

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

ORM ID: SAW-2008-02310

December 15, 2008

PUBLIC NOTICE

The District Commander 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 Interagency Review Team members, either favorable or unfavorable opinion of the work to be performed, but is issued to solicit comments regarding the factors on which final decisions will be based.

Location of Proposed Work: The 617 acre property is located adjacent to the Croatan National Forest, south of U.S. Highway 70 and east of Catfish Lake Road, between New Bern and Havelock, southwest of the community of Croatan, adjacent to East Prong Brice's Creek, in Craven County, North Carolina.

Proposed Work and Purpose: The bank sponsor (Sponsor) proposes to establish and operate a wetland compensatory mitigation bank to compensate for losses authorized by applicable federal and state regulatory programs. As proposed, an estimated 554 acres of non-riparian, forested wetland restoration, enhancement and preservation may be realized as a result of the project. Specifically, it is estimated that 475 acres of non-riparian wooded wetlands will be restored via the plugging of ditches and planting of appropriate tree species on the site. Approximately 23 acres of wetlands will be enhanced by this work and 56 acres of existing wetlands will be preserved. Upon execution of the mitigation banking instrument, a conservation easement for the site will be conveyed to an appropriate public land trust organization. Proposed credit ratios are as follows: a) Restoration 1:1; b) Enhancement 2:1; and c) Preservation 5:1. Accordingly, it is estimated that 497 non-riparian, forested wetland credits will be derived from the successful establishment of this bank.

Geographic Service Area: The Sponsor proposes to establish a service area that includes subsets of 14-digit hydrologic unit codes (HUC) from both the Lower Neuse River, HUC 03020204, and the White Oak River, HUC 03020106. The Sponsor selected the boundaries based upon geographic proximity to the bank site, occurrence of similarly situated and functioning wetland habitats, and economic viability considerations.

Prospectus: The full prospectus is available for review at:

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.

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Preliminary review of this proposal 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., January 9, 2009, or telephone (252) 975-1616, extension 22.

Distribution List

Copies Furnished

Ms. Kathy Matthews
United States Environmental Protection Agency
Wetlands Regulatory Section
Mail Code: E143-04
Research Triangle Park, North Carolina 27711

Mr. Ron Sechler
National Marine Fisheries Service
Habitat Conservation Division
101 Pivers Island Road
Beaufort, North Carolina 28516

Mr. Howard Hall
United States Fish and Wildlife Service
Ecological Services - Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

Ms. Maria Dunn, N.E. Permits Coordinator
North Carolina Wildlife Resources Commission
943 Washington Square Mall
Washington, North Carolina 27889

Ms. Tammy Hill
North Carolina Department of Environment and Natural Resources
Division of Water Quality - Wetlands and Stormwater Branch
Mail Service Center 1650
Raleigh, North Carolina 27699-1650

BRICE CREEK WETLAND MITIGATION BANK

Craven County, North Carolina

MITIGATION BANK PROSPECTUS

Sponsor:

Weyerhaeuser Company

Prepared by:

*Land Management Group, Inc.
Wilmington, NC*

Updated November 2008

BRICE CREEK WETLAND MITIGATION BANK BANK PROSPECTUS

I. INTRODUCTION

A. Project Overview

The proposed mitigation bank site (approximately 617 acres) consists predominantly of former headwater wetlands that drain to Great Branch (a first-order tributary of the Trent River), Tucker Creek (a first-order tributary of the Neuse River), and the East Prong (a first-order tributary of the Trent River). Non-riparian wetlands have been historically ditched and managed on the tract for silvicultural production. A network of drainage ditches on the tract serve to lower groundwater tables and intercept surface water. Flow is diverted into the East Prong that drains to Brice Creek and subsequently into the Trent and Neuse Rivers. Based upon preliminary site investigations, approximately 554 acres of non-riparian wetlands can be restored, enhanced, and preserved on the site.

The site consists entirely of drained hydric soils characteristic of broad interstream flats of the outer Coastal Plain. Representative mapped soil units include Bayboro mucky loam, Pantego fine sandy loam, Rains fine sandy loam, and Leaf silt loam. These series are poorly drained to very poorly drained soils characteristic of non-riparian wetlands. Open ditching on approximate 330-ft spacing for timber management has effectively lowered water table levels throughout a majority of the site, effectively removing wetland hydrology. This is supported by observed field indicators, groundwater monitoring data, and DRAINMOD studies.

Assuming a 125-ft setback for boundary ditches to be left in their present condition (to minimize hydrologic trespass), the tract offers up to 554 ac +/- of potential for non-riparian wetland restoration, enhancement, and preservation. Given the landscape position and soil types occurring on the tract, we believe that the entire site formerly consisted of non-riparian wet hardwood flats. Based upon the proposed mitigation effect, the bank site will result in 497 non-riparian wetland credits (restoration equivalent credits). Supply of these credits to Section 404/401 applicants will be deemed as suitable mitigation to offset authorized wetland impacts in the identified Geographic Service Area (GSA).

B. Site Location

The tract is located south of Highway 70 (between New Bern and Havelock) and just east of Catfish Lake Road in Craven County, NC. It is bordered on the south by East Prong, a first-order tributary of the Trent River. Refer to the enclosed site location map (Figure 1), USGS topographic quadrangle (Figure 2-3), and

the Craven County Soil Survey map (Figure 4) for additional site information. A 1998 infra-red aerial photograph of the site (Figure 5) is also enclosed for reference.

C. Project Purpose and Service Area

The Brice Creek tract is located within the Middle Atlantic Coastal Plain (Ecoregion 63) as defined by Griffith et al. (2002) "Ecoregions of North Carolina" (refer to Appendix A). This ecoregion encompasses the area defined as the 'Carolina Flatwoods' – a subregion occurring along nearly level, poorly drained areas in the outer Coastal Plain including the Lower Neuse River Basin and the White Oak River Basin.

The "Ecoregions of North Carolina" is a collaborative effort between the NRCS, EPA, NCDENR, U.S. Geological Service (USGS), U.S. Forestry Service (USFS), and the University of North Carolina (UNC). The Ecoregions Project has identified areas of North Carolina consisting of ecosystems that are similar in type, quantity, and quality of environmental resources. Characteristics of ecoregions include similar geology, physiography, vegetation, climate, soils, land use, wildlife, and hydrology.

The Geographic Service Area (GSA) is the designated area wherein a bank can be reasonably be expected to provide appropriate compensation for impacts to similar wetland and/or other stream or aquatic functions. Since the Brice Creek site is located on the southeastern edge of the Lower Neuse River Basin, the proposed GSA includes a subset of 14-digit HUC's from the Lower Neuse River Basin and from the neighboring White Oak River Basin. Note that similar non-riverine flat wetlands commonly occur throughout all of the proposed 14-digit watersheds. The proposed GSA does not include the entire Lower Neuse River Basin. Rather the boundaries have been selected based upon geographic proximity to the bank site, occurrence of similarly situated and functioning wetland habitats, and economic viability considerations (as provisioned in the Mitigation Rule (CFR 332.8(d)(6)). The proposed GSA is inclusive of the 14-digit watersheds listed in Table 1. Refer to Figure 6 for the location and extent of the proposed GSA. The mitigation banking instrument will identify the specific approved GSA upon further consultation with the IRT.

The proposed project will serve as a general use wetland mitigation bank serving the identified GSA. The purpose of the bank is to compensate for those wetland losses authorized by applicable federal and state regulatory programs via the restoration, enhancement, and preservation of approximately 554 acres of wetlands.

II. BASELINE CONDITIONS

A. Community Types

The tract consists of former wetland hardwood flats with characteristic mineral soils, topography, and drainage patterns consistent with interstream divide systems. The primary wetland type targeted for restoration are non-riparian wet hardwood flats. Based upon the Cowardin classification for wetland and deepwater habitats (Cowardin et al. 1979), the primary wetland community type to be restored is Palustrine Forested Wetland (broad-leaved deciduous, needle-leaved deciduous and broad-leaved evergreen).

B. Vegetation

The predominant land use of the tract and surrounding area is silvicultural production. Dominant wetland vegetation of the tract includes species such as loblolly pine (*Pinus taeda*), red maple (*Acer rubrum*), and sweet gum (*Liquidambar styraciflua*). Nearly all the former wetland habitat on the tract has been drained and managed for timber production. At the time of preliminary site investigations, the southwestern portion

Table 1. Proposed Geographic Service Area

14 Digit HUC (Lower Neuse)	14 Digit HUC (White Oak)
03020204030020	03020106010040
03020204030010	03020106010020
03020204030040	03020106010060
03020204030030	03020106010050
03020204060020	03020106040010
03020204020010	03020106030040
03020204010100	03020106030020
03020204070010	03020106030030
03020204020050	03020106030010
03020204030050	03020106020020
03020204060010	
03020204020040	
03020204040010	
03020204020020	
03020204050050	
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03020204010090	
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03020204050030	
03020204050040	

of the site had been recently clear-cut, while significant acreage remained planted with loblolly pine in various stages of growth. Existing wetland areas exhibit greater densities of bay species including red bay (*Persea palustris*), sweet bay (*Magnolia virginiana*), loblolly bay (*Gordonia lasianthus*). Other commonly occurring species in undrained portions of the tract include catbrier (*Smilax* species), red maple, fetterbush (*Lyonia lucida*), bitter gallberry (*Ilex glabra*) and, titi (*Cyrilla racemiflora*). Netted chain fern (*Woodwardia areolata*), and cinnamon fern (*Osmunda cinnamomea*) are common herbaceous species of these areas.

Drained wetland areas (suitable for restoration) exhibit a mix of species indicative of changes in hydrology. Remnant wetland canopy species (e.g. red maple) tend to persist in certain areas. However, subcanopy species and herbaceous vegetation is indicative of drier conditions resulting from site drainage. These species include water oak (*Quercus nigra*), yellow jasmine (*Gelsimium sempervirens*), horse sugar (*Symplocos tinctoria*), bracken fern (*Pteridium aquilinum*), and dog fennel (*Eupatorium capillifolium*).

C. Soil Characteristics

The tract (located within the headwaters of Brice Creek and Tucker Creek) exhibits nearly level to gently sloping topography. The site and surrounding area is grouped in the Pantego-Bayboro-Rains-Leaf general soil unit. This assemblage is characterized by nearly level, very poorly drained soils that have silt and muck surfaces and are subject to rare to frequent flooding. The predominant wetland soil units occurring on the tract are the Pantego fine sandy loam and Bayboro mucky loam soil series. These soils occur on broad flats and/or depressions and are very poorly drained (refer to Figure 4). Each of these soil units is characterized by low chroma (black or dark brown), often mucky surfaces. The Pantego series has a black fine sandy loam surface layer to approximately 15" and is underlain by a dark gray sandy clay loam. The Bayboro series consists of organic muck to approximately 13" and is underlain by grayish brown loam to approximately 17", and is underlain by grayish brown clay loam and grey clay. Other wetland soil units on the tract include Rains fine sandy loam and Leaf silt loam. These are poorly to very poorly drained soils occurring in low flats and in depressions of uplands.

D. Hydrology/Hydraulic Characteristics

The tract is located within a headwater area that has been historically managed for timber production. An intensive drainage network (of varying ditch size) effectively drains most of the former non-riparian wetlands occurring on the property. Drained hydric soils (i.e. low-chroma, friable soils exhibiting a relatively high percentage of uncoated sand grains) are clearly evident along either side of existing ditches on the tract.

Subsidence around old-growth trees and oxidation of surficial organics are also indications of long-term drainage. Given the predominant soil type on the tract and observed field indicators, the lateral drainage effect of the ditches is estimated to be approximately 200 to 300 ft for many of the ditches occurring on the property. Beyond these distances, drainage appears to be restricted. Estimates of lateral drainage distances are consistent with those values observed in other drained sites with soil groups exhibiting similar hydraulic conductivity and drainable porosity.

Thirty-two (32) automated wells were installed on the site to document existing groundwater hydrology. Nearly all of these wells have indicated relatively rapid discharge subsequent to rainfall events. Existing data from the early growing season of 2007 (March through May) were used to calibrate DRAINMOD software. DRAINMOD was used to model the drainage effect of the existing ditch network for a period of 30 years (1959-1989). A total of four (4) models were developed using well data from each major soil type found within the project area (Appendix B).

Calibration of each model is based on observed water table and precipitation data. During calibration a variety of inputs such as drain depth and drain spacing are adjusted to generate a calculated response to precipitation events. Results from this calibration are displayed in graphical format, plotting actual water table depths in relation to model results. Once these two data sets are synchronized, a statistical analysis is completed to ensure that a best fit has been achieved. Current state statutes require a statistical difference of less than 6 inches between the two. This statute was applied to the model developed for this project.

Wells #25, 28, 5, and 8 were modeled using DRAINMOD. Wells 5 and 28 were located in the Bayboro soil unit. Well 8 was located in the Rains unit while Well 25 was placed in the Pantego unit. In addition to representing each of the major soil types found on-site, these wells also characterize the geography of the site. Modeling results for Well 28 found the area to be effectively drained as it failed to meet the wetland hydrology criteria in each of the 30 years. Well 25 showed similar results, meeting the criteria in one of the 30 years. The remaining wells met the criteria in 9 of the 30 years. Overall, model results depict an area that has been effectively drained through historically prescribed drainage improvements.

III. CONCEPTUAL PLAN

Hydrology Restoration: The proposed mitigation bank includes the restoration of up to 475 ac of non-riparian 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 wet hardwood areas. Based upon preliminary site investigations, some boundary ditches will 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 the project area (560 ac) assumes a 125-ft offset from all property boundaries. Refer to Figure 7 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 swamp chestnut oak (*Quercus michauxii*), tulip poplar (*Liriodendron tulipifera*), willow oak (*Quercus phellos*), and black gum (*Nyssa biflora*). Areas of deeper organic soils may also include plantings of water tupelo, Atlantic white cedar and bald cypress. 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 parcels, 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 and White Oak River Basins are particularly susceptible to loss of wetland functions and associated watershed impacts. By providing for successful restoration of an expansive non-riparian wetland system, the mitigation bank will help to replace wetland functions critical to water quality and wildlife habitat in the area.

Earthwork/Site Preparation: Initially, all remaining loblolly pine stands will be logged to allow for hardwood plantings to commence. Backfilling and/or installation of ditch plugs will follow the logging activities. Where possible, existing spoil piles and logging roads will be used to source the material for this portion of the earthwork. Clay plugs will also be used in former ditch outlet areas to promote hydrologic restoration.

Prior to placing fill material in any of the existing ditches, a Nationwide (#27) permit will be prepared and submitted to NC Division of Water Quality and US Army Corps of Engineers. As total disturbance will exceed 1 acre, a sediment and erosion control plan will also be filed with NC Division of Land Quality. The

erosion control plan will likely include provisions for installation of check dams and silt fencing to prevent sedimentation of down-gradient waters.

Wetland Enhancement: Wetland enhancement is targeted for approximately 23 acres of the project site (Figure 7). The areas were targeted due to their location outside of the drainage effect. Areas targeted for restoration were based on a 150' lateral drainage effect from each ditch. In order to establish the acreage for the enhancement, an additional 150' offset was placed on the isolated ditches along the perimeter of the site.

Prior to any clearing activities, a survey of the existing vegetation in each of the four areas will be conducted to determine if there is a sufficient number of target species (swamp chestnut oak, tulip poplar, etc.) present. In the event that these areas are determined to be dominated by non-target species, logging and clearing will be initiated. Following clearing activities, planting will take place using same species and spacing criteria planned for the restoration areas.

Wetland Preservation: Four areas, totaling 56 acres have been targeted for wetland preservation within the site (Figure 7). The preservation area consists of relatively undisturbed jurisdictional wetlands along the perimeter of the site. Wetland hydrology of these areas remains unaltered by drainage features of the site, as they are located greater than 300' from any existing ditch. As such, these wetlands exhibit seasonal saturation and inundation characteristic of natural, undisturbed swamp forests. Given the lack of proximity to the existing drainage network and preliminary DRAINMOD results, it is anticipated that these areas will meet the criteria for wetland hydrology during periods of normal rainfall.

Areas targeted for preservation maintain remnants of silvicultural species such as loblolly pine, but are also populated by typical wetland flora such as red bay (*Persea palustris*), sweet bay (*Magnolia virginiana*), loblolly bay (*Gordonia lasianthus*), and fetterbush (*Lyonia lucida*). Due to the existence of an intact, mature canopy, no project activities are proposed for these areas. All of the wetlands within the targeted area will be preserved through appropriate legal covenants. These covenants will assure that the wetlands will be protected in their natural state in perpetuity.

IV. PROPOSED MONITORING PLAN

Upon agency concurrence of the final wetland mitigation plan, mitigation site activities will be initiated. Staff environmental scientists will be present during project construction to ensure that the work is consistent with the proposed design. An 'as-built' survey will be prepared to document site conditions immediately post-construction. The mitigation site will be monitored annually for a period of up to seven (7) years (or until such time deemed successful) whichever is longer, to document site development over time. Note that during the development of the banking instrument, the Sponsor will coordinate with the IRT for the final, accepted terms and duration of post-construction performance monitoring. The site will be evaluated based upon performance criteria related to vegetative density and wetland hydrology.

The *proposed* primary success criteria for the mitigation bank are:

- (1) Demonstrated density of planted species to meet or exceed 320 trees per acre at the end of 3 years (post-planting) and 260 trees per acre at the end of 5 years (post-planting).¹*
- (2) No single volunteer species (most notably, red maple, loblolly pine, and sweet gum) will comprise more than 50% of the total composition at year 2 or 3. If this occurs, remedial procedures will be implemented. During years 4 & 5, no single volunteer species, comprising over 50% of the total composition, may be more than half the height of the planted trees. If this occurs, remedial procedures will be implemented.*
- (3) The hydrologic criterion for the wet hardwood community will be the establishment of a static water table at, or within, 12" of the soil surface for 8% of the growing season² (equivalent to 22 days based upon SCS-established growing season March 18th through November 14th) during periods of normal rainfall.*

¹ Volunteer species may be counted toward meeting the success criteria upon evaluation of site-specific conditions and concurrence by IRT members.

² As defined by the Soil Conservation Service, the growing season for Craven County is 240 days.

A. VEGETATION MONITORING

The vegetation monitoring protocol is based upon accepted methods used for other mitigation bank sites of North Carolina. Specifically, 1% of the planted wetland areas will be monitored via the establishment of permanent 0.10-acre plots. This areas includes areas currently managed for silvicultural resources, construction corridors, and removal of existing road beds. Areas of non-target species removal will also be monitored for a total of 475 planted acres. Given the proposed acreage, a total of forty-seven (47) plots will be established. GPS coordinates for the centers of each sampling plot will be recorded and included with the 'as-built' survey and subsequent annual monitoring reports. During monitoring, surviving planted individuals and volunteer individuals will be enumerated within each plot.

B. HYDROLOGY MONITORING

Shallow groundwater hydrology will be monitored via twenty-four (24) automated wells (RDS, Inc. WM-20s) located within the restoration and enhancement areas. Wells will be installed in accordance with installation methods outlined in the Wetlands Regulatory Assistance Program (WRAP) Technical Note 00-02 (Sprecher 2000). Water levels will be recorded once daily. Data will be downloaded from the wells every three months (i.e. once quarterly). Data from well downloads will be compiled and graphically displayed to demonstrate hydroperiods of monitored areas. As stated earlier, the proposed hydrologic criterion for the wet hardwood community is the following:

"establishment of a static water table at, or within, 12" of the soil surface for 8% of the growing season³ (equivalent to 22 days based upon SCS-established growing season March 18^h through November 14th) during periods of normal rainfall."

Please note again that the final, approved performance criteria will be identified in the banking instrument and the comprehensive mitigation plan based upon further consultation with the IRT.

V. BANK OPERATION

The Bank Sponsor (Weyerhaeuser Company) owns fee simple title for the entire bank site. The Sponsor has control of all ditches affecting groundwater hydrology of the site. Since the restoration is premised on re-establishment of groundwater hydrology via removal of ditches, all water rights necessary for

³ As defined by the Soil Conservation Service, the growing season for Craven County is 240 days.
Brice Creek Wetland Mitigation Bank Prospectus
Lower Neuse River Basin (HUC 03020204)/White Oak River Basin (HUC 03020106)

sustainability of the bank are secured through the fee simple ownership. Weyerhaeuser has conducted previous wetland restoration projects in sites in Louisiana. In addition, staff members working on the project have advanced degrees in Forestry and Natural Resources. Thus, the Sponsor is well-versed in site restoration techniques, re-forestation practices, and site management. The Sponsor has also contracted with LMG for environmental services associated with the design and implementation of the bank site. Over the last decade, LMG has designed and implemented numerous wetland restoration projects for full-delivery (EEP and NC DOT) and project-specific permit mitigation.

The entire bank site is owned by the Sponsor. Many of the site evaluations (e.g. soil profile descriptions, hydrologic monitoring and modeling, and vegetative surveys) have been completed for the site. More detailed delineation and survey work will be necessary for the development of the mitigation plan. A jurisdictional determination will be obtained prior to the final mitigation plan and Mitigation Banking Instrument (MBI). Upon acceptance of the final mitigation plan and execution of the MBI by the Interagency Review Team (IRT), the bank Sponsor (Weyerhaeuser) 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
(3)	Wetland Preservation	5:1

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) recordation of the conservation easement; and (3) establishment of appropriate financial assurances. Given the identified ratios for wetland restoration, enhancement, and preservation it is estimated that 497 non-riparian wetland credits will be derived from the establishment of the Brice Creek Wetland Mitigation Bank.

The tentative schedule for establishment of the bank site is outlined in Table 2. Note that the final, approved credit release schedule will be identified in the banking instrument prior to execution by IRT members and the Sponsor.

Table 2. Proposed Project Timetable.

<i>Task</i>	Project Milestone	Projected Completion
1	Approval of Mitigation Plan and Execution of MBI	September 2009
2	Recordation of Conservation Easement Deed	November 2009
3	Initiation of Site Earthwork	December 2009
4	Mitigation Site Earthwork Completed	February 15, 2010
5	Mitigation Site Planting and Installation of Monitoring Devices	February 15 through March 15, 2010
6	Submittal of As-Built Report	April 15, 2010
7	First Year Annual Monitoring	October 2010
8	Submittal of Monitoring Report #1 to MBRT	December 31, 2010
9	Submittal of Monitoring Report #2 to MBRT	December 31, 2011
10	Submittal of Monitoring Report #3 to MBRT	December 31, 2012
11	Submittal of Monitoring Report #4 to MBRT	December 31, 2013
12	Submittal of Monitoring Report #5 to MBRT	December 31, 2014

As part of the approval process for the MBI, the Bank Sponsor must obtain the proper financial assurances, in the form of 2 separate bonds or letters of credit. One bond will cover 30% of the estimated construction costs and is referred to as the performance bond. The remaining bond will cover 10% of the estimated monitoring costs for all five years. These assurances will only be invoked in the event the Bank Sponsor is unable to meet the terms of the MBI (i.e. abandonment of project, etc.). Following successful completion of construction and monitoring events these bonds may also be renegotiated to reflect the decrease in financial liability to the sponsor.

Ownership of the site will reside with the Bank Sponsor who intends to transfer a perpetual conservation easement to an appropriate 501(c)3 non-profit organization (as approved by the IRT) for long-term protection of the site. Potential easement holders may include NC Coastal Land Trust, NC Wildlife Resources Commission, or the NC State Agriculture Foundation. The conservation easement will be recorded upon approval of the mitigation plan and execution of the MBI. The transferee will be responsible for maintaining the Bank in accordance with a Conservation Easement placed on the Bank Site for perpetual protection as described in the Mitigation Plan.

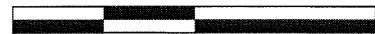
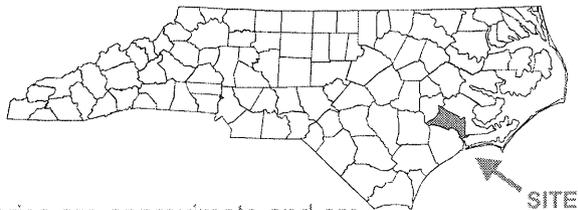
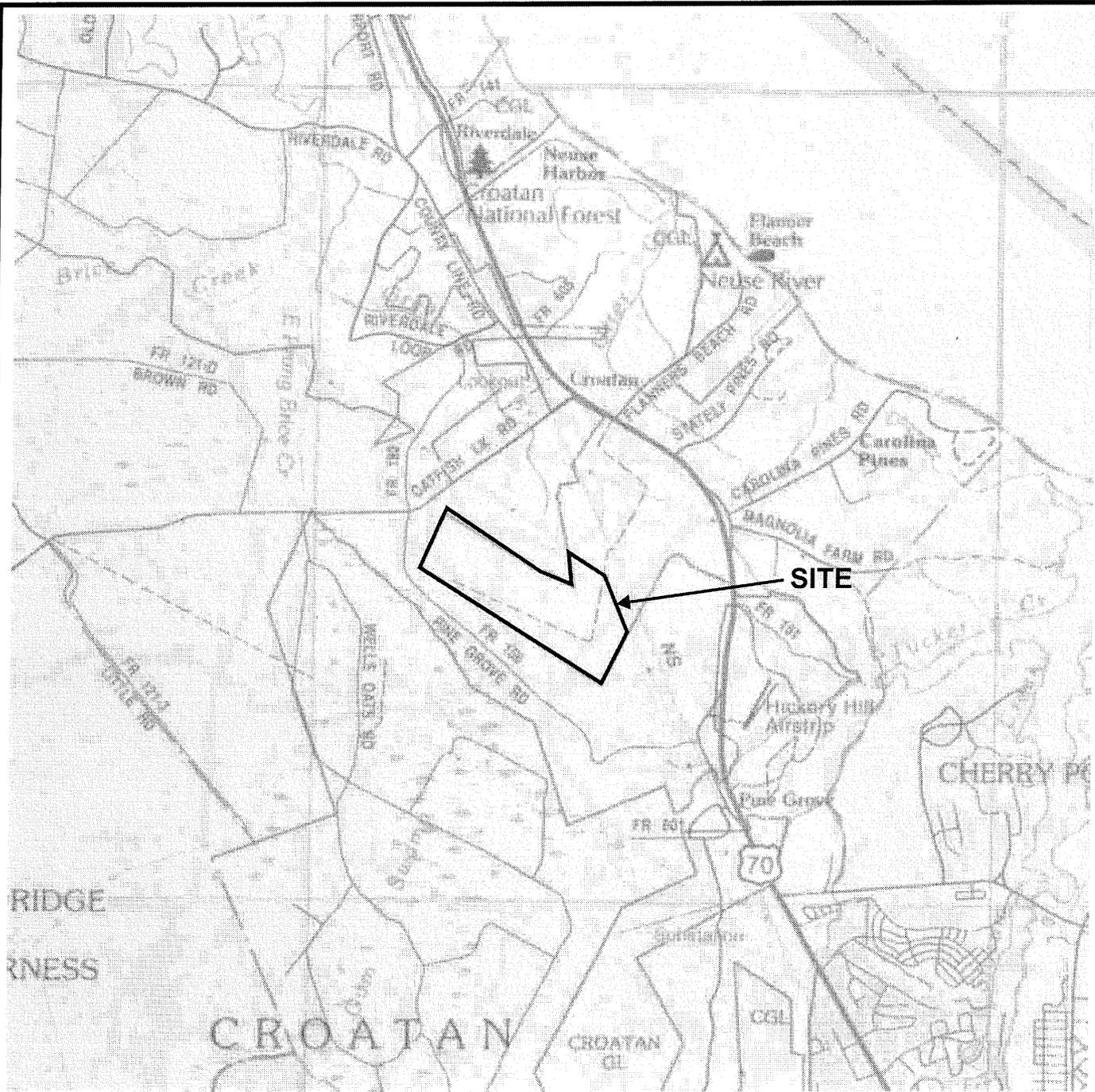
In most cases, use of mitigation banks for the purpose of offsetting Section 404/401 authorized impacts to wetlands would result in the debiting of two credits for each acre of impact proposed. One of the two credits debited would be required to be a restoration credit.

The Sponsor shall develop accounting procedures for maintaining accurate records of debits made from the bank that is acceptable to the IRT. 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 IRT within 30 days of the date of credit sale. In addition, the Sponsor shall prepare an Annual Report to be provided to each IRT 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.

VI. CONCLUSION

Initial data collected and reviewed for the Brice Creek tract support the development of a wetland mitigation bank. Based on these investigations a total of 554 acres are available for restoration, enhancement, and preservation of wetlands (comprised of non-riparian wet hardwood flats). Restoration efforts throughout the 554-ac area will provide tangible benefits to water quality and habitat in a rapidly urbanizing watershed. Additional benefits will also be realized through increases in flood water retention and groundwater recharge rates.

By providing wetland restoration credits prior to authorized impacts, overall disturbance and loss of function within the watershed are minimized. Furthermore, the proposed hardwood forest plantings will provide improved foraging habitat within a predominantly monoculture section of the Croatan National Forest, generating ancillary benefits to large fauna. Overall, the project has the potential to generate positive ecological benefits within a watershed currently experiencing acute development pressure.



SCALE 1" = 1 Mile

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

Map Source: North Carolina Atlas & Gazetteer. Pg 78. 2006

Brice Creek Wetland Mitigation Bank

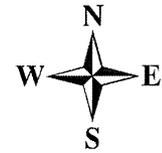
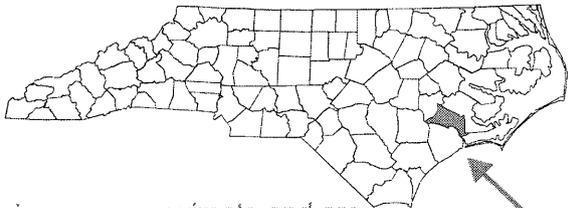
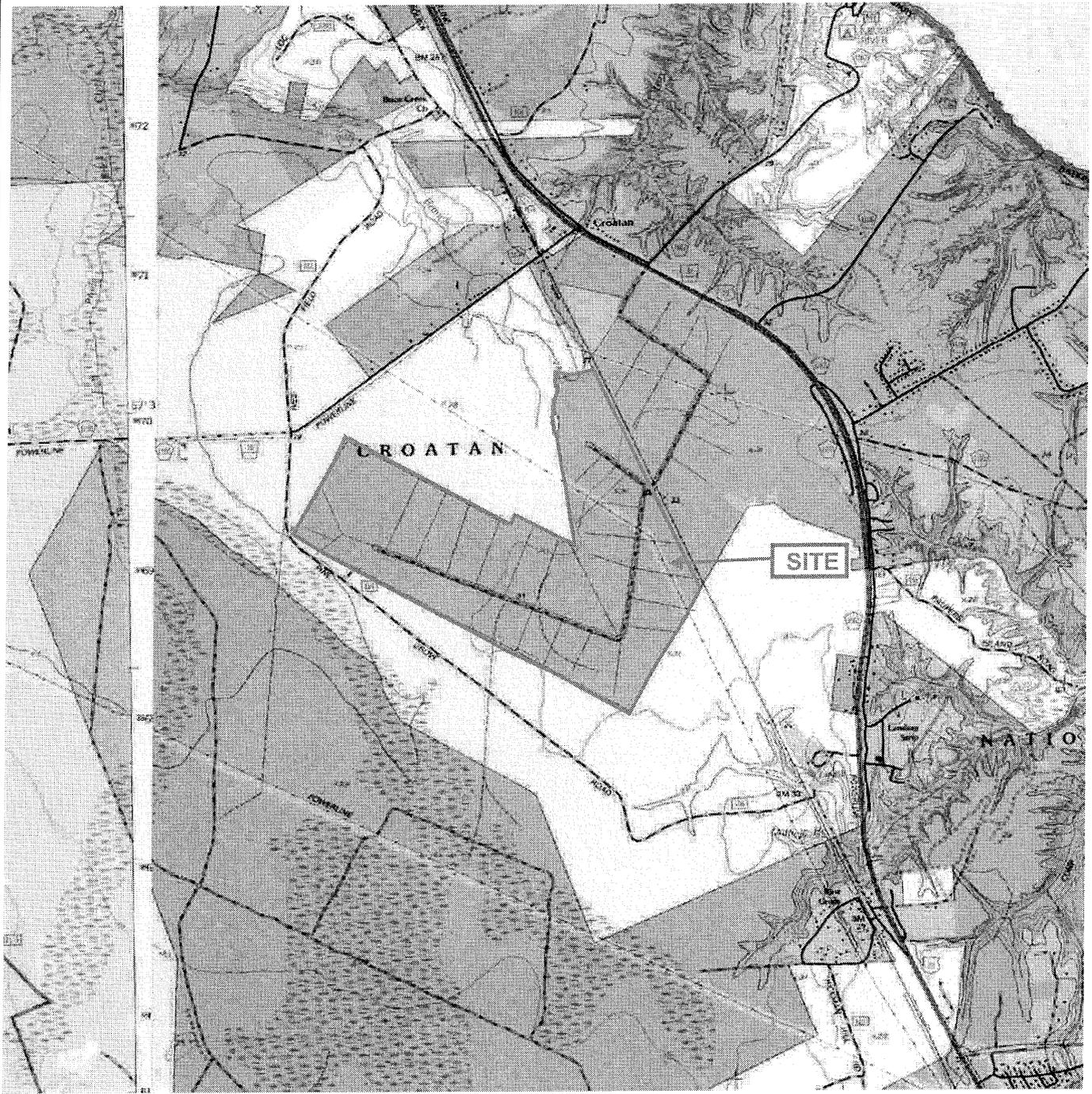
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Figure 1
Vicinity Map



SCALE 1" = 3000'

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

Map Source: Catfish Lake (1994) and Havelock (1994) Quadrangle 7.5 minute (topographic)

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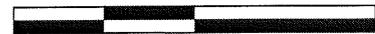
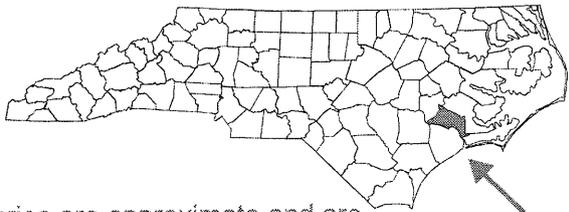
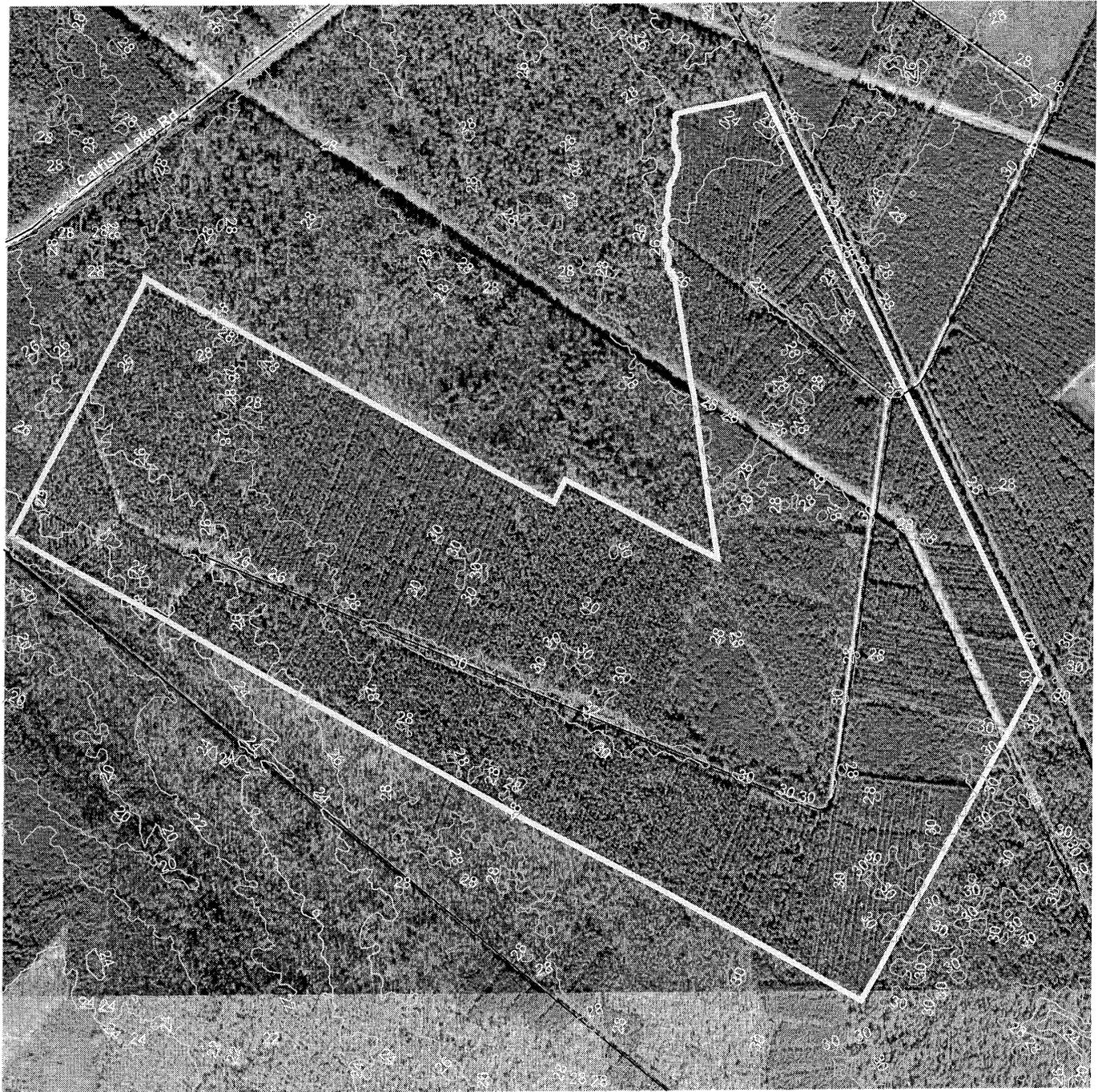
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Figure 2
USGS Topographic Map



SCALE 1" = 1200'

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

Map Source: Catfish Lake (1994) and Havelock (1994) Quadrangle 7.5 minute (topographic)

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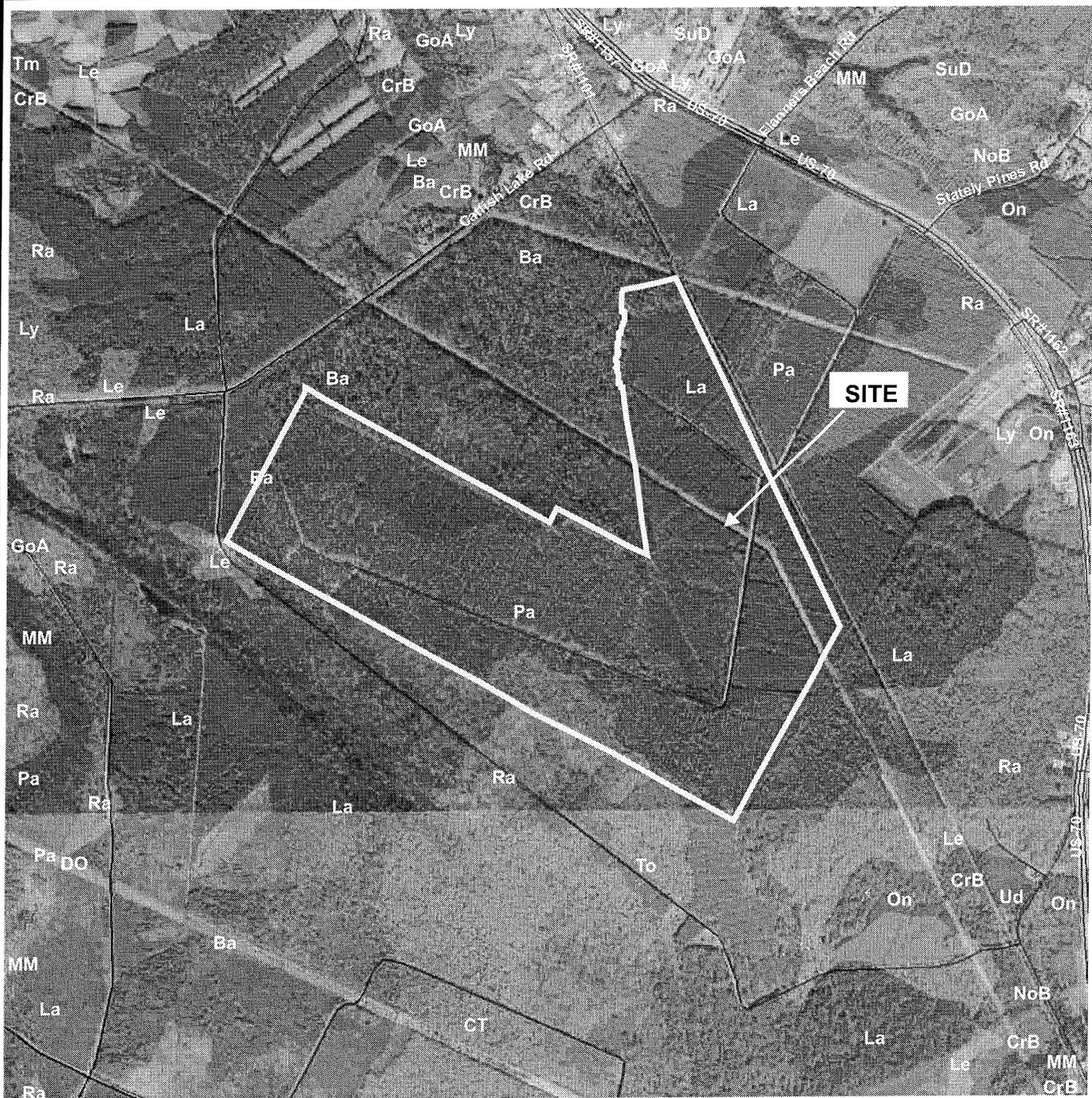
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Figure 3
LIDAR Data



- Soils
- Ba Bayboro mucky loam
 - CrB Craven silt loam, 1 to 4 percent slopes
 - CT Croatan muck
 - GoA Goldsboro loamy fine sand, 0 to 2 percent slopes
 - La Leaf silt loam
 - Le Lenoir silt loam
 - Ly Lynchburg fine sandy loam
 - MM Masontown mucky fine sandy loam and Muckalee sandy loam, frequently flooded
 - NoB Norfolk loamy fine sand, 2 to 6 percent slopes
 - On Onslow loamy sand
 - Pa Pantego loam
 - Ra Rains fine sandy loam
 - To Torhunta fine sandy loam



SCALE 1" = 2000'

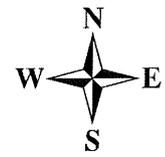
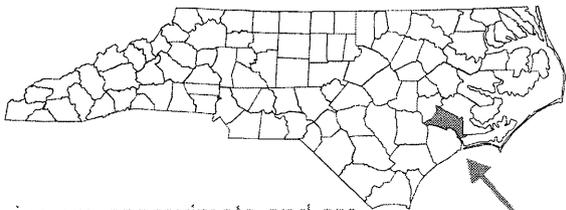
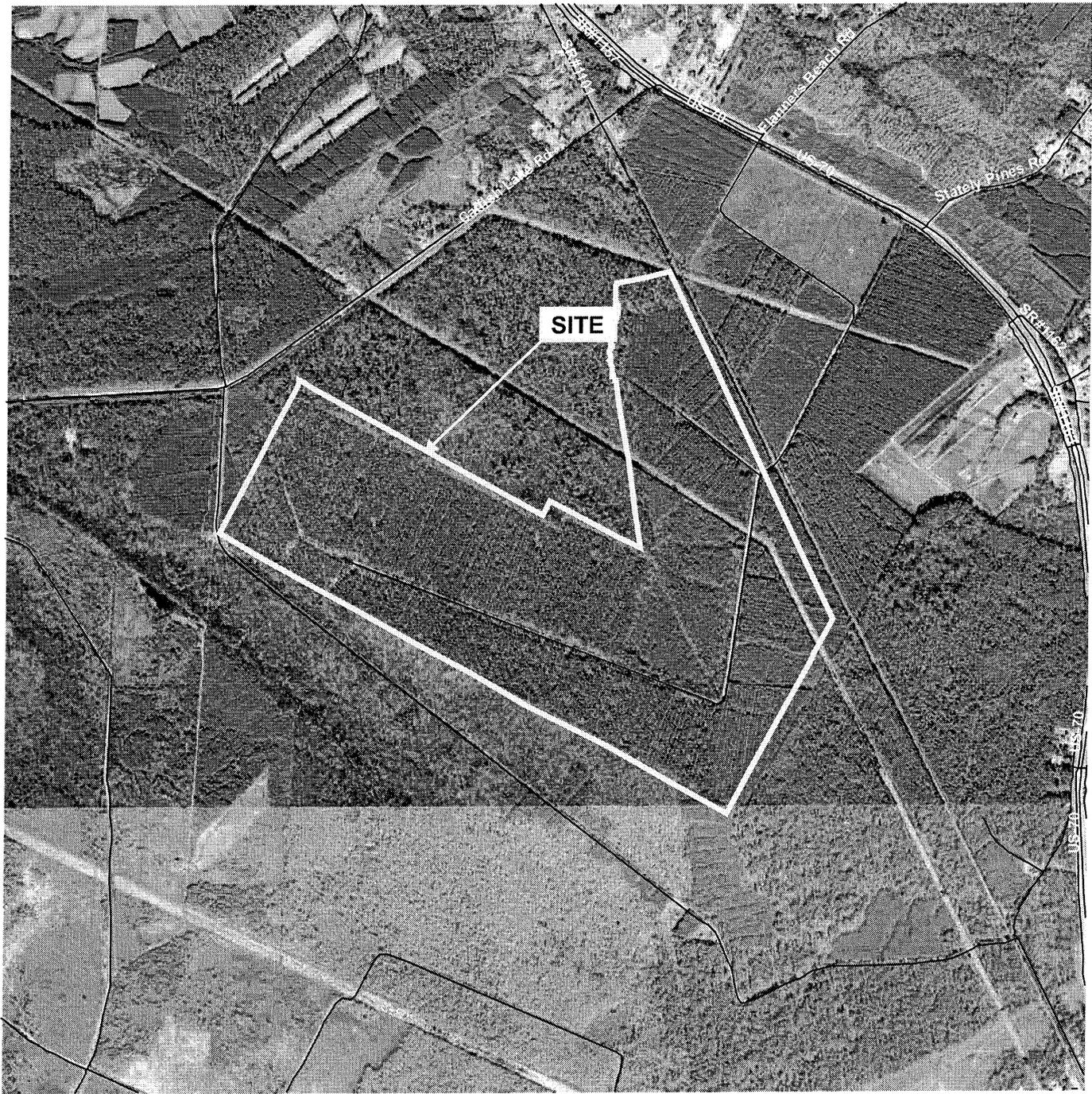
*Boundaries are approximate and are not meant to be absolute.

Map Source: NRCS Soil Survey.

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Figure 4
USDA-NRCS Soils Map



SCALE 1" = 2000'

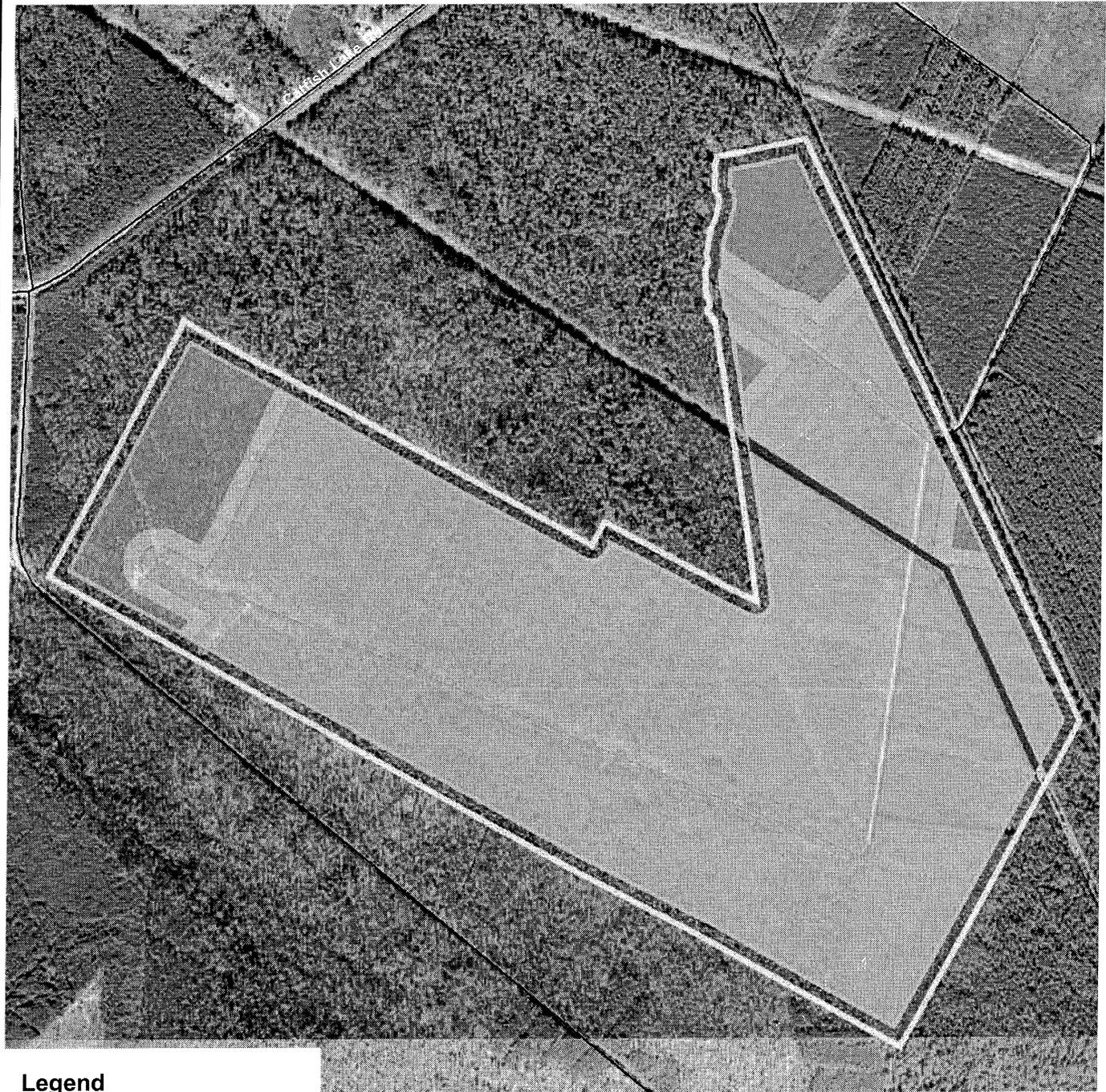
*Boundaries are approximate and are not meant to be absolute.

Map Source: 1998 NAPP aerial photography

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Figure 5
Aerial Photograph

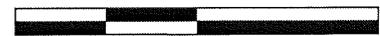


Legend

-  Parcel Boundary
-  Project Boundary
-  Powerline Easement (6 ac.)

Restoration Plan

-  Restoration (475 ac.)
-  Enhancement (23 ac.)
-  Preservation (56 ac.)



SCALE 1" = 1,200'

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

Map Source: 1998 NAPP aerial photography

Brice Creek Wetland Mitigation Bank

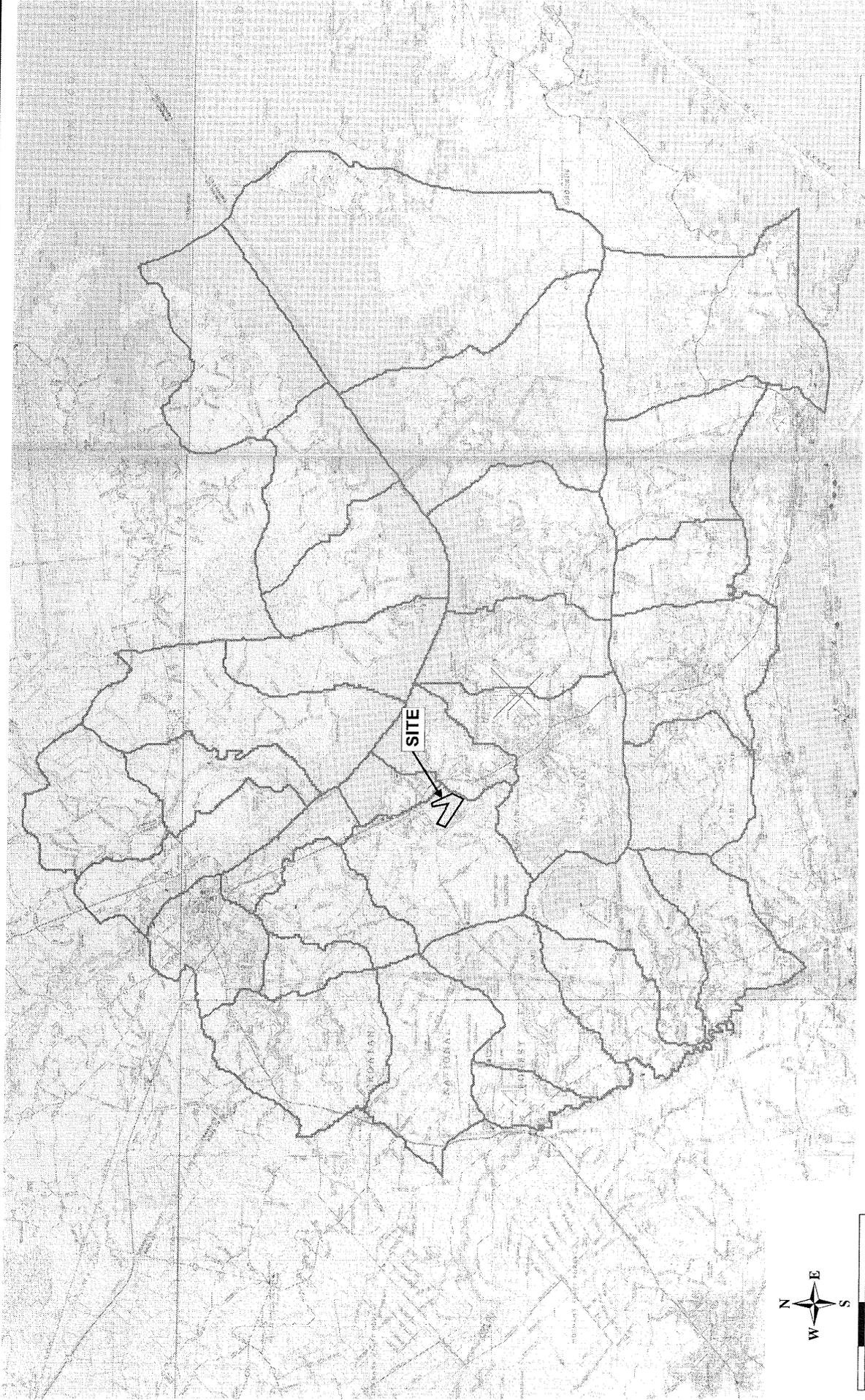
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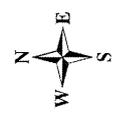
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**Figure 7
Restoration Plan**



SCALE 1" = 3 miles



Brice Creek Wetland Mitigation Bank

Figure 6.
Geographic Service Area
(GSA)