Mr. Richard Banchoff  
ISI Professional Services  
1201 15th Street, NW Suite 200  
Washington DC, 20005  

Reference: Submittal of Wetland and Biological Resource Surveys  
Florence National Cemetery Expansion 14.33 Acres  
Florence, Florence County, South Carolina  
ECS Project No. 34-2048  

ECS Carolinas, LLP (ECS) is pleased to submit this report and attachments, which are submitted in compliance with the Statement of Work for the Wetlands and Biological Resource Surveys for the expansion of property to be acquired by the Florence National Cemetery.

The biological surveys resulted in the findings that the site contains 0.973 acres of jurisdictional waters of the United States, including wetlands. The U.S. Army Corps of Engineers has agreed with the ECS determination and the final ALTA survey plat of the property referenced and included herein. The wetland areas and the regulatory framework in which they are managed are described in greater detail within this report.

The site was not observed or recorded to contain any occurrences of endangered or threatened species managed under Section 7 of the Endangered Species Act. The U.S. Fish and Wildlife Service has issued a concurrence letter which reflects their agreement with the findings of the detailed report written by ECS. That letter and the report on which it is based is included in this report.
Closure
Please contact Eric J. McClanahan at (843) 696-9865 if you have any questions concerning this report.

Sincerely,

ECS Carolinas, LLP

Eric J. McClanahan, PWS
Senior Environmental Scientist

Justin A. Roth, CHMM
Environmental Services Manager/
Principal Scientist

Attachments: USACE Verification Letter
Site Figures
Survey Plat
USFWS Report
USFWS Concurrence Letter
ECS Carolinas, LLP (ECS) is pleased to submit the attached jurisdictional waters/wetland delineation report for the above referenced site, located in Florence, South Carolina. The Veterans Administration (VA) is exploring this site as an expansion area for the Florence National Cemetery.

The site is located on the north side of East National Cemetery Road sides in Florence, Florence County, South Carolina (Figure 1). The site includes multiple parcels identified as owned by the City of Florence as shown by Florence County GIS parcel mapping system. The site totals approximately 14.333 acres. The site is currently vacant wooded land with no current use. There are previously existing streets and lots within the site which have been overgrown and are now wooded.

The site is being planned as a future expansion area for the Florence National Cemetery. Two wetland areas or jurisdictional waters of the US are on or bordering the site. Documentation of these areas is included in the attachments. No isolated wetlands were encountered during our delineation. No streams are located on the subject site. Data sheets, photos and mapping showing the site and the wetland areas are attached.

The wetlands encountered on the subject site are palustrine forested wetlands, which include a structure including moderate to dense woody vegetation as the predominant plant community. The hydrologic characteristics within the two areas vary from seasonally saturated to frequently flooded areas. These areas perform a variety of functions in the landscape, including; flood mitigation, natural stormwater retention, filtration, nutrient recycling, groundwater discharge, wildlife habitat and aesthetic values.

The wetland areas encountered appear to be contiguous with offsite waters and are therefore likely to be jurisdictional areas, under Section 404 of the Clean water Act. These areas are regulated such that any impact to them is to be coordinated with the U.S. Army Corps of Engineers (USACE). ECS is not aware of a specific development plan for this site.
at this time. If any wetland impacts are designed into a future site plan, a Section 404 Permit will be required.

Certain activities are permitted under the USACE – General Permit also known as the Nationwide Permits (NWPs). Generally these impacts are small (less than ½ acre). Impacts exceeding ½ acre and those which are not specifically addressed by the NWPs will be processed under an individual permit and are reviewed as Individual Permit (IP). The IP process is longer than the NWP review and requires additional review and public notice periods at both the state and Federal level.

The 0.973 acres of jurisdictional wetlands located on the subject site were surveyed and reflected on the attached plat. The USACE issued a final determination letter for the site on August 18, 2015. This letter verifies the jurisdictional status of the wetlands located on site. If any project will impact these areas, then a USACE permit will be required.

Closure
Please contact Eric J. McClanahan at (843) 696-9865 if you have any questions concerning this report.

Sincerely,

ECS Carolinas, LLP

Eric J. McClanahan, PWS
Senior Environmental Scientist

Justin A. Roth, CHMM
Environmental Services Manager/
Principal Scientist

Attachments: USACE Verification Letter
Site Figures (6 Pages)
Survey Plat
DEPARTMENT OF THE ARMY  
CHARLESTON DISTRICT, CORPS OF ENGINEERS  
1948 INDUSTRIAL PARK ROAD, ROOM 140  
CONWAY, SOUTH CAROLINA  

AUG 12 2015  

Regulatory Division  

City of Florence  
c/o Eric McClanahan  
ECS Carolinas LLP  
3820 Faber Place Drive, Suite 500  
North Charleston, SC 29405  

RE: SAC 2015-00603-4S  
Florence County  

Dear Mr. McClanahan:  

This is in response to your letter, received by this office on May 15, 2015, requesting a wetland determination, on behalf of the City of Florence, for a 14.333 acre tract located east of U.S. Highway 52, adjacent to East National Cemetery Road, in the City of Florence, Florence County, South Carolina. The project area is depicted on the survey plat you submitted which was prepared by Ervin Engineering Company, last revised on August 03, 2015, and titled "WETLANDS SURVEY / FOR / UNITED STATES OF AMERICA, BY AND THROUGH THE SECRETARY OF VETRANS AFFAIRS".  

This plat depicts surveyed boundaries of wetlands or other waters of the United States as established by your office. You have requested that this office verify the accuracy of this mapping as a true representation of wetlands or other waters of the United States within the regulatory authority of this office. The property in question contains 0.973 acres of federally defined jurisdictional freshwater wetlands or other waters of the United States subject to the jurisdiction of this office. The location and configuration of these areas are reflected on the plat referenced above.  

Based on an on-site inspection, a review of aerial photography and soil survey information, it has been determined that the surveyed jurisdictional boundaries shown on the referenced plat are an accurate representation of jurisdictional areas within our regulatory authority. This office should be contacted prior to performing any work in these areas. Enclosed is a form describing the basis of jurisdiction for the areas in question. You should also be aware that these areas may be subject to restrictions or requirements of other state or local governmental entities.  

If a permit application is forthcoming as a result of this delineation, a copy of this letter, as well as the verified survey plat, should be submitted as part of the application. Otherwise, a delay could occur in confirming that a delineation was performed for the permit project area.  

Please be advised that this determination is valid for five (5) years from the date of this letter unless new information warrants revision of the delineation before the expiration date. All actions concerning this determination must be complete within this time frame, or an additional delineation must be conducted. This approved jurisdictional determination is an appealable action under the Corps of Engineers administrative appeal procedures defined at 33 CFR 331. The administrative appeal options, process and appeals request form is attached for your convenience and use.
This delineation/determination has been conducted to identify the limits of U. S. Army Corps of Engineers (COE) Clean Water Act jurisdiction for the particular site identified in this request. This delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

In future correspondence concerning this matter, please refer to SAC 2015-00603-4S. You may still need state or local assent. You may still need state or local assent. Prior to performing any work, you should contact the South Carolina Department of Health and Environmental Control, Bureau of Water.

If you have any questions concerning this matter, please contact Erica Stone at 843-365-0583.

Sincerely,

[Signature]

Tommy Fennel
Chief, Northeast Branch

Enclosures:
Approved Jurisdictional Determination Form
Notification of Appeal Options
SECTION I: BACKGROUND INFORMATION
A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):  AUG 12 2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: JD Form 1 of 1; CESAC-RD-NE 2015-00603-4S; Florence National Cemetery Expansion

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: South Carolina  County/parish/borough: Florence  City: Florence
Center coordinates of site (lat/long in degree decimal format): Lat. 34.184292° N, Long. -79.752711° W.
Universal Transverse Mercator:
Name of nearest waterbody: Unnamed Tributary of Jeffries Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Great Pee Dee River
Name of watershed or Hydrologic Unit Code (HUC):
☐ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☒ Field Determination. Date(s): June 03, 2015

SECTION II: SUMMARY OF FINDINGS
A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There are no “navigable waters of the U.S.” within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]
☒ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:  

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are “waters of the U.S.” within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.
   a. Indicate presence of waters of U.S. in review area (check all that apply):  
      ☒ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters (RPWs) that flow directly or indirectly into TNWs
      ☒ Non-RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☒ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. Identify (estimate) size of waters of the U.S. in the review area:
      Non-wetland waters: linear feet: width (ft) and/or acres.
      Wetlands: 0.973 acres.

   c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Pick List, Pick List
      Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):  
[Including potentially jurisdictional features that upon assessment are NOT waters or wetlands]

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1 Boxes checked below shall be supported by completing the appropriate sections in Section III below.
2 For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least “seasonal” (e.g., typically 3 months).
3 Supporting documentation is presented in Section III.F.
SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
   Identify TNW: Great Pee Dee River.

   Summarize rationale supporting determination: Report No. 11 of the 1977 U.S. Army Corps of Engineers Charleston District Navigability Study presently classifies the Great Pee Dee River as a "navigable water of the U.S." between its mouth at Winyah Bay (R.M. 0) near Georgetown, SC to Cheraw, SC (R.M. 165). The recommended practical limit of navigation is at Blewett Falls Dam (R.M. 188.2).

2. Wetland adjacent to TNW
   Summarize rationale supporting conclusion that wetland is "adjacent".

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanos have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

   (i) General Area Conditions:
       Watershed size: Pick List ;
       Drainage area: Pick List
       Average annual rainfall: inches
       Average annual snowfall: inches

   (ii) Physical Characteristics:
       (a) Relationship with TNW:
           ☐ Tributary flows directly into TNW.
           ☐ Tributary flows through Pick List tributaries before entering TNW.

           Project waters are Pick List river miles from TNW.
           Project waters are Pick List river miles from RPW.
           Project waters are Pick List aerial (straight) miles from TNW.
           Project waters are Pick List aerial (straight) miles from RPW.

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Note: The Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW:

Tributary stream order, if known:

(b) General Tributary Characteristics (check all that apply):

**Tributary is:**
- [ ] Natural
- [ ] Artificial (man-made). Explain:
- [ ] Manipulated (man-altered). Explain:

**Tributary properties with respect to top of bank (estimate):**
- Average width: feet
- Average depth: feet
- Average side slopes: Pick List.

**Primary tributary substrate composition (check all that apply):**
- [ ] Silts
- [ ] Sand
- [ ] Cobbles
- [ ] Gravel
- [ ] Bedrock
- [ ] Vegetation. Type/cover:
- [ ] Concrete
- [ ] Muck
- [ ] Other. Explain:

**Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:**

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: Pick List.

Tributary gradient (approximate average slope): %

(c) Flow:

**Tributary provides for:** Pick List

Estimate average number of flow events in review area/year: Pick List

**Describe flow regime:**

Other information on duration and volume:

Surface flow is: Pick List. Characteristics:

Subsurface flow: Pick List. Explain findings:
- [ ] Dye (or other) test performed:

**Tributary has (check all that apply):**
- [ ] Bed and banks
- [ ] OHWM (check all indicators that apply):
  - clear, natural line impressed on the bank
  - changes in the character of soil
  - shelving
  - vegetation matted down, bent, or absent
  - leaf litter disturbed or washed away
  - sediment deposition
  - water staining
  - other (list):
- [ ] Discontinuous OHWM. Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
- [ ] High Tide Line indicated by:
  - [ ] oil or scum line along shore objects
  - [ ] fine shell or debris deposits (foreshore)
  - [ ] physical markings/characteristics
  - [ ] tidal gauges
  - [ ] other (list):
- [ ] Mean High Water Mark indicated by:
  - [ ] survey to available datum;
  - [ ] physical markings;
  - [ ] vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

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5 Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

6 A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

7 Ibid.
Identify specific pollutants, if known:
(iv) Biological Characteristics. Channel supports (check all that apply):
- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:
(a) General Wetland Characteristics:
   Properties:
   - Wetland size: [number] acres
   - Wetland type. Explain:
   - Wetland quality. Explain:
   Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:
   Flow is: Pick List Explain:
   Surface flow is: Pick List
   Characteristics:

   Subsurface flow: Pick List. Explain findings:
   - Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:
   - Directly abutting
   - Not directly abutting
     - Discrete wetland hydrologic connection. Explain:
     - Ecological connection. Explain:
     - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW
   Project wetlands are Pick List river miles from TNW.
   Project waters are Pick List aerial (straight) miles from TNW.
   Flow is from: Pick List
   Estimate approximate location of wetland as within the Pick List floodplain.

(ii) Chemical Characteristics:
   Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:
   Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):
   - Riparian buffer. Characteristics (type, average width):
   - Vegetation type/percent cover. Explain:
   - Habitat for:
     - Federally Listed species. Explain findings:
     - Fish/spawn areas. Explain findings:
     - Other environmentally-sensitive species. Explain findings:
     - Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)
   All wetland(s) being considered in the cumulative analysis: Pick List
   Approximately (______) acres in total are being considered in the cumulative analysis.
For each wetland, specify the following:

| Directly abuts? (Y/N) | Size (in acres) | Directly abuts? (Y/N) | Size (in acres) |

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

Documentation for the Record only: Significant nexus findings for seasonal RPWs and/or wetlands abutting seasonal RPWs:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:

   - Wetlands: linear feet width (ft), Or, acres.
   - Wetlands adjacent to TNWs: acres.

2. RPWs that flow directly or indirectly into TNWs.
   - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: The tributary was determined to be a RPW with perennial flow during a site visit conducted on
June 03, 2015 and by review of aerial photographs, Florence County LiDAR, and USGS topographic maps. Aerial photos depict a well defined channel with uninterrupted flow into Jefferies Creek and the USGS topographic maps depict a solid blue line feature which is the symbol for perennial flow. Florence County LiDAR depicts low elevations and a defined channel. Geomorphic indicators observed in the field include a well defined channel with continuous bed and bank located within a natural valley, natural sinuosity and depositional bars. Hydrologic indicators include a firm sandy bottom clear of leaf litter and debris, and organic drift lines. Based on the previously mentioned evidence, this perennial RPW was determined to have flow at least 90% of the year under normal conditions. The wetland evaluated in this determination is contiguous and abuts the perennial RPW.

☐ Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally.

Provide estimates for jurisdictional waters in the review area (check all that apply):

☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. Non-RPWs that flow directly or indirectly into TNWs.

☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

☑ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: Wetlands were determined to be contiguous and directly abutting an off-site perennial RPW by during a site visit conducted on June 03, 2015 and by review of Aerial photographs, USGS topographic maps, Florence County LiDar maps, NWIS, Florence County wetland maps, and Florence County Soil survey information. All of the above referenced desktop resources depict a contiguous wetland directly abutting the offsite tributary located due west of the project area.

☐ Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: 0.973 acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters. 

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

☐ Demonstrate that impoundment was created from “waters of the U.S.,” or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

Explain:

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9 See Footnote # 3.
9 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):  

☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.  
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.  
☐ which are or could be used for industrial purposes by industries in interstate commerce.  
☐ Interstate Isolated waters. Explain:  
☐ Other factors. Explain:  

Identify water body and summarize rationale supporting determination:  

Provide estimates for jurisdictional waters in the review area (check all that apply):  

☐ Tributary waters: linear feet width (ft).  
☐ Other non-wetland waters: acres.  
☐ Identify type(s) of waters:  
☐ Wetlands: acres.  

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):  

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.  
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.  
 ☐ Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).  
☐ Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain:  
☐ Other: (explain, if not covered above):  

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):  

☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).  
☐ Lakes/ponds: acres.  
☐ Other non-wetland waters: acres. List type of aquatic resource:  
☐ Wetlands: acres.  

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction (check all that apply):  

☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).  
☐ Lakes/ponds: acres.  
☐ Other non-wetland waters: acres. List type of aquatic resource:  
☐ Wetlands: acres.  

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):  
☑ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: The project area is depicted on a survey plat submitted by the agent, which was prepared by Ervin Engineering Company, last revised on August 03, 2015, and titled "WETLANDS SURVEY / FOR / UNITED STATES OF AMERICA, BY AND THROUGH THE SECRETARY OF VETRANS AFFAIRS".  
☑ Data sheets prepared/submitted by or on behalf of the applicant/consultant.  
☑ Office contains with data sheets/delineation report.  
☐ Office does not contain with data sheets/delineation report.  
☐ Data sheets prepared by the Corps:  
☐ U.S. Geological Survey Hydrologic Atlas:  
☐ USGS NHD data.  
☐ USGS 8 and 12 digit HUC maps.  

* Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.
B. ADDITIONAL COMMENTS TO SUPPORT JD: This form addresses an approximately 14.333 acre tract that contains 0.973 acre of jurisdictional wetlands. Jurisdictional wetlands on site are part of a contiguous wetland run that continues off site and abuts a perennial RPW that flows into Jefferies Creek. The offsite tributary is located to the north and east of the project area. Jefferies Creek drains into the Great Pee Dee River.

During a site visit conducted on June 03, 2015 soils within the boundaries of the delineated wetland were found to be saturated and to contain oxidized rhizospheres along living root channels. Obligate and Fac Wet vegetation was abundant in the herbaceous layer and soils met an A11 indicator (depleted below dark surface) as outlined in the "Field Indicators of Hydric Soils in the United States" guide, version 7.0, 2010., Based on NRCS WETS data climatic conditions at the time were within normal range.

Limits of jurisdiction were established by the parameters set forth in the 1987 Wetland Delineation Manual and the 2010 Coastal Plain Supplement. The offsite tributary was observed on June 03, 2015 and was determined to be a RPW with perennial flow. Further review of aerial photographs, Florence County LiDAR, soil survey information and USGS topographic maps concurred with this determination. Aerial photos depict a well defined channel with uninterrupted flow into Jefferies Creek and the USGS topographic maps depict a solid blue line feature which is the symbol for perennial flow. Horry County LiDAR depicts low elevations and a defined channel. Based on the previously mentioned evidence, this perennial RPW was determined to have flow at least 90% of the year under normal conditions. The wetland evaluated in this determination is contiguous and abuts the off-site perennial RPW.
### NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

<table>
<thead>
<tr>
<th>Applicant:</th>
<th>City of Florence</th>
<th>File Number:</th>
<th>SAC 2015-00603-4S</th>
<th>Date:</th>
<th>AUG 1 2 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attached is:</td>
<td>See Section below</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)  
**A**

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

#### PROFFERED PERMIT: You may accept or object to the permit  
**B**

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

#### PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.  
**C**

#### APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.  
**D**

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer, South Atlantic Division, 60 Forsyth St, SW, Atlanta, GA 30308-8801. This form must be received by the Division Engineer within 60 days of the date of this notice.

#### PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is **not appealable**. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.  
**E**
SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFERRED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact the Corps biologist who signed the letter to which this notification is attached. The name and telephone number of this person is given at the end of the letter.

If you only have questions regarding the appeal process you may also contact the Coordinator for Appeals in our South Atlantic Division Office in Atlanta, Georgia at (404) 562-5136.
Jason W. Steele
60 Forsyth St, SW
Atlanta, GA 30308-8801

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent. ____________________________

Date: ____________________ Telephone number: ____________________
FIGURE 1
USGS TOPOGRAPHY
Expansion of Florence National Cemetery
Approximate 14 Acre Tract
East National Cemetery Road
Florence, South Carolina
ECS Project 34-2048

LEGEND
Approximate Location of Site Boundary
Approximate Location of Streams
Approximate Location of Wetland

SOURCE:
USGS Earth Point Topographic Maps
Google Earth
NTS

THE WETLAND LOCATIONS SHOWN ON THIS MAP ARE APPROXIMATE. THEY HAVE BEEN DELINEATED BY ECS. THEY HAVE NOT BEEN VERIFIED BY THE U.S. ARMY CORPS OF ENGINEERS OR SURVEYED AT THIS TIME. THESE AREAS ARE NOT TO SCALE AND ARE SUBJECT TO CHANGE UPON USACE INSPECTION/LAND SURVEY.
FIGURE 2
SOILS MAP

Florence County, South Carolina (SC041)

<table>
<thead>
<tr>
<th>Map Unit Symbol</th>
<th>Map Unit Name</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>NoB</td>
<td>Norfolk loamy sand, 2 to 6 percent slopes</td>
<td>13.0</td>
<td>80.1%</td>
</tr>
<tr>
<td>WgB</td>
<td>Wagram sand, 0 to 6 percent slopes</td>
<td>3.2</td>
<td>19.9%</td>
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<tr>
<td><strong>Totals for Area of Interest</strong></td>
<td></td>
<td><strong>16.3</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

LEGEND

- Red: Approximate Location of Site Boundary
- Yellow: Approximate Location of Streams
- Green: Approximate Location of Wetland

SOURCE:
USDA
WEBSOILSURVEY.SC.EGOV.USDA.GOV
NOT TO SCALE

THE WETLAND LOCATIONS SHOWN ON THIS MAP ARE APPROXIMATE. THEY HAVE BEEN DELINEATED BY ECS. THEY HAVE NOT BEEN VERIFIED BY THE U.S. ARMY CORPS OF ENGINEERS OR SURVEYED AT THIS TIME. THESE AREAS ARE NOT TO SCALE AND ARE SUBJECT TO CHANGE UPON USACE INSPECTION/LAND SURVEY.

FIGURE 2
SOILS MAP

Expansion of Florence National Cemetery
Approximate 14 Acre Tract
East National Cemetery Road
Florence, South Carolina
ECS Project 34-2048
THE WETLAND LOCATIONS SHOWN ON THIS MAP ARE APPROXIMATE. THEY HAVE BEEN DELINEATED BY ECS. THEY HAVE NOT BEEN VERIFIED BY THE U.S. ARMY CORPS OF ENGINEERS OR SURVEYED AT THIS TIME. THESE AREAS ARE NOT TO SCALE AND ARE SUBJECT TO CHANGE UPON USACE INSPECTION/LAND SURVEY.

LEGEND
- Approximate Location of Site Boundary
- Approximate Location of Streams
- Approximate Location of Wetland

SOURCE:
10/06/2014
US FISH & WILDLIFE SERVICE
NOT TO SCALE

FIGURE 3
NATIONAL WETLANDS INVENTORY MAP
Expansion of Florence National Cemetery
Approximate 14 Acre Tract
East National Cemetery Road
Florence, South Carolina
ECS Project 34-2048
THE WETLAND LOCATIONS SHOWN ON THIS MAP ARE APPROXIMATE. THEY HAVE BEEN DELINEATED BY ECS. THEY HAVE NOT BEEN VERIFIED BY THE U.S. ARMY CORPS OF ENGINEERS OR SURVEYED AT THIS TIME. THESE AREAS ARE NOT TO SCALE AND ARE SUBJECT TO CHANGE UPON USACE INSPECTION/LAND SURVEY.

FIGURE 4
PROPERTY TAX MAP

Expansion of Florence National Cemetery
Approximate 14 Acre Tract
East National Cemetery Road
Florence, South Carolina
ECS Project 34-2048

LEGEND
- Approximate Location of Site Boundary
- Approximate Location of Streams
- Approximate Location of Wetland

SOURCE:
2012
FLORENCE COUNTY GIS
NOT TO SCALE
THE WETLAND LOCATIONS SHOWN ON THIS MAP ARE APPROXIMATE. THEY HAVE BEEN DELINEATED BY ECS. THEY HAVE NOT BEEN VERIFIED BY THE U.S. ARMY CORPS OF ENGINEERS OR SURVEYED AT THIS TIME. THESE AREAS ARE NOT TO SCALE AND ARE SUBJECT TO CHANGE UPON USACE INSPECTION/LAND SURVEY.

LEGEND
- Approximate Location of Site Boundary
- Approximate Location of Streams
- Approximate Location of Jurisdictional Wetlands

SOURCE:
- 12/18/2014
- SATELLITE IMAGERY
- GOOGLE EARTH
- NOT TO SCALE

FIGURE 5
PRELIMINARY WETLANDS MAP
Expansion of Florence National Cemetery
Approximate 14 Acre Tract
East National Cemetery Road
Florence, South Carolina
ECS Project 34-2048
FIGURE 6
PHOTO AND DATA POINT MAP

THE WETLAND LOCATIONS SHOWN ON THIS MAP ARE APPROXIMATE. THEY HAVE BEEN DELINEATED BY ECS. THEY HAVE NOT BEEN VERIFIED BY THE U.S. ARMY CORPS OF ENGINEERS OR SURVEYED AT THIS TIME. THESE AREAS ARE NOT TO SCALE AND ARE SUBJECT TO CHANGE UPON USACE INSPECTION/LAND SURVEY.

LEGEND
- Approximate Location of Site Boundary
- Approximate Location of Streams
- Approximate Location of Jurisdictional Wetlands
- Photo / Data Point (As labeled)

SOURCE:
12/18/2011
SATELLITE IMAGERY
GOOGLE EARTH
NOT TO SCALE

FIGURE 6
PHOTO AND DATA POINT MAP
Expansion of Florence National Cemetery
Approximate 14 Acre Tract
East National Cemetery Road
Florence, South Carolina
ECS Project 34-2048
Re: Report of Threatened and Endangered Species Evaluation Proposed Expansion of Florence National Cemetery Florence, Florence County, South Carolina ECS Project No. 34-2048 (Revised 04/06/2015)

Dear Mr. Banchoff

ECS Carolinas, LLP (ECS) is pleased to provide the results of a Threatened and Endangered Species Survey conducted for the subject site. Our services were provided in accordance with ECS Proposal Number 34-1517-WP dated November 14, 2014.

BACKGROUND INFORMATION

The subject study area is located approximately one mile west of Florence Regional Airport in Florence, Florence County, South Carolina. Total acreage of the land in the study area shown is approximately 14 acres. The aerial photography and county GIS show that the site is all forested with varying degrees of forest stand maturity.

FIELD RECONNAISSANCE

ECS personnel conducted a site survey on February 10, 2014. The site contains approximately 13 acres of upland pine forest, and approximately ¾-1 acre of bottomland hardwood wetlands. The site includes lots owned by the city of Florence, which included some existing streets, which are overgrown. Also – some dumping of construction and demolition debris is evident on portions of the site.

Upland Pine Forest
This habitat consists of uplands with moderately well drained to excessively drained soils. The predominant vegetation type is loblolly pine (Pinus taeda), with scattered hardwoods including water oak (Quercus nigra), sweet gum (Liquidambar styraciflua) and American holly (Ilex opaca) with an approximate age of 15-20 years and canopy closure of approximately 60-85 percent. An open understory with moderate shrubs including wax myrtle (Myrica cerifera) and sparse herbaceous layer including ebony spleenwort (Asplenium platyneuron). Ground cover and duff layer is sparse to moderate.

Forested Wetlands
This habitat consists of seasonally saturated to inundated wetlands, with loamy to clayey hydric soils. The overstory is sparse hardwoods including sweet gum, red maple (Acer rubrum), and sugarberry
Threatened and Endangered Species Report
Approximately 14 Acres – National Cemetery Expansion
Florence, Florence County, South Carolina
ECS Project No. 34-2048

(Celtis laevis). The shrub and sapling layer is dominated by the invasive species Chinese privet (Ligustrum sinense). The herbaceous layer consists of cinnamon fern (Osmunda cinnamomea) and grasses and sedges.

PRELIMINARY THREATENED AND ENDANGERED SPECIES DETERMINATION

Congress passed the Endangered Species Act (ESA) in 1973. The purpose of the ESA is to protect and recover imperiled species and the ecosystems upon which they depend. It is administered by the U.S. Fish and Wildlife Service (FWS) and the Commerce Department’s National Marine Fisheries Service (NMFS). The FWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife.

Under the ESA, species may be listed as either endangered or threatened. “Endangered” means a species is in danger of extinction throughout all or a significant portion of its range. “Threatened” means a species is likely to become endangered within the foreseeable future. All species of plants and animals, except pest insects, are eligible for listing as endangered or threatened. For the purposes of the ESA, Congress defined species to include subspecies, varieties, and, for vertebrates, distinct population segments.

We reviewed the FWS Endangered Species Database to identify federally protected threatened and endangered terrestrial, inland species in Florence County, South Carolina. The following federally protected Threatened and Endangered species were identified with the possibility to occur in the area:

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific name</th>
<th>Federal Status</th>
<th>Record Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animals:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red-cockaded Woodpecker</td>
<td>Picoides borealis</td>
<td>E</td>
<td>Known</td>
</tr>
<tr>
<td>Wood Stork</td>
<td>Mycteria Americana</td>
<td>E</td>
<td>Known</td>
</tr>
<tr>
<td>Vascular Plants:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canby’s Dropwort</td>
<td>Oxypolis canbyii</td>
<td>E</td>
<td>Known</td>
</tr>
<tr>
<td>Chaffseed</td>
<td>Schwalbea americana</td>
<td>E</td>
<td>Known</td>
</tr>
<tr>
<td>E = Endangered</td>
<td>T = Threatened</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Red-Cockaded Woodpecker (*Picoides borealis*)
The red-cockaded woodpecker (RCW) is a black and white bird measuring approximately seven inches long. The bird displays black and white horizontal stripes on its back. The cheeks and underparts are white and the sides are streaked in black. The cap and stripe on the throat and neck of the bird are black. Male individuals of the species have a small red spot on each side of the black cap and display a red crown patch after the first post-fledgling molt. The woodpecker’s diet consists primarily of insects.

The RCW’s range is closely linked to the distribution of mature stands of southern pines. Loblolly and longleaf pines that are 60-plus years old are most commonly selected for nesting and roosting trees. The woodpecker excavates nest and roost cavities in trees that are stressed, and often are infected.
with the red-heart rot fungus. Preferred nesting sites generally include relatively open, park-like, mature pine stands with an undeveloped or low mid-story layer. Suppression of the midstory by fire or mechanical means in mature pine stands promotes colonization by the RCW. Foraging habitat is frequently limited to pine or pine-hardwood stands that are 30 years or older with a preference for pine trees with a diameter of 10 inches or larger. Dense hardwood mid-story hampers foraging by RCW’s. The USFWS indicates that the maximum foraging radius from a colony site for RCW’s is typically one-half mile or less.

This site itself does not contain sufficiently aged pine timber resources greater than 60 years old. No RCW cavities were sighted during the survey, and no RCW colonies are known in nearby locations. No birds were heard or sighted on the subject tract. Therefore it is our opinion that this species is not believed to occur on this site, and any proposed expansion of the Florence National Cemetery would not be expected to impact this species.

**Wood Stork (Mycteria americana)**

The wood stork is a large wading bird that is approximately 50 inches tall and has a wingspan of approximately five feet. The plumage of the wood stork is primarily white with black primary and secondary wing feathers and a short black tail. The head and neck are dark gray and primarily unfeathered. The wood stork displays a prominent black bill that is slightly decurved and thick at the base. The wood stork feeds primarily on small fish including minnows and shellfish. The wood stork requires shallow wetland areas with a depth of six to ten inches. The bird’s primary habitat is brackish and freshwater wetland areas with associated shallow water zones. Wood storks are highly colonial and prefer forested wetland areas (swamps) or islands surrounded by open water.

Suitable habitats for wading bird rookeries including wood storks are located adjacent to the site along the wetland and stream frontage. No birds were seen using the area, and none are documented on the occurrence map. If wood storks are encountered, they should not be disturbed during roosting or nesting. However, this species is not believed to occur on this site, and any proposed expansion of the Florence National Cemetery would not be expected to impact this species.

**Canby’s Dropwort (Oxypolis canbyi)**

Canby’s dropwort is a perennial herb growing from elongate, stoloniferous rhizomes to a height of 2.6 to 3.9 feet. The stems are hollow and erect with slender leaves. The species is aromatic, smelling like dill. The flowering period is from May through early August. The flowers have white petals and pale green sepals and are five parted. The leaves are round in cross-section, thin, and divided by partitions. The primary habitats of Canby’s dropwort are wet pineland ponds and savannas, wet meadows, and around the edges of open cypress ponds. The species prefers habitat with little or no canopy closure. Canby’s dropwort prefers soils with a high water table.

The site does not contain open cypress ponds, or other open ponded areas which Canby’s dropwort is normally found and no specimens were observed. The wetlands located on the site are historically disturbed riparian wetlands with a high density of invasive shrubs including privet. These areas are not known as good habitat for *Oxypolis*. Therefore it is our opinion that this species is not believed to occur on this site, and any proposed expansion of the Florence National Cemetery would not be expected to impact this species.
American Chaffseed (Schwalbea americana)

American chaffseed is a perennial herb growing to a height of 0.6 to 0.7 meters. The entire plant, including the leaves and flowers, are covered with fine hairs. Chaffseed is an erect herb with simple, alternate leaves that are lance-shaped to elliptic and purplish tinged. The corollas are creamy yellow to purple-tinted green and rose-tinted green and shaped like turtle heads. The fruit resembles a capsule that is divided into four sections that shed numerous, winged seeds. The seeds are greenish-brown in color and linear in shape. The flowering period for chaffseed occurs in May through June with the fruiting period occurring June through July. American chaffseed is found in moist to dry, sandy soils in the Coastal Plain. The species prefers fire-maintained areas such as wet savannas and open, moist pine forests. Chaffseed also occurs within open, grass and sedge systems. The species depends on a fluctuating water table and frequent fire to maintain the open habitat that it requires.

The site does not contain open meadow like or open burned pine habitats suitable habitat for American chaffseed. Therefore it is our opinion that this species is not believed to occur on this site, and any proposed expansion of the Florence National Cemetery would not be expected to impact this species.

CONCLUSIONS

We have conducted a threatened and endangered species survey for the Expansion of the Florence National Cemetery. Based upon our site visits, our understanding of the proposed development, and the lack of observed presence of Federally Protected Species or critical habitats, it is our opinion that the project will not adversely affect threatened and endangered species protected under the Endangered Species Act.

CLOSING

We appreciate the opportunity to provide our services to you. Please contact Eric J. McClanahan at (843) 654-4448 if you have questions or require additional information.

Sincerely,

ECS Carolinas, LLP

Eric J. McClanahan, PWS
Senior Environmental Scientist

Justin A. Roth, CHMM
Environmental Services Manager/
Principal Scientist

Attachments
- USGS Topographic Location Map
- Species Occurrence Map
- County List of Threatened and & Endangered Species
- Photographs
LEGEND
Approximate Location of Site Boundary

SOURCE:
EARTH POINT TOPO
GOOGLE EARTH
NOT TO SCALE

USGS TOPOGRAPHIC MAP
Florence National Cemetery Expansion
Approximate 14 Acre Area
East National Cemetery Road, Florence
Florence County, South Carolina
ECS Project 34-2048
<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>USESA Designation</th>
<th>State Protection</th>
<th>Global Rank</th>
<th>State Rank</th>
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<td><em>Condylura cristata</em></td>
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<td>G5</td>
<td></td>
<td>S3?</td>
<td></td>
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<td><em>Haliaeetus leucocephalus</em></td>
<td>Bald Eagle</td>
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<td>G5</td>
<td>S2</td>
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<td><em>Lanius ludovicianus</em></td>
<td>Loggerhead Shrike</td>
<td></td>
<td>G4</td>
<td>S3</td>
<td></td>
</tr>
<tr>
<td><em>Picoides borealis</em></td>
<td>Red-cockaded Woodpecker</td>
<td>LE: Endangered</td>
<td>SE: Endangered</td>
<td>G3</td>
<td>S2</td>
</tr>
<tr>
<td><em>Rana palustris</em></td>
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<td>G5</td>
<td></td>
<td>SNR</td>
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</tr>
<tr>
<td><strong>Invertebrate Animal</strong></td>
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<td></td>
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</tr>
<tr>
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<td>Gravel Elimia</td>
<td>G4</td>
<td></td>
<td>SNR</td>
<td></td>
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<tr>
<td><em>Lampsilis cariosa</em></td>
<td>Yellow Lampmussel</td>
<td></td>
<td>G3G4</td>
<td>S2</td>
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<td><strong>Animal Assemblage</strong></td>
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<td>Waterbird Colony</td>
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<td>SNR</td>
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</tr>
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<td><strong>Vascular Plants</strong></td>
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<td></td>
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<td>S2S3</td>
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<td>G5</td>
<td>S1</td>
<td></td>
</tr>
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<td><em>Carex amphibola</em></td>
<td>Narrowleaf Sedge</td>
<td></td>
<td>G5</td>
<td>SNR</td>
<td></td>
</tr>
<tr>
<td><em>Carex basiantha</em></td>
<td>Widow Sedge</td>
<td></td>
<td>G5</td>
<td>S2</td>
<td></td>
</tr>
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<td><em>Carex granularis</em></td>
<td>Meadow Sedge</td>
<td></td>
<td>G5</td>
<td>S2</td>
<td></td>
</tr>
<tr>
<td><em>Cayaponia quinqueloba</em></td>
<td>Cayaponia</td>
<td></td>
<td>G4</td>
<td>S1?</td>
<td></td>
</tr>
<tr>
<td><em>Coreopsis gladiata</em></td>
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<td></td>
<td>SNR</td>
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<td>Boykin's Lobelia</td>
<td>G2G3</td>
<td></td>
<td>S3</td>
<td></td>
</tr>
<tr>
<td><em>Lygodium palmatum</em></td>
<td>Climbing Fern</td>
<td></td>
<td>G4</td>
<td>S3</td>
<td></td>
</tr>
<tr>
<td><em>Macbridea caroliniana</em></td>
<td>Carolina Bird-in-a-nest</td>
<td>G2G3</td>
<td></td>
<td>S3</td>
<td></td>
</tr>
<tr>
<td><em>Oxypolis canbyi</em></td>
<td>Canby's Dropwort</td>
<td>LE: Endangered</td>
<td></td>
<td>G2</td>
<td>S2</td>
</tr>
<tr>
<td><em>Rhhexia aristosa</em></td>
<td>Awned Meadowbeauty</td>
<td></td>
<td>G3G4</td>
<td>S3</td>
<td></td>
</tr>
<tr>
<td><em>Rhododendron eastmanii</em></td>
<td>May White</td>
<td></td>
<td>G2</td>
<td>S2</td>
<td></td>
</tr>
<tr>
<td><em>Rhynchospora careyana</em></td>
<td>Horned Beakrush</td>
<td></td>
<td>G4Q</td>
<td>S3</td>
<td></td>
</tr>
<tr>
<td><em>Rhynchospora tracyi</em></td>
<td>Tracy Beakrush</td>
<td></td>
<td>G4</td>
<td>S3</td>
<td></td>
</tr>
<tr>
<td><em>Rorippa sessiliflora</em></td>
<td>Stalkless Yellowcress</td>
<td></td>
<td>G5</td>
<td>SNR</td>
<td></td>
</tr>
<tr>
<td><em>Schwalbea americana</em></td>
<td>Chaffseed</td>
<td>LE: Endangered</td>
<td></td>
<td>G2G3</td>
<td>S2</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>USESA Designation</td>
<td>State Protection</td>
<td>Global Rank</td>
<td>State Rank</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------</td>
<td>-------------------</td>
<td>------------------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td><em>Silene ovata</em></td>
<td>Ovate Catchfly</td>
<td></td>
<td></td>
<td>G3</td>
<td>S1</td>
</tr>
<tr>
<td><em>Stachys latidens</em></td>
<td>Broad-toothed Hedge-nettle</td>
<td></td>
<td></td>
<td>G4G5</td>
<td>S2</td>
</tr>
<tr>
<td><em>Thelypteris ovata var. ovata</em></td>
<td>Ovate Marsh Fern</td>
<td></td>
<td></td>
<td>G3G5T3T4</td>
<td>S1</td>
</tr>
<tr>
<td><em>Urtica chamaedryoides</em></td>
<td>Weak Nettle</td>
<td></td>
<td></td>
<td>G4G5</td>
<td>S2</td>
</tr>
</tbody>
</table>

**Communities**

- Bald cypress - tupelo gum swamp  
  USESA Designation: G5  
  State Rank: S4
- *Fagus grandifolia* - *quercus alba* - *(acer barbatum)* / mixed herbs forest  
  Atlantic Coastal Plain Mesic Mixed Hardwood Forest  
  USESA Designation: G4  
  State Rank: SNR
Mr. Eric McClanahan  
ECS Carolinas, LLP  
3820 Faber Place, Suite 500  
North Charleston, SC 29405  

Re: Threatened and Endangered Species Evaluation, Florence National Cemetery  
Florence County, ECS Project No. 34-2048 (Revised April 6, 2015)  
FWS Log No. 2015-1-0264  

Dear Mr. McClanahan:  

The U.S. Fish and Wildlife Service (Service) has received your revised evaluation of threatened and endangered (T&E) species that may be impacted by the potential expansion of the Florence National Cemetery, Florence, South Carolina. Your revision follows the Service’s consultation of April 6, 2015, in which we determined that the American wood stork was not addressed in your initial evaluation. We recommended that ECS Carolinas reevaluate the site to determine the potential impacts upon the American wood stork, a T&E species known to occur within Florence County.

Your revised evaluation found that habitat adjacent to the expansion site that is suitable for the American wood stork, however no individuals were sighted. Further, you did not observe individuals on the project site and that the potential expansion of the cemetery is not expected to impact the species. Upon review of the additional information provided, the Service agrees with your conclusion that expansion of the cemetery is not likely to adversely affect the American wood stork and finds that you have satisfied section 7 of the Endangered Species Act of 1973.

Please note that obligations under the ESA must be reconsidered if: (1) new information reveals impacts of this identified action may affect any listed species or critical habitat in a manner not previously considered; (2) this action is subsequently modified in a manner, which was not considered in this assessment; or (3) a new species is listed or critical habitat is designated that may be affected by the identified action.

If you need further assistance, please contact Mr. Mark Caldwell at (843) 727-4707 ext. 215, and reference FWS Log No. 2015-1-0264.

Sincerely,

Thomas D. McCoy  
Acting Field Supervisor

TDM/MAC