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September 4, 2015

Selling Directly Realty
Attn: Mr. Michael Mansour
524 Old Chestnut Crossing
Moncure, NC 27559

RE: Wetland, Stream and Riparian Buffer Delineation Report
Paul H. Wetmore Heirs Property
Chatham County, NC
SEPI Project #EN15.038

Dear Mr. Mansour,

SEPI Engineering & Construction is pleased to provide you with the attached copy of the Wetland, Stream and Riparian Buffer Delineation Report for the 6.74-acre Paul H. Wetmore Heirs Site located immediately south of the intersection of Pea Ridge Road and US-1 in New Hill, North Carolina. If you have any questions, please contact me via email at SClark@sepiengineering.com or call me at (919) 573-9931.

Respectfully submitted:

Sean Clark, PWS
Environmental Division Manager

Attachment: Wetland, Stream, and Riparian Buffer Delineation Report

WETLAND & STREAM EVALUATION AND DELINEATION REPORT

Paul H. Wetmore Heirs Property

Chatham County, North Carolina

Wetland & Stream Evaluation & Delineation Report

Paul H. Wetmore Property
Chatham County, NC

Prepared for:
Selling Directly Realty
Attn: Michael Mansour
524 Old Chestnut Crossing
Moncure, NC 27559

Submitted by:
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Project Number | EN15.038.00

September 3, 2015

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EXECUTIVE SUMMARY

SEPI Engineering & Construction (SEPI) was retained by Selling Directly Realty to complete a detailed delineation of wetlands & streams on the Paul H. Wetmore Heirs Property (Property) located south of the intersection of Pea Ridge Road and US-1 in New Hill, NC. The purpose of this evaluation was to determine the extents of "waters of the United States" (e.g. wetlands, streams, ponds, etc.) on the subject property. On September 1, 2015, SEPI staff evaluated the +/- 6.74-acre subject site for jurisdictional wetlands, streams and/or riparian buffers. The attached Figure 1 shows the general location of the site on the applicable USGS topographical quadrangle sheet and Figure 2 shows the site's location on the applicable portion of the United States Department of Agriculture's Soil Survey.

The evaluated site contains a bottomland hardwood wetland located in the northwestern portion of the floodplain that bisects the Property. The boundary of the wetland area will need to be confirmed by the US Army Corps of Engineers (USACE) if site plans require disturbance in this area. The approximate size and location of the potentially jurisdictional area is depicted on Figure 3. The eastern portion of the floodplain contains areas that appear to hold water during flood events; however, these areas lacked indicators of hydric soils so were therefore determined to not be wetlands. A single jurisdictional stream bisects the property and flows from north to south through the property. As per the Chatham County Watershed Protection Ordinance, both the stream and the wetland will require undisturbed buffers as shown in Figure 3. Figure 3 is intended for informational purposes only and does not constitute a certified survey of the area or provide the required jurisdictional determination. The flagged wetland area should be located by a licensed surveyor in order to produce a survey for the US Army Corps of Engineers (USACE) approval as well as for final planning purposes.

SEPI's professional opinion as to the presence and/or absence of wetlands & streams and their boundaries within the evaluated property is represented within this report and depicted on the attached Figure 3. Verification of report findings, as well as the final determination of regulatory jurisdiction will be determined by representatives of the USACE and NCDWR. The USACE and NCDWR must review, confirm, and approve all wetland and stream delineations in order for these determinations to be considered valid.

SECTION 1

REGULATION DEFINITION

1.1 Definition of "Waters of the United States"

"Waters of the United States" is a broad term originally defined within the Clean Water Act of 1972, which includes intrastate lakes, rivers, perennial and intermittent streams, mudflats and sand flats, wetlands, sloughs, wet meadows, and ponds, which could affect interstate and foreign commerce.

1.2 Definition of Wetlands

Within the 1987 USACE Wetlands Delineation Manual (Environmental Laboratory, 1987) wetlands are defined as follows:

> Wetlands are "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Three parameters are used to determine if a subject property is classifiable as a wetland. These three criteria are hydric soils, hydrology, and vegetation. Positive indicators of all three parameters must be found in order for the area to be considered a wetland.

1. **Soils:** As currently defined by the USACE, some indicators of hydric soils include a chroma value of 2 or less (i.e. grayish color) in the Munsell Soil Color Chart or a gleyed color, the presence of a sulfidic odor, a high organic content in surface layer of sandy soils, concretions (e.g. manganese), or the listing of the soil series on the national or local hydric soils list.

2. **Hydrology:** Primary indicators of wetland hydrology include the presence of free water in an excavated pit or saturated soils within the upper twelve inches of the soil, standing water or inundated conditions, sediment deposits, or oxidized root channels in the upper twelve inches of the soil. Secondary indicators include, but are not limited to, water stained leaves and drainage patterns. Only one primary hydrology indicator is required in order for an area to contain wetland hydrology, however, two secondary indicators are required if there is no primary indicator present.

3. **Vegetation:** Vegetation commonly found in and adjacent to wetlands are rated based on the percentage of time that each species is found in a wetland or on high ground that is not wetland. Species found almost exclusively in wetlands (99% or more) are considered obligate wetland species (OBL). Species found 67% to 98% of the time in wetlands, are considered facultative wetland (FACW) species and species found in wetlands 34% to 66% of the time are considered facultative species (FAC). Facultative Upland Species (FACU) and Obligate Upland Species (UPL) refer to those species that occur predominately in upland, or non-wetland areas. In order for an evaluated area to meet the hydrophytic vegetation requirement, 50% or greater of the dominant plant species must be FAC or wetter.

1.3 Definition of Streams

In general there are three main stream types that describe the overall stream flow. These are ephemeral, intermittent, and perennial. Ephemeral streams only contain water immediately after a large rain event whereas perennial stream channels typically contain water throughout the year. Intermittent streams may contain water during the winter (i.e. during higher water table periods of time) but are dry during the summer except after rain events. Streams are assessed and defined locally by the USACE and the North Carolina Division of Water Resources (NC-DWR). Each agency has its own assessment form and methodology that is used to describe and define streams. Both forms assign numerical values to different stream characteristics which generally break into the three main categories of Geomorphology, Hydrology, and Biology. The NC-DWR currently uses the "NC DWQ Stream Identification Form Version 4.11" and the USACE currently uses the "Stream Quality Assessment Worksheet." NC-DWR's form is also utilized to determine the applicability of riparian buffers on intermittent and perennial streams within the river basins where stream buffers are applied. Currently ephemeral streams are not buffered by the NC-DWR.

1.4 Regulation of Wetlands and Streams

Wetlands and streams are USACE regulated "waters of the United States" under Section 404 of the Clean Water Act. Section 404, administered by USACE, requires permits for discharges of dredged or fill material into regulated "waters of the United States." As granted under Section 401 of the Clean Water Act, the state of North Carolina through the NC-DWR also regulates disturbance activities in wetlands or other waters of the United States in the state of North Carolina. NC-DWR also regulates disturbance activities within wetland and stream areas that are

"isolated" from waters of the US and are therefore not regulated by the USACE due to their lack of connection to other waters of the US. All areas regulated by NC-DWR are considered "waters of the state" and disturbance to these areas are permitted through the 401-permitting process which is separate from the USACE's 404-permitting process.

1.5 Chatham County Watershed Protection Ordinance

The Chatham County Watershed Protection Ordinance was revised December 10, 2007, to require more stringent buffer requirements around surface water features in the County's jurisdiction. The ordinance requires all stream classifications to be conducted by a qualified professional who has received documented certification of training in classifying streams and surface waters in North Carolina. Additionally, all seep, spring and wetland delineations must be conducted by a qualified professional who has at least 2 years of demonstrated experience in conducting wetland delineations in North Carolina under the Clean Water Act Sections 401 and 404 provisions. All field determinations of streams, seeps and springs are subject to review and approval by the County.

The ordinance requires a one hundred (100') foot buffer along each side of perennial streams, or the full horizontal extent of the "Area of Special Flood Hazard 5" as most recently mapped by the North Carolina Floodplain Mapping Program, NC Division of Emergency Management, whichever is greater. Intermittent Streams require a fifty (50') foot riparian buffer along each side. Ephemeral Streams require a thirty (30') foot buffer along each side. Wetlands require a riparian buffer of fifty (50') feet from the delineated boundary, surrounding all features classified as wetlands and linear wetlands. Seeps and springs (not considered jurisdictional wetlands by the USACE) require a thirty (30') foot buffer measured from the delineated boundary.

Before any land disturbance activities may begin, and in addition to any erosion control notification, the riparian buffer boundaries must be clearly flagged in the field and approved by county staff. Tree protection fencing or other approved protective measures must be installed along the approved flagging lines.

SECTION 2

SITE DESCRIPTION

2.1 Site Location

The site is located south of the intersection of Pea Ridge Road and US-1 in New Hill, NC. The coordinates of 35.633289°N, 79.053900°W generally correspond to the center of the property.

Geologically the site is within the Triassic Basin that generally runs northeast to southwest in North Carolina. Soils in this geologic formation typically contain expansive clay mineralogy (i.e. clays that expand when they are wet and shrink when they are dry) which can often times result in perched water tables that drain faster laterally than vertically. The site is mapped as containing the Mattaponi fine sandy soil series and the Chewacla and Wehadkee soil series.

The property drains to an unnamed tributary (UT) that bisects the property. The UT drains to the Haw River which is within the Cape Fear River Basin.

2.2 General Site Descriptions

The Property is forested and contains a large floodplain adjacent to the UT. The upland areas of the Property are dominated by loblolly pine, sweetgum, and yellow poplar. There are no structures on the Property.

The topography of the site ranges from approximately 180 feet above mean sea level (msl) along the southern property line where the stream exits the property to an elevation of 204 msl along the eastern portion of the property adjacent to US-1. The property contains a single drainage that enters the property from the north as it exits a culvert under US-1.

SECTION 3

SCOPE OF SERVICES

3.1 Performed Scope of Work

SEPI was contracted to complete a detailed delineation and evaluation of wetlands and streams on the subject property. The methodology for our work is discussed below.

3.2 Wetland Evaluation Methodology

The wetland delineation was completed based upon the procedures specified and described in the "*Corps of Engineers Wetlands Delineation Manual" (January 1987 – Final Report)* and using the current regional guidance. Prior to arriving on-site, topographical maps, soil survey maps, orthophotographs, and ArcGIS generated maps of the area were reviewed to preliminarily identify areas (e.g. drainages, hydric soils areas, areas showing standing water, etc.) where wetlands would likely exist.

The site was traversed on foot and evaluated for the presence of hydric soils indicators, evidence of wetland hydrology, and existence of hydrophytic vegetation. Data point plots were established to identify the presence or absence of wetland indicators. At each plot location, any hydrologic indicators were recorded, vegetation was identified, and a soil auger utilized to collect a soil core to stratify and classify the soil properties.

For each plot, plants were identified to species within the 30-50 ft^2 area of each plot. The percent relative cover of each species within the four common strata classifications was recorded: trees (T), shrubs & understory trees (S/S), herbs (H), woody vines (V). Wetland indicator status for each species represented within the sample areas were obtained from the current National List of Plant Species that Occur in Wetlands: Region 2 – Southeast.

After the plant species were identified and recorded, soil cores were collected and described to a depth of at least 12 inches at the center of each plot. Soil samples were inspected for hydric soil indicators such as chroma 2 or less color. Hydric soils, as defined by USACE, are soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper 12" of the soil. A hydric soil is different from a non-hydric soil due to the induced anaerobic conditions that change the soil color, mottling, structure, and chemistry. The soil colors and mottling are described using a Munsell Soil Color Chart.

As per the Eastern Mountains and Piedmont Region Wetland Determination Data Form, hydrology indicators such as the presence of surface water, saturated soils and/or the presence of the water table within the upper 12 inches of the soil, water-stained leaves, etc. were identified and noted. Further discussion of the site conditions is provided in the Results and Recommendations section.

3.3 Stream Evaluation Methodology

Topographical maps, soil survey maps, and aerial maps of the site were reviewed in order to preliminarily identify drainages where potential streams may exist. The published NRCS soil survey map and USGS topographical map indicate a stream exists on the site below the drained pond. It is important to note that the NRCS web-based soil maps do not indicate drainages and streams. Drainages on the site were evaluated using the current NC-DWQ Stream Identification Form Version 4.11 and/or the USACE's Stream Quality Assessment Worksheet. Both agencies have their own forms, which assign numerical values to different characteristics such as the presence of fish, particle size in the stream versus that of the adjacent upland area, etc. NC-DWR's form is used to identify if a drainage is subject to riparian buffers as well as to identify the stream's flow regime (i.e. ephemeral, intermittent, or perennial).

It is important to note that the USACE's form does not attempt to define a stream as being intermittent or perennial and that the NC-DWR's terms and the USACE's terms are not interchangeable. The USACE generally considers a drainage to contain a jurisdictional stream if there is an Ordinary High Water Line or evidence of periodic concentrated flow. The stream designations from both the USACE and DWR hold more significance in the event that impacts (e.g. road or utility crossings or general fill) are required. The DWR will require mitigation for impacts to intermittent and perennial streams. The USACE typically requires mitigation for impacts to streams that are "important to aquatic function" and may not require mitigation for impacts to streams that are not as much so.

SECTION 4

RESULTS OF DELINEATION

4.1 Wetlands Determinations

The project site was evaluated per the methodology described above and all areas containing the three wetland criteria (hydric soils, wetland hydrology, and hydrophytic vegetation) were flagged and are depicted on the attached Figure 3. A single wetland within a bottomland hardwood forest was found to exist on the property and is located along the western edge of the floodplain. The wetland boundary is demarcated with the pink survey flagging sequentially numbered (WA-01 through WA-11). The eastern side of the floodplain contains areas that appear to be intermittently flooded; however, these areas lacked indicators of hydric soils so were therefore determined to not be wetlands. Please refer to the attached Figure 3 for the general location of wetlands and flag numbers. All wetland flagging on the property as well as the stream channel should be surveyed to generate a jurisdictional map to be used for site planning purposes and in order to obtain USACE approval.

4.2 Wetland Buffers

Chatham County requires a 50-foot wetland buffer on delineated wetlands. The wetland delineated with the WA flag series will be subject to the County's wetland buffers. Activities within these buffers will require prior approval from Chatham County.

4.3 Stream Determinations

A perennial stream channel was determined to flow through the property from a culvert exiting under US-1 along the northern property line. The stream channel is approximately 5 to 8 feet wide and is entrenched approximately 3 feet. The UT drains to the Haw River which is classified as a Water Supply IV; (WS-IV) by the NC DENR's "Classifications and Water Quality Standards Applicable to Surface Water and Wetlands of North Carolina."

4.4 Riparian Buffer Determinations

The Chatham County Soil Survey and the USGS topographical maps depict the stream that bisects the property. This stream will require 100-foot buffers on each side. No other streams are depicted on the property and no other intermittent or perennial streams were found to exist on the property.

SECTION 5

CONCLUSIONS

The USACE must review, confirm, and approve all wetland and stream delineations in order for these determinations to be considered valid. USACE confirmation may require a site visit with the USACE Chatham County field agent.

5.1 Conclusions

The detailed wetland and stream delineation was completed on the approximately 6.74-acre site on September 1, 2015. The property contains one jurisdictional wetland and one jurisdictional perennial stream. A 50-foot wide buffer will be applied to the wetland area. The stream channel will require 100-foot buffers on each side of the stream. SEPI can assist with obtaining USACE and NC-DWR approval of our delineation as well as provide assistance in obtaining any necessary permits. SEPI staff is available to provide further discussion on relevant wetland, stream, and riparian buffer regulations and permit thresholds should site plans require impacts to these areas.

A NC licensed surveyor should complete a location survey of the wetland flags as well as the stream channel. This information will be used to produce a preliminary JD package to be sent to the USACE for approval of SEPI's detailed delineation of streams and wetlands. The survey information will also be used to generate site plans and quantify potential impacts required for site development.

SECTION 6
REFERENCES

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http://new.chathamgis.com/mapguide/ChathamGISWeb/
Chatham County, North Carolina:

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Radford, Albert E., Ahles, Harry E., and C. Ritchie Bell. 1968. Manual of the Vascular Flora of the Carolinas. The University of North Carolina Press, Chapel Hill, NC.

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APPENDIX A

SITE PHOTOS

Photo 1: Non-hydric floodplain on eastern side of stream. Location of Data Point 1.

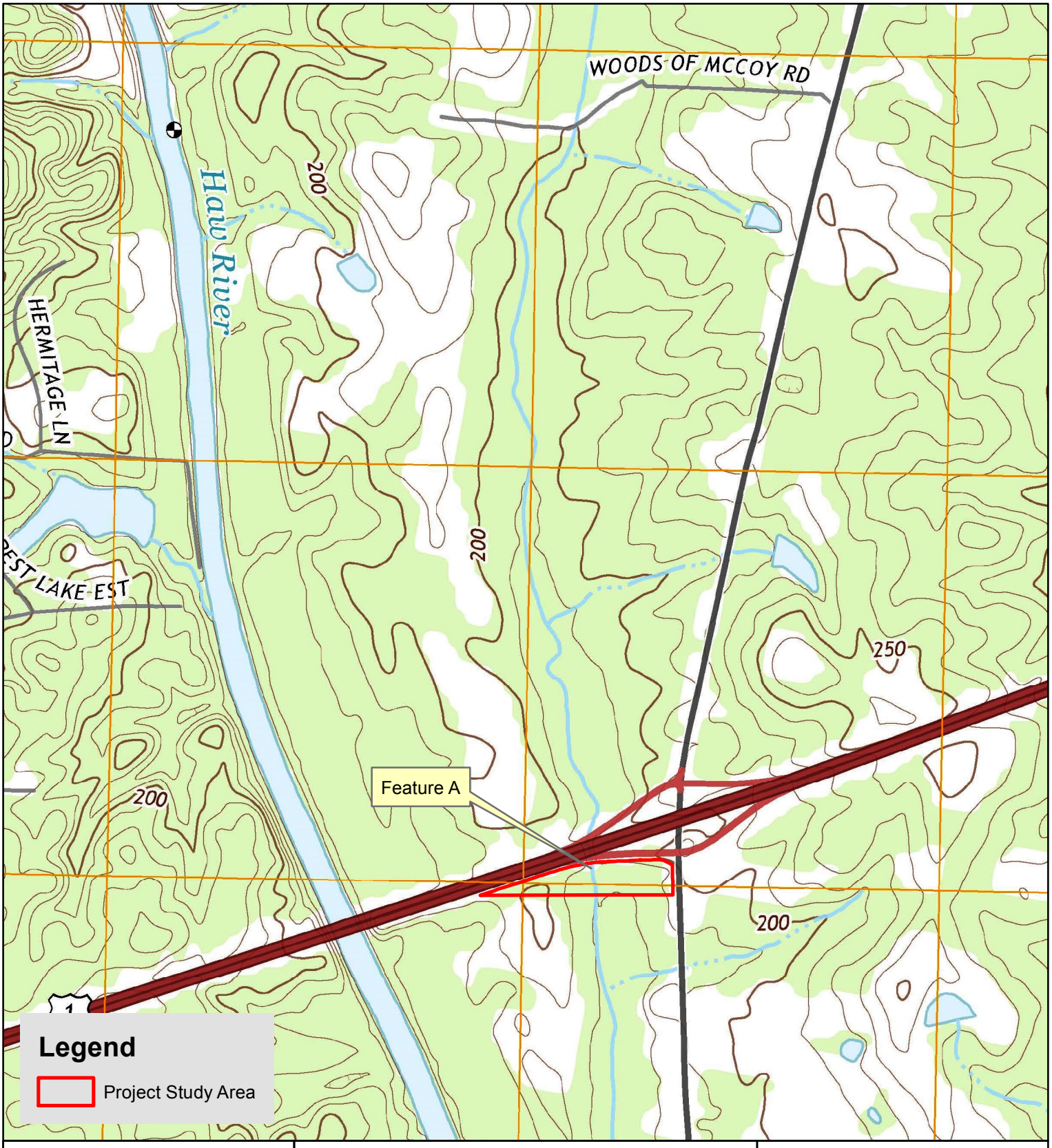
Photo 2: Typical floodplain soils located at Data Point 1.

Photo 3: Wetland area (Flags WA-01 through WA-11) looking north.

Photo 4: Stream Channel looking north at outlet culvert below US-1.

APPENDIX B

FIGURES/MAPS



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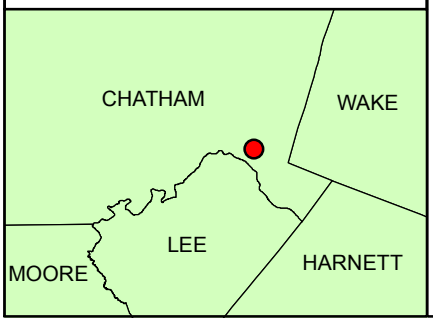


USGS Map

Wetmore Paul H Heirs Property
Chatham County, NC
SEPI Project # EN15.038.00
USGS Topography, 2013
Merry Oaks, NC

September 1, 2015

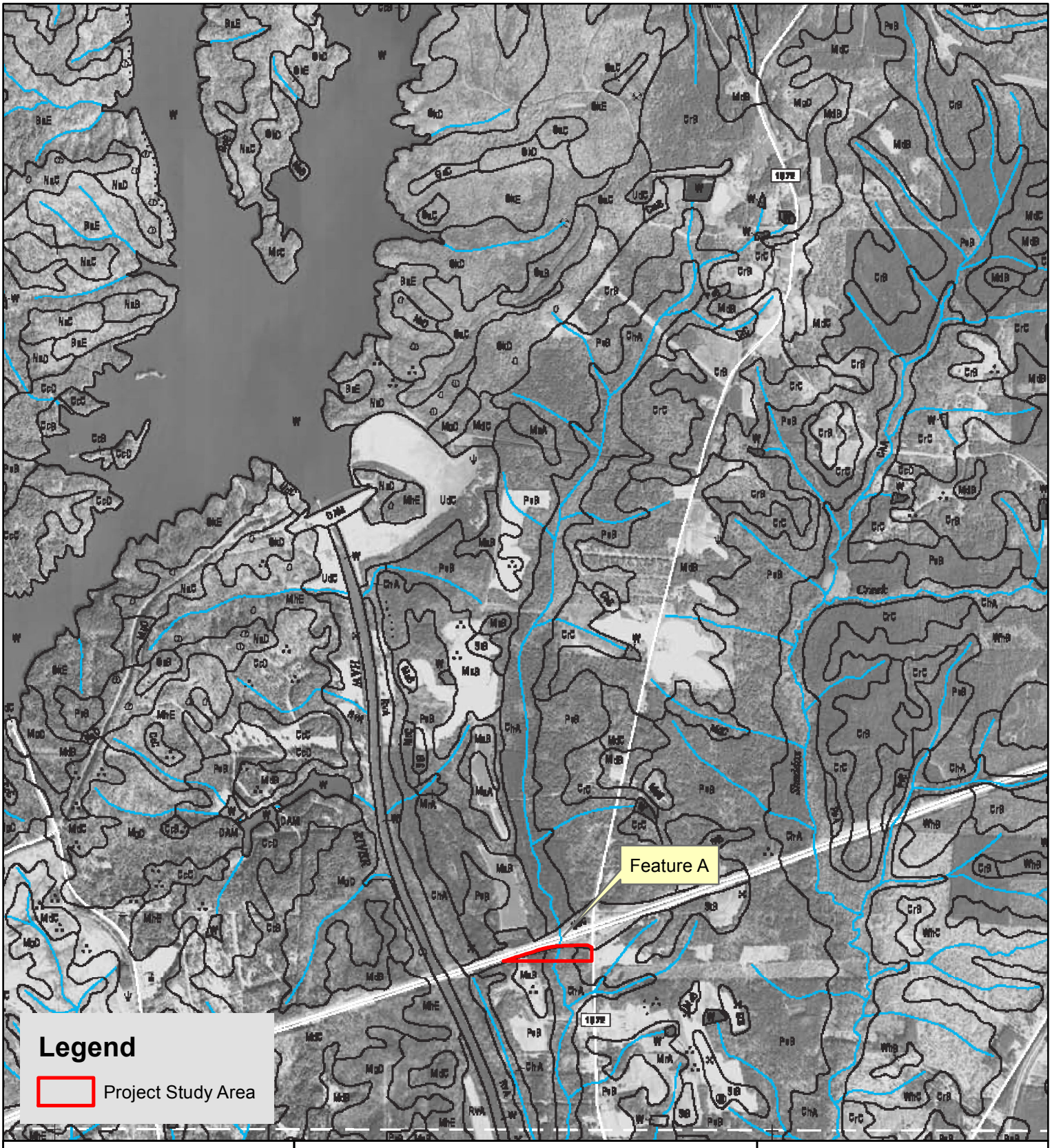
0 650 1,300 2,600 Feet

N

Figure 1

SEPI ENGINEERING & CONSTRUCTION

Map Created by: KMH



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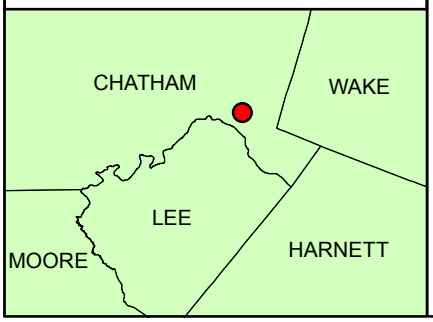


Soil Survey Map

Wetmore Paul H Heirs Property
Chatham County, NC
SEPI Project # EN15.038.00

Chatham County Soil Survey, 2006
Sheet #11 Merry Oaks
September 1, 2015

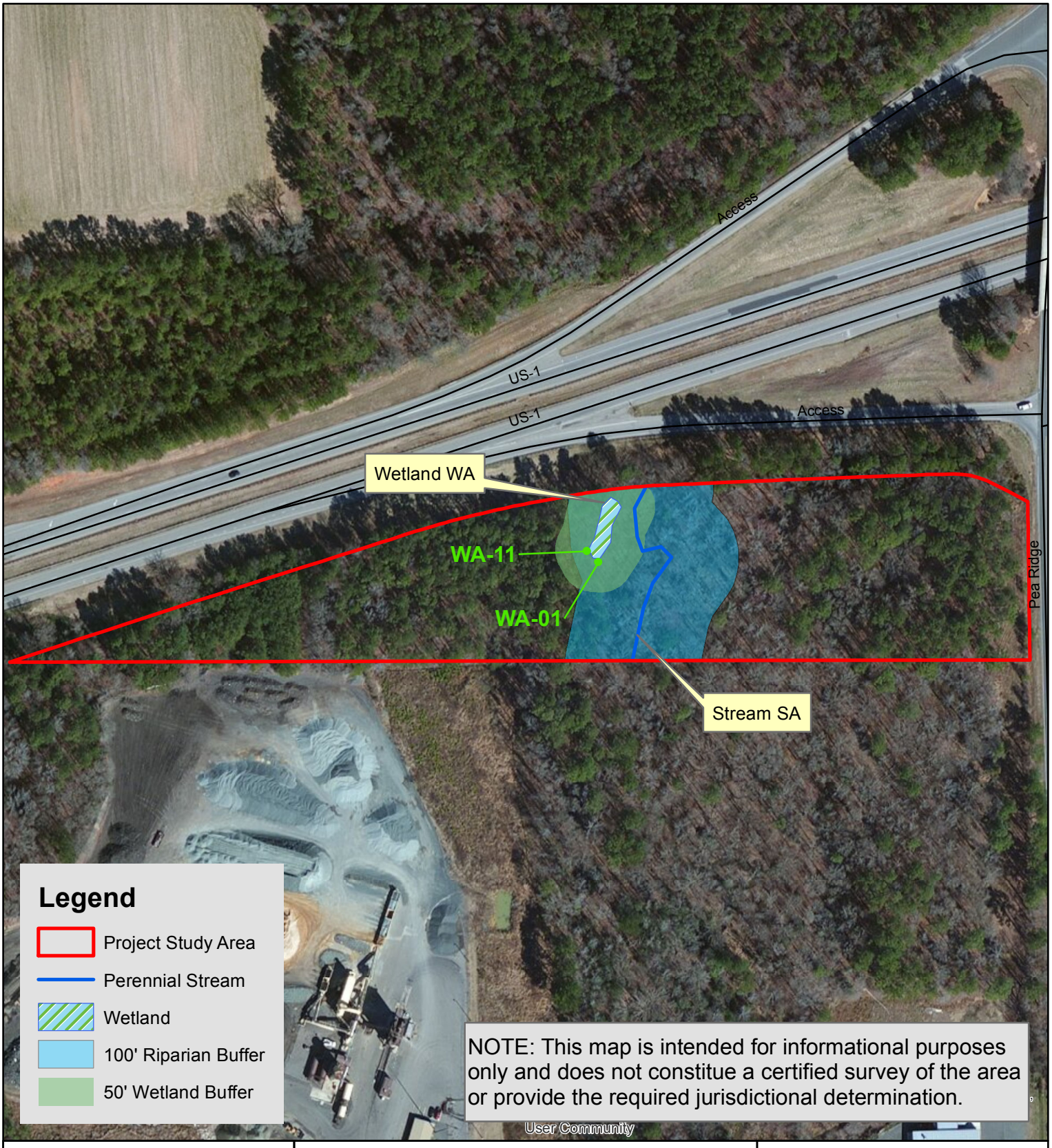
N

0 1,200 2,400 4,800 Feet

Figure 2

SEPI ENGINEERING & CONSTRUCTION

Map Created by: KMH



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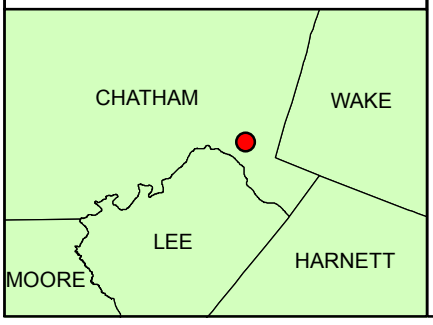

Natural Resources Map

Wetmore Paul H Heirs Property
Chatham County, NC
SEPI Project # EN15.038.00

September 3, 2015

N

0 125 250 500 Feet

Figure 3

SEPI ENGINEERING & CONSTRUCTION

Map Created by: KMH