

Bank Parcel Development Plan

Caraway Creek Bank Parcel

WEI Neuse 01 Riparian Buffer & Nutrient Umbrella Mitigation Bank



JUNE 2015



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The Caraway Creek Bank Parcel (“Parcel”) is proposed as an addition to the Wildlands Holdings II, LLC (“Sponsor”) **WEI Neuse 01 Riparian Buffer & Nutrient Umbrella Mitigation Bank** (“Bank”). The Umbrella Mitigation Banking Instrument (UMBI) for the Bank was signed on July 3, 2012 and updated on April 1, 2015. The project Parcel shall be planned and designed according to the Temporary Mitigation Program Requirements for Protection and Maintenance of Riparian Buffers (15A NCAC 02B.0295); however, it will adhere to the success criteria established in the aforementioned UMBI. The temporary rule 15A NCAC 02B .0295 became effective on October 24, 2014.

The project encompasses land along the Neuse River, Caraway Creek, and its 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). Impacts approved under 15A NCAC 02B.0233 (Rule .0233) will be treated according to rule 15A NCAC 02B.0295 (Rule .0295). 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 50.65 acres and will be protected with a permanent conservation easement.

Out of the 50.65 acres, 15.07 acres will be restored for Neuse buffer credit, 27.92 acres will be restored for nutrient offset restoration credit, and 6.91 acres will be buffer preservation. In general, Neuse buffer widths will extend 100 feet and nutrient offset restoration area widths will extend at least 200 feet from the top of the channel bank. The buffer preservation credit is classified as alternative mitigation under Rule .0295 and is discussed in Section 6.2. The project will be divided into two phases with the first phase planted in December 2015 and the second planted in December 2016. Phase 1 includes 3.68 acres of buffer restoration and 25.44 acres of nutrient offsets. Phase 2 includes 6.91 acres of buffer preservation, 11.39 acres of buffer restoration, and 2.48 acres of nutrient offset. Further explanation of the two phases is included in Section 6 of this BPDP.

1.2 Parcel Location

The Parcel is located in central Wayne County, approximately four miles south of the City of Goldsboro (35° 19' 39.65" N, 78° 0' 42.47" W). To get to the site traveling east on US Hwy 70 from Raleigh, merge onto I795 S/ US-70 E/US-13 S for 3.4 Miles. Turn left onto Old Mt Olive Hwy and continue for 1.2 miles. Turn Left onto Genoa Road. The site can be accessed by a driveway 0.2 miles down Genoa Road on the left, or on Robert Ave, an additional 0.4 miles down Genoa Rd (Figure 2).

The Parcel is located in a rural watershed within the Neuse River Basin (HUC 03020201) and within sub-basin 03-04-12. Stormwater runoff from the Parcel drains into three unnamed tributaries (UT1, UT2 and UT3) and three ditches (D1, D2, and D3). The westernmost ditch, D1, drains into an unnamed tributary,



which connects to the Neuse River off-site. The eastern two ditches, D2 and D3, drain into an unnamed tributary, UT3, and then to Caraway Creek, which connects to the Neuse River on site (Figure 3). Elevations of D2 showing the drainage towards UT3 are included in the appendix. Both Caraway Creek and the Neuse River are classified as Class C, Nutrient Sensitive Waters by the North Carolina Division of Water Resources (NCDWR). UT 3 was determined to be at least an intermittent stream during an onsite visit by DWR staff on March 16, 2015. See the appendix for DWR Stream Determinations.

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 five main soil types on the site: Dragston loamy sand, Goldsboro loamy sand, Johns sandy loam, Kalmia loamy sand, and Lumbee sandy loam. These soils are described below in Table 1. A soils map is provided in Figure 4.

Table 1: Project Soil Types and Descriptions - Caraway Creek BPDP

Soil Name	Location	Description
Dragston loamy sand	Located in the central and western portions of the project	These soils are nearly level and very deep. They are found on broad, smooth flats of interstream divides. They are somewhat poorly drained. Infiltration rates are moderate and surface runoff is slow.
Goldsboro loamy sand	Located along the southwestern drainage ditch	These are moderately well drained soils. They are nearly level and very deep. They are found on broad, smooth divides near shallow drainage ways. Infiltration rates are moderate and surface runoff is slow.
Johns sandy loam	Located along Caraway Creek and the unnamed tributary in the east of the project	These soils are somewhat poorly drained with slopes from 0-2%. They are nearly level soils found on broad smooth stream terraces. They have moderate permeability.
Kalmia loamy sand, 0-2% slopes	Located in the central northern portion of the project	These soils form in coastal plain sediments. They are well-drained, nearly level soils found on broad, smooth stream terraces. They have moderate permeability and low shrink-swell potential
Lumbee sandy loam	Located in the central portion of the project	These soils are poorly drained and found in shallow drainageways and broad, smooth, flat areas on stream terraces. They have moderate permeability and low shrink-swell potential.

Source: Wayne County Soil Survey 1976, USDA-NRCS

2.2 Existing Vegetative Communities

The Parcel consists primarily of open agricultural fields currently in row crop production. Recent crops include corn, soybean, tobacco, sweet potatoes, and wheat. 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 Parcel have been mowed in most locations on an annual basis. Small areas along Caraway Creek, and UT1 have an existing narrow buffer, which will be preserved. The project includes restoring the Neuse buffer along Caraway Creek, unnamed tributaries UT1 and UT2, a small portion of UT3 and drainage ditches D1, D2 and D3 (Figure 5). The unnamed

tributaries, UT1, UT2, and UT3, correspond with the NC Department of Water Resources (DWR) stream calls. The DWR stream calls and a photo log of the site are located in the appendix.

While the Parcel is dominated by agricultural fields, there are some existing buffers located within the project area (Figure 5) that will be preserved. The existing buffers and forested areas adjacent to the Parcel consist primarily of swamp chestnut oak (*Quercus michauxii*), water oak (*Quercus nigra*), willow oak (*Quercus phellos*), red maple (*Acer rubrum*), sweetgum (*Liquidambar styraciflua*), box elder (*Acer negundo*), American elm (*Ulmus americana*), Black gum (*Nyssa sylvatica*), and persimmon (*Diospyros virginica*). The forested areas along the eastern boundary of the project were assessed for existing vegetation conditions on August 25, 2014. 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 that have the potential for occurrence in the eastern forested area adjacent to the project.

Table 2: Adjacent Forested Areas Existing Tree and Shrub Species - Caraway Creek BPDP
(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 - Caraway Creek BPDP

Species	Federal Status	Habitat
Vertebrate		
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 August 25, 2014. 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 September 2, 2014. SHPO responded on September 9, 2014 and stated they “are aware of no historic resources which would be affected by the project”. All correspondence is included in the Appendix.

2.5 Environmental Issues

An EDR Radius Map Report with Geocheck was ordered for the Parcel through Environmental Data Resources, Inc. The target property was not listed in any of the Federal, State, or Tribal environmental databases searched by EDR. There were, however, properties listed in databases within one mile of the property. There is one Hazardous Substance disposal site (Hevi Duty Electric) located approximately one mile from the project site, which drains into the Neuse River. The site had been monitored by the Environmental Protection Agency (EPA) and was on a National Priorities list. It appears that as of August 30, 1990 the site was closed and the EPA was considering various alternatives for the site (EPA, 1990). This indicates that any further activities on site would be to improve the environmental quality.

There is one state and tribal landfill (Recycled Materials, Inc) located one half mile from the project site. Runoff from the site drains into Poplar Branch and to the Neuse River. The recycling facility is subject to rules and regulations set forth by the North Carolina Division of Waste Management and the EPA. With regulations being monitored by these agencies, there are no anticipated deleterious environmental effects from the recycling facility on the Parcel.

The Genoa Mart, located on a 0.5 acre parcel a quarter mile from the project site has a registered underground storage tank. One incident was recorded in the Incident Management Database located at GAF Materials, approximately one half mile from the site. This incident was recorded in Jul 2006. Underground storage tanks are not uncommon in a drainage area the size of the Neuse River. The size of the drainage area to the Genoa Parcel and GAF Materials is much less than one percent of the drainage area to the Neuse River at this location. Any potential leakage from the tanks would have minimal effect on the Parcel and would not negate the positive environmental impact of restoring and protecting 50.65 acres of riparian areas.

The Executive Summary of the EDR report is included in the Appendix.

2.6 FEMA Floodplain / Floodway Mapping

The northern half of the parcel is located within the Federal Emergency Management Association's (FEMA's) approximate 100-year floodplain boundary (FIRM Map # 372059700J, Figure 6). A portion of Caraway Creek, UT1 and UT2 are located within Zone AE. The downstream portion of Caraway Creek is located within the designated floodway. The planting of riparian buffers and minor bank stabilization measures on Caraway Creek planned on the Parcel are not expected to have any impact on the floodplain and floodway areas.

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 along the project corridors. Minor bank grading and stabilization will take place along Caraway Creek where eroded meander bends have migrated into the agricultural fields. 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. Any herbicides will be applied by a certified applicator. More detailed descriptions of the proposed restoration activity follows.

3.1 Parcel Preparation

The majority of the Parcel 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 if site conditions at the time of planting allow it. 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 December 15, 2015 for Phase I and December 15, 2016 for Phase II.

The Sponsor will utilize mechanical equipment periodically in the first few years after planting to enhance vegetative growth. Mowing will not take place within the first 50 ft (Zone A) of restored buffer after planting unless absolutely necessary. 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 a density sufficient to meet the success criteria set forth in the UMBI of 320 trees per acre. Tree species specified for planting on the Caraway Creek Mitigation Site Parcel are detailed in Table 4.

Table 4: Selected Tree Species Appropriate for Buffer Restoration - Caraway Creek BPDP

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.	4,608
<i>Liriodendron tulipifera</i>	Yellow Poplar	12 ft.	R	0.25"-1.0"	Canopy	6-12 ft.	4,608
<i>Quercus phellos</i>	Willow Oak	12 ft.	R	0.25"-1.0"	Canopy	6-12 ft.	4,608
<i>Plantus occidentalis</i>	Sycamore	12 ft.	R	0.25"-1.0"	Canopy	6-12 ft.	4,608
<i>Betula nigra</i>	River Birch	12 ft.	R	0.25"-1.0"	Canopy	6-12 ft.	4,608
<i>Quercus michauxii</i>	Swamp Chestnut Oak	12 ft.	R	0.25"-1.0"	Canopy	6-12 ft.	4,608
<i>Fraxinus pennsylvanica</i>	Green Ash	12 ft.	R	0.25"-1.0"	Canopy	6-12 ft.	4,608
						Subtotal	32,256

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

“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 – Caraway Creek BPDP
(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

Scientific Name	Common Name	Wetland Indicator Status
<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 34 plots will be established within the credit generation area: 22 plots in Phase 1 and 12 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 (2008). 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 seasons, 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. The Sponsor shall submit to NCDWR an annual monitoring report for each phase, no later than December 31st of each year for five consecutive years and will follow the terms and conditions of the UMBI signed on July 3, 2012 (updated April 1, 2015). 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. Any parcel maintenance performed will be included in the monitoring report for that year.

5.0 Financial Assurance

Following approval of the Caraway Creek Bank Parcel BPDP, the Sponsor shall provide a Performance Bond for each Phase 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. In lieu of posting the performance bond, the Sponsor 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 for each phase 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 DWR approval, this may be lowered each year based on the adjusted cost to complete the monitoring

6.0 Mitigation Potential

6.1 Mitigation Activities

Approximately 50.65 acres of land will be protected with a permanent conservation easement. Out of the 50.65 acres, 15.07 acres will be restored for Neuse buffer credit, 27.92 acres will be restored for nutrient offset credit, and 6.91 acres will be buffer preservation. The Sponsor may use the 15.07 acres of buffer restoration for either Neuse buffer credits or nutrient offset credits, but not both. Table 6, below, indicates where each activity is taken place on the Parcel. Because the project will be constructed in two phases, the associated conservation easement will be acquired separately for each phase. The two phases are discussed in more detail in Section 6.3.

Table 6: Credit Generating Mitigation Activities by Drainage Feature – Caraway Creek BPDP

Drainage Feature	Drainage Feature Classification	Restoration (Acre)	Preservation (Acre)	Nutrients (Acre)		% Total Area
				First 100'	Second 100'	
UT1	Perennial	10.36			3.63	28.0%
UT2	Perennial	0.30				0.6%
UT3	Intermittent					0%
D1	Ditch			2.87	2.75	11.3%
D2	Ditch			4.56	3.57	16.3%
D3	Ditch			4.67	3.55	16.5%
Caraway Creek	Perennial	4.41	6.91	0	2.32	27.3%
	% Total Area	30.2%	13.9%	24.2%	31.7%	100%

6.2 Buffer Preservation

Rule .0295 allows for 100% credit for 100 feet of riparian buffer preservation along perennial and ephemeral streams according to section (m)(2)(D-H). Caraway Creek, which is Perennial, incorporates up to 100 feet of riparian buffer preservation at a ten to one ratio. Buffer preservation can only generate

buffer mitigation credit and is not transferrable into nutrient offset credits. A separate ledger will be provided to account for the preservation credits generated from this bank.

6.3 Project Phasing

This project will be constructed in two phases: Phase I and Phase II. Phase I will be planted in December 2015 and Phase II in December 2016. The overall credit generation for the site is described in Table 7, below, and depicted in Figure 5.

Table 7: Credit Generation Summary for Total Project – Caraway Creek BPDP

Activity	Total Acreage	Total Credit
Riparian Buffer Restoration	15.07	656,624 ft ²
Riparian Buffer Preservation	6.91	30,147 ft ²
Nutrient Offset	27.92	63,498 lbs N

Descriptions of mitigation activities and credit generation for the Parcel are broken out by phase in Tables 7a and 7b. These tables correspond with Figures 7a and 7b.

Table 7a: Credit Generation Summary for Phase I – Caraway Creek BPDP

	Credit Type	Riparian Zone	Total square Feet	Total Acreage	Credit Ratio	Credit Per Acre	Mitigation Credit
Phase I	Buffer Restoration	Zone A: Top of Bank - 50'	82,533	1.89	1:1	43,560 ft ²	82,533 ft ²
		Zone B: 51'-100'	78,098	1.79	1:1	43,560 ft ²	78,098 ft ²
	Subtotal						160,631 ft²
	Nutrient Offset	Zone B: Top of Bank - 100'	527,076	12.10	N/A	2,273 lb/acre	27,503 lbs
		Zone C: 101'-200'	581,090	13.34	N/A	2,273 lb/acre	30,322 lbs
	Subtotal						57,825 lbs
Total Buffer Restoration Credits						160,631 ft²	
Total Nutrient Offset Credits						57,825 lbs	

Table 7b: Credit Generation Summary for Phase II – Caraway Creek BPDP

	Credit Type	Riparian Zone	Total square Feet	Total Acreage	Credit Ratio	Credit Per Acre	Mitigation Credit
Phase II	Buffer Restoration	Zone A: Top of Bank - 50'	214,582	4.92	1:1	43560 ft ²	214,582 ft ²
		Zone B: 51'-100'	281,412	6.47	1:1	43560 ft ²	281,412 ft ²
	Subtotal						495,993 ft²
	Buffer Preservation	Zone A: Top of Bank -50'	231,674	5.31	10:1	4356 ft ²	23,167 ft ²
		Zone B: 51'-100'	69,804	1.60	10:1	4356 ft ²	6,980 ft ²
	Subtotal						30,147 ft²
Nutrient Offset	Zone C: 101'-200'	107,909	2.48	N/A	2273 lb/acre	5673 lbs	
Subtotal						5,673 lbs	
Total Buffer Restoration Credits						495,993 Ft²	
Total Buffer Preservation Credits						30,147	
Total Nutrient Offset Credits						5,673 lbs	

7.0 References

Lee, M.T., Peet, R.K., S.D., Wentworth, T.R. 2008. CVS-EEP Protocol for Recording Vegetation Version 4.2. Retrieved from <http://cvs.bio.unc.edu/protocol/cvs-eeep-protocol-v4.2-lev1-5.pdf>.

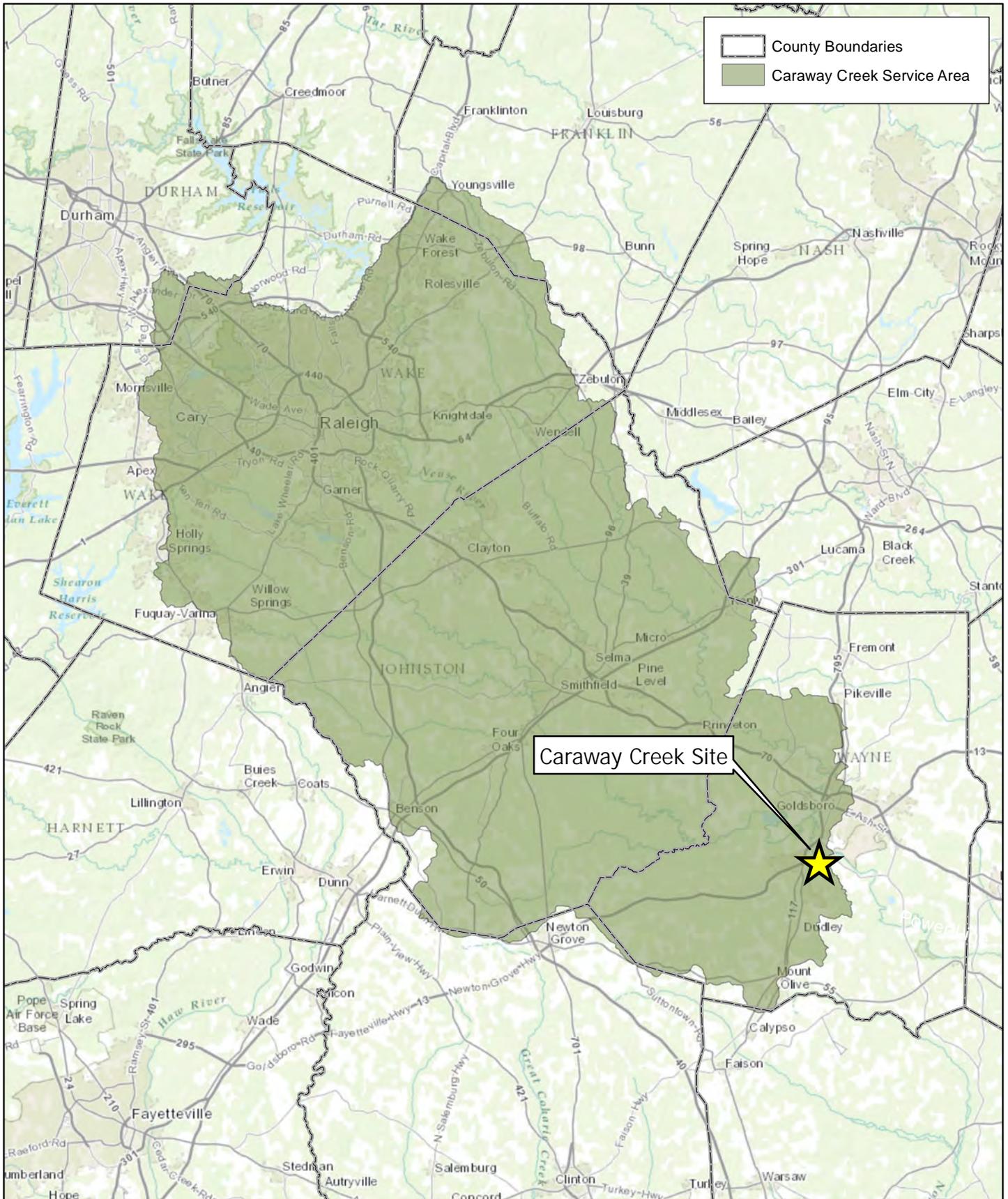
Peet, R.K., T.R. Wentworth and P.S. White. 1998. A flexible, multipurpose method for recording vegetation composition and structure. *Castanea* 63:262-274. <http://cvs.bio.unc.edu/methods.htm>

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.

USEPA, 1990. MPL Site Narrative for Hevi-Duty Electric Co. Goldsboro, NC <http://www.epa.gov/superfund/sites/npl/nar1079.htm> Website Accessed December 16, 2014

FIGURES



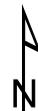
County Boundaries
 Caraway Creek Service Area

Caraway Creek Site

Figure 1 Service Area Map
 Caraway Creek Mitigation Site
 Bank Parcel Development Plan
 Neuse River Basin 03020201
 Wayne County, NC



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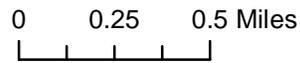
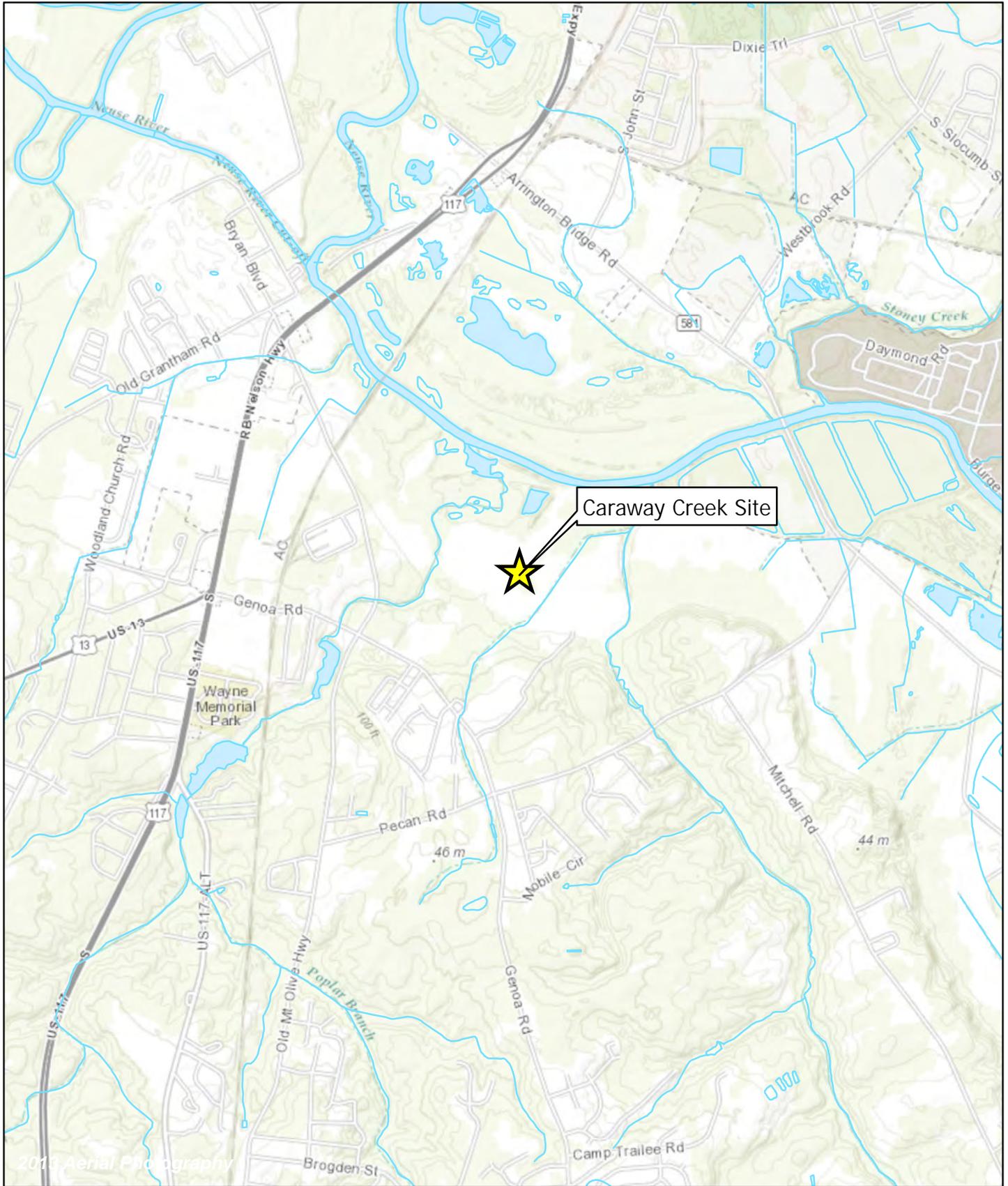
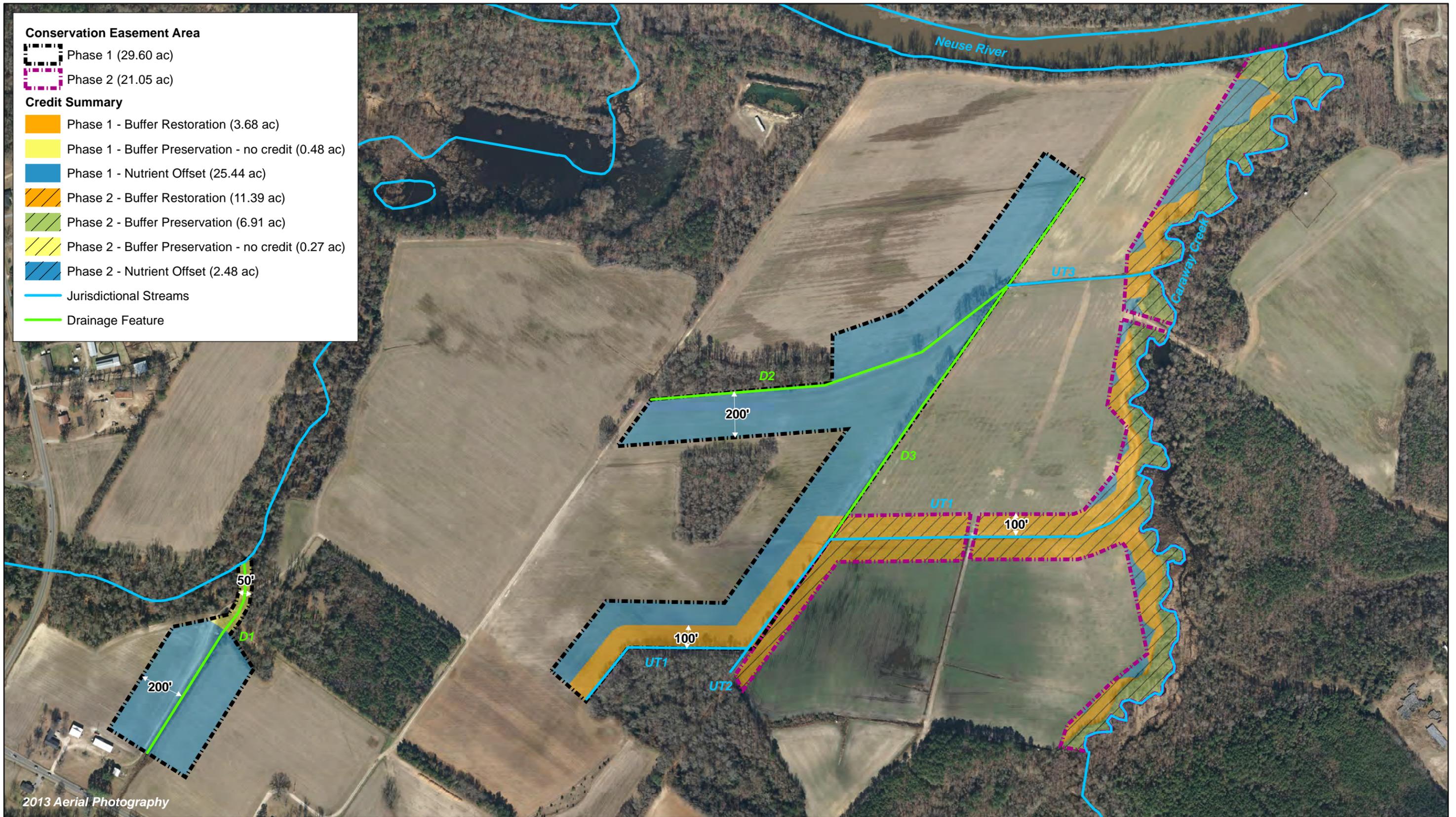
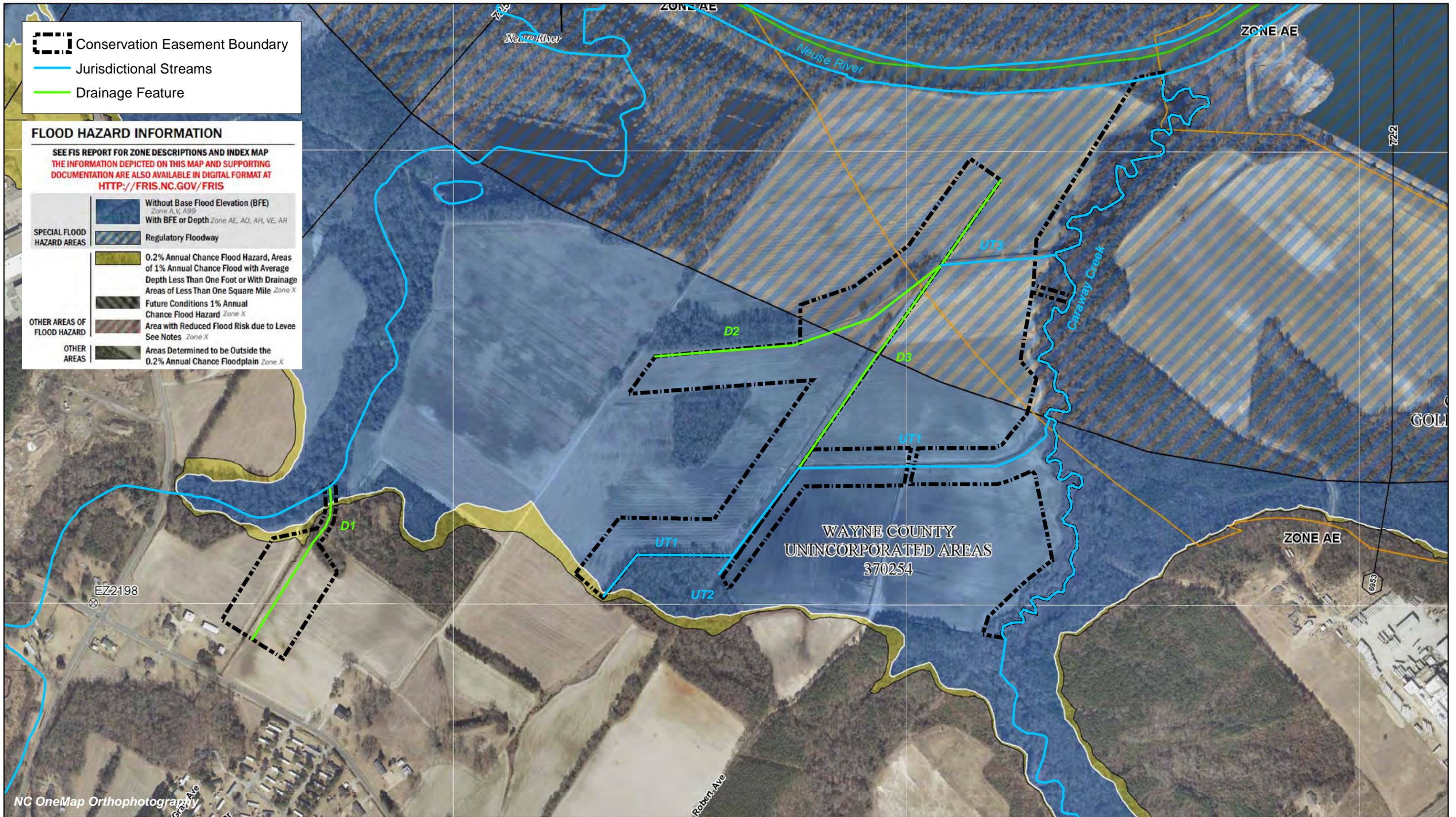


Figure 2. Vicinity Map
 Caraway Creek Mitigation Site
 Bank Parcel Development Plan
 Neuse River Basin 03020201
 Wayne County, NC











APPENDIX



LOCATION MAP



MAGNETIC MERIDIAN
PLAT CABINET L SLIDE 38-1

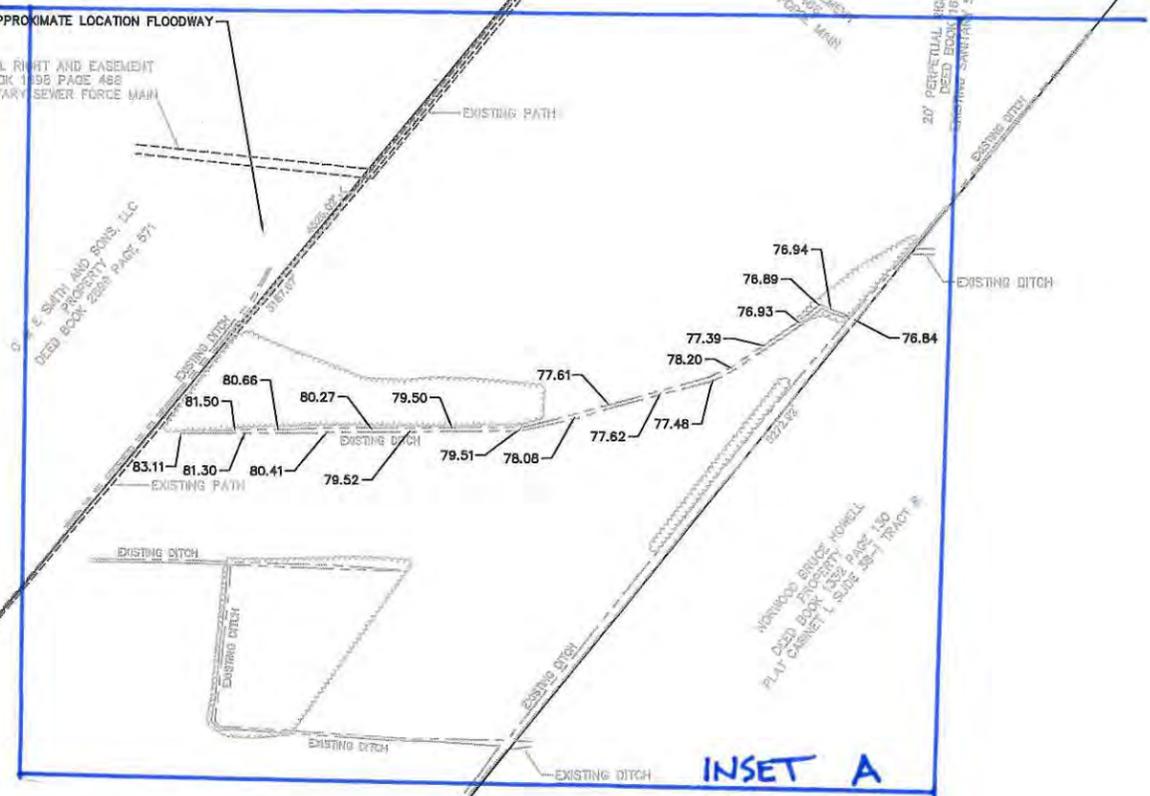
APPROXIMATE LOCATION FLOODWAY

20' PERPETUAL RIGHT AND EASEMENT
DEED BOOK 1998 PAGE 468
EXISTING SANITARY SEWER FORCE MAIN

D & E SMITH AND SONS, LLC
PROPERTY
DEED BOOK 2888 PAGE 571

20' PERPETUAL RIGHT AND EASEMENT
DEED BOOK 1998 PAGE 468
EXISTING SANITARY SEWER FORCE MAIN

NORWOOD BRUCE HOWELL
PROPERTY
DEED BOOK 1332 PAGE 130
PLAT CABINET L SLIDE 38-1 TRACT B



APPROXIMATE LOCATION
100 YEAR FLOOD HAZARD

(OLD MOUNT OLIVE HIGHWAY)
N.C. SECONDARY ROAD NO. 1926

N.C. SECONDARY ROAD NO. 1927
(GENOA ROAD)

H 38°33'00" E 76.91'
H 38°33'00" E 31.47'
PK NAIL FOUND MID-PAVEMENT
JOHN D. SMITH
PROPERTY
DEED BOOK 2588 PAGE 567
DEED BOOK 2377 PAGE 715
PLAT CABINET K SLIDE 32-A

CONTROL POINT
MAG NAIL FOUND MID-PAVEMENT (A)
N = 573,824.836
E = 2,288,294.248
MAD 83 (2011)

CONTROL POINT
MAG NAIL FOUND MID-PAVEMENT (B)
N = 573,844.639
E = 2,288,294.753
MAD 83 (2011)

JOHN B. EVERITT
PROPERTY
DEED BOOK 1528 PAGE 745

D & E SMITH AND SONS, LLC
PROPERTY
DEED BOOK 2888 PAGE 571

JOHN B. EVERITT
PROPERTY
DEED BOOK 1528 PAGE 745

PAUL W. RUDY AND WIFE LOS CASEY RUDY
PROPERTY
DEED BOOK 1982 PAGE 59
PLAT CABINET L SLIDE 38-1 TRACT A

NORWOOD BRUCE HOWELL
PROPERTY
DEED BOOK 1332 PAGE 130
PLAT CABINET L SLIDE 38-1 TRACT B

APPROXIMATE LOCATION FLOODWAY

ACTUAL RIGHT AND EASEMENT
BOOK 1698 PAGE 468
SANITARY SEWER FORCE MAIN

FORCE MAIN

EXHIBIT A

20' PERPETUAL RI
DEED BOOK 1
EXISTING SANITARY

EXISTING PATH

G & F SMITH AND SONS, LLC
PROPERTY
DEED BOOK 2899 PAGE 571

EXISTING DITCH

45276.02 J.C.

5187.87

76.94

76.89

76.93

77.39

78.20

76.84

77.61

FLOW

D2

80.66

81.50

80.27

79.50

77.62

77.48

5272.92

83.11

81.30

80.41

79.52

79.51

78.08

EXISTING DITCH

EXISTING PATH

EXISTING DITCH

EXISTING DITCH

EXISTING DITCH

EXISTING DITCH

EXISTING DITCH

NORWOOD BRUCE HOWELL
PROPERTY
DEED BOOK 1332 PAGE 130
PLAT CABINET L SLIDE 38-1 TRACT B

D3

INSET A



WILDLANDS
ENGINEERING

September 2, 2014

Renee Gledhill-Earley
State Historic Preservation Office
4617 Mail Service Center
Raleigh, NC 27699-4617

**Subject: Request for Records Search
Caraway Creek Mitigation Bank Site
Wayne County, North Carolina**

Dear Ms. Gledhill-Earley:

We are hereby contacting the North Carolina State Historic Preservation Office regarding the presence of any historic properties or cultural resources within the referenced project area. The project is located on Genoa Road, approximately 0.25 miles east of Old Mt Olive Hwy. The attached USGS Vicinity Map and Site Map illustrate the approximate location of the project area.

This project is located within a rural agricultural area with adjacent forested areas and small residential lots. The purpose of this project is to add to the WEI – Buck Swamp Umbrella Mitigation Bank. Construction of this project will result in the replanting and establishment of native riparian buffer species. No impacts to on-site Jurisdictional Waters of U.S. will occur as a result of this project.

Please provide a written response concerning your determination regarding the presence of any historic properties or cultural resources within the project area. Thank you for your attention to this matter.

Sincerely,

Angela N Allen, PE
Water Resources Engineer



**North Carolina Department of Cultural Resources
State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Pat McCrory
Secretary Susan Kluttz

Office of Archives and History
Deputy Secretary Kevin Cherry

September 19, 2014

Angela Allen
Wildlands Engineering
312 West Millbrook Road
Raleigh, NC 27609

Re: Caraway Creek Mitigation Bank Site, Wayne County, ER 14-2046

Dear Ms. Allen:

Thank you for your letter of September 2, 2014, 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, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or renee.gledhill-earley@ncdcr.gov. 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".

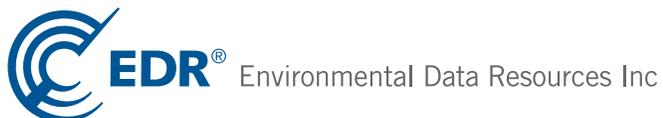
for Ramona M. Bartos

Caraway Creek Mitigation Site

345 Genoa Road
Dudley, NC 28333

Inquiry Number: 4049846.2s
September 10, 2014

The EDR Radius Map™ Report with GeoCheck®



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Physical Setting Source Records Searched	PSGR-1

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 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

345 GENOA ROAD
DUDLEY, NC 28333

COORDINATES

Latitude (North): 35.3277000 - 35° 19' 39.72"
Longitude (West): 78.0115000 - 78° 0' 41.40"
Universal Transverse Mercator: Zone 17
UTM X (Meters): 771661.4
UTM Y (Meters): 3913285.2
Elevation: 64 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 35078-C1 SOUTHWEST GOLDSBORO, NC
Most Recent Revision: 2001

East Map: 35077-C8 SOUTHEAST GOLDSBORO, NC
Most Recent Revision: 2001

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20120628, 20120510
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
LUCIS..... Land Use Control Information System

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent CERCLIS

SHWS..... Inactive Hazardous Sites Inventory

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

OLI..... Old Landfill Inventory

State and tribal leaking storage tank lists

LUST..... Regional UST Database
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

AST..... AST Database

EXECUTIVE SUMMARY

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

DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
ODI..... Open Dump Inventory
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

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System
SPILLS 80..... SPILLS 80 data from FirstSearch
SPILLS 90..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR..... RCRA - Non Generators / No Longer Regulated
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
US MINES..... Mines Master Index File

EXECUTIVE SUMMARY

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
RMP.....	Risk Management Plans
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
2020 COR ACTION.....	2020 Corrective Action Program List
LEAD SMELTERS.....	Lead Smelter Sites
PRP.....	Potentially Responsible Parties
US AIRS.....	Aerometric Information Retrieval System Facility Subsystem
US FIN ASSUR.....	Financial Assurance Information
Financial Assurance.....	Financial Assurance Information Listing
COAL ASH EPA.....	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER.....	PCB Transformer Registration Database
COAL ASH DOE.....	Steam-Electric Plant Operation Data
COAL ASH.....	Coal Ash Disposal Sites
EPA WATCH LIST.....	EPA WATCH LIST

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP.....	EDR Proprietary Manufactured Gas Plants
EDR US Hist Cleaners.....	EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST.....	Recovered Government Archive Leaking Underground Storage Tank
RGA LF.....	Recovered Government Archive Solid Waste Facilities List
RGA HWS.....	Recovered Government Archive State Hazardous Waste Facilities List

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

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

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent NPL

NC HSDS: The Hazardous Substance Disposal Sites list contains locations of uncontrolled and unregulated hazardous waste sites. The file contains sites on the national priority list as well as the state priority list. The data source is the North Carolina Center for Geographic Information and Analysis.

A review of the NC HSDS list, as provided by EDR, and dated 08/09/2011 has revealed that there is 1 NC HSDS site within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
HEVI DUTY ELECTRIC		WNW 1/4 - 1/2 (0.341 mi.)	0	8

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

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Department of Environment & Natural Resources' List of Solid Waste Facility Contacts in Alpha Order.

A review of the SWF/LF list, as provided by EDR, and dated 07/01/2014 has revealed that there is 1 SWF/LF site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>RECYCLED MATERIALS, INC.</i>	<i>538 OLD MOUNT OLIVE HIG</i>	<i>W 0 - 1/8 (0.023 mi.)</i>	<i>1</i>	<i>8</i>

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environment & Natural Resources' Petroleum Underground Storage Tank Database.

A review of the UST list, as provided by EDR, and dated 05/09/2014 has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
GENOA MART	659 GENOA ROAD	SSW 0 - 1/8 (0.060 mi.)	2	8

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

HIST LF: A listing of solid waste facilities.

A review of the HIST LF list, as provided by EDR, and dated 11/06/2006 has revealed that there is 1

EXECUTIVE SUMMARY

HIST LF site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
RECYCLED MATERIALS, INC.	538 OLD MOUNT OLIVE HIG	W 0 - 1/8 (0.023 mi.)	1	8

Records of Emergency Release Reports

IMD: Incident Management Database.

A review of the IMD list, as provided by EDR, and dated 07/21/2006 has revealed that there is 1 IMD site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
GAF MATERIALS	430 OLD MOUNT OLIVE HIG	WNW 1/4 - 1/2 (0.320 mi.)	5	11

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there are 2 EDR US Hist Auto Stat sites within approximately 0.25 miles of the target property.

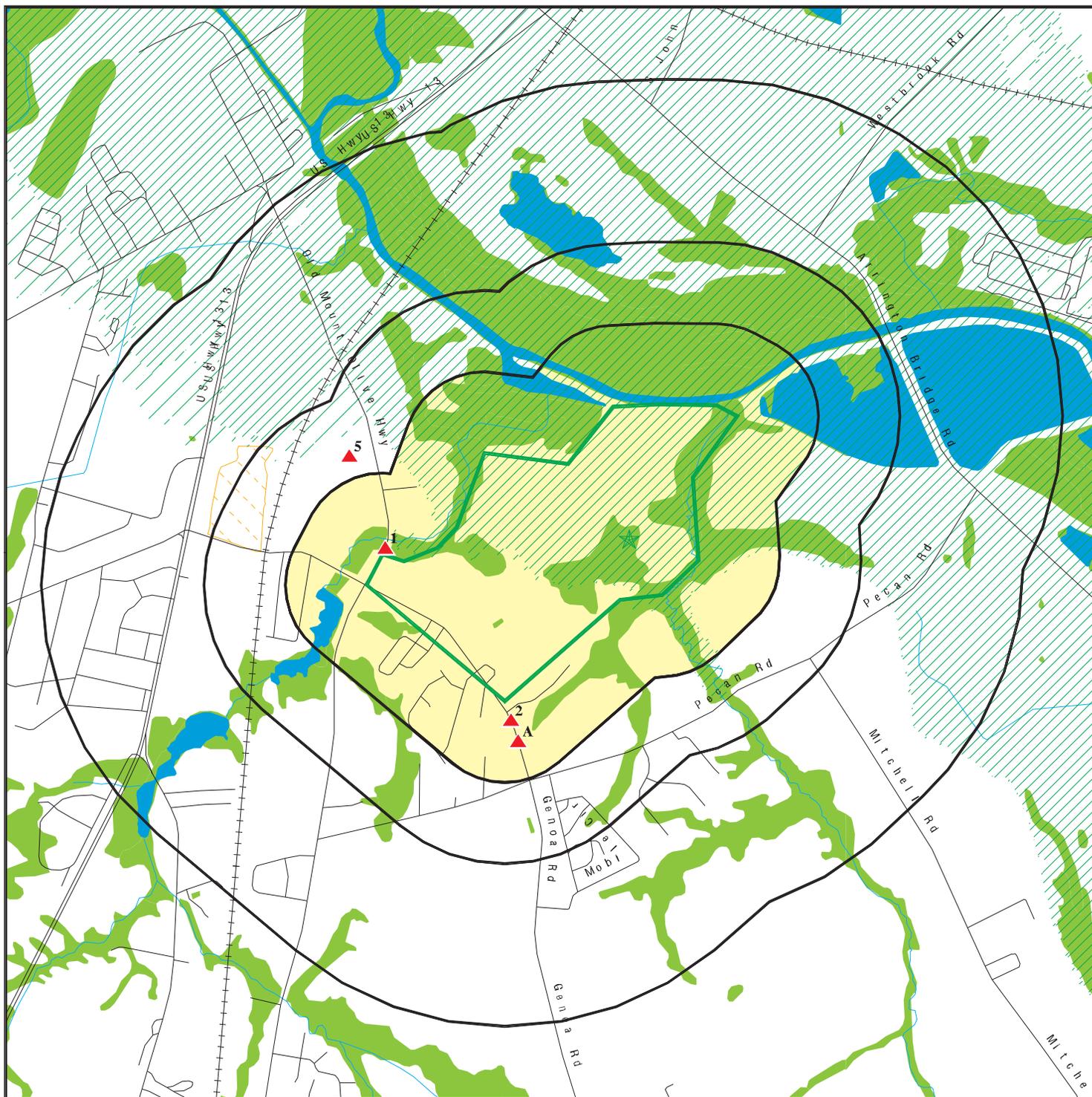
<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
Not reported	687 GENOA RD	SSW 1/8 - 1/4 (0.128 mi.)	A3	9
Not reported	687 GENOA RD	SSW 1/8 - 1/4 (0.130 mi.)	A4	10

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 29 records.

<u>Site Name</u>	<u>Database(s)</u>
GA-PACIFIC CORP CHIP-N-SAW	SHWS
GEORGIA-PACIFIC CORP CHIP-N-SAW	CERC-NFRAP, RCRA-CESQG
TRI-COUNTY ELECTRIC MEMBERSHIP	LUST TRUST
THOMPSON'S GROCERY	UST
WAYNE HARDWOOD LUMBER, INC.	UST
WHITFIELD ENTERPRISES EQUIP YARD	UST
ZELMA S CASEY'S 76 GROCERY	UST
SINGLETON'S GROCERY	UST
PIKERVILLE QUICK MART	UST
CARTER'S BODY SHOP	UST
TURNER EQUIPMENT CO INC	UST
TRANSPORTATION DIVISION	UST
STEVE & PAT CONVENIENT STORE	UST
SPRUILLS GROCERY	UST
STONEY CREEK GROCERY	UST
RAYBORN DEW	UST
SAULSTON COMMUNITY STORE	UST
BROADHURST GROCERY	UST
GEORGE F. PEELE	UST
PORT UNIT 219	UST
MOBILE EQUIPMENT CO.	UST
COMER BROTHERS LUMBER CO.	UST
FALM	UST
WEBBERS HATCHERY	UST
METAL CRAFTERS GOLDSBORO NC	RCRA NonGen / NLR
BASF WYANDOTTE CORP SECUR	RCRA NonGen / NLR
CAR-GEN INC	RCRA NonGen / NLR
FUNK SEEDS INTL GOLDSBORO	RCRA NonGen / NLR
WAYNE COMMUNITY COLLEGE	RCRA-CESQG

overview MAP - 4049846.2s



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

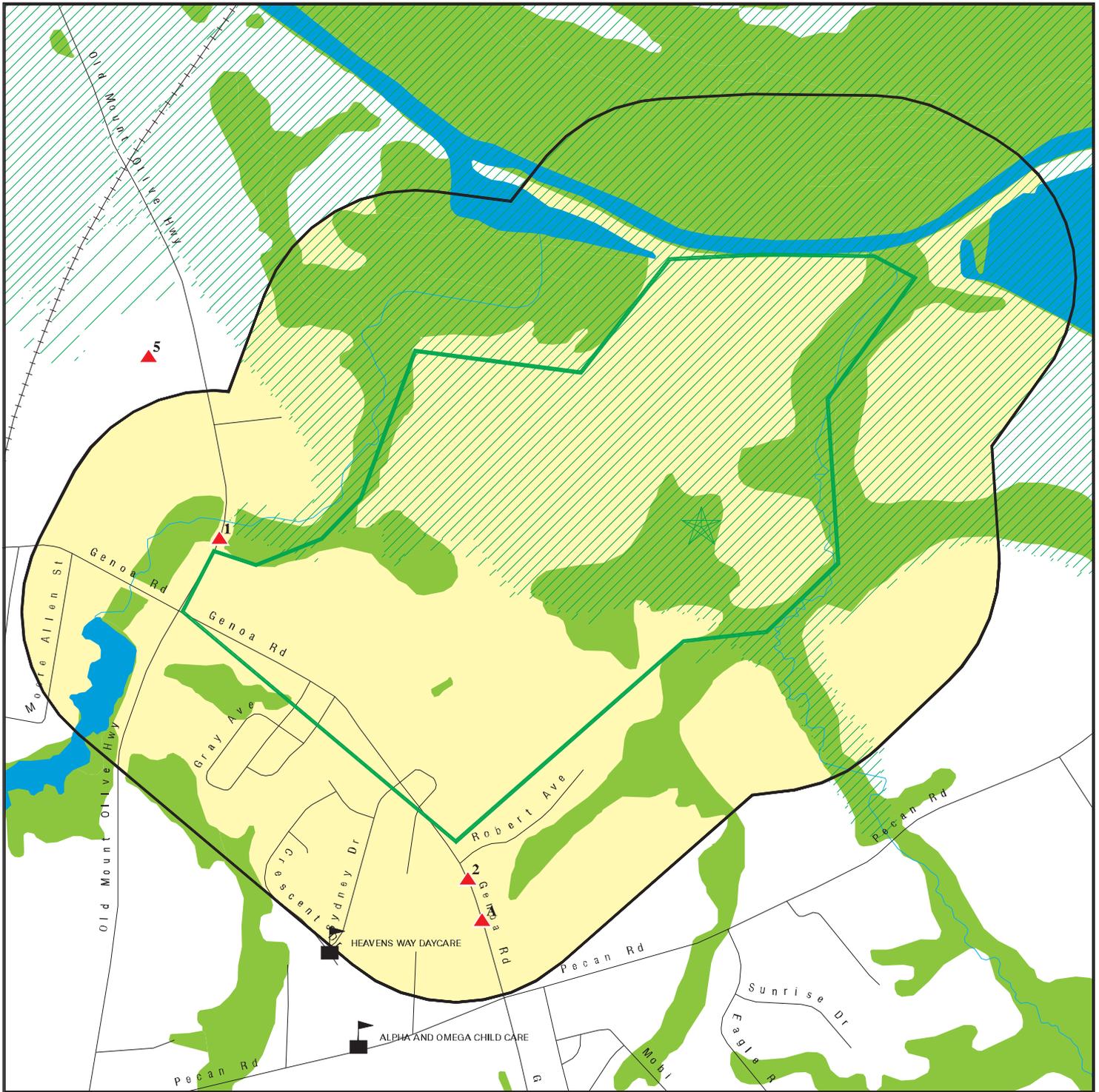


This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Caraway Creek Mitigation Site
 ADDRESS: 345 Genoa Road
 Dudley NC 28333
 LAT/LONG: 35.3277 / 78.0115

CLIENT: Wildlands Eng, Inc.
 CONTACT: Angela Allen
 INQUIRY #: 4049846.2s
 DATE: September 10, 2014 6:22 pm

detail MAP - 4049846.2s



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

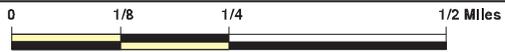
100-year flood zone

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: Caraway Creek Mitigation Site
 ADDRESS: 345 Genoa Road
 Dudley NC 28333
 LAT/LONG: 35.3277 / 78.0115

CLIENT: Wildlands Eng, Inc.
 CONTACT: Angela Allen
 INQUIRY #: 4049846.2s
 DATE: September 10, 2014 6:23 pm



INQUIRY #: 4049846.5

YEAR: 1959

| = 500'





INQUIRY #: 4049846.5

YEAR: 1980

|—————| = 1000'



INQUIRY #: 4049846.5

YEAR: 1998



| = 750'





INQUIRY #: 4049846.5

YEAR: 2010

| = 500'





INQUIRY #: 4049846.5

YEAR: 2010

| = 500'





North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

John E. Skvarla, III
Secretary

August 25, 2014

DWQ # 14-0820
Wayne County

G&E Smith and Sons, LLC
Attn: Mr. Stacy Smith
345 Genoa Road
Dudley, NC 28333

Mr. Norwood B. Howell
118 Oak Heights Road
Goldsboro, NC 27530

Subject Property: Caraway Creek
UTs to Caraway Creek, Neuse River Basin

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

Dear Messrs. Smith and Howell:

On August 25, 2014, at the request of your consultant Mr. John Hutton of Wildlands Engineering, Inc, Anthony Scarbraugh conducted an on-site determinations to review unnamed tributaries (UTs) to Caraway Creek located on the subject property for applicability to the Neuse Buffer Rules (15A NCAC 2B .0233). The features are labeled as "14-0820 A and 14-0820 B" on the attached maps initialed by Mr. Scarbraugh on August 25, 2014. The project is located between 345 Genoa Road and the Neuse River near the Town of Dudley, Wayne County.

At your request, Mr. Scarbraugh conducted on-site determinations as stated above. During his review, he evaluated the streams using the DWR Stream Classification Form. He evaluated the stream reach 14-0820 A at 35.32593 N, 78.01651 W and calculated the score to be 24.25 points. He evaluated the stream reach 14-0820 B at 35.32612 N, 78.01462 W and calculated the score to be 21.5 points. The form states that if the score is "greater than or equal to 19 points the stream is at least intermittent."

The Division of Water Resources (DWR) has determined that a portion of feature labeled as "14-0820 A and 14-0820 B" on the attached maps, and highlighted in blue is subject to the Neuse Buffer Rules. The features and its associated buffers should be identified on any future plans for this property. The owner (or future owners) should notify the DWR (and other relevant agencies) of this decision in any future correspondences concerning this property. This on-site determination shall expire five (5) years from the date of this letter.

The owner (or future owners) should notify the DWR (and other relevant agencies) of this decision in any 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 DWR 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, DWR 401 & Buffer Permitting Unit, 1617 Mail Service Center, Raleigh, NC 27699-1650. Individuals that dispute a determination by the DWR 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. DWR 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 Anthony Scarbraugh in the Washington Regional Office at (252) 948-3924.

Sincerely,

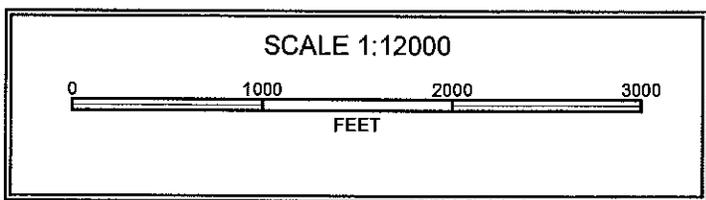
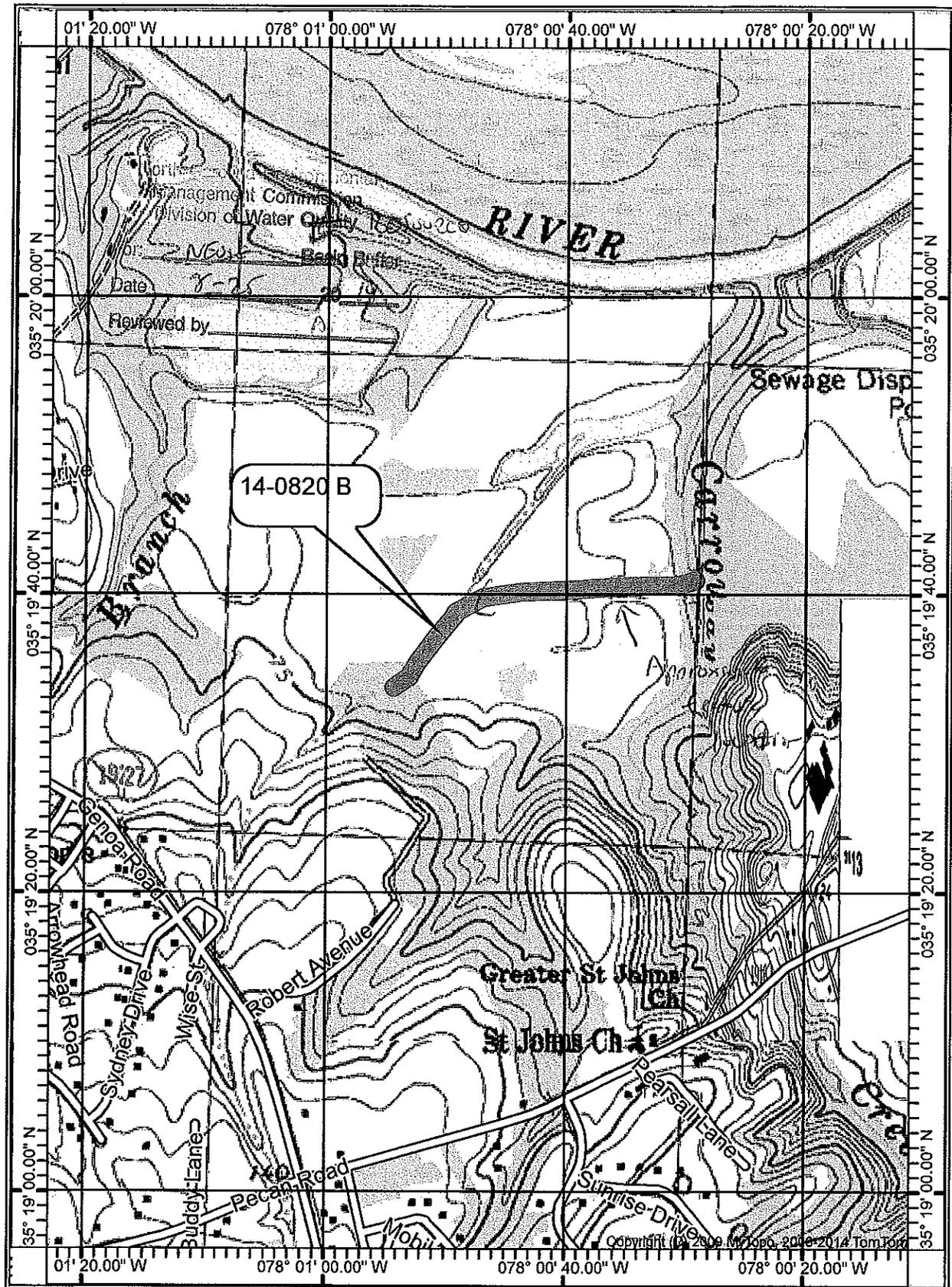


Robert Tankard, Assistant Regional Supervisor
Water Quality Regional Operations Section
Division of Water Resources, NCDENR

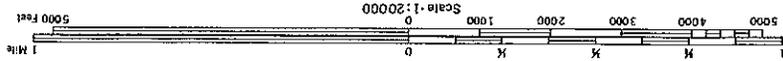
Attachment USGS Topographic 1:24,000 Quadrangle Map "SW Goldsboro"
copy of sheet 25, 1974 version of Wayne County Soil Survey

cc: DWR 401 & Buffer Permitting Unit
File Copy
Eric Kulz, DWR 401 & Buffer Permitting Unit
Daniel Taylor, Wildlands Engineering, Inc.,
312 West Millbrook Road, Suite 225, Raleigh, NC 27609

Filename 14-0820



1:25000



WAYNE COUNTY, NORTH CAROLINA - SOILS SURVEY



This map is one of a set compiled in 1972 as part of a soil survey by the United States Department of Agriculture, Soil Conservation Service, and the North Carolina Agricultural Experiment Station. Photographs from 1970 aerial photography. Features of 5,000 feet and larger are represented and based on the North Carolina coordinate system.

WAYNE COUNTY, NORTH CAROLINA NO. 25



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

Donald R. van der Vaart
Secretary

March 17, 2015

DWQ # 14-0820 Ver. 2
Wayne County

G&E Smith and Sons, LLC
Attn: Mr. Stacy Smith
345 Genoa Road
Dudley, NC 28333

Mr. Norwood B. Howell
118 Oak Heights Road
Goldsboro, NC 27530

Subject Property: Caraway Creek
UT to Caraway Creek, Neuse River Basin

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

Dear Messrs. Smith and Howell:

On March 16, 2015, at request of your consultant Mr. John Hutton of Wildlands Engineering, Inc, Anthony Scarbraugh conducted on-site determination to review an unnamed tributary (UT) to Caraway Creek located on the subject property for applicability to the Neuse Buffer Rules (15A NCAC 2B .0233). The feature is labeled as "14-0820 Ver. 2" on the attached map(s) initialed by Mr. Scarbraugh on March 17, 2015. The project is located between 345 Genoa Road and the Neuse River near the Town of Dudley, Wayne County.

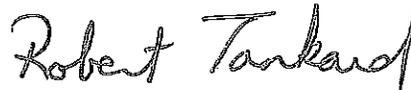
At your request, Mr. Scarbraugh conducted on-site determination as stated above. During his review, he evaluated the stream using the DWR Stream Classification Form. He evaluated the stream reach "14-0820 Ver. 2" at 35.33111 N, 78.01034 W and calculated the score to be 27.25 points. The form states that if the score is "greater than or equal to 19 points the stream is at least intermittent."

The Division of Water Resources (DWR) has determined that a portion of feature labeled as "14-0820 Ver. 2" on the attached map(s), and highlighted in blue is subject to the Neuse Buffer Rules. The portion of the feature labeled as "14-0" and highlighted in red and circled on the attached map(s), is not subject to the Neuse Buffer Rules. The portion of the feature labeled as "15-0096 B" on the attached map(s), and highlighted in red is not subject to the Neuse Buffer Rules. The features and the associated buffers should be identified on any future plans for this property. The owner (or future owners) should notify the DWR (and other relevant agencies) of this decision in any 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 DWR 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, DWR 401 & Buffer Permitting Unit, 1617 Mail Service Center, Raleigh, NC 27699-1650. Individuals that dispute a determination by the DWR 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. DWR 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.

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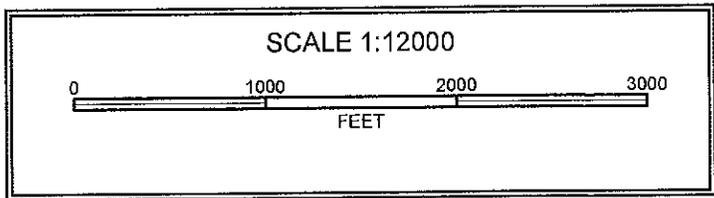
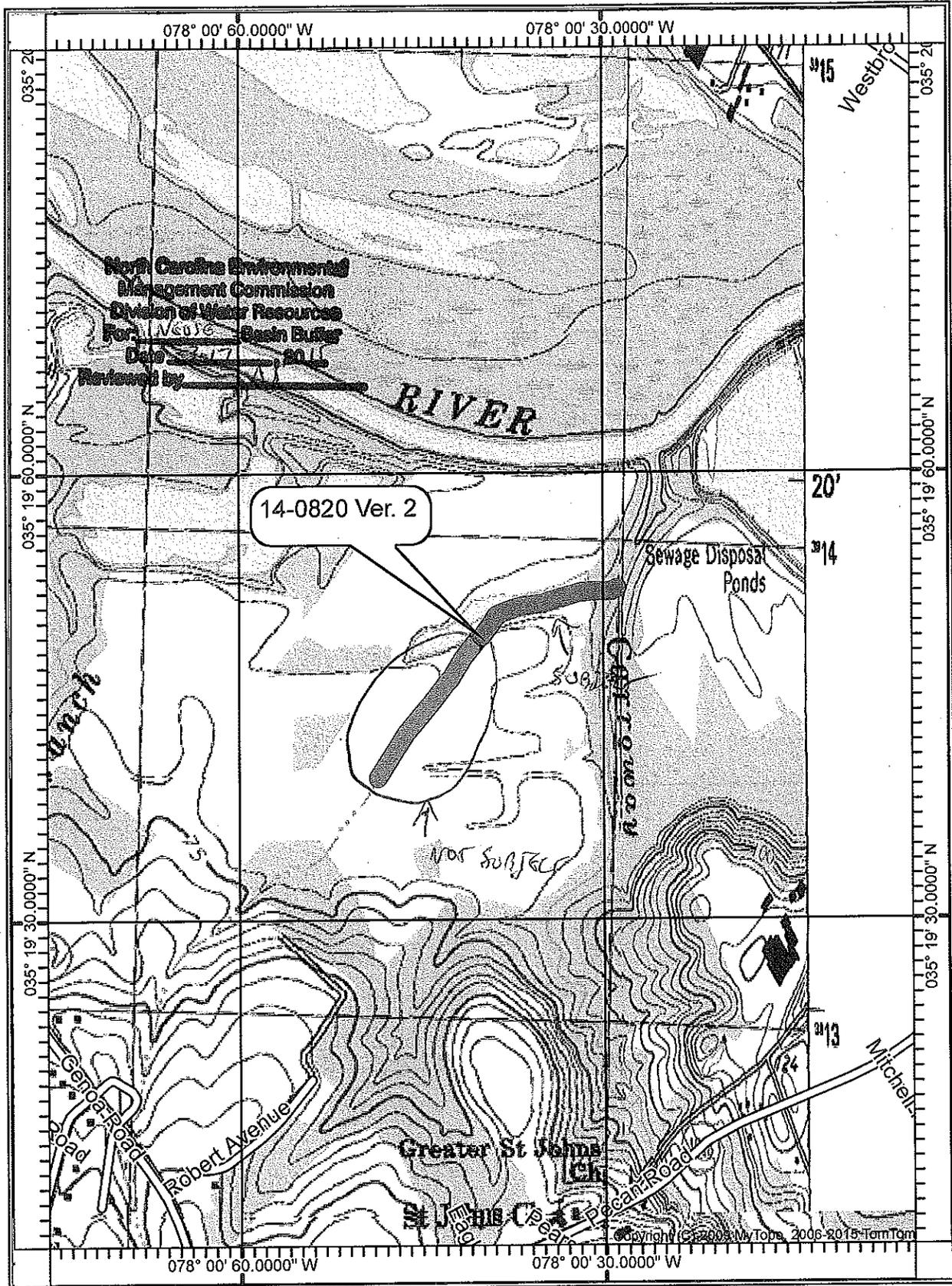
Sincerely,



Robert Tankard, Assistant Regional Supervisor
Water Quality Regional Operations Section
Division of Water Resources, NCDENR

Attachment: USGS Topographic 1:24,000 Quadrangle Map "SW Goldsboro"

cc: DWR 401 & Buffer Permitting Unit
File Copy
Katie Merritt, DWR 401 & Buffer Permitting Unit
Daniel Taylor, Wildlands Engineering, Inc.,
312 West Millbrook Road, Suite 225, Raleigh, NC 27609





UT1



UT1



Caraway Creek



Caraway Creek





UT1



Caraway Creek



D3



UT1



UT2



UT1

