

**DEPARTMENT OF THE ARMY  
Wilmington District, Corps of Engineers  
Post Office Box 1890  
Wilmington, North Carolina 28402-1890**

**ORM ID: SAW-2008-00790**

**August 11, 2008**

**PUBLIC NOTICE**

The District Engineer has received a prospectus describing the establishment of a wetland compensatory mitigation bank for federal and state permits as described below:

**Bank Sponsor**

**Mr. Christian Preziosi  
Land Management Group  
Post Office Box 2522  
Wilmington, North Carolina 28402**

This public notice does not imply, on the parts of the U. S. Army Corps of Engineers (Corps) or other agencies, either favorable or unfavorable opinion of the work to be performed, but it issued to solicit comments regarding the factors on which final decisions will be based.

**LOCATION OF THE PROPOSED WORK:** The project is located approximately eight miles west of New Bern, just south of the Jones/Craven County line, southeast of the junction of U.S. Highway 70 and N.C. Highway 41, south of the community of Cove City, in Jones County, North Carolina. Site drainage flows south to Jumping Creek, a first-order tributary of the Trent River. The site formerly consisted of non-riverine, headwater wetlands and was locally known as the Great Dover Swamp.

**PROPOSED WORK AND PURPOSE:** The bank sponsor proposes to establish and operate a wetland restoration compensatory mitigation bank to compensate for losses authorized by applicable federal and state regulatory programs. As proposed, an estimated 1,180 acres of non-riverine, forested wetlands may be restored via the plugging of ditches on the 1,352 acre property. Appropriate tree species will be planted including pond pine, red bay, bald cypress and black gum. Areas of deeper organic soils may also include plantings of Atlantic white cedar and water tupelo. Annual monitoring will be conducted for a period of 5 years, or until success criteria have been achieved, whichever is longer. Upon execution of the mitigation banking instrument, a conservation easement for the site will be conveyed to an appropriate public land trust organization. A restoration ratio of 1:1 is proposed. Accordingly, a total of up to 1,180 wetland restoration credits may be realized should the project be successful.

GEOGRAPHIC SERVICE AREA: The proposed geographic service area for this bank is the Lower Neuse River Cataloging Unit 03020204.

PROSPECTUS: The full prospectus is available for review at:

[http://www.saw.usace.army.mil/WETLANDS/Notices/Current\\_notices.html](http://www.saw.usace.army.mil/WETLANDS/Notices/Current_notices.html)

This mitigation bank may be considered one of a number of practicable alternatives available to applicants to compensate for unavoidable wetland impacts associated with permits issued under the authority of Sections 404 and 401 of the Clean Water Act for projects located within the prescribed geographic service area.

Oversight of this wetland mitigation bank will be by a group of federal and state agency representatives collectively referred to as the Interagency Review Team (IRT). The IRT shall be chaired by the Wilmington District, U.S. Army Corps of Engineers and is comprised of representatives from the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, National Marine Fisheries Service, N.C. Division of Water Quality, N.C. Division of Coastal Management, and the N.C. Wildlife Resources Commission.

The actual approval of the use of this mitigation bank for a specific project is the decision of the Corps pursuant to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. The Corps provides no guarantee that any particular individual or general permit will be granted authorization to use this wetland compensatory mitigation bank to compensate for unavoidable wetland impacts associated with a proposed permit, even though mitigation from this bank may be available.

AUTHORITY: This public notice is required pursuant to 33 CFR Part 332, *Compensatory Mitigation for Losses of Aquatic Resources*.

FEDERAL EVALUATION OF PROPOSAL: The Corps is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate this proposed mitigation bank. Any comments received will be considered by the Corps in evaluating this proposal. Comments are used to assess impacts on endangered species, historic properties, conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards and flood plain values (in accordance with Executive Order 11988), land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

Preliminary review indicates that:

1. An environmental impact statement (EIS) will not be required.
2. No species of fish, wildlife, or plant (or their critical habitat) listed as endangered or threatened under the Endangered Species Act of 1973 (PL 93-205) will be affected.
3. No cultural or historic resources considered eligible or potentially eligible for listing on the National Register of Historic Places will be affected.

Additional information may change any of these preliminary findings.

Written comments pertinent to the proposed work, as outlined above, will be received in this office, Attention: Mr. David Lekson, Washington Regulatory Field Office, Post Office Box 1000, Washington, North Carolina 27889, until 4:15 p.m., September 12, 2008, or telephone (252) 975-1616, extension 22.

**DOVER WETLAND MITIGATION BANK  
LOWER NEUSE RIVER BASIN (CATALOGING UNIT 03020204)  
BANK PROSPECTUS**

**I. INTRODUCTION**

**A. Project Overview**

The Dover Wetland Mitigation Bank site (approximately 1352 acres) consists predominantly of former headwater wetlands historically ditched and drained for silvicultural and agricultural production. The site is located just south of US Highway 70 within an area commonly known as Great Dover Swamp near the northern boundary of Jones County, NC. The site consists nearly entirely of drained hydric soils characteristic of broad interstream flats of the Outer Coastal Plain. A network of drainage ditches on the tract serve to lower groundwater tables and intercept surface water. Site drainage flows south toward first-order tributaries of the Trent River – part of the Lower Neuse River (Cataloging Unit 03020204) (DWQ Subbasin 03-04-11). Based upon preliminary site investigations, up to 1,180 ac of former non-riverine wetlands may be restored. As a result, the restoration effort will allow for increased floodwater storage, nutrient retention/sediment reduction, and intact headwater wetland habitat for resident and migratory fauna.

**B. Site Location**

The tract is located southeast of the junction of US Highway 70 and NC Highway 41 in northern Jones County, NC (refer to Figure 1). It is bordered on the north by the Jones/Craven County line. The site is located approximately 8 miles due west of New Bern. The attached USGS 7.5-minute quadrangle (Cove City quad) depicts the location of the site relative to mapped blue-line streams and canals (Figure 2).

### **C. Watershed Characterization**

The bank site is located within the Lower Neuse River watershed (DWQ Subbasin 03-04-11). Much of the subbasin consists of managed forestry tracts and expansive cultivated cropland. Population growth within the subbasin is principally focused in the areas immediately west of New Bern. Stream and waterbodies of the watershed are susceptible to impairment from nutrient loading and low ambient dissolved oxygen (DO) concentrations. According to the Neuse River Basinwide Water Quality Plan (NC DWQ 2004), all waters within subbasin 03-04-11 are impaired based upon fish consumption advisories.

Surface waters of the Dover Wetland Mitigation Bank Site drain south to Jumping Creek, a first order tributary of the Trent River. The NC DWQ surface water body classification for Jumping Creek is C-Sw-NSW. "C" waters are defined as those waters protected for secondary recreation, fishing, wildlife, fish consumption, aquatic life including propagation, survival and maintenance of biological integrity, and agriculture. Secondary recreation includes wading, boating, and other uses involving human body contact with water where such activities take place in an infrequent, unorganized, or incidental manner. "Sw" is a supplemental classification intended to recognize those waters which have low velocities and other natural characteristics which are different from adjacent streams. Nutrient Sensative Waters (NSW) is a supplemental classification intended for waters needing additional nutrient management due to being subject to excessive growth of microscopic or macroscopic vegetation. Best management practices (BMPs), including riparian buffer setbacks, are implemented within NSW basins to help offset or minimize nutrient loading to susceptible waters.

The site formerly consisted of non-riverine headwater wetlands (pocosin and swamp forest) characteristic of the outer Coastal Plain. These type of wetlands support a number of functions/values including, but not limited to the following: groundwater recharge; floodwater storage and attenuation; filtration and storage of nutrients, sediments, and/or toxic substances; and refuge/feeding habitat for resident and migratory fauna. At the present time, these functions have been compromised through silvicultural management of the site (ditching, bedding, clear-cutting, etc.). The Neuse River and its tributaries have exhibited significant water quality impairments associated with low dissolved oxygen (DO), high total nitrogen (TN), and high total

phosphorous (TP). High nutrient concentrations originate from non-point source loading associated with intensive agricultural and silvicultural practices common throughout the watershed. These impairments are likely exacerbated channelization of local streams and ditching of headwater wetlands, resulting in diminished nutrient uptake and nutrient/sediment loading to down-gradient waters.

### **C. Project Purpose and Service Area**

The proposed project will serve as a general use wetland mitigation bank serving the Lower Neuse River Basin (USGS 8-digit hydrologic unit (03020204) (refer to Appendix A). The purpose of the bank is to compensate for those wetland losses authorized by applicable federal and state regulatory programs via the restoration of 1,180 ac of non-riverine wetlands. The following prospectus provides information related to project goals and objectives, existing site conditions, proposed mitigation activities, site-success criteria, financial assurances, property dispensation, and annual monitoring.

## **II. BANK ESTABLISHMENT**

### **A. Baseline Conditions**

Community Types: The tract consists predominantly of former wetland habitat types coinciding with gradients in topography, drainage patterns, and soil types. The primary wetland type targeted for restoration is non-riverine headwater pocosin. These areas grade to non-riverine swamp forest or to wet pine plat depending upon degree of wetness and the organic/mineral content of soils. Based upon the Cowardin classification for wetland and deepwater habitats (Cowardin et al. 1979), the wetland community types to be restored are Palustrine Scrub-Shrub and Forested Wetlands (broad-leaved deciduous, needle-leaved deciduous, and broad-leaved evergreen). Based upon the recently developed NC Wetland Assessment Manual, the targeted community types for the bank site are (1) pocosin and (2) non-riverine swamp forest.

Vegetation: The predominant land use of the tract and surrounding area is agricultural and silvicultural (managed pine plantation of various stand stages). Since the tract has been affected

by prescribed drainage improvements for forestry production, species indicative of drier, upland conditions are more prevalent. These species include old field blackberry (*Rubus alumnus*), dog fennel (*Eupatorium capillifolium*), bracken fern (*Pteridium aquilinum*), broom-sedge (*Andropogon glomeratus*), horse-sugar (*Symplocos tinctoria*), water oak (*Quercus nigra*), and loblolly pine (*Pinus taeda*). Other remnant bay species continue to demonstrate vigorous growth via rhizome and/or seed. Such species include loblolly bay (*Gordonia lasianthus*), fetterbush (*Lyonia lucida*), inkberry (*Ilex glabra*), red bay (*Persea borbonia*), red maple (*Acer rubrum*), and sweet bay (*Magnolia virginiana*). Characteristic hardwoods (e.g. black gum, water tupelo, bald cypress) of bay forests are either sparse or absent. The species assemblage has clearly shifted in response to long-term site drainage and timber management.

Soil Characteristics: The tract is located within a broad, flat interstream divide – representing vast acreage of headwater wetlands collectively known as Great Dover Swamp. The site and surrounding area is grouped in the Pantego-Torhunta general soil unit. This assemblage is characterized by nearly level, very poorly drained soils with loamy subsoils. Inclusions of deeper organic soil units are common. The predominant wetland soil units occurring on the tract are the Croatan muck, Torhunta fine sandy loam, Pantego loam, and Raines fine sandy loam (refer to Figure 3). The Croatan series has a deep organic muck surface and is underlain by sandy loam. It is an extremely acidic, very poorly drained soil. Each of the other series consist of very poorly to poorly drained loamy soils characteristic of broad flats.

Hydrology/Hydraulic Characteristics: The tract is located within a watershed that has historically received drainage improvements for the purposes of increased timber productivity and/or crop yield. Drained hydric soils (i.e. low-chroma , friable soils exhibiting a relatively high percentage of uncoated sand grains) are clearly evident throughout much of the tract. Subsidence around old-growth trees and oxidation of surficial organics are also indications of long-term drainage. Prior shallow groundwater monitoring and subsequent concurrence by the US Army Corps of Engineers (USACE) has confirmed the lack of wetland hydrology on the tract. In June 2005, the owner received a jurisdictional determination from the USACE documenting that no jurisdictional wetlands/waters of the U.S. occur on the 1,352-ac property (refer to Appendix B).

A network of ditches has served to lower the groundwater table and intercept surface water sheetflow across the tract. Internal block ditches range in depth from 2 to 4 ft. Water from these ditches is conveyed to larger collector ditches (primarily along existing road beds). Ditch outlets occur primarily in three locations along the southern boundary. Site photographs are provided for reference in Appendix C.

## **B. Conceptual Plan**

Hydrology Restoration: The proposed mitigation bank includes the restoration of up to 1,180 ac of non-riverine wetland habitat via the backfilling and/or plugging of ditches. In addition, removal of a portion of the roadbeds will allow for surface water to sheetflow along its natural gradient. Installation of ditch plugs and associated grading work along secondary and tertiary ditches will restore characteristic wetland hydrology to headwater bay forest and pocosin habitats. Based upon preliminary site investigations, some boundary ditches will need to be left intact to prevent hydrologic trespass. Future topographic survey work and additional drainage evaluations will help to determine the specific limits of the restoration work. The estimated acreage for restoration (1,180 ac) assumes a 200-ft offset from all property boundaries. Refer to Figure 5 for a conceptual plan map depicting proposed areas of restoration.

Vegetation Restoration: Drained wetland areas that have been cleared will be planted with characteristic wetland species. Depending upon landscape position and soil type, suitable species may include pond pine, red bay, bald cypress, and black gum. Areas of deeper organic soils may also include plantings of water tupelo and Atlantic white cedar. Tree seedlings will be planted on 10-ft spacings (equivalent to a density of 435 stems/acre). Shrub species will be planted on 8-ft spacings (equivalent to a density of 680 stems per acre). Other characteristic shrub species (e.g. inkberry, fetterbush, American titi) will continue to volunteer aggressively into the restored wetland areas.

Functional Restoration: Restored wetlands will intercept runoff from adjacent crop fields, dissipate stormwater velocity, and enhance nutrient and sediment trapping. These restored functions are likely to have discernible benefits to water quality and habitat downstream.

Vegetative restoration will provide for increased foraging and refuge habitat for resident and migratory species. In light of acute development pressures in this region of eastern North Carolina, the Lower Neuse River Basin is particularly susceptible to loss of wetland functions and associated watershed impacts. By providing for successful restoration of an expansive non-riverine wetland system, the Dover Wetland Mitigation Bank will help to replace wetland functions critical to water quality and wildlife habitat in the area.

**C. Reference Wetland**

Based upon landscape position and soil series of the mitigation site, target restoration communities include non-riverine pocosin and non-riverine swamp forest. Field evaluations have been conducted to identify relatively undisturbed reference wetlands of the region. In consideration of the desired wetland communities to be restored, LMG identified two reference areas within the Croatan National Forest. The two reference sites represent characteristic pocosin and non-riverine swamp forest of the outer Coastal Plain. Please refer to Appendix D for a more detailed discussion of the reference wetlands with supporting documentation and photographs.

**III. BANK OPERATION**

A comprehensive mitigation bank and Mitigation Banking Instrument (MBI) will be developed and submitted prior to project construction. Upon acceptance of the final mitigation plan by the Mitigation Bank Review Team (MBRT), the bank sponsor (Dover Preserve LLC) will initiate proposed grading and planting activities for the development of the Bank site. Mitigation bank credits will be calculated using the following standard:

	<u>Mitigation Type</u>	<u>Ratio</u>
(1)	Wetland Restoration	1:1
(2)	Wetland Enhancement	2:1 (N/A)
(3)	Wetland Creation	3:1 (N/A)
(4)	Wetland Preservation	5:1 (N/A)

Use of credits from the Bank to offset wetland and stream impacts authorized by federal permits or state water quality certifications must be in compliance with the Clean Water Act, Section 404 (b)(1) guidelines and other applicable federal and state legislation, regulations, and policies.

Prior to release of bank credits, the following requirements will be met: (1) approval of the final mitigation plan and execution of the MBI; (2) securing the bank site; and (3) establishment of appropriate financial assurances. Given the 1:1 ratio for wetland restoration, it is estimated that 1,180 non-riverine wetland credits will be derived from the establishment of the Dover Wetland Mitigation Bank.

The tentative schedule for establishment of the bank site is outlined in Table 1:

**Table 1: Project Milestone Schedule**

Task	Project Milestone	Projected Completion
1	Approval of Mitigation Plan and Execution of MBI	November 30, 2008
2	Recordation of Conservation Easement Deed	December 30, 2008
3	Initiation of Site Earthwork	January 15, 2009
4	Mitigation Site Earthwork Completed	February 15, 2009
5	Mitigation Site Planting and Installation of Monitoring Devices	February 15 through March 15, 2009
6	Submittal of As-Built Report	April 15, 2009
7	First Year Annual Monitoring	October 2009
8	Submittal of Monitoring Report #1 to MBRT	December 31, 2009
9	Submittal of Monitoring Report #2 to MBRT	December 31, 2010
10	Submittal of Monitoring Report #3 to MBRT	December 31, 2011
11	Submittal of Monitoring Report #4 to MBRT	December 31, 2012
12	Submittal of Monitoring Report #5 to MBRT	December 31, 2013

Upon execution of the MBI, a conservation easement deed for the site will be conveyed to an appropriate public land trust organization. The terms and conditions of the conservation easement will ensure the protection of the site in perpetuity. The ownership of the Bank will reside with the Sponsor until completion of the debiting of the Bank. Potential easement holders for a Bank site in this area include the North Carolina Coastal Land Trust; the NC Wildlife

Resources Commission; The Nature Conservancy; or the NC Agricultural Foundation (a 501(c) 3 non-profit branch of NC State University's College of Agriculture and Life Sciences). The holder of the conservation easement will be responsible for long-term protection and management of the site. The easement prohibits any activities (e.g. timbering, farming, building, etc.) that would alter the environmental state of the Bank site. Conditions of the easement will not restrict passive recreational, educational, and/or research activities.

The Bank Sponsor will be responsible for securing appropriate financial assurances in the form of construction, monitoring, and maintenance bonds to cover contingency measures in the event of Bank default or failure. Performance monitoring will be conducted for a 5-year period subsequent to project construction. Annual monitoring will evaluate the development of wetland function and document site performance relative to established success criteria. In addition, monitoring activities will identify any site deficiencies that may warrant remedial action. Monitoring reports documenting site success and/or failure will be submitted to the MBRT each year. Upon submittal of annual monitoring reports demonstrating the fulfillment of site success criteria, wetland credits will be released according the approved credit release schedule.

In most cases, use of mitigation banks for the purpose of offsetting Section 404/401 authorized impacts to wetlands would result in the debiting of two credits for each acre of impact proposed. One of the two credits debited would be required to be a restoration credit. The remaining credit would be made up of any combination of restoration, enhancement, or preservation as selected by the Bank sponsor and approved by The COE and the NC Division of Water Quality during the 404/401 permitting process. All credits derived from the Dover Wetland Mitigation Bank will be restoration credits. Therefore, the permitting agencies would determine the balance of the mitigation requirement once the minimum one credit of restoration is debited. In many cases, two credits of restoration may still be required. However, this may be viewed on a case-by-case basis and may be amended. For instance, on-site preservation (in combination with a credit of restoration from the Bank site) may fulfill the mitigation requirement if the wetlands to be preserved are considered higher quality, functioning wetlands.

The sponsor shall develop accounting procedures for maintaining accurate records of debits made from the bank that is acceptable to the MBRT. Such procedures shall include the generation of a debit report by the sponsor documenting all credits used at the time they are debited from the bank. Debit reports shall be provided to each member of the MBRT within 30 days of the date of credit sale. In addition, the sponsor shall prepare an Annual Report to be provided to each MBRT member within thirty (30) days of each anniversary of the date of execution of the MBI, showing all credits used and the balance of credits remaining. The sponsor's reporting obligations hereunder shall end upon the sale of all credits or termination of the MBI, whichever event first occurs.

#### **IV. CONCLUSION**

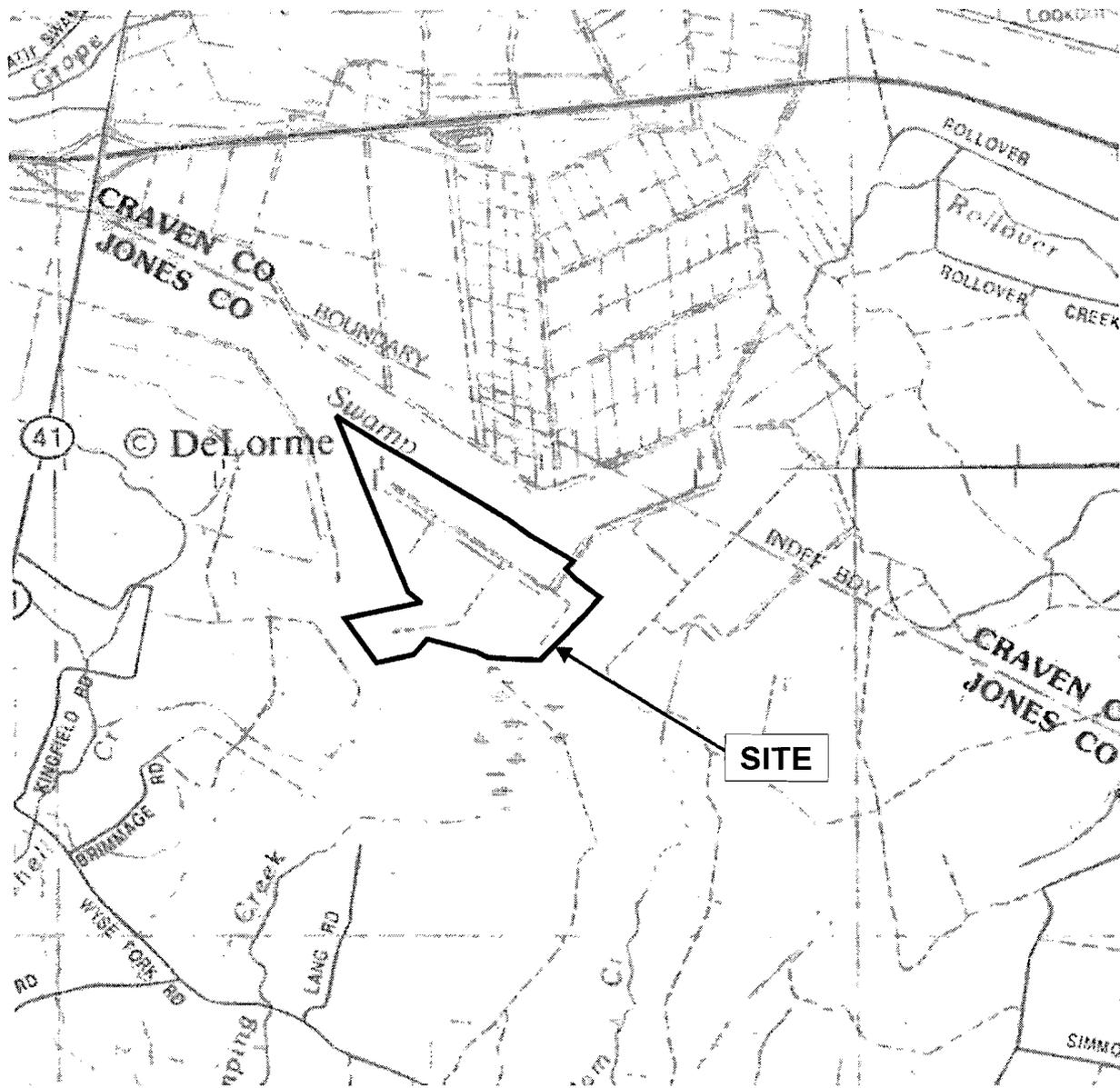
The establishment, use, and operation of the Dover Wetland Mitigation Bank will provide a quality compensatory mitigation alternative for authorized wetland impacts occurring within the Lower Neuse River Basin. The Bank will be established and operating in advance of development impacts in the area. Therefore, its use will help to reduce uncertainty in the CWA Section 404 permit program by having established compensatory mitigation credit available to applicants. In addition, the Bank will more effectively replace wetland functions within the watershed through consolidation of design, implementation, monitoring, and management of mitigation activities (Fed. Reg., 1995).

Based upon the current USACE jurisdictional determination and site investigations, 1,352 acres of wetlands have been degraded by historical land-use activities (including ditch excavation and clearing for timber production). Through the placement of protective real estate mechanism (i.e. conservation easement) and implementation of the proposed mitigation activities, degraded habitats and associated functions will be restored. The project will result in significant benefits to water quality and wildlife habitat in the Lower Neuse River Basin.

## V. SOURCES OF INFORMATION

- Mitsch, W.J. and J.G. Gosselink. 1993. *Wetlands* (Second Edition). Van Nostrand Reinhold, New York.
- North Carolina Division of Water Quality. 2004. *Neuse River Basinwide Water Quality Plan*. Raleigh, NC.
- N.C. Wetland Functional Assessment Team. 2007. *N.C. Wetland Assessment Method (NC WAM), Draft User Manual*. 183 pp.
- Schafale, M.P. and A.S. Weakely. 1990. *Classification of the Natural Communities of North Carolina*. Third approximation. N.C. Natural Heritage Program , Raleigh, N.C.
- Sharitz R.R. and J.W. Gibbons. 1982. *The ecology of southeastern shrub bogs (pocosins) and Carolina bays: a community profile*. U.S. Fish and Wildlife Service, Office of Biological Sciences. FWS/OBS-82/04. 103 pp.
- Skaggs, R.W. et al. 1995. Reference Simulations for Evaluating Wetland Hydrology, *in* Campbell, K. (ed.), *Versatility of Wetlands in the Agricultural Landscape*. American Society of Agricultural Engineers, pp. 1-10.
- U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, Natural Resources Conservation Service, U.S. Fish and Wildlife Service, and National Marine Fisheries Service. 1995. *Federal Guidance for the Establishment, Use and Operation of Mitigation Banks; Notice*. Vol. 60, No. 228. 10pp.

## FIGURES



SCALE 1" = 1 Mile

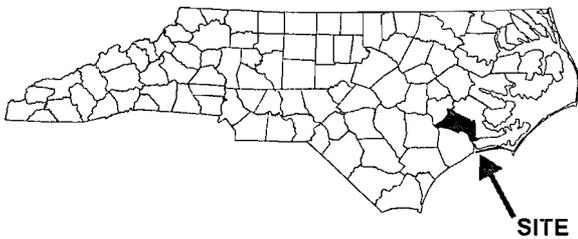
\*Boundaries are approximate and are not meant to be absolute.  
 Map Source: North Carolina Atlas & Gazetteer. Pg 65. 2003

Dover Wetland Mitigation Bank  
 Lower Neuse River Basin  
 Jones County, NC  
 40-06-686



**LMG**  
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 November 2007

**Figure 1  
 Vicinity Map**



SITE



SCALE 1" = 2000'

\*Boundaries are approximate and are not meant to be absolute.  
**Map Source:** Trenton Quadrangle 7.5 minute (topographic) 1990.

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**Figure 2**  
**USGS Topographic Map**



MAPPED SOIL UNITS (per Jones County Soil Survey)

- Ct - Croatan Muck
- To - Torhunta fine sandy loam
- Ra - Rains fine sandy loam
- Pa - Pantego loam
- Gr - Grantham loam

\*Boundaries are approximate and are not meant to be absolute.

**Map Source:** NRCS Soil Survey (Jones County, 1981)



SCALE 1" = 2000'

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**Figure 3**  
**Soils Map**



-----> Drainage pattern and outlets for collector ditches



0 2,000 4,000  
Feet

SCALE 1" = 2000'

\*Boundaries are approximate and are not meant to be absolute.

Map Source: 1998 NAPP aerial photography

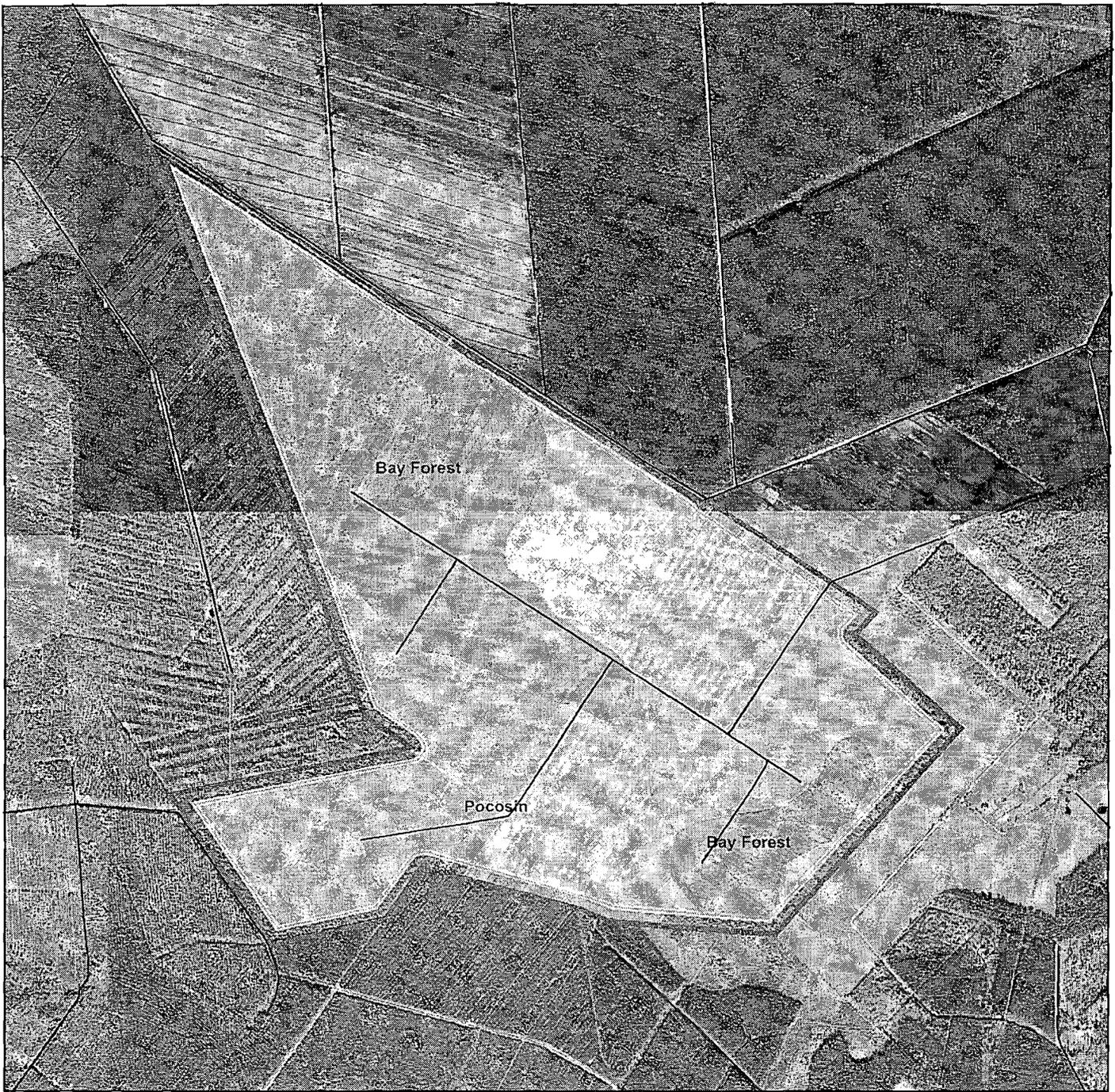
Dover Wetland Mitigation Bank  
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**Figure 4**  
**Aerial Photograph**  
**with Drainage Outlets**



**Proposed Restoration (~1,168 ac.)**

**Community Type**

-  Bay Forest (~470 ac.)
-  Pocosin (~698 ac.)
-  Proposed Restoration Area
-  Parcel Boundary



SCALE 1" = 2000'

Map Source: 1998 NAPP aerial photography

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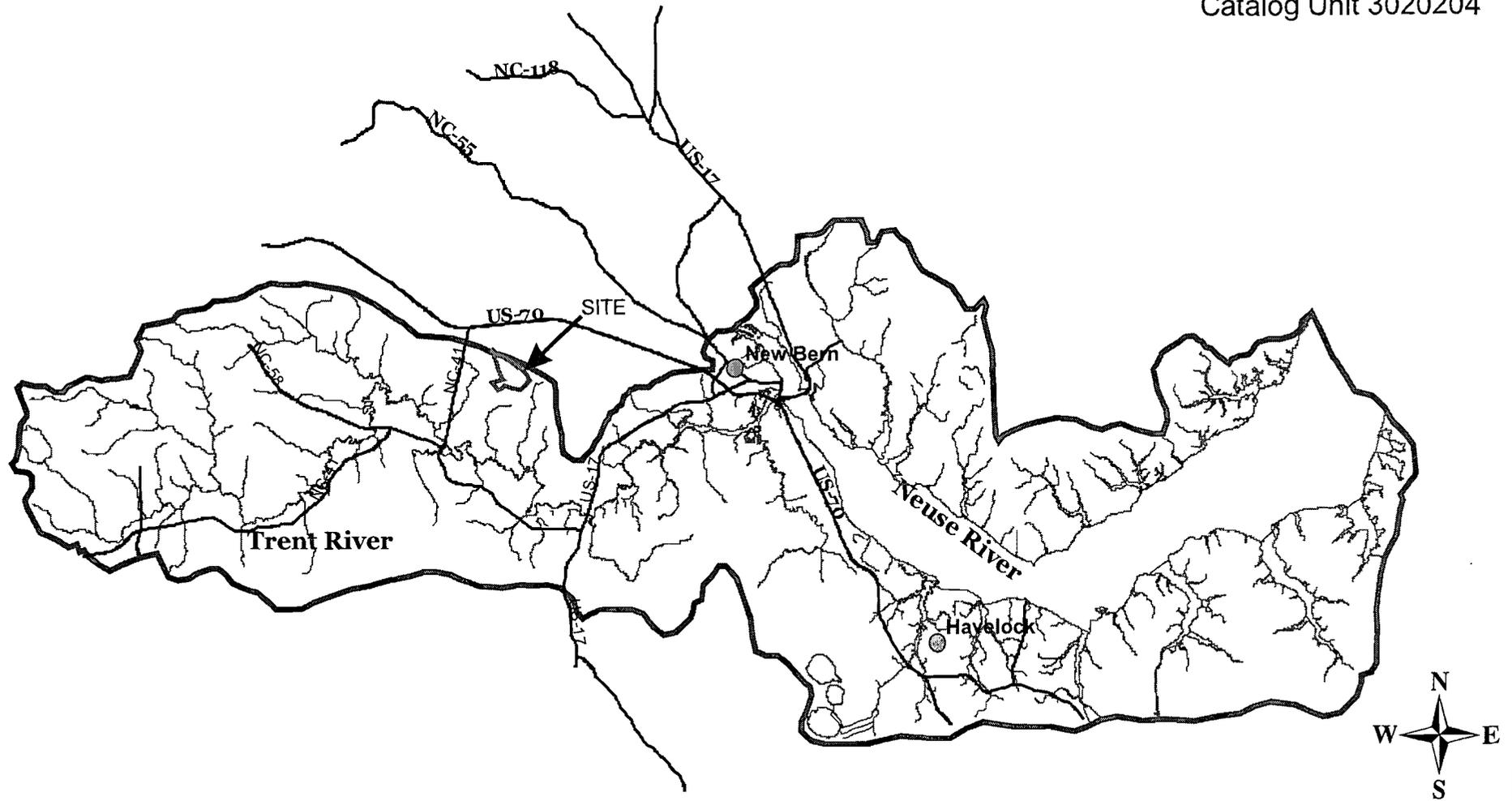
November 2007

**Figure 5**  
**Proposed Restoration Plan**

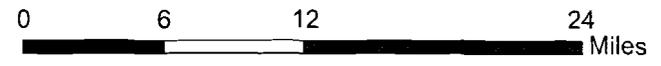
**APPENDIX A**

**8-DIGIT HUC MAP  
LOWER NEUSE RIVER BASIN  
CATALOGING UNIT 03020204**

Neuse River Basin  
Jones County, NC  
Catalog Unit 3020204



 Watershed Boundary



Dover Wetland Mitigation Bank  
Lower Neuse River Bason  
Jones County, NC



Appendix A.  
Geographic Service Area  
8-Digit HUC

**APPENDIX B**

**JURISDICTIONAL DETERMINATION**

U.S. ARMY CORPS OF ENGINEERS  
WILMINGTON DISTRICT

COPY

Action Id. 200511004

County: Jones

U.S.G.S. Quad: Cove City

NOTIFICATION OF JURISDICTIONAL DETERMINATION

Expires 6-13-2011

Property Owner/Agent: Weible Land Company c/o Mr. John Taylor, Coastal Real Estate & Management, Inc.

Address: Post Office Box 12006  
New Bern, North Carolina 28561

Telephone No.: (252) 633-5106

Property description:

Size (acres)	<u>1.352 acres</u>	Nearest Town	<u>Cove City</u>
Nearest Waterway	<u>Unnamed Tributary</u>	River Basin	<u>Neuse</u>
USGS HUC	<u>03020204</u>	Coordinates	<u>N 35.1328 W 77.3048</u>

Location description A 1.352 acre tract located approximately two miles southeast of the intersection of U. S. Highway 70 and and N. C. Highway 41 adjacent to the Great Dover Swamp south of Cove City in Jones County, North Carolina.

Indicate Which of the Following Apply:

- Based on preliminary information, there may be wetlands on the above described property. We strongly suggest you have this property inspected to determine the extent of Department of the Army (DA) jurisdiction. To be considered final, a jurisdictional determination must be verified by the Corps. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process ( Reference 33 CFR Part 331).
- There are Navigable Waters of the United States within the above described property subject to the permit requirements of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- There are wetlands on the above described property subject to the permit requirements of Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- We strongly suggest you have the wetlands on your property delineated. Due to the size of your property and/or our present workload, the Corps may not be able to accomplish this wetland delineation in a timely manner. For a more timely delineation, you may wish to obtain a consultant. To be considered final, any delineation must be verified by the Corps.
- The wetland on your property have been delineated and the delineation has been verified by the Corps. We strongly suggest you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.
- The wetlands have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on 5/23/2005. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- There are no waters of the U.S., to include wetlands, present on the above described property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in Morehead City, NC, at (252) 808-2808 to determine their requirements.

Action Id. 200511004

Placement of dredged or fill material within waters of the US and/or wetlands without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). If you have any questions regarding this determination and/or the Corps regulatory program, please contact Scott Jones at (252) 975-1616 extension 27.

Basis For Determination: This site does not exhibit wetland criteria as described in the 1987 Corps Wetland Delineation Manual.

Remarks: Plat entitled "Jones County JO-07 Tract for Weible Land Company," prepared by Atlantic Survey and Design, PA on 04/19/2005. Renewal of jurisdictional determinations made on 06/14/1995, 7/26/1995, 10/05/1995, and 6/15/2000. Cross-reference Action IDs 200011261, 200011271, and 199503978.

Corps Regulatory Official:



---

Date 06/13/2005

Expiration Date 06/13/2010

Copy Furnished:

**JURISDICTIONAL DETERMINATION**  
U.S. Army Corps of Engineers

Revised 8/13/04

DISTRICT OFFICE: CESAW  
FILE NUMBER: 200511004

**PROJECT LOCATION INFORMATION:**

State: NC  
County: Jones  
Center coordinates of site (latitude/longitude): 35.1328 / -77.3048  
Approximate size of area (parcel) reviewed, including uplands: 1,352 acres.  
Name of nearest waterway: Great Dover Swamp  
Name of watershed: Neuse

**JURISDICTIONAL DETERMINATION**

Completed: Desktop determination  Date:  
Site visit(s)  Date(s): 05/03/2005

**Jurisdictional Determination (JD):**

- Preliminary JD - Based on available information,  there appear to be (or)  there appear to be no "waters of the United States" and/or "navigable waters of the United States" on the project site. A preliminary JD is not appealable (Reference 33 CFR part 331).
- Approved JD - An approved JD is an appealable action (Reference 33 CFR part 331).  
Check all that apply:
- There are "navigable waters of the United States" (as defined by 33 CFR part 329 and associated guidance) within the reviewed area. Approximate size of jurisdictional area:
- There are "waters of the United States" (as defined by 33 CFR part 328 and associated guidance) within the reviewed area. Approximate size of jurisdictional area:
- There are "isolated, non-navigable, intra-state waters or wetlands" within the reviewed area.  
 Decision supported by SWANCC/Migratory Bird Rule Information Sheet for Determination of No Jurisdiction.

**BASIS OF JURISDICTIONAL DETERMINATION:**

- A. Waters defined under 33 CFR part 329 as "navigable waters of the United States":**
- The presence of waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
- B. Waters defined under 33 CFR part 328.3(a) as "waters of the United States":**
- (1) The presence of waters, which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
- (2) The presence of interstate waters including interstate wetlands.
- (3) The presence of other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate commerce including any such waters (check all that apply):
- (i) which are or could be used by interstate or foreign travelers for recreational or other purposes.
- (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- (iii) which are or could be used for industrial purposes by industries in interstate commerce.
- (4) Impoundments of waters otherwise defined as waters of the US.
- (5) The presence of a tributary to a water identified in (1) - (4) above.
- (6) The presence of territorial seas.
- (7) The presence of wetlands adjacent to other waters of the US, except for those wetlands adjacent to other wetlands.

**Rationale for the Basis of Jurisdictional Determination (applies to any boxes checked above).** *If the jurisdictional water or wetland is not itself a navigable water of the United States, describe connection(s) to the downstream navigable waters. If B(1) or B(3) is used as the Basis of Jurisdiction, document navigability and/or interstate commerce connection (i.e., discuss site conditions, including why the waterbody is navigable and/or how the destruction of the waterbody could affect interstate or foreign commerce). If B(2, 4, 5 or 6) is used as the Basis of Jurisdiction, document the rationale used to make the determination. If B(7) is used as the Basis of Jurisdiction, document the rationale used to make adjacency determination:*

**Lateral Extent of Jurisdiction: (Reference: 33 CFR parts 328 and 329)**

- Ordinary High Water Mark indicated by:
- clear, natural line impressed on the bank
  - the presence of litter and debris
  - changes in the character of soil
  - destruction of terrestrial vegetation
  - shelving
  - other:
- High Tide Line indicated by:
- oil or scum line along shore objects
  - fine shell or debris deposits (foreshore)
  - physical markings/characteristics
  - tidal gages
  - other:
- Mean High Water Mark indicated by:
- survey to available datum;  physical markings;  vegetation lines/changes in vegetation types.
- Wetland boundaries, as shown on the attached wetland delineation map and/or in a delineation report prepared by:

**Basis For Not Asserting Jurisdiction:**

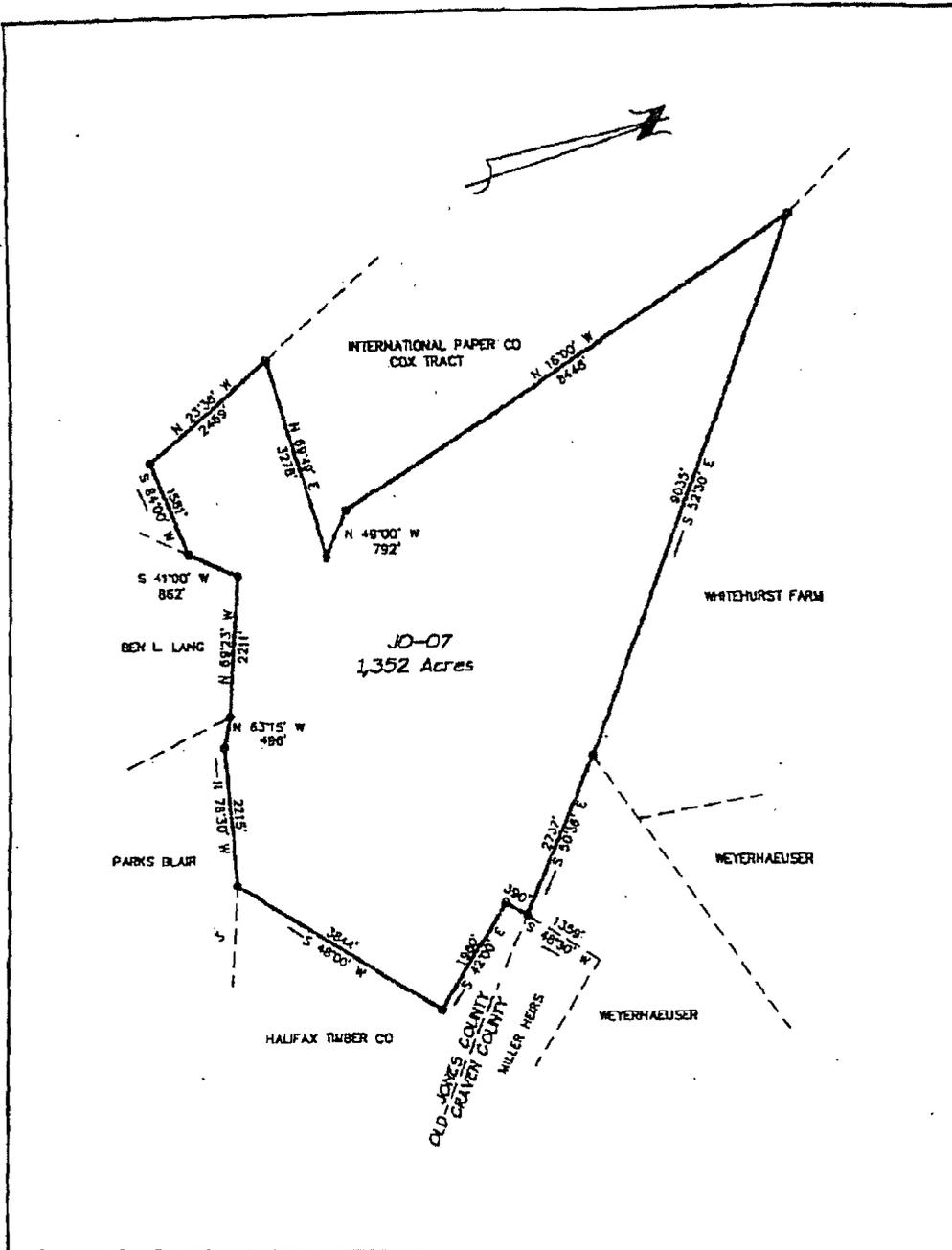
- The reviewed area consists entirely of uplands.
- Unable to confirm the presence of waters in 33 CFR part 328(a)(1, 2, or 4-7).
- Headquarters declined to approve jurisdiction on the basis of 33 CFR part 328.3(a)(3).
- The Corps has made a case-specific determination that the following waters present on the site are not Waters of the United States:
- Waste treatment systems, including treatment ponds or lagoons, pursuant to 33 CFR part 328.3.
  - Artificially irrigated areas, which would revert to upland if the irrigation ceased.
  - Artificial lakes and ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
  - Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons.
  - Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States found at 33 CFR 328.3(a).
  - Isolated, intrastate wetland with no nexus to interstate commerce.
  - Prior converted cropland, as determined by the Natural Resources Conservation Service. Explain rationale:
  - Non-tidal drainage or irrigation ditches excavated on dry land. Explain rationale:
  - Other (explain):

**DATA REVIEWED FOR JURISDICTIONAL DETERMINATION (mark all that apply):**

- Maps, plans, plots or plat submitted by or on behalf of the applicant.
- Data sheets prepared/submitted by or on behalf of the applicant.
- This office concurs with the delineation report, dated \_\_\_\_\_, prepared by (company):
  - This office does not concur with the delineation report, dated \_\_\_\_\_, prepared by (company):
- Data sheets prepared by the Corps.
- Corps' navigable waters' studies:
- U.S. Geological Survey Hydrologic Atlas:
  - U.S. Geological Survey 7.5 Minute Topographic maps: Cove City
  - U.S. Geological Survey 7.5 Minute Historic quadrangles:
  - U.S. Geological Survey 15 Minute Historic quadrangles: \_\_\_\_\_
  - USDA Natural Resources Conservation Service Soil Survey: Jones
  - National wetlands inventory maps:
  - State/Local wetland inventory maps:
  - FEMA/FIRM maps (Map Name & Date):
  - 100-year Floodplain Elevation is: \_\_\_\_\_ (NGVD)
  - Aerial Photographs (Name & Date): CESAW
  - Other photographs (Date):
  - Advanced Identification Wetland maps:
  - Site visit/determination conducted on:
  - Applicable/supporting case law:
  - Other information (please specify):

<sup>1</sup>Wetlands are identified and delineated using the methods and criteria established in the Corps Wetland Delineation Manual (87 Manual) (i.e., occurrence of hydrophytic vegetation, hydric soils and wetland hydrology).

<sup>2</sup>The term "adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes, and the like are also adjacent.



**U.S. ARMY CORPS OF ENGINEERS CERTIFICATE**

THIS CERTIFIES THAT THIS COPY OF THIS PLAT CONFORMS AS WETLANDS ALL AREAS OF WETLANDS REGULATED PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT AS DETERMINED BY THE UNDERSIGNED ON THIS DATE. UNLESS THERE IS A CHANGE IN THE LAW OR OUR PUBLISHED REGULATIONS THIS DETERMINATION OF SECTION 404 JURISDICTION MAY BE RELIED UPON FOR A PERIOD NOT TO EXCEED FIVE (5) YEARS FROM THIS DATE. THIS DETERMINATION WAS MADE UTILIZING THE 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL.

DRAWN Scott Lane  
 TITLED Project Hurricane  
 DATED 06/13/2005  
AID 200511004

THIS PLAT IS FOR PLANNING PURPOSES ONLY AND IS NOT THE RESULT OF A FIELD SURVEY PROVIDED BY ME AT THIS TIME AND SHOULD NOT BE USED FOR SALES, DEED DESCRIPTION, OR RECORDING PURPOSES.

SKETCH FROM OLD DRAWINGS		
JONES COUNTY JO-07 TRACT		
for		
WEIBLE LAND COMPANY		
TRENTON TOWNSHIP	JONES COUNTY	NORTH CAROLINA
DATE: JAN 26 1997	Atlantic Survey + Design, PA	
JOB No: 7026	1305 Country Club Road	
SCALE: 1" = 2000'	New Bern, North Carolina	
	(252) 635-6649	

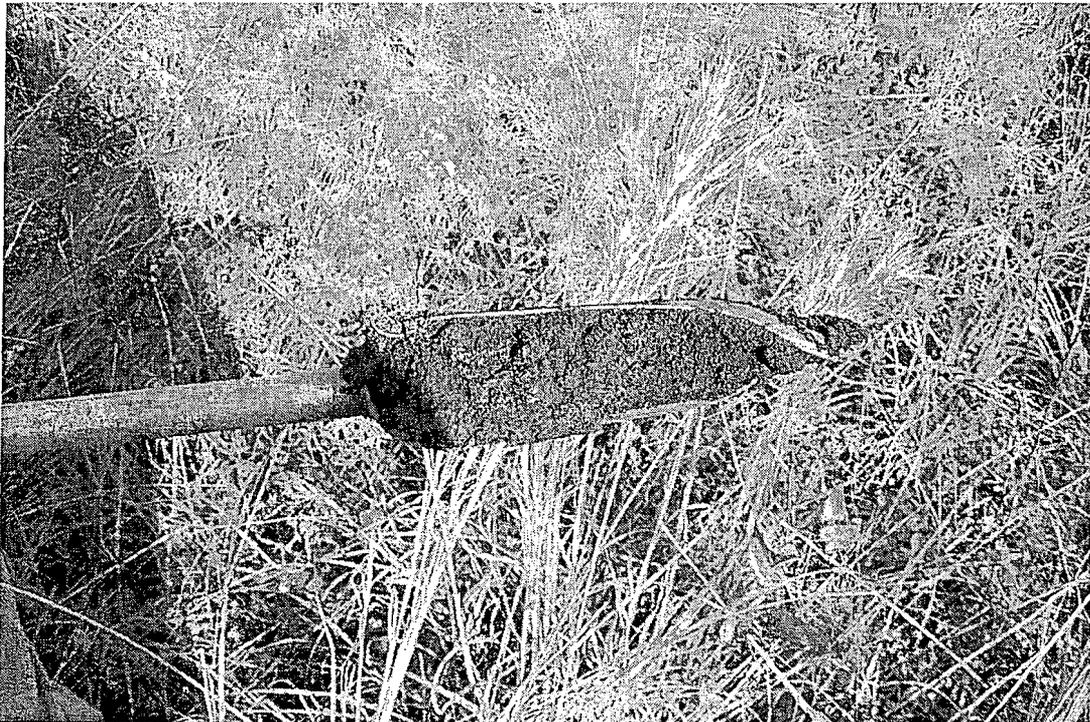
**APPENDIX C**

**SITE PHOTOGRAPHS**

## SITE PHOTOGRAPHS



(1) Typical collector ditch adjacent to road



(2) Drained hydric muck loam



(3) Drained hydric soil and typical herbaceous vegetation of disturbed site



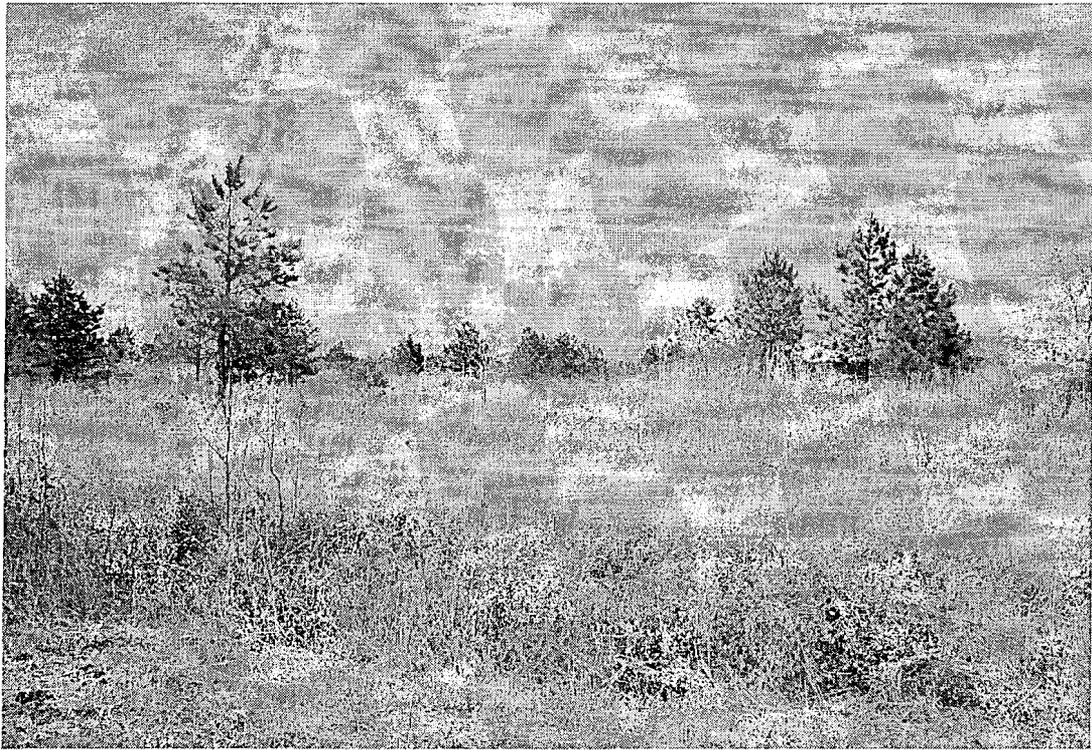
(4) Collector ditch on southern boundary



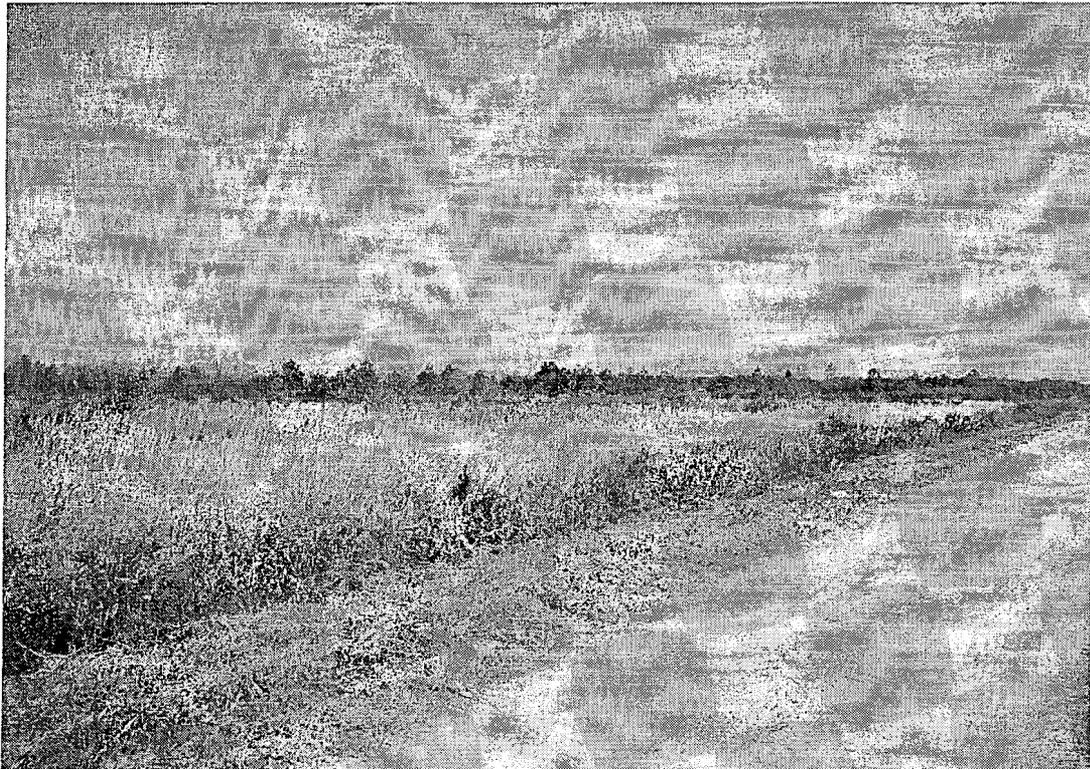
(5) Existing stand of vegetation in drained block



(6) Existing stand of vegetation in drained block



(7) View of interior of tract



(8) View of existing vegetation near internal road network

**APPENDIX D**

**REFERENCE WETLAND SUMMARY**

## **Dover Wetland Mitigation Bank Reference Wetland Summary**

### **I. Introduction**

On March 18, 2008 Land Management Group, Inc. (LMG) staff conducted field evaluations to locate and describe reference non-riverine pocosin and non-riverine swamp forest wetland communities for the Dover Wetland Mitigation Bank (Bank). Given the proximity of the proposed restoration site to the protected lands of the Croatan National Forest (Carteret County), specific wetland areas were identified as potential reference wetlands within the National Forest (Figure 1). Field evaluations focused on landscape position, vegetative composition, mapped soil series, and hydrologic regime. Information collected during these evaluations will be used to guide restoration efforts at the Bank site.

### **II. Targeted Wetland Communities**

Pocosin wetlands are defined as a palustrine, scrub-shrub community by the Cowardin classification method. Soils in these systems are often histosols, containing high percentages of organic matter. Development of these systems has been linked to the changes in sea level throughout geologic time. After a dramatic decline in sea level during the Wisconsin Ice Age (15,000 years ago), a gradual increase occurred, slowing drainage throughout the Coastal Plain of North Carolina and Virginia. This slowed drainage allowed aquatic plant communities to develop along the broad interstream flats. Increased sedimentation rates in conjunction with the decomposition of plant material and shallow water tables formed the basis for the organic soils.

Hydrologic input to these systems is driven by precipitation. As these areas drain poorly, evapotranspiration and surface runoff are the primary methods of export. Evapotranspiration accounts for a majority of the removal in the late spring and summer, typically between 60% and 70% of the total. Surface runoff is dominant during the late fall and winter months, when evapotranspiration rates decrease. However, drainage ditches may artificially inflate runoff rates year-round, causing attenuation rates to decrease following a precipitation event (Richardson, 1981).

Vegetation within these interstream areas has evolved due to changes in nutrient levels, peat accumulation and fire frequency. Succession from the original aquatic community to a swamp forest dominated by bald cypress (*Taxodium distichum*) and Atlantic white cedar (*Chamaecyparis thyoides*) occurred between 9,000 and 12,000 years ago. Although experts disagree on the precise composition of the climax community, frequency of fire played a major role in controlling which canopy species would dominate. Early research suggests that fires occurring every 10 years or less would eventually support development of a swamp forest community (Wells, 1928). More recent research cites nutrient levels as the controlling factor in plant succession, suggesting that the short pocosin (shrubs less than 1.5 meters in height) community is the climax community. Plant growth in these areas occurs entirely within the deepest nutrient poor, organic soils which

stunt growth. Stands located in areas containing shallower deposits may access the underlying mineral layers and obtain valuable nutrients to support more robust growth forms (Otte, 1981).

Non-riverine swamp forest communities are typically found in concave positions of interstream divides. These communities typically grade into both tall and short pocosins pending soil mineral content and hydrology. Succession within these communities is driven primarily by frequency of fire, availability of nutrients, and duration of hydroperiod.

Evergreen bay forests canopies are composed of the three main bay species (loblolly, sweet, and red) and are associated with higher mineral content soils and shorter hydroperiods. Fires typically occur less frequently in these areas, suppressing competition from various pine species. As mineral content decreases and hydroperiod increases, the community grades into a deciduous forest containing swamp black gum (*Nyssa sylvatica var. biflora*) and red maple (*Acer rubrum*) within the canopy (Kologiski, 1977).

### III. Pocosin - Headwaters of Caleb Branch

Caleb Branch is a first order tributary located on the southern side of Hadnot Creek (Figures 2-3). The area reviewed was located in a poorly drained interstream divide in the headwaters of the creek and was defined as a tall pocosin/pond pine woodland community (Shafale and Weakley, 1990). Management of this portion of the Croatan National Forest appeared to be minimal as the tree strata was dominated by pond pine (*Pinus serotina*) and no drainage plan had been implemented.

Elevations in this area range from 10' to 14' MSL. Soils are mapped as Pantego and Torhunta units, both considered to be very poorly drained (see description below) with observed water tables at or near the surface for a majority of the year. Observed conditions during the site visit confirmed water table levels and soil characteristics consistent with the original mapped designation. Indicators of extended ponding such as water marks and algal mats were also found throughout the stand.

In addition to the pond pine canopy, several large red bay (*Persea borbonia*), red maple (*Acer rubrum*), and loblolly pine (*Pinus taeda*) were identified. Species such as gallberry (*Ilex glabra*), fetterbush (*Lyonia lucida*), and sweet pepperbush (*Clethra alnifolia*) were dominant in the shrub layer. Dense areas of laurel-leaf greenbriar (*Smilax laurifolia*) were also observed. Given this assemblage, this community can be classified as a tall pocosin.

#### Pantego/Torhunta Mapping Unit

Depth	Horizon	Color	Texture
0-8	A	10YR 2/1	Mucky fine sand
8-18+	Btg	10YR 3/1	Sandy clay loam
Obs. Water Table	2"		

#### IV. Non-Riverine Swamp Forest – Unnamed Tributary to Hadnot Creek

This wetland was located in the headwaters of an unnamed tributary on the northern side of Hadnot Creek approximately 1,000' from a defined channel (Figures 4-5). This area is located in the poorly drained flats between Hunters Creek to the north and Hadnot Creek to the south. As with the pocosin community, no artificial drainage has been implemented in this area and natural hydroperiods appear to remain intact.

Dominant species of this reference wetland included red bay (*Persea borbonia*) and loblolly bay (*Gordonia lasianthus*). Pond pine (*Pinus serotina*), swamp black gum (*Nyssa sylvatica* var. *biflora*), and sweet bay (*Magnolia virginiana*) were co-dominate within the tree strata. Gallberry (*Ilex glabra*), fetterbush (*Lyonia lucida*), and ti-ti (*Cyrilla racemiflora*) were dominant in the shrub layer.

Elevations in this area range from 10' to 14' MSL. Soils are mapped as Leon and Torhunta units, considered to be poorly and very poorly drained, respectively (see description below). Observed water tables are typically found at or near the surface for a majority of the year. Conditions during the site visit confirmed water table levels and soil characteristics consistent with the original mapped designation. Indicators of extended ponding such as water marks and algal mats were also found throughout the stand.

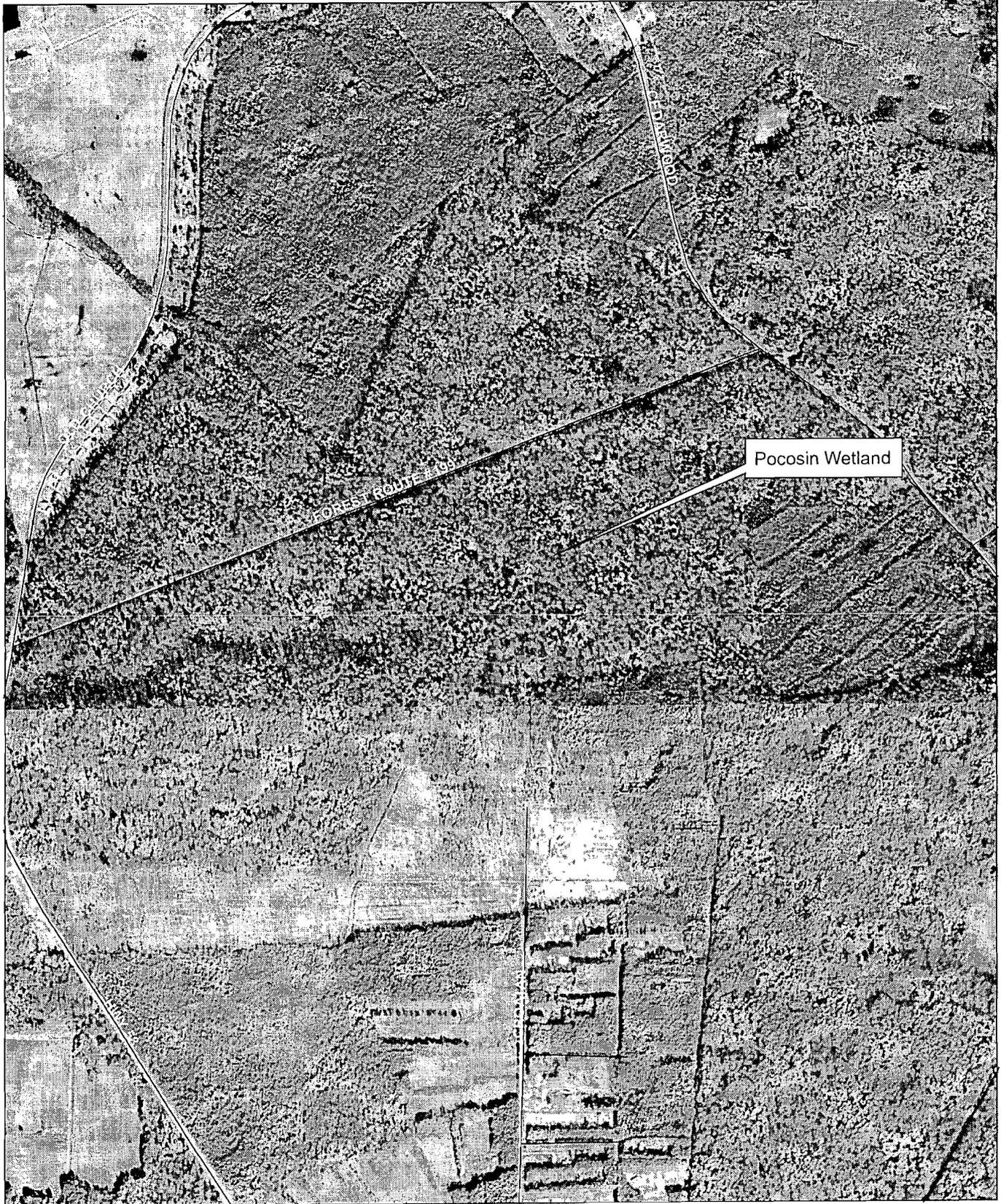
##### Torhunta Mapping Unit

Depth	Horizon	Color	Texture
0-10	A	10YR 2/1	Mucky fine sand
10-15	Btg1	10YR 3/2	Sandy clay loam
15-24+	Btg2	10YR 3/3	Sandy clay loam
Obs. Water Table	8"		

## V. References

- Kologiski, R.L. 1977. The phytosociology of the Green Swamp, North Carolina. North Carolina Ag. Ext. Standard Technical Bulletin No. 250. 101 pp.
- Otte, L.J. 1981. Origin, development and maintenance of pocosin wetlands of North Carolina. Unpublished report to NC Heritage Program. NC Department of Natural Resources and Community Development, Raleigh. 51 pp.
- Richardson, C.J., ed. 1981. Pocosins wetlands. Hutchinson Ross Publishing Co., Stroudsburg, Pa. 364 pp.
- Schafale, M.P. and A.S. Weakely. 1990. Classification of the Natural Communities of North Carolina. Third approximation. N.C. Natural Heritage Program , Raleigh, N.C
- Wells, B.W. 1928. Plant communities of the coastal plain of North Carolina and their successional Relations. Ecology 9: 230-242.





Pocosin Wetland



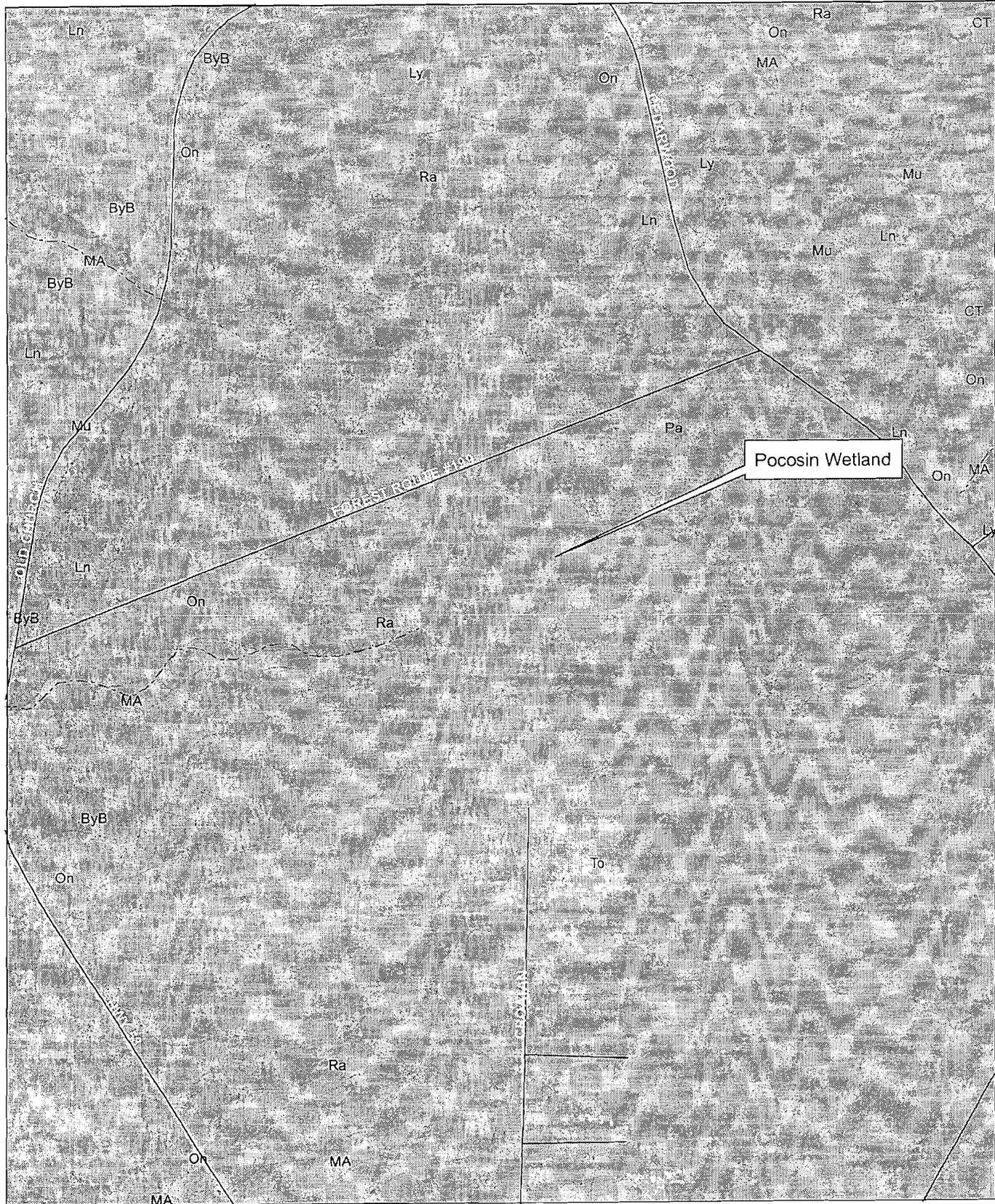
Caleb Branch

Croatan National Forest

Figure 2.  
1998 Aerial Photography

0 1,000 2,000 Feet

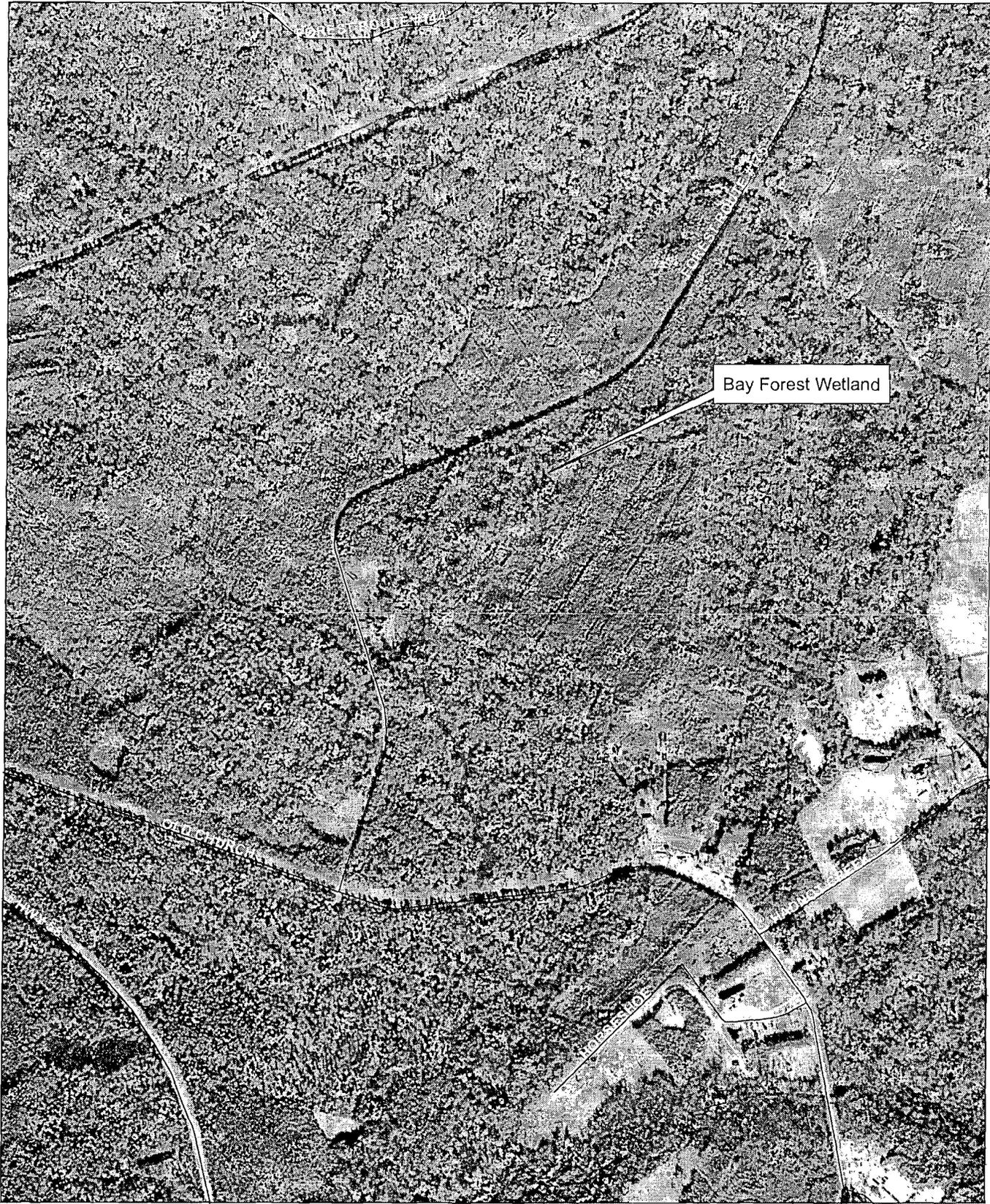




Caleb Branch  
Croatan National Forest

Figure 3.  
NRCS Soils Map





Bay Forest Wetland

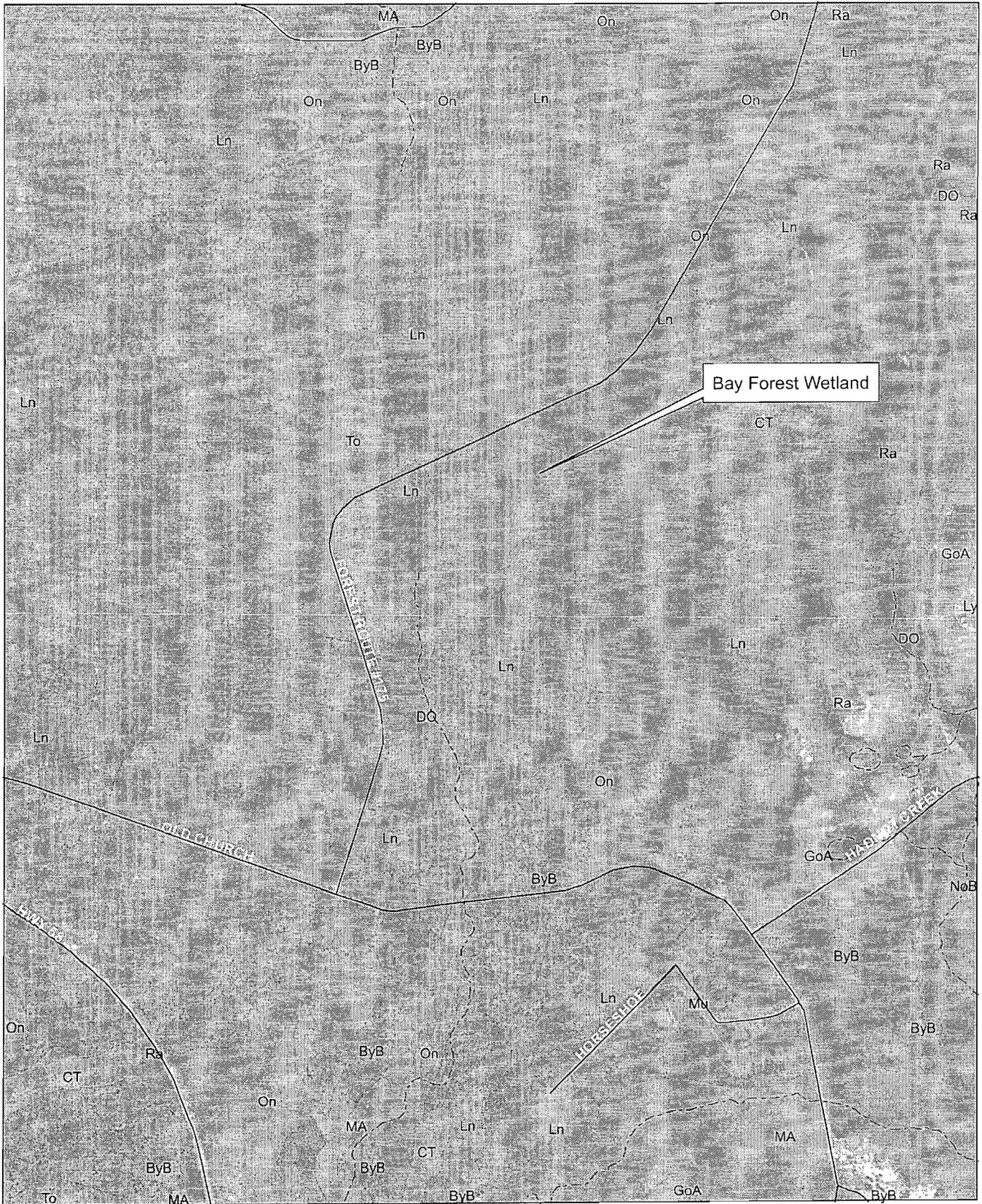


UT to Hadnot Creek  
Croatan National Forest

Figure 4.  
1998 Aerial Photography

0 1,000 2,000 Feet





Bay Forest Wetland

UT to Hadnot Creek  
Croatan National Forest

Figure 5.  
NRCS Soil Survey



A view of surface ponding at Caleb Branch site.



A view of soil surface at Caleb Branch site.



Dover Wetland Mitigation Bank  
Reference Wetland  
Croatan National Forest

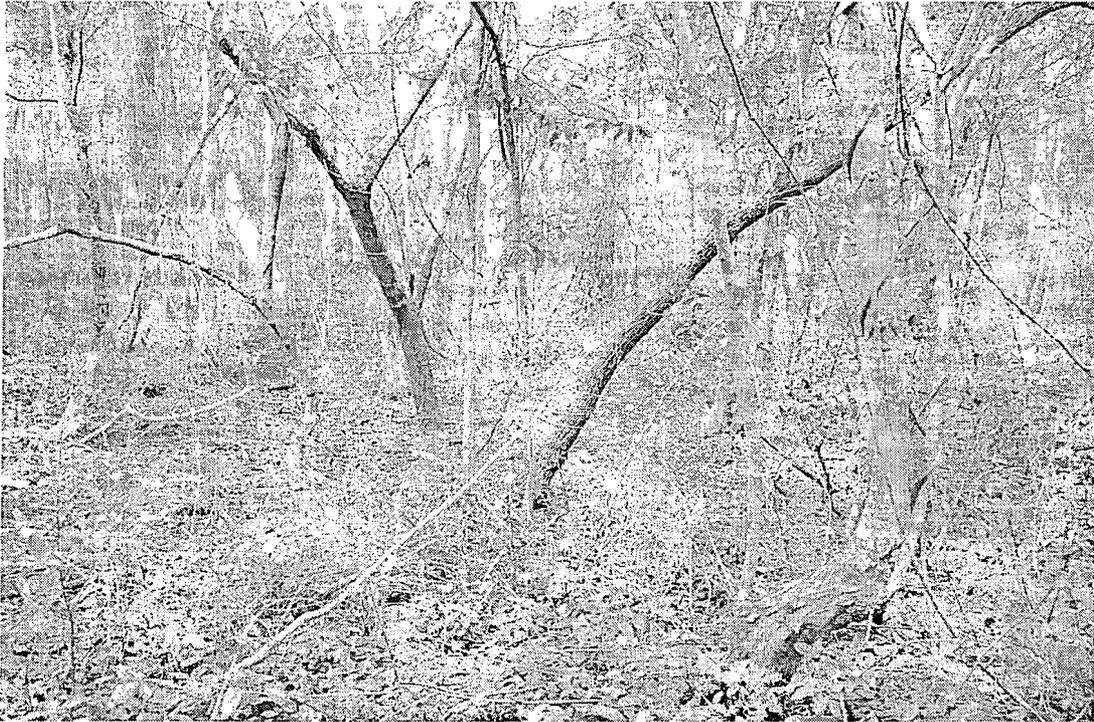
**Land Management Group, Inc.**  
Environmental Consultants  
Wilmington, N.C.  
March 2008

Site Documentation  
Photos

**A view of typical vegetation at Caleb Branch site.**



**A view of typical vegetation at UT to Hadnot Creek site.**



**Dover Wetland Mitigation Bank  
Reference Wetland  
Croatan National Forest**

**Land Management Group, Inc.**  
Environmental Consultants  
Wilmington, N.C.  
March 2008

Site Documentation  
Photos

A view of typical understory vegetation at UT to Hadnot Creek site.



A view of typical understory vegetation at Caleb Branch site.



Dover Wetland Mitigation Bank  
Reference Wetland  
Croatan National Forest

**Land Management Group, Inc.**  
Environmental Consultants  
Wilmington, N.C.  
March 2008

Site Documentation  
Photos