this letter. Persons whose substantial interests will be affected by any decision of the Department with regard to the permit have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 21 days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This Notice constitutes final agency action unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition. Upon timely filing of a petition or a request for an extension of time this Notice will not be effective until further Order of the Department.

Any party to this letter has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000; and by filing a copy with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Notice of Permit Modification is filed with the Clerk of the Department.

Sincerely,



Vicki Tauxe
Mining and Mitigation Program

cc by email: IRT members – Carrie Bond (COE); Ted Martin (FWS); Ted Hoehn (FWC); Elizabeth McGuire (EPA); Mark Thompson (NOAA)

Attachment: Adaptive Management Plan

Attachment L

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Nokuse Plantation Mitigation Bank
Permit 283695

**Nokuse Plantation
Wetlands Mitigation Bank
Adaptive Management Plan for Restoration of Slash Pine Plantations**

3 February 2014

Matthew J. Aresco, Ph. D.

The Nokuse Plantation Wetlands Mitigation Bank (FDEP Permit 283695-001 issued July 3, 2008; modified under FDEP permit #283695-002 on April 20, 2010; MBI dated 8 August 2011) specifies the management tasks required to restore Hydric and Upland Pine Plantations (FLUCCS 441) to Wet Flatwoods, Wet Prairie, and Mesic Flatwoods (see Florida Natural Areas Inventory community descriptions: <http://www.fnai.org/naturalcommguide.cfm>). Management (thinning) of the planted pines is a major component of the management tasks needed to meet the community targets. Restoration of Hydric Pine Plantations to Wet Flatwoods require thinning to "no more than 75 trees/acre", restoration of Hydric Pine Plantations to Wet Prairie require thinning to "no more than 35 trees/acre" and Upland Pine Plantations require thinning to "no more than 100 trees/acre". Accordingly, from 2007-2011, pine plantations on the Mitigation Bank were thinned (no-row method) to the near maximum allowable density (hydric plantation @75 trees per acre; upland plantation @80-100 trees per acre). Additional restoration activities on the upland plantation sites require underplanting longleaf pine seedlings at a density of 100 - 150 trees/acre.

Field inspections in 2012 and 2013 subsequent to pine thinning (and prescribed fire) on both hydric and upland pine plantations demonstrated a significant improvement of the herbaceous groundcover community over that which was present in unthinned pine plantations. Specifically, a written report of the field inspection on December 17, 2013 provides further documentation of progress towards attainment of restoration community goals. However, this report and additional discussions brought up the opinion that meeting our full restoration goals and the final success criteria of the Bank may require additional restoration activities relating to canopy management. An analysis of the 1941 aerial photos of the Bank site show that nearly all of the area now classified as hydric pine plantation (816 acres) was herbaceous wet prairie with very few trees (i.e., very scattered slash pine and longleaf pine). Close study of the historic aerial photos provides strong evidence that these virtually tree-less areas were naturally tree-less and not a result of human harvest of pines in the previous decades. There are no visible skid trails, logging roads, or other disturbances that should be visible on the aerial photos if widespread logging did occur. In fact, these areas look very similar to current conditions on remnant wet prairies found on both the Nokuse Mitigation Bank and other areas of the Gulf Coastal flatwoods of the Florida Panhandle. Therefore, complete restoration of hydric pine plantations to historic conditions of wet prairie (pre-silviculture conditions) will require additional removal of the slash pine overstory. In order to experimentally test the efficacy of removing the planted pine overstory to further achieve the restoration goals, we clearcut 22 acres of hydric slash pine plantation in October 2011 and the sites were burned in February 2012. The site inspection in December 2013 showed that each

of these experimental sites were dominated by grasses and other herbaceous groundcover and had qualitatively greater grass cover than nearby hydric plantations that were thinned to 75 tree per acre. It should be noted that there was little or no woody understory (e.g., titi, fetterbush) and ample fine fuels (grasses) to carry fire. The primary original reason that the slash pine overstory was retained was a concern for the need to maintain needle cast as fuel for burning. Thus, the results of the experimental clearcut plots provide good evidence that restoration to herbaceous wet prairie/ wet flatwoods requires additional removal of the slash pine overstory. We propose removing the majority of the slash pine overstory on the remaining 787 acres of thinned slash pine plantation leaving a density of 0 - 20 trees per acre (Figure 1). The very low pine density should not contradict the success criteria as stipulated in the MBI as it refers to "less than" 75 trees per acre for Wet Flatwoods and 35 trees per acre for Wet Prairie.

The upland pine areas (mesic flatwoods and sandhill) were harvested of longleaf pine historically and replaced with slash pine plantation. Currently, the Bank has 442 acres of thinned slash pine plantation (80-100 trees per acre). We propose that the final success criteria of uplands should be a canopy of longleaf pine (50-100 trees per acre). The current density of 80-100 slash pines will not allow for restoration and reforestation to longleaf pine. The canopy causes light and root competition and underplanted longleaf pine seedlings will either die or will not grow. In many areas, the crowns of slash pines thinned in 2007 actually touch, causing complete shading of the groundcover. Experiments on other areas of Nokuse Plantation with the same soil type, tree density, and management have confirmed this problem. As we did with the hydric pine plantations, we conducted experimental clearcuts of upland pine plantations to examine the efficacy of this method to restore these areas to a longleaf pine dominated overstory. In October-November 2011, we clearcut 167 acres of previously thinned slash pine plantation within the Bank. In August 2012, these sites were treated with low rates of triclopyr and imazapyr, burned, and planted in longleaf pine. Longleaf pine seedlings had high survival and are growing rapidly on these sites. Herbaceous groundcover was not negatively affected by site prep herbicide, and for several species (e.g., wiregrass and legumes) there was a clear positive growth response and woody midstory was reduced. Clearly, we can achieve the success final criteria by removing the remaining slash pine overstory. We propose removing the majority of the slash pine overstory on the remaining 442 acres of thinned slash pine plantation leaving a density of 0 - 20 trees per acre (Figure 2). In some areas, the large, dominant slash pines (no greater than 20 trees per acre) will be left as wildlife trees. Frequent burning will prohibit young slash pines from establishing on these sites. Longleaf pine seedlings will be planted at a density of 150 trees per acre. The very low pine density should not contradict the success criteria as stipulated in the MBI as it refers to "less than" 100 trees per acre and no more than 150 planted longleaf per acre.

Bed removal has not been completed around depressional wetlands and will be conducted immediately after additional pine removal. Both activities will require at least 8 months to complete during an exceptionally dry period. Soil conditions on the Bank are currently fully saturated following 126 inches of rain in 2013. Drying has not yet occurred in 2014 and, unless significant drying occurs this spring and summer, heavy equipment

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cannot be used on the site and additional pine removal and bed removal will be delayed. Therefore, the start of these activities cannot be date certain.

Additional pine removal will be conducted with the QMA on-site to ensure that both Silviculture Best Management Practices (BMPs) of the Florida Department of Agricultural and Consumers Services and permit conditions are followed to ensure that there are no adverse impacts on soil and groundwater, or turbid discharge to waters of the State. The QMS and management staff will continue to observe the response of groundcover to management activities and identify areas with good wiregrass response and determine those areas that may need supplemental planting of wiregrass plugs and other native species to meet success criteria and achieve community goals.