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2012-0144

**APPROVED**

Km 10/2/12  
with additions

**BANK PARCEL DEVELOPMENT PLAN**

**Buck Swamp Parcel**  
WEI's Neuse 01 Riparian Buffer  
& Nutrient Umbrella Mitigation Bank



**RECEIVED**  
AUG - 7 2012  
DENR - WATER QUALITY  
Wetlands & Stormwater Branch

**August 2012**



Prepared by:  
Wildlands Engineering, Inc.  
5605 Chapel Hill Rd, Suite 122  
Raleigh, NC 27607  
Phone: 919-851-9986  
Fax: 919-851-9987

APPROVED

**Buck Swamp Parcel  
WEI's Neuse 01 Riparian Buffer &  
Nutrient Umbrella Mitigation Bank - HUC 03020201  
Bank Parcel Development Plan**

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# Buck Swamp Parcel

## WEI's Neuse 01 Riparian Buffer & Nutrient Umbrella Mitigation Bank Bank Parcel Development Plan

The Buck Swamp Parcel ("Parcel") is proposed as part of the Wildlands Engineering, Inc's (WEI) Neuse 01 Riparian Buffer and Nutrient Umbrella Mitigation Bank ("Bank"). The Umbrella Mitigation Banking Instrument (UMBI) for the Bank was signed on July 3, 2012. The project parcel shall be planned and designed encompassing land along Buck Swamp and it's tributaries in Wayne County, NC.

The purpose of the Bank is to provide Neuse buffer and nutrient offset mitigation credits to compensate for buffer impacts and development requiring nutrient offset payments within the service area, Hydrologic Unit 03020201 (with the exception of the Falls Lake drainage area). The service area is depicted in Figure 1.

### 1.0 Project Location and Description

#### 1.1 Introduction

The Parcel involves the restoration of Neuse buffers and nutrient offset riparian areas in order to help reduce non-point source discharge of contaminants into streams and agricultural ditch channels within the Neuse River Basin. The project area is approximately 49.5 acres and will be protected with a permanent conservation easement.

Out of the 49.5 acres, 3.5 acres will be restored for Neuse buffer credit and 46 acres will be restored for nutrient offset restoration credit. WEI may use the 3.5 acres for either Neuse buffer credits or nutrient offset credits, but not both. In general, Neuse buffer widths will extend 50 feet and nutrient offset restoration area widths will extend at least 200 feet from the top of the channel bank. The project will be divided into two phases. The first phase includes 3.5 acres of Neuse buffer and 30 acres of nutrient offset restoration. The second phase includes the remaining 16 acres of nutrient offset restoration. Further explanation of the two phases is included in Section 3 of the BPDP.

#### 1.2 Parcel Location

The proposed Site is located in western Wayne County, approximately five miles north east of the Town of Princeton (35° 29' 38.093" N, 78° 4' 26.857" W). To get to the site traveling east on US Hwy 70 from Raleigh, Turn left onto Capps Bridge Rd and continue north approximately 3.5 miles to the intersection with Pikeville-Princeton Rd. Turn Right and continue 0.7 miles east. The site can be accessed directly from Pikeville-Princeton Rd or Old Kenly Rd (Figure 2).

The proposed site is located in a rural watershed within the Neuse River Basin (HUC 03020201) and within sub-basin 03-04-06. Stormwater runoff from the site drains into six ditches and one unnamed tributary which all drain into Buck Swamp which drains into Mill Creek which then drains into the Little River, a major tributary to the Neuse River, all classified as Nutrient Sensitive Waters by the North Carolina Division of Water Quality (NCDWQ). Buck Swamp, Mill Creek and the Little River are also each listed as Water Supply IV – Highly Developed by NCDWQ.



## 2.0 Project Area - Existing Conditions

### 2.1 Parcel Soils

The soils in the proposed project area are mapped by the Wayne County Soil Survey. There are four main soil types on the site: Lynchburg sandy loam, Myatt very sandy loam, Rains sandy loam, and Norfolk loamy sand. These soils are described below in Table 1. A soils map is provided in Figure 3.

**Table 1. Project Soil Types and Descriptions**

Soil Name	Location	Description
Lynchburg sandy loam	Located in the center of the project area.	These soils are nearly level and very deep. They are found on broad flats and in slight depressions on uplands. They are somewhat poorly drained. Permeability is moderate and shrink-swell potential for these soils is low.
Myatt very sandy loam	Located in the northern and middle portions of the project area.	These are poorly drained soils. They are nearly level and very deep. They are found on stream terraces and upland flats. The soils have a loamy surface layer and subsoil.
Rains sandy loam	Located in the northern portion of the project.	These soils are nearly level and very deep. They are found on broad flats and in slight depressions on uplands. The soils are poorly drained. Permeability of these soils is moderate and shrink-swell potential is low.
Norfolk loamy sand, 0-2% slopes	Located primarily in the southern portion of the project.	These soils are nearly level and very deep. They are found on uplands and are well drained. Permeability is moderate and shrink-swell potential is low.
Source: Wayne County Soil Survey, USDA-NRCS		

### 2.2 Existing Vegetative Communities

The project site consists primarily of open agricultural fields currently in row crop production. Recent crops include wheat, corn and tobacco. Streams, ditches, and other stormwater conveyances on the site have little to no existing riparian buffer. The riparian area adjacent to streams, ditches, and other stormwater conveyances on the site have been mowed in most locations on an annual basis. The project includes restoring the Neuse buffer along Buck Swamp, one unnamed tributary to Buck Swamp and approximately 6 ditches/stormwater conveyances (Figure 4). The six ditches/stormwater conveyances were identified in the asset map NCDWQ provided on July 17, 2012. A photolog of the site is located in the appendix.

While the project area consists of agricultural fields, there are some forested areas adjacent to the project (Figure 4). The forested area along the western portion of the project consists of Loblolly Pine (*Pinus taeda*). The forested areas along the eastern boundary of the project were assessed for existing vegetation conditions on August 2, 2012. This area is dominated by sweetgum (*Liquidambar styraciflua*) but contains loblolly pine, black willow (*Salix nigra*), red maple (*Acer rubrum*), and sycamore (*Platanus occidentalis*). This forested area is generally characterized as a Coastal Plain Small Stream Swamp, according to the North Carolina Natural Heritage Program (NHP) classification system (Schafale and



Weakley, 1990). Table 2 includes a list of the species found in this ecosystem type and have the potential for occurrence in the eastern forested area adjacent to the project.

**Table 2. Adjacent Forested Areas Existing Tree and Shrub Species (Coastal Plain Bottomland Hardwood Communities\*)**

Scientific Name	Common Name	Wetland Indicator Status
<i>Carya aquatica</i>	Water Hickory	OBL
<i>Quercus shumardii</i>	Shumard Oak	FACW-
<i>Celtis laevigata</i>	Sugarberry	FACW
<i>Ilex decidua</i>	Deciduous Holly	FACW-
<i>Nyssa aquatica</i>	Water Tupelo	OBL
<i>Salix nigra</i>	Black Willow	OBL
<i>Clethra alnifolia</i>	Sweet Pepperbush	FACW
<i>Cyrilla racemiflora</i>	Swamp Titi	FACW
<i>Fraxinus caroliniana</i>	Water Ash	OBL
<i>Itea virginica</i>	Virginia Sweetspire	FACW+
<i>Nyssa sylvatica</i>	Blackgum	FAC
<i>Diospyros virginiana</i>	Persimmon	FAC
<i>Acer rubrum</i>	Red Maple	FAC
<i>Liquidambar styraciflua</i>	Sweetgum	FAC+
<i>Pinus taeda</i>	Loblolly Pine	FAC
<i>Quercus rubra</i>	Red Oak	FACU
<i>Quercus phellos</i>	Willow Oak	FACW-
<i>Liriodendron tulipifera</i>	Yellow Poplar	FAC
<i>Platanus occidentalis</i>	American Sycamore	FACW-
<i>Juniperus virginiana</i>	Eastern Red Cedar	FACU-

Notes:\*Source: Schafale & Weakley (1990)

### 2.3 Threatened and Endangered Species

The US Fish and Wildlife Service (USFWS) database was searched for federally listed threatened and endangered plant and animal species for Wayne County, NC. Two federally listed species, the bald eagle (*Haliaeetus leucocephalus*) and the red-cockaded woodpecker (*Picoides borealis*), are currently listed in Wayne County (Table 3).



**Table 3. Listed Threatened and Endangered Species in Wayne County, NC**

Species	Federal Status	Habitat
<b>Vertebrate</b>		
Bald eagle ( <i>Haliaeetus leucocephalus</i> )	BGPA	Near large open water bodies: lakes, marshes, seacoasts, and rivers
Red-cockaded woodpecker ( <i>Picoides borealis</i> )	E	Open stands of mature pines
E = Endangered; BGPA=Bald & Golden Eagle Protection Act		

### ***Bald eagle***

Bald eagles typically live near large bodies of open water with suitable fish habitat including: lakes, marshes, seacoasts, and rivers. This species generally requires tall, mature tree species for nesting and roosting. Bald eagles were de-listed from the Endangered Species List in June 2007; however this species remains under the protection of the Bald and Golden Eagle Protection Act (BGPA). This species is known to occur in every U.S. state except Hawaii.

### ***Red-cockaded woodpecker***

The red-cockaded woodpecker is typically found in large open stands of pines with trees over 60 years in age. The foraging habitat for this species may include pine hardwood stands of longleaf and southern pine, over 30 years in age. Known populations of the red-cockaded woodpecker have been observed within Wayne County over the past 20 years.

A pedestrian survey of the site was performed on May 30, 2012. No individual species or their habitat was found to exist on the site.

#### **2.4 Cultural Resources**

Review and comment from the State Historic Preservation Office (SHPO) with respect to any archeological and architectural resources related to the Parcel was requested on May 14, 2012. SHPO responded on May 30, 2012, and stated they were aware of no historic resources that would be affected by the project (Appendix).

#### **2.5 Environmental Issues**

An EDR Radius Map Report with Geocheck was ordered for the site through Environmental Data Resources, Inc. Neither the target property, nor the adjacent properties, was listed in any of the Federal, State, or Tribal environmental databases searched by EDR. There were no known or potential hazardous waste sites identified within one mile of the Parcel. The Executive Summary of the EDR report is included in the Appendix.

#### **2.6 FEMA Floodplain / Floodway Mapping**

The Parcel is not located with the Federal Emergency Management Association's (FEMA's) designated floodway and approximate 100-year flood boundary. No floodplain impacts associated with the Parcel are anticipated.

### **3.0 Proposed Neuse Buffer and Nutrient Offset Restoration Plan**

Actions required to develop the subject site for mitigation will require altering current land use practices. Both the Neuse buffer and the nutrient offset restoration areas will involve replanting



appropriate native tree and shrub species along the project corridors. Intensive vegetation management and a rigorous herbicide schedule will need to be implemented over the first few years of tree establishment in the restoration areas to prevent establishment of invasive species that will attempt to out-compete the planted native vegetation. More detailed descriptions of the proposed restoration activity follows.

### 3.1 Parcel Preparation

The majority of the site slated for Neuse buffer or nutrient offset restoration has been maintained as a cleared agricultural field. These areas are relatively clear and will require little site preparation other than select herbicide treatments or limited mechanical clearing to remove undesirable underbrush prior to planting. The restoration area will be planted with a mechanical tree planter. The mechanical planter will rip, plant, and compress the soil around the tree and roots which will break up any plow layers and create good soil contact with the tree roots. Site preparation and planting is planned to begin in January 2013 for Phase I and January 2015 for Phase II.

WEI will manage vegetation growth by mowing in between planted trees as needed during the monitoring period. Additionally, selective applications of a pre-emergent herbicide will be used to control weedy competition. Past project experience has indicated that use of these techniques significantly limits competition by undesirable vegetation and results in significant increases in tree growth.

### 3.2 Planting

The revegetation plan for the site will include planting of bare root trees and controlling invasive species growth. Bare root trees selected for the site will be native bottomland hardwood species typical for Coastal Plain Small Stream Swamp communities as defined by Schafale and Weakley (1990). Trees will be planted at the density recommended in the NC Ecosystem Enhancement Program's (NCEEP) Guidelines for Riparian Buffer Restoration. "Trees should be planted at a density sufficient to provide 320 trees per acre at maturity." Tree species specified for planting on the Buck Swamp Parcel are detailed in Table 4.

**Table 4. Selected Tree Species Appropriate for Buffer Restoration**

Species	Common Name	Max Spacing	Unit Type*	Min. Caliper Size	Stratum	Indiv. Spacing	# of Stems
<i>Taxodium distichum</i>	Bald Cypress	12 ft.	R	0.25"-1.0"	Canopy	6-12 ft.	3500
<i>Liriodendron tulipifera</i>	Yellow Poplar	12 ft.	R	0.25"-1.0"	Canopy	6-12 ft.	3500
<i>Quercus phellos</i>	Willow Oak	12 ft.	R	0.25"-1.0"	Canopy	6-12 ft.	3500
<i>Plantanus occidentalis**</i>	Sycamore	12 ft.	R	0.25"-1.0"	Canopy	6-12 ft.	3500
<i>Betula nigra</i>	River Birch	12 ft.	R	0.25"-1.0"	Canopy	6-12 ft.	3500
<i>Quercus michauxii</i>	Swamp Chestnut Oak	12 ft.	R	0.25"-1.0"	Canopy	6-12 ft.	3500



Species	Common Name	Max Spacing	Unit Type*	Min. Caliper Size	Stratum	Indiv. Spacing	# of Stems	
<i>Fraxinus pennsylvanica</i>	Green Ash	12 ft.	R	0.25"-1.0"	Canopy	6-12 ft.	3500	
							<b>Subtotal</b>	<b>24,500</b>

\* L = Live Stake; P = Herbaceous Plug; R = Bare Root

\*\*Sycamore will not be planted adjacent to neighboring forested areas where sycamore has been identified as present.

"Character Trees" are defined as planted or volunteer species identified from a survey of local vegetation on less degraded sections of the specified stream and from reference literature that details native species. A list of Character Tree species other than the species specified for planting is listed in Table 5.

**Table 5. Character/Existing Tree and Shrub Species (Coastal Plain Bottomland Hardwood Communities\*)**

Scientific Name	Common Name	Wetland Indicator Status
<i>Carya aquatica</i>	Water Hickory	OBL
<i>Quercus shumardii</i>	Shumard Oak	FACW-
<i>Celtis laevigata</i>	Sugarberry	FACW
<i>Ilex decidua</i>	Deciduous Holly	FACW-
<i>Nyssa aquatica</i>	Water Tupelo	OBL
<i>Salix nigra</i>	Black Willow	OBL
<i>Clethra alnifolia</i>	Sweet Pepperbush	FACW
<i>Cyrilla racemiflora</i>	Swamp Titi	FACW
<i>Fraxinus caroliniana</i>	Water Ash	OBL
<i>Itea virginica</i>	Virginia Sweetspire	FACW+
<i>Nyssa sylvatica</i>	Blackgum	FAC
<i>Diospyros virginiana</i>	Persimmon	FAC
<i>Acer rubrum</i>	Red Maple	FAC
<i>Liquidambar styraciflua</i>	Sweetgum	FAC+
<i>Pinus taeda</i>	Loblolly Pine	FAC
<i>Quercus rubra</i>	Red Oak	FACU
<i>Quercus phellos</i>	Willow Oak	FACW-
<i>Liriodendron tulipifera</i>	Yellow Poplar	FAC
<i>Platanus occidentalis</i>	American Sycamore	FACW-
<i>Juniperus virginiana</i>	Eastern Red Cedar	FACU-

Notes:\*Source: Schafale & Weakley (1990)



## **4.0 Monitoring and Maintenance Plan**

### *4.1 Monitoring Protocol*

Vegetation monitoring plots will be installed and evaluated within the buffer restoration area to measure the survival of the planted trees. The number of monitoring quadrants required was determined in accordance with the Carolina Vegetative Sampling Protocol (CVS) Levels 1 & 2. A total of 37 plots will be established within the credit generation area: 22 plots in Phase 1 and 15 plots in Phase 2. The size of individual quadrants will be 10 square meters for woody tree species and shrubs. Vegetation assessments will be conducted following the Carolina Vegetation Survey (CVS) Level 1 Protocol for Recording Vegetation (2006). A reference photo will be taken from the southwestern corner of each plot. All planted stems will be marked with flagging tape and recorded.

The first annual monitoring activities will commence at the end of the first growing season, at least five months after planting has been completed. Species composition, density, and survival rates will be evaluated on an annual basis by plot and for the entire site. WEI shall submit to NCDWQ an annual monitoring report, no later than December 31<sup>st</sup> of each year for five consecutive years and will follow the terms and conditions of the WEI UMBI signed on July 3, 2012. Success criteria within the Neuse buffer and nutrient offset restoration areas will be based on the survival of a minimum density of 320 planted stems per acre after five years of monitoring.

### *4.2 Parcel Maintenance*

Adaptive measures will be developed or appropriate remedial actions will be implemented in the event that the site or a specific component of the site fails to achieve the success criteria outlined in Section 3.3. Site maintenance will be performed to correct any identified problems on the site that have a high likelihood of affecting project success. Such items include but are not limited to excess tree mortality caused by fire, flooding, drought or insects. Any actions implemented will be designed to achieve the success criteria and will include a work schedule and updated monitoring criteria.

## **5.0 Financial Assurance**

Following approval of the Buck Swamp BPDP, WEI shall provide a Performance Bond from a surety that is rated no less than an "A-" as rated by A.M. Best. The Performance Bond amount shall be 100% of the estimated cost for implementation of the project as described in the approved BPDP, but not less than \$150,000.00. In lieu of posting the performance bond, WEI may elect to construct the project prior to the first credit release. In that case no performance bond will be necessary.

After completion of the restoration/construction, a separate Performance/Maintenance Bond will be secured for 100% of the estimated cost to implement the monitoring and maintenance plan but not less than \$100,000.00. The Performance/Maintenance Bond shall apply at the inception of the monitoring period for a term of one year, to be extended annually for a minimum of five years. Upon DWQ approval, this may be lowered each year based on the adjusted cost to complete the monitoring

## **6.0 Mitigation Potential**

Approximately 49.5 acres of land will be protected with a permanent conservation easement. Out of the 49.5 acres, 3.5 acres will be restored for Neuse buffer credit and 46 acres will be restored for nutrient offset credit. WEI may use the 3.5 acres for either Neuse buffer credits or nutrient offset credits, but not both. The Buck Swamp Parcel will generate a total of 46 acres (104,558 pounds) of nutrient offset credit and 3.5 acres (152,460 square feet) of Neuse buffer credit. Phase 1 will generate



30 acres (68,190 pounds) of nutrient offset credit and 3.5 acres (152,460 square feet) of Neuse buffer credit. Phase II will generate 16 acres (36,368 pounds) of nutrient offset credit.

## 7.0 References

*Guidelines for Riparian Buffer Restoration*. NC Department of Environment and Natural Resources, Ecosystem Enhancement Program. October 2004.

Peet, R.K., T.R. Wentworth and P.S. White. 1998. A flexible, multipurpose method for recording vegetation composition and structure. *Castanea* 63:262-274. <http://cvs.bio.unc.edu/methods.htm>

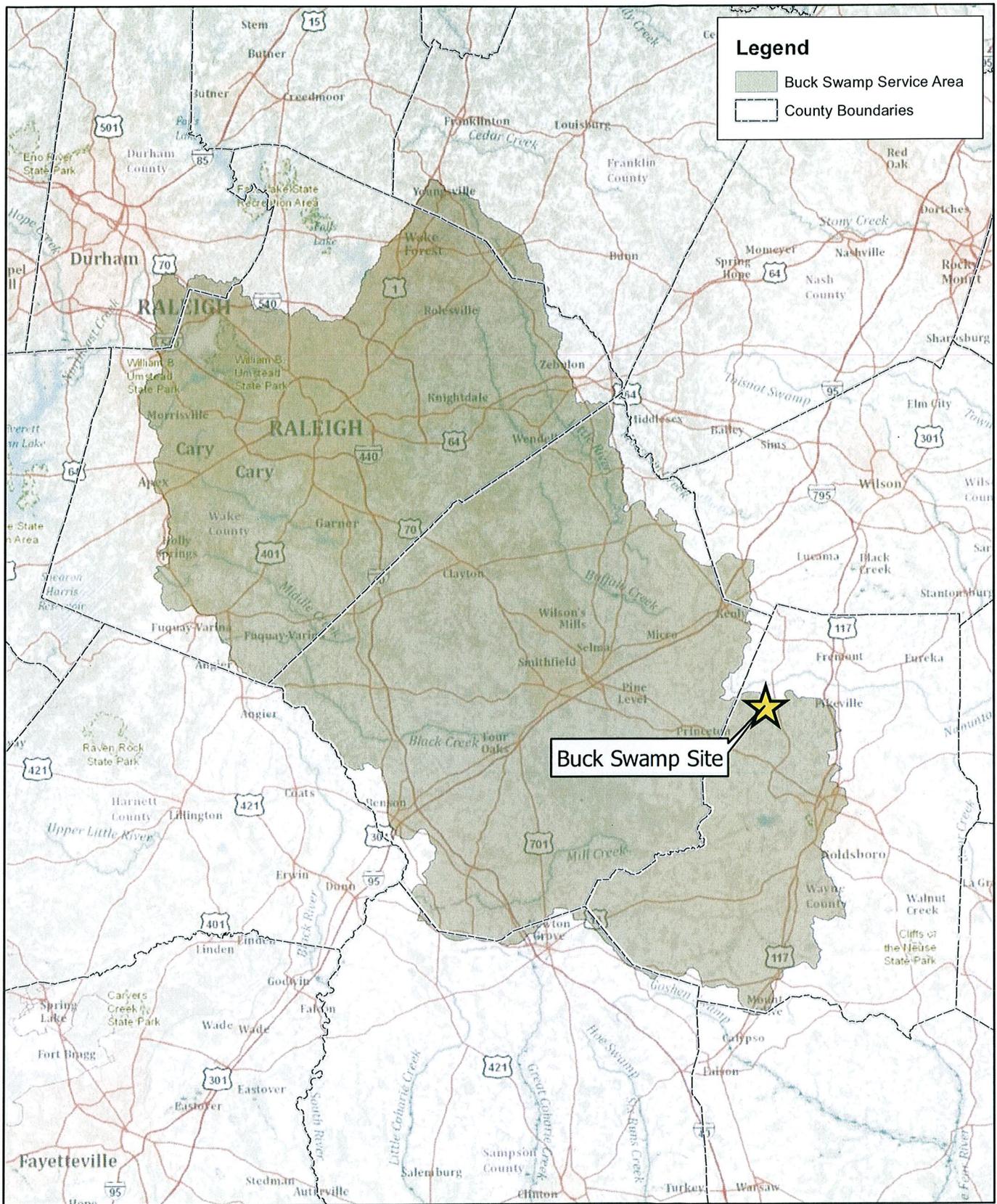
Schafale, M.P. and Weakley, A.S. 1990. A Classification of the Natural Communities of North Carolina, Third Approximation.

USDA, Soil Conservation Service, 1974. Soil Survey of Wayne County.



## FIGURES

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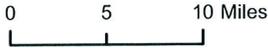
**Legend**

- Buck Swamp Service Area
- County Boundaries

**Buck Swamp Site**

Figure 1 Service Area  
 Buck Swamp Site  
 HUC 03020201

Wayne County, NC



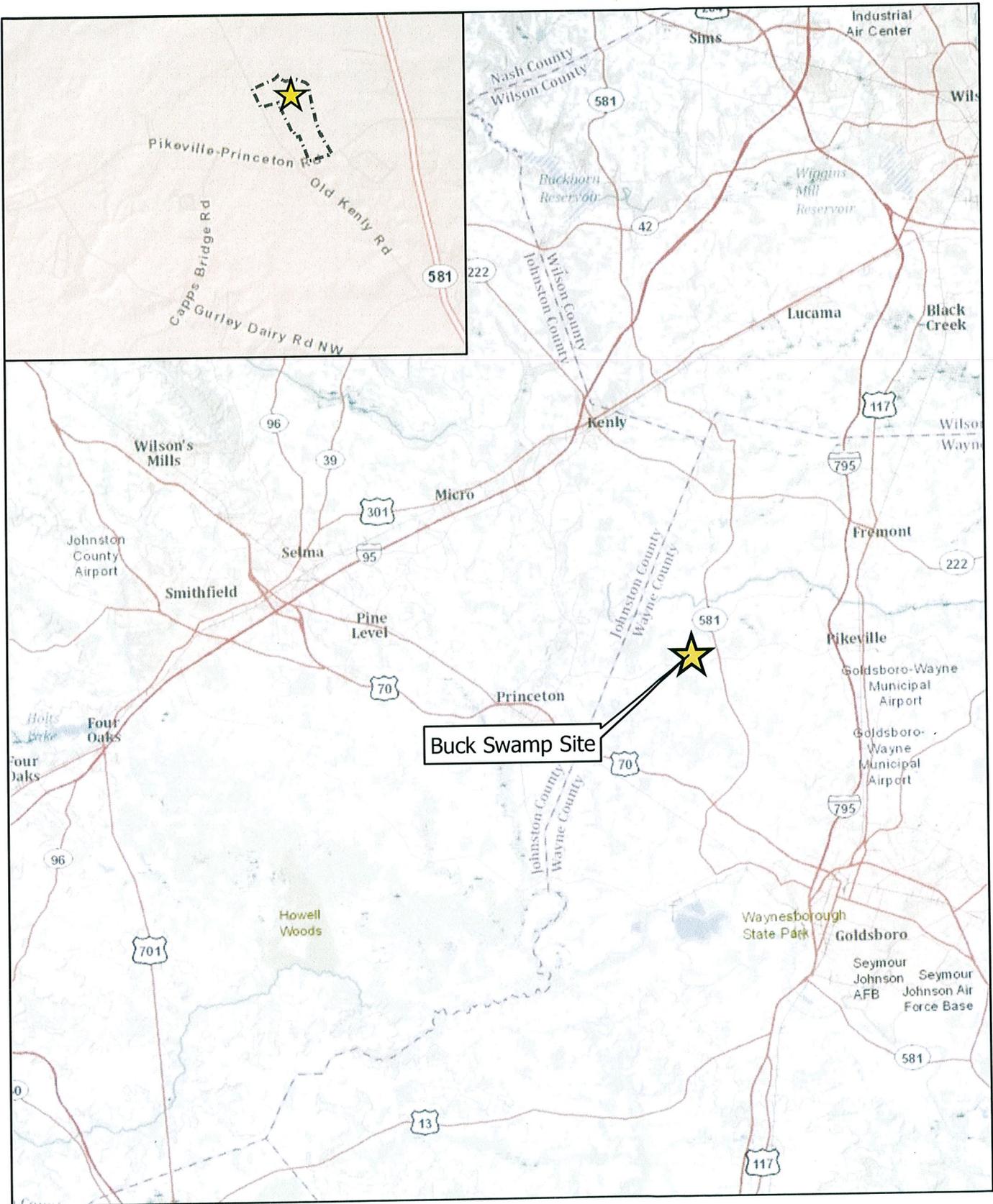
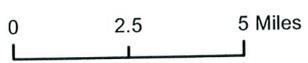


Figure 2 Vicinity Map  
 Buck Swamp Site  
 HUC 0320201  
 Wayne County, NC



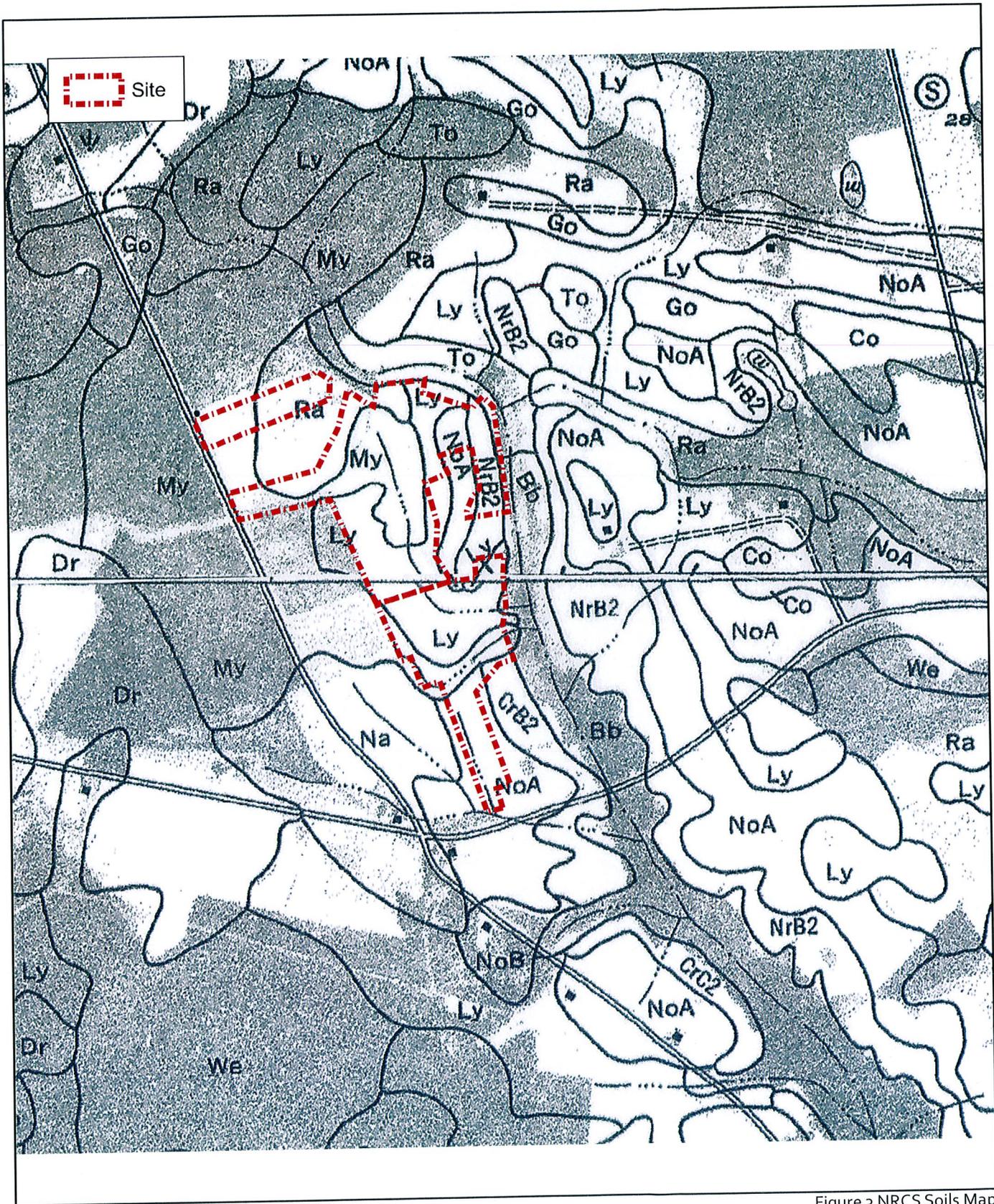


Figure 3 NRCS Soils Map  
 Buck Swamp Site  
 HUC 0320201

Wayne County, NC



0 450 900 Feet



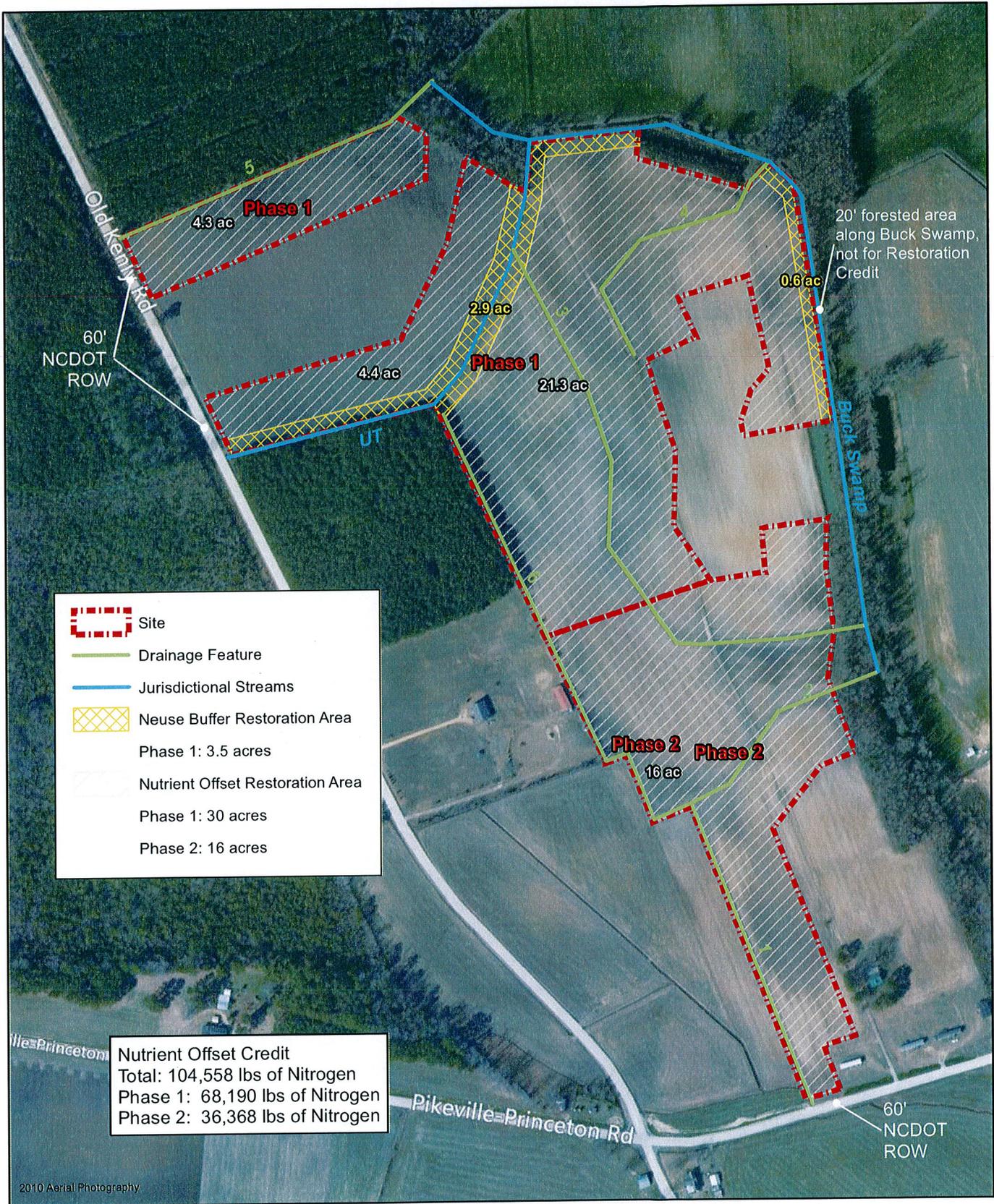
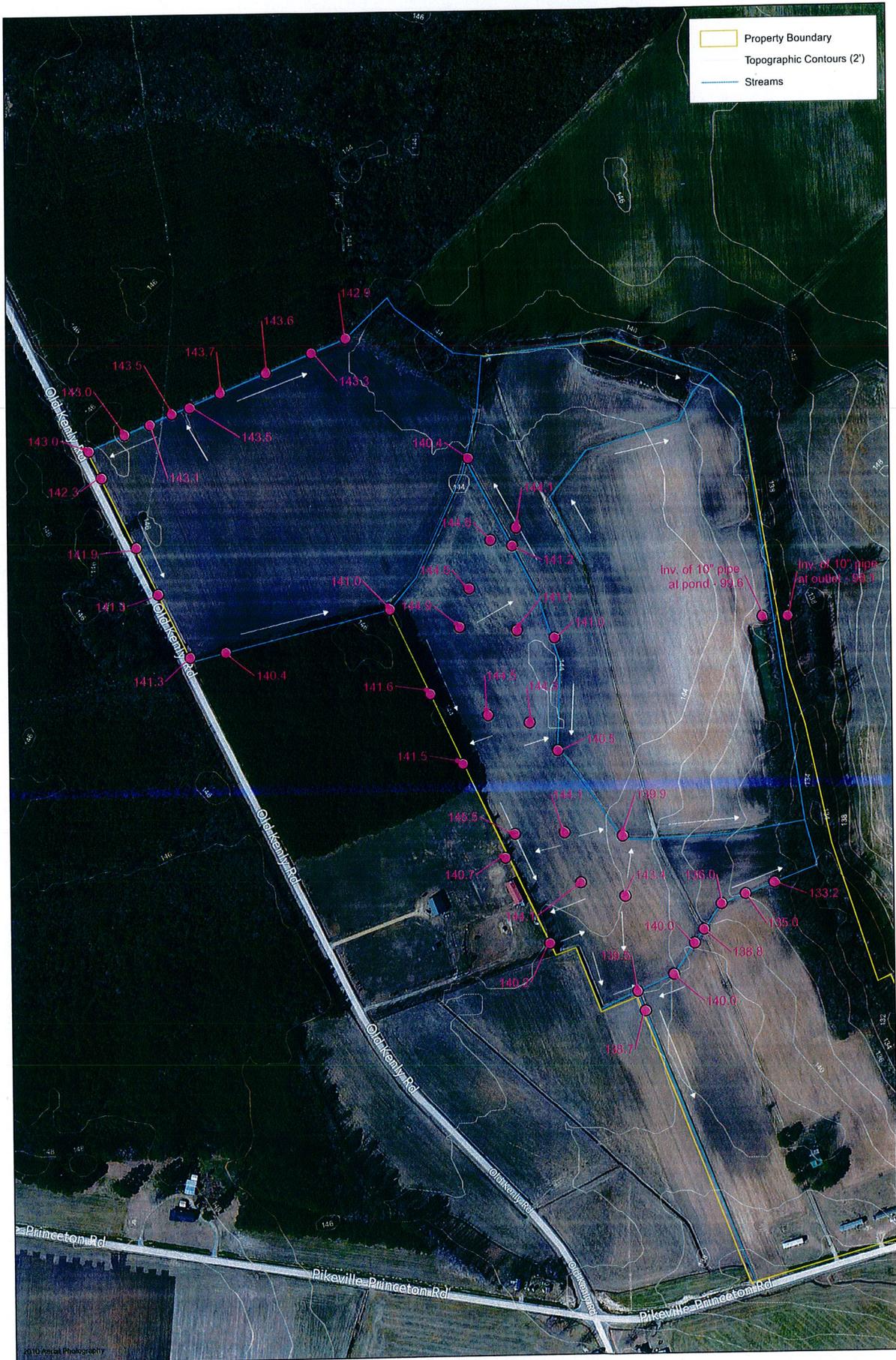


Figure 4 Credit Generation Map  
 Buck Swamp Site  
 HUC 0320201  
 Wayne County, NC



2010 Aerial Photography



Property Boundary  
 Topographic Contours (2')  
 Streams

inv. of 10" pipe at pond - 99.6

inv. of 10" pipe at outlet - 99.5

© 2010 Aerial Photography



Elevations and Stormwater Runoff  
 Buck Swamp Nutrient  
 And Riparian Buffer Site  
 HUC 0320201  
 Wayne County, NC

# APPENDIX

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North Carolina Department of Cultural Resources  
State Historic Preservation Office

Ramona M. Bartos, Administrator

Beverly Eaves Perdue, Governor  
Linda A. Carlisle, Secretary  
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History  
Division of Historical Resources  
David Brook, Director

May 30, 2012

Andrea Eckardt  
Wildlands Engineering  
1430 South Mint Street  
Suite 104  
Charlotte, NC 28203

Re: Buck Swamp Nutrient Mitigation Bank Site, Princeton, Wayne County, ER 12-0815

Dear Ms. Eckardt:

Thank you for your letter of May 14, 2012, concerning the above project.

We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579. In all future communication concerning this project, please cite the above-referenced tracking number.

Sincerely,

A handwritten signature in blue ink that reads "Renee Gledhill-Earley".

for Ramona M. Bartos

**Buck Swamp**

Pike Princeton Road  
Pikeville, NC 27863

Inquiry Number: 3323707.2s  
May 15, 2012

**The EDR Radius Map™ Report with GeoCheck®**



440 Wheelers Farms Road  
Milford, CT 06461  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

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*Thank you for your business.*  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

### TARGET PROPERTY INFORMATION

#### ADDRESS

PIKE PRINCETON ROAD  
PIKEVILLE, NC 27863

#### COORDINATES

Latitude (North): 35.4923000 - 35° 29' 32.28"  
Longitude (West): 78.0723000 - 78° 4' 20.28"  
Universal Transverse Mercator: Zone 17  
UTM X (Meters): 765591.7  
UTM Y (Meters): 3931382.2  
Elevation: 145 ft. above sea level

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 35078-D1 NORTHWEST GOLDSBORO, NC  
Most Recent Revision: 2001  
  
North Map: 35078-E1 KENLY EAST, NC  
Most Recent Revision: 1978

### AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 2009, 2010  
Source: USDA

### TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

### DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

### STANDARD ENVIRONMENTAL RECORDS

#### *Federal NPL site list*

NPL..... National Priority List

## EXECUTIVE SUMMARY

Proposed NPL..... Proposed National Priority List Sites  
NPL LIENS..... Federal Superfund Liens

### ***Federal Delisted NPL site list***

Delisted NPL..... National Priority List Deletions

### ***Federal CERCLIS list***

CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System  
FEDERAL FACILITY..... Federal Facility Site Information listing

### ***Federal CERCLIS NFRAP site List***

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

### ***Federal RCRA CORRACTS facilities list***

CORRACTS..... Corrective Action Report

### ***Federal RCRA non-CORRACTS TSD facilities list***

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

### ***Federal RCRA generators list***

RCRA-LQG..... RCRA - Large Quantity Generators  
RCRA-SQG..... RCRA - Small Quantity Generators  
RCRA-CESQG..... RCRA - Conditionally Exempt Small Quantity Generator

### ***Federal institutional controls / engineering controls registries***

US ENG CONTROLS..... Engineering Controls Sites List  
US INST CONTROL..... Sites with Institutional Controls

### ***Federal ERNS list***

ERNS..... Emergency Response Notification System

### ***State- and tribal - equivalent NPL***

NC HSDS..... Hazardous Substance Disposal Site

### ***State- and tribal - equivalent CERCLIS***

SHWS..... Inactive Hazardous Sites Inventory

### ***State and tribal landfill and/or solid waste disposal site lists***

SWF/LF..... List of Solid Waste Facilities  
OLL..... Old Landfill Inventory

### ***State and tribal leaking storage tank lists***

LUST..... Regional UST Database

## EXECUTIVE SUMMARY

LUST TRUST..... State Trust Fund Database  
LAST..... Leaking Aboveground Storage Tanks  
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

### ***State and tribal registered storage tank lists***

UST..... Petroleum Underground Storage Tank Database  
AST..... AST Database  
INDIAN UST..... Underground Storage Tanks on Indian Land  
FEMA UST..... Underground Storage Tank Listing

### ***State and tribal institutional control / engineering control registries***

INST CONTROL..... No Further Action Sites With Land Use Restrictions Monitoring

### ***State and tribal voluntary cleanup sites***

VCP..... Responsible Party Voluntary Action Sites  
INDIAN VCP..... Voluntary Cleanup Priority Listing

### ***State and tribal Brownfields sites***

BROWNFIELDS..... Brownfields Projects Inventory

## **ADDITIONAL ENVIRONMENTAL RECORDS**

### ***Local Brownfield lists***

US BROWNFIELDS..... A Listing of Brownfields Sites

### ***Local Lists of Landfill / Solid Waste Disposal Sites***

ODI..... Open Dump Inventory  
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations  
HIST LF..... Solid Waste Facility Listing  
SWRCY..... Recycling Center Listing  
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

### ***Local Lists of Hazardous waste / Contaminated Sites***

US CDL..... Clandestine Drug Labs  
US HIST CDL..... National Clandestine Laboratory Register

### ***Local Land Records***

LIENS 2..... CERCLA Lien Information  
LUCIS..... Land Use Control Information System

### ***Records of Emergency Release Reports***

HMIRS..... Hazardous Materials Information Reporting System

### ***Other Ascertainable Records***

RCRA-NonGen..... RCRA - Non Generators

## EXECUTIVE SUMMARY

DOT OPS.....	Incident and Accident Data
DOD.....	Department of Defense Sites
FUDS.....	Formerly Used Defense Sites
CONSENT.....	Superfund (CERCLA) Consent Decrees
ROD.....	Records Of Decision
UMTRA.....	Uranium Mill Tailings Sites
MINES.....	Mines Master Index File
TRIS.....	Toxic Chemical Release Inventory System
TSCA.....	Toxic Substances Control Act
FTTS.....	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS.....	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS.....	Section 7 Tracking Systems
ICIS.....	Integrated Compliance Information System
PADS.....	PCB Activity Database System
MLTS.....	Material Licensing Tracking System
RADINFO.....	Radiation Information Database
FINDS.....	Facility Index System/Facility Registry System
RAATS.....	RCRA Administrative Action Tracking System
IMD.....	Incident Management Database
UIC.....	Underground Injection Wells Listing
DRYCLEANERS.....	Drycleaning Sites
NPDES.....	NPDES Facility Location Listing
INDIAN RESERV.....	Indian Reservations
SCRD DRYCLEANERS.....	State Coalition for Remediation of Drycleaners Listing
PCB TRANSFORMER.....	PCB Transformer Registration Database
COAL ASH EPA.....	Coal Combustion Residues Surface Impoundments List
FINANCIAL ASSURANCE.....	Financial Assurance Information Listing
COAL ASH DOE.....	Steam-Electric Plan Operation Data
COAL ASH.....	Coal Ash Disposal Sites

### EDR PROPRIETARY RECORDS

#### *EDR Proprietary Records*

Manufactured Gas Plants..... EDR Proprietary Manufactured Gas Plants

### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were not identified.

Unmappable (orphan) sites are not considered in the foregoing analysis.

## EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 4 records.

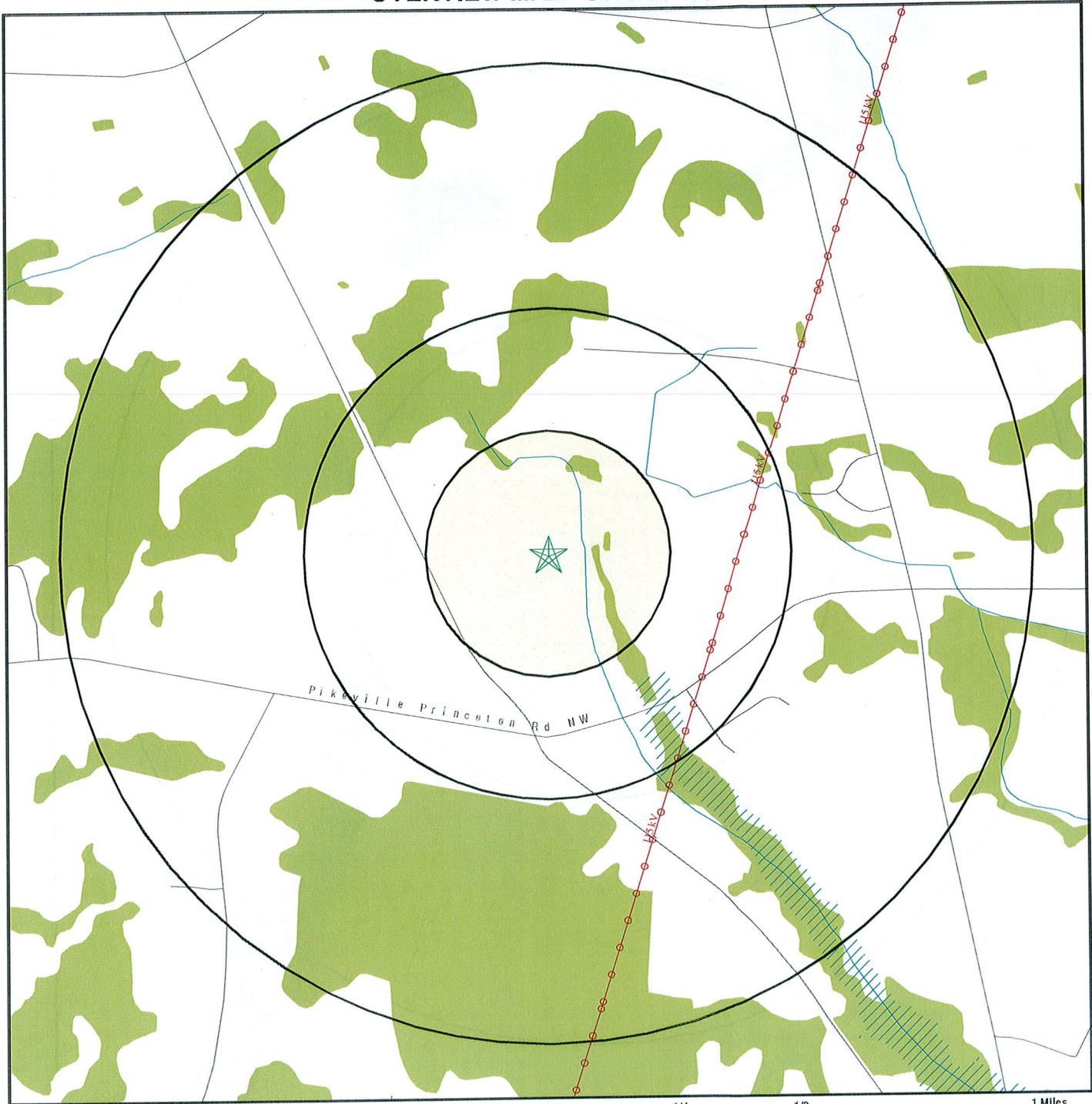
Site Name

NORTHWEST ELEMENTARY SCHOOL  
B.P. SERVICE STATION  
W. HEAD GROCERY  
WAYNE COMM COLLEGE AVIATION

Database(s)

UST, FINANCIAL ASSURANCE  
UST  
UST  
RCRA-CESQG, FINDS

# OVERVIEW MAP - 3323707.2s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- ⚡ Power transmission lines
- ⚡ Oil & Gas pipelines from USGS
- ▨ 100-year flood zone
- ▨ 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Hazardous Substance Disposal Sites

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

<p>SITE NAME: Buck Swamp          ADDRESS: Pike Princeton Road          Pikeville NC 27863          LAT/LONG: 35.4923 / 78.0723</p>	<p>CLIENT: Wildlands Eng, Inc.          CONTACT: Andrea Eckardt          INQUIRY #: 3323707.2s          DATE: May 15, 2012 3:53 pm</p>
---	--

# DETAIL MAP - 3323707.2s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Hazardous Substance Disposal Sites

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Buck Swamp  
 ADDRESS: Pike Princeton Road  
 Pikeville NC 27863  
 LAT/LONG: 35.4923 / 78.0723

CLIENT: Wildlands Eng, Inc.  
 CONTACT: Andrea Eckardt  
 INQUIRY #: 3323707.2s  
 DATE: May 15, 2012 3:55 pm



North Carolina Department of Environment and Natural Resources  
Division of Water Quality

Beverly Eaves Perdue  
Governor

Charles Wakild  
Director

Dee Freeman  
Secretary

March 12, 2012

DWQ Project # 12-0144  
Wayne County

Wildlands Engineering, Inc.  
Attn: John Hutton  
5605 Chapel Hill Road, Suite 122  
Raleigh NC 27607

Subject Property: **Buck Swamp Nutrient and Riparian Buffer Site**  
Buck Swamp [NEU06 27-57-20.7-1; WS-IV, NSW]

**On-Site Determination for Applicability to the Neuse River Riparian Area Protection Rules  
(15A NCAC 2B .0233)**

Dear Mr. Hutton:

On February 23, 2012, at your request I conducted an on-site determination to review multiple blue line and drainage features located on the subject property for applicability to the Neuse River Buffer Rules (15A NCAC 2B .0233). The features are labeled as "12-0144A through 12-0144G" on the attached map initialed by me on March 10, 2012. The project is located at north side of Pikeville-Princeton Rd 0.15 east of Old Kenly Rd. near the town of Princeton, NC.

During my review I evaluated the stream using the DWQ Stream Classification Form. I evaluated the stream reach 12-0144B and 12-0144C calculated the score to between 21 and 23 points. The form states that if the score is "greater than or equal to 19 points the stream is at least intermittent". However, several features on the property did not rate at least intermittent or were determined to be drainage ditches.

**The Division of Water Quality (DWQ) has determined that the surface water labeled as "12-0144B and 12-0144C" on the attached map are at least intermittent and are SUBJECT to the Neuse Buffer Rule.** The features labeled as "12-0144A", "12-0144D, 12-0144E, 12-0144F, 12-0144G" are NOT SUBJECT stream features. These subject streams and the associated buffers should be identified on any future plans for this property. The owner (or future owners) should notify the DWQ (and other relevant agencies) of this decision in any

North Carolina Division of Water Quality  
943 Washington Square Mall  
Washington, NC 27889

Internet: [www.ncwaterquality.org](http://www.ncwaterquality.org)  
Phone: 252-946-6481  
FAX 252-946-9215

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future correspondences concerning this property. This on-site determination shall expire five (5) years from the date of this letter.

Landowners or affected parties that dispute a determination made by the DWQ or Delegated Local Authority that a surface water exists and that it is subject to the buffer rule may request a determination by the Director. A request for a determination by the Director shall be referred to the Director in writing c/o Karen Higgins, DWQ, Wetlands, Buffers, Stormwater, Compliance and Permitting Unit (WBSCP) Mail Service Center, Raleigh, NC 27699-1650. Individuals that dispute a determination by the DWQ or Delegated Local Authority that "exempts" a surface water from the buffer rule may ask for an adjudicatory hearing. You must act within 60 days of the date that you receive this letter. Applicants are hereby notified that the 60-day statutory appeal time does not start until the affected party (including downstream and adjacent landowners) is notified of this decision. DWQ recommends that the applicant conduct this notification in order to be certain that third party appeals are made in a timely manner. To ask for a hearing, send a written petition, which conforms to Chapter 150B of the North Carolina General Statutes to the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, N.C. 27699-6714. This determination is final and binding unless you ask for a hearing within 60 days.

This letter only addresses the applicability to the buffer rules and does not approve any activity within the buffers. Nor does this letter approve any activity within Waters of the United States or Waters of the State. If you have any additional questions or require additional information please call Amy Adams at (252) 948-3917.

Sincerely,



Amy Adams/Env. Sr. Specialist  
For Al Hodge/Supervisor  
Division of Water Quality  
Surface Water Protection  
Washington Regional Office

Enclosures: Stream/Buffer Applicability Map

cc: DWQ Webscape Unit  
WaRO File Copy  
Katie Merritt, Nutrient Offset Coordinator

Filename: 12-0144\_BuckSwamp\_BuffDet/aa

Buck Swamp Nutrient Riparian Buffer Site Wayne County, NC



Buck Swamp Photolog

