March 30, 2015

Ms. Bonnie Renfro
Randolph County EDC
P.O. Box 2001
Asheboro, North Carolina 27204-2001

Reference: Report of Jurisdictional Waters and Wetland Delineation
Liberty Mega Site
Liberty, Randolph County, North Carolina
ECS Project No. 09-24982A

Dear Ms. Renfro:

ECS Carolinas, LLP (ECS) is pleased to submit this report of the jurisdictional waters/wetland delineation of the Liberty Mega Site located between US Highway 421 and Old US Highway 421 in Liberty, Randolph County, North Carolina.

Background

ECS was contracted to identify the locations of waters of the U.S., including wetlands, for the above referenced site. The site is an approximate 1,410 acre tract that is located between US Highway 421 and Old US Highway 421 in Liberty, North Carolina. The site consists of wooded land, open grass areas, agricultural fields, residential parcels, and service roads. The eastern boundary consists of Troy Smith Road and the western boundary consists of Julian Airport Road.

In order to accurately describe the multiple features across this large site, the site has been broken into four quadrants. Browns Meadow Road serves as the north to south dividing line and the high voltage power lines serve as the east to west dividing line. Quadrant 1 consists of the land west of Browns Meadow Road and north of the high voltage power lines. Quadrant 2 consists of the land east of Browns Meadow Road and north of the high voltage power lines. Quadrant 3 consists of the land west of Browns Meadow Road and south of the high voltage power lines. Quadrant 4 consists of the land east of Browns Meadow Road and south of the high voltage power lines.

Wetlands are defined by the U.S. Army Corps of Engineers (USACE) and the United States Environmental Protection Agency (EPA) as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions." In order for an area to be classified as wetland, hydrophytic vegetation, hydric soils, and wetland hydrology indicators must be present.

Literature Review

ECS reviewed the United States Geographic Survey (USGS) Topographic Map, United States Department of Agriculture (USDA) Natural Resource Conservation Survey (NRCS) Soil Survey of Randolph County, United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI), and Federal Emergency Management Act (FEMA) Floodplain FIRM map to obtain information regarding the site.

- The USGS Topographic Map, Climax, Kimesville, Greys Chapel, and Liberty NC quadrangles (Figure 1) depict multiple ponds within quadrants 1, 3, and 4. There are numerous unnamed tributaries that drain to each pond and to Dobson Lake located in quadrant 4. The topographic map shows additional drainage swales on the site that could contain surface waters or wetlands.

- The NRCS Soil Survey Soil System Map of North Carolina indicates that the site is located in the Mixed Felsic and Mafic System. In this region a range of soil types can be found in different parts of the topography. The drainage patterns are branching with the second order streams only flowing during rain events.

- The USDA Soil Survey Map (Figure 2) shows that the site consists of multitude soil types. Chewacla Loam can be found on-site in areas of low elevation and near streams. Chewacla Loam is a hydric soil that is poorly drained and found in streams and flood plains. Chewacla soils are listed as hydric soils on the Randolph County soil survey.

- USFWS NWI (Figure 3) indicates that there are ten ponds and one wetland area present on the site. The wetlands are located at the bottom of quadrant 2 and the top of quadrant 4 under the high voltage power lines.

- ECS reviewed the FEMA-Flood Insurance Rate Map (FIRM) Service Center website. The site is depicted on the FEMA-FIRM Panels 8708, 8718, 8707, and 8717 (Figure 4). The map indicates that the majority of the site is located in Zone X, which is determined to be outside the 1% 100 year floodplain. There are large low lying areas in quadrant 3 and quadrant 4 that are located in Zone A (Inside flood elevations), and Zone AE (Inside the 1% 100 year flood plain.)

Site Reconnaissance

ECS personnel conducted the site reconnaissance from December 19, 2014 through February 23, 2015. During our reconnaissance, we observed the site for evidence of ponds, streams and wetlands (Figure 5). Features within Quadrant 1 consist of perennial and intermittent streams that drain to the south to ponds located on the southwestern portion of the site. There are some abutting wetlands along the streams in this quadrant. Quadrant 2 is the largest portion of the site. This quadrant has recently been timbered and contains several large streams and large wetland areas. Quadrant 3 is the smallest portion of the site and contains perennial streams, a several ponds, and a few wetland areas. Features within Quadrant 4 consist of large lakes and ponds, intermittent and perennial streams with wetland seeps around the ponds. There are also abutting wetlands to the streams within this quadrant.

Figure 5 depicts the locations of the site, streams, wetlands and ponds. Figure 5 is based on GPS points collected by using a Trimble 2005 series GXH hand-held GPS unit capable of sub-meter accuracy. The flag locations depicted in Figure 5 have not been surveyed nor have they been verified by the respective regulatory agencies. ECS recommends conducting a a site visit with the United States Army Corps of Engineers (USACE) and the North Carolina Department of Environment and Natural Resources-Division of Water Resources (NCDENR-DWR) to verify our findings. Subsequent to that visit, we can coordinate with the agencies to obtain the Jurisdictional Determination (JD). Determinations/delineations, including our stream designations, are subject to change based on agency verification(s). Following agency verification, the flags should be surveyed to determine the exact location and extent of the jurisdictional areas. Based on our contracted scope of services, ECS is proceeding with the scheduling a JD and a verification of wetland and streams with the USACE and NCDWR. We will coordinate these meetings and provide follow up information after the JD has been completed.

Watershed Classification

The unnamed tributaries on the project site drains to Dobson Lake and later into Sandy Creek. According to the NCDENR-DWR, Sandy Creek is classified as WS-III and is not listed on the most recent 303(d) list of impaired waters. Therefore, state mandated buffers are not required along streams. Randolph County (or portions of Randolph County) may also be subject to local Randleman Watershed requirements. ECS recommends consultation with a county civil engineer to determine if mandatory vegetative buffers and/or regulated development (impervious surfaces) setbacks are required adjacent to surface waters as a result of local storm water requirements.

Additional Considerations

The site is located in the Sandy Creek Watershed, which is part of the Cape Fear River Basin. There are no state mandated buffer rules in effect for this watershed at this time.

ECS recommends that erosion control measures and best management practices are installed and implemented on-site prior to earth moving activities.

General Discussion

Section 404 of the Clean Water Act regulates the discharge of dredge and fill materials into waters of the United States (lakes, rivers, ponds, streams, etc.), including wetlands. Waters of the United States include the territorial seas, navigable coastal and inland lakes, rivers and streams, intermittent streams, and wetlands. Activities that could be regulated under Section 404 include the placement of fill for construction of roadways; residential, commercial or industrial structures; and the construction of water retention ponds along tributaries. The EPA and the USACE jointly administer the Section 404 program. Section 401 of the Clean Water Act grants each state the authority to approve, condition, or deny any Federal permits that could result in a discharge to State waters.

Streams, ponds and wetlands are regulated by the USACE and NCDENR-DWR. Permits are required prior to impacting wetlands or open waters, including ponds, lakes and perennial or intermittent streams. Mitigation and stormwater management plans will be a condition of any permits issued for the site. Buffers may be required adjacent to the streams.

For impacts to one-half acre or more of waters of the U.S. or to more than 300 linear feet of perennial stream channel, an individual permit (IP) may be required. An IP requires a habitat analysis, alternative site analysis, project justification, plans to avoid and minimize impacts, and a proposed mitigation plan. Depending on the habitat analysis and the extent of impacts, an Environmental Impact Statement may be required by the U.S. Army Corps of Engineers. An IP allows for a public comment period and may require 4 to 18 months to obtain depending on conditions arising during the U.S. Army Corps of Engineers review and public comment period.

In summary, the wetlands, ponds and streams (both perennial and intermittent) identified on the site are typical of site conditions observed throughout the Piedmont region of North Carolina. Wetland and stream permits have been issued by the USACE and NCDWR for impacts to wetlands and streams on similar sites in other areas of the Piedmont of North Carolina. The existing ponds can be drained by breeching the dams or using existing devices to drain the ponds as long as erosion and sediment control and downstream flooding/drainage is controlled. If impacts to existing wetlands, ponds and streams (depending on the end user) are unavoidable on portions of the site, the site size is an advantage since there are potential wetland and stream mitigation areas (with further study) present on other portions of the site. In addition, since the site is located within the Sandy Creek Watershed, which is part of the Cape Fear River Basin, there are no state mandated buffer rules in effect for this site.

Closure

ECS appreciates the opportunity to provide wetland services for your project. Please contact us at (336) 856-7150 if you have any questions concerning this report.

Sincerely,

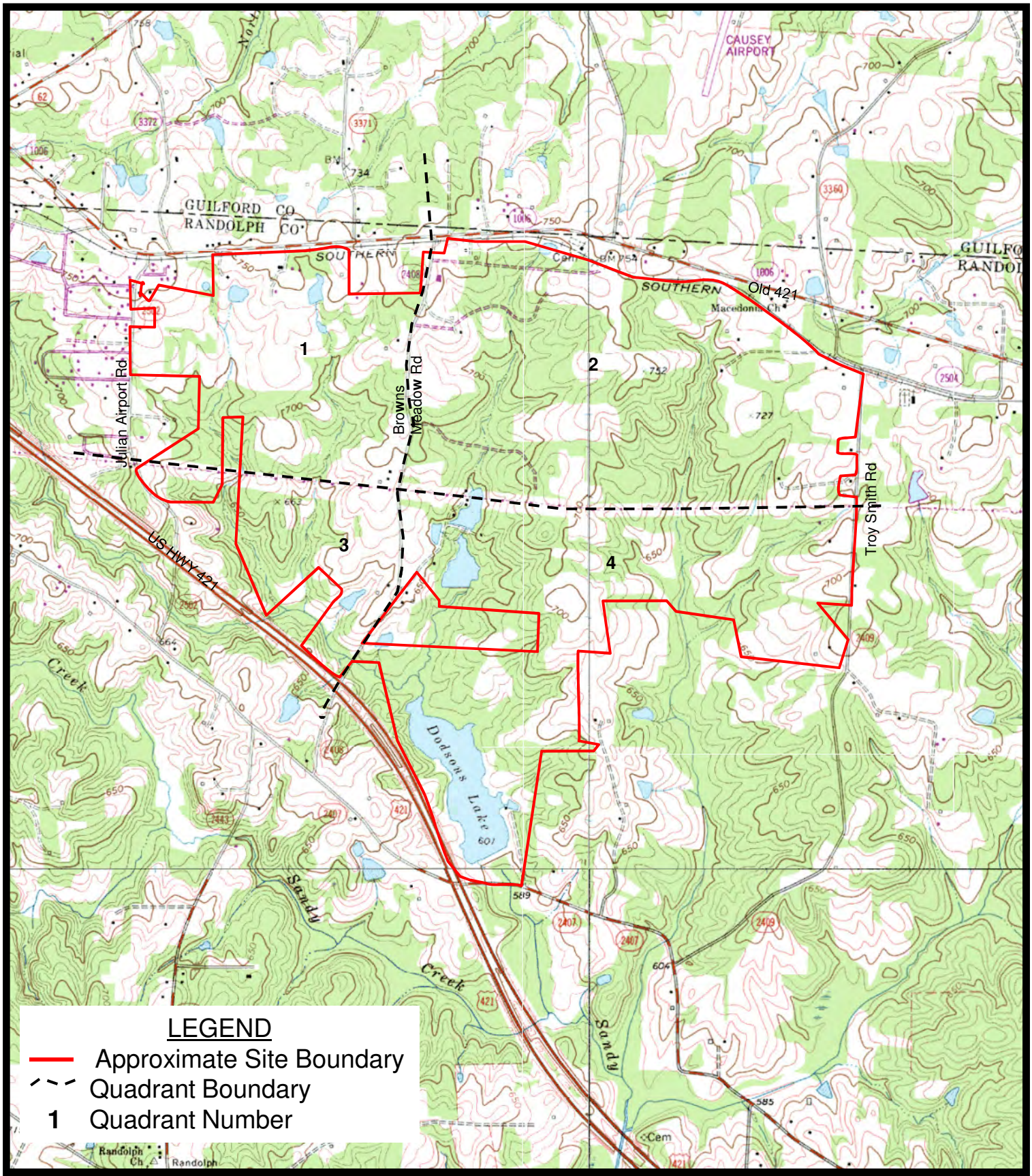
ECS Carolinas, LLP

Ken Vilagos
Wetland Scientist

W. Brandon Fulton, PWS, LSS
Environmental Project Manager

Brian E. Maas, REM
Senior Environmental Principal

Attachments: Figure 1 – Site and Quadrant Location Map
Figure 2 – USDA Soil Survey
Figure 3 – USFWS NWI Map
Figure 4 – FEMA Floodplain FIRM Map
Figure 5 – Stream/Wetland Flag Location Map (Preliminary)



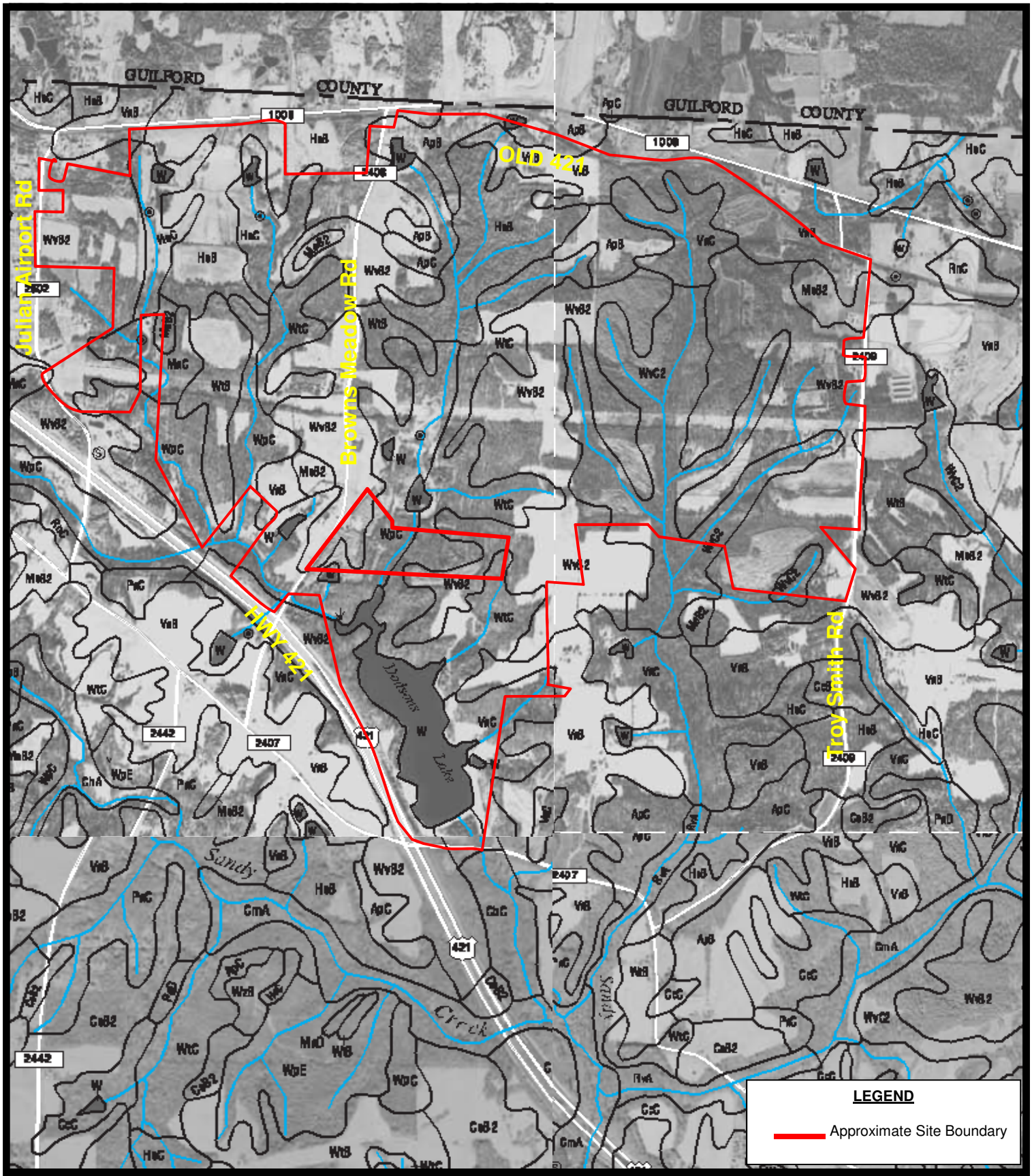
SOURCE:
USGS TOPOGRAPHIC MAP
CLIMAX, NC QUADRANGLE,
DATED 1970 REVISED 1982; KIMESVILLE, NC
QUADRANGLE DATED 1970 REVISED 1982; GREY
CHAPEL, NC QUADRANGLE, DATED 1974; LIBERTY,
NC QUADRANGLE, DATED 1974

SCALE 1" = 2,000'

FIGURE 1
QUADRANT AND SITE LOCATION MAP

LIBERTY MEGA SITE
HIGHWAY 421
LIBERTY, NORTH CAROLINA

ECS PROJECT NO. 09-24982A



SOURCE:

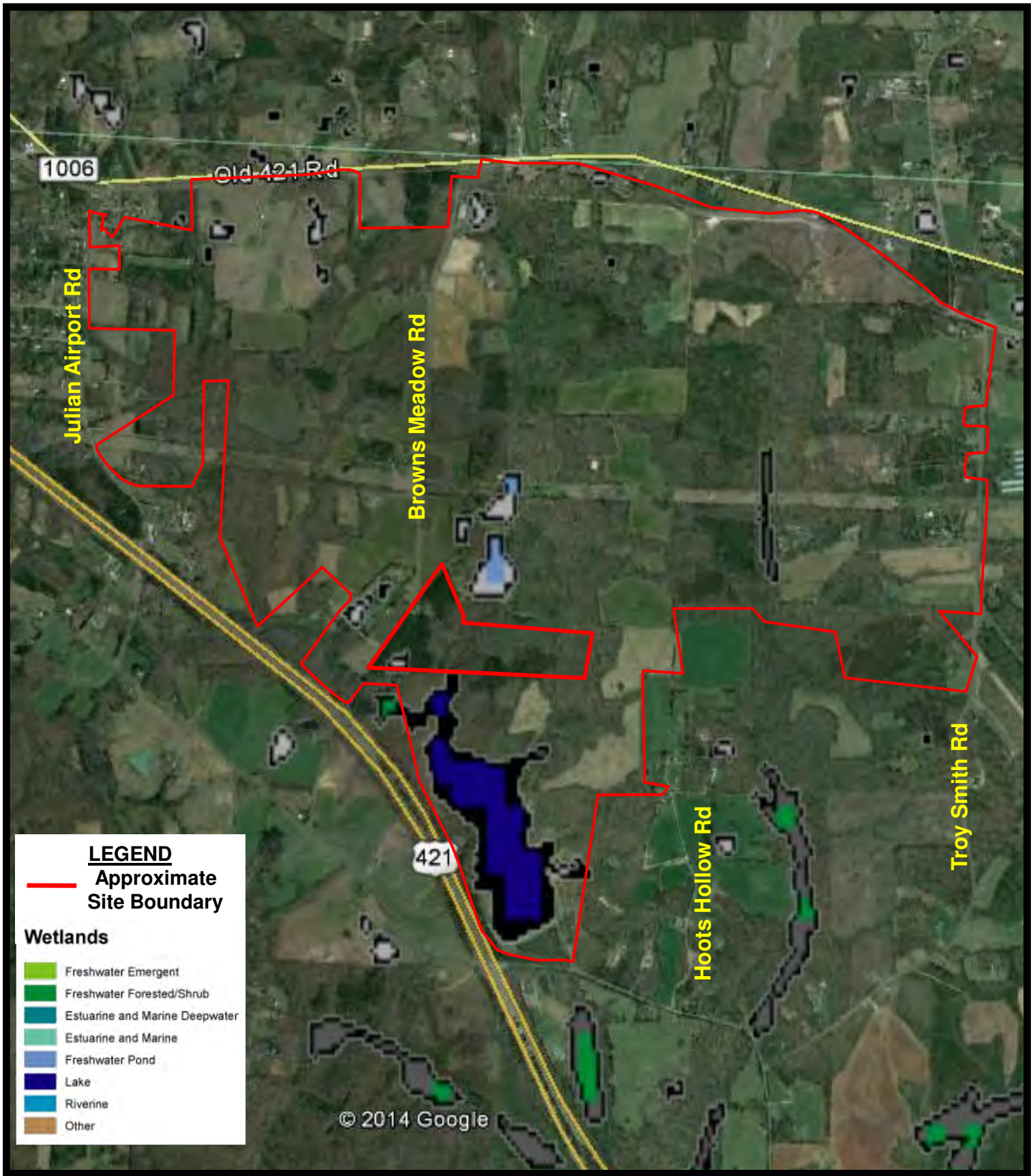
USDA-NRCS SOIL SURVEY
RANDOLPH COUNTY

Not to Scale

FIGURE 2
USDA SOIL SURVEY MAP

LIBERTY MEGA SITE
HIGHWAY 421
LIBERTY, NORTH CAROLINA

ECS PROJECT NO. 09-24982A



SOURCE:

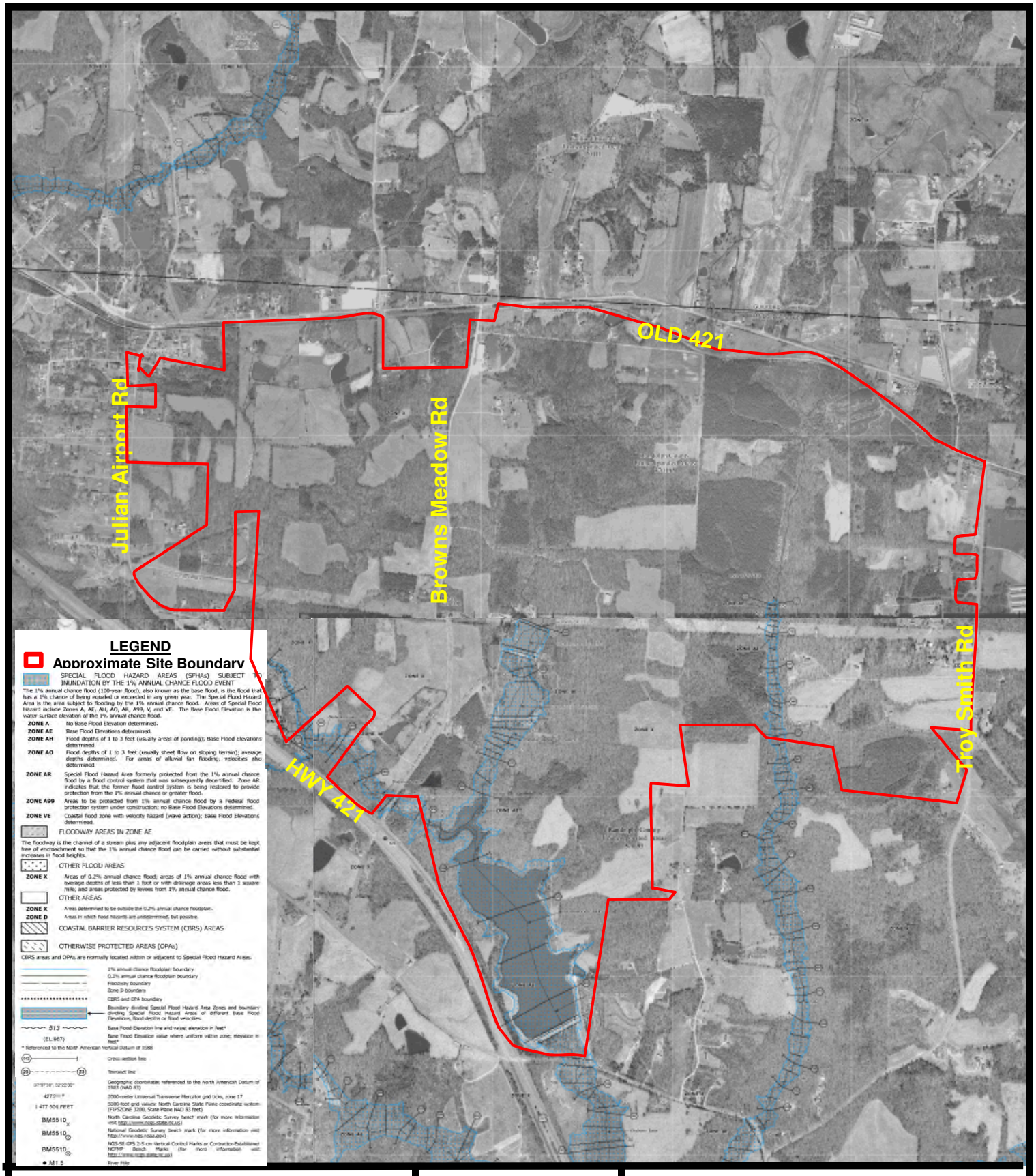
U.S. FISH AND WILDLIFE SERVICE
NATIONAL WETLANDS INVENTORY
GOOGLE EARTH MAPPING PROGRAM

Scale: 1" ≈ 1456'

FIGURE 3
NATIONAL WETLANDS INVENTORY MAP

LIBERTY MEGA SITE
HIGHWAY 421
LIBERTY, NORTH CAROLINA

ECS PROJECT NO. 09-24982A



SOURCE:
FEMA FIRM

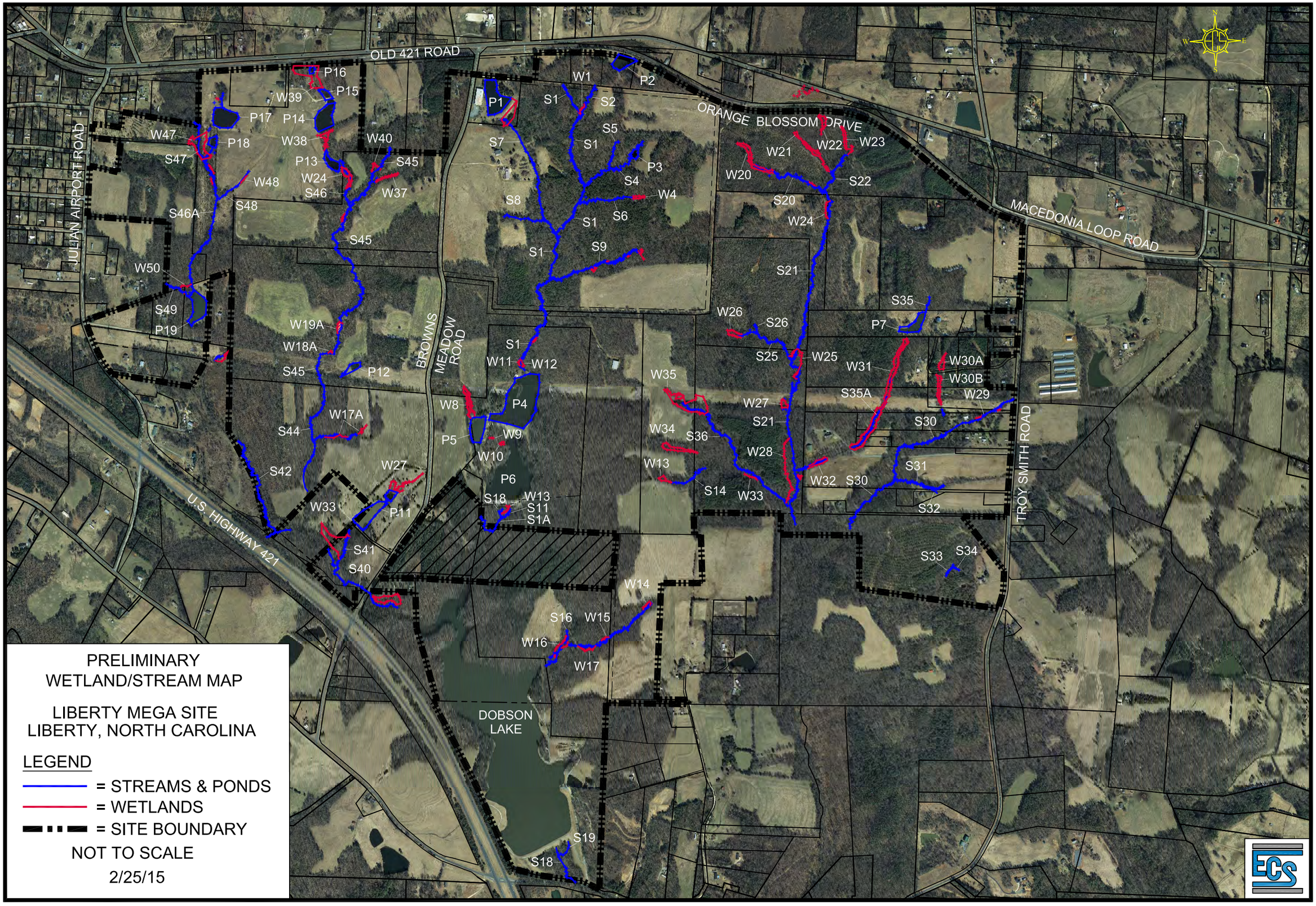
MAP NUMBER 3710870800K,
3710871800K, 3710870700J,
3710871700J
Dated 2010

SCALE: 1" = 1,400'

FIGURE 4
FEMA FIRM MAP

LIBERTY MEGA SITE
HIGHWAY 421
LIBERTY, NORTH CAROLINA

ECS PROJECT NO. 09-24982A


OLD 421 ROAD
ORANGE BLOSSOM DRIVE
MACEDONIA LOOP ROAD
JULIAN AIRPORT ROAD
BROWNS MEADOW ROAD
TROY SMITH ROAD
U.S. HIGHWAY 421
DOBSON LAKE
N
S
E
W
P1
P2
P3
P4
P5
P6
P7
P11
P12
P13
P14
P15
P16
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S41
S42
S44
S45
S46
S46A
S47
S48
S49
PRELIMINARY
WETLAND/STREAM MAP
LIBERTY MEGA SITE
LIBERTY, NORTH CAROLINA
LEGEND
= STREAMS & PONDS
= WETLANDS
= SITE BOUNDARY
NOT TO SCALE
2/25/15
ECS