March 1, 2020

U.S. Army Corps of Engineers
Charleston Regulatory Office
69A Hagood Ave
Charleston, SC 29403

Subject: **Preliminary Jurisdictional Determination Request**
Santee Cooper Johns Island-Queensboro 115kV Line
Charleston County, South Carolina
Wood Project No. 6250160115

To Whom it May Concern:

Wood Environment & Infrastructure Solutions, Inc. (Wood), on behalf of our client Santee Cooper, respectfully requests a preliminary jurisdictional determination by the U.S. Army Corps of Engineers (USACE) Charleston District of the Waters of the U.S./Wetlands for their proposed project, Johns Island-Queensboro 115kV Line (Project Study Area). The Project Study Area begins west of the intersection of Comsee Lane and Langston Drive, in Charleston County, South Carolina at coordinates 32.73154 N, -80.0883 W and ties into the existing Dominion Church Creek-Ritter transmission line near Maybank Highway, at coordinates 32.75097 N, -80.03022 W (See Figure 1).

The proposed transmission project area includes a 55-foot wide corridor parallel to an existing Santee Cooper transmission line and a 100-foot wide corridor in all other portions of the Project Study Area. The Project Study Area encompasses approximately 6.38 miles of new transmission line. The proposed transmission line runs north of SC-700 from the Johns Island substation, paralleling the existing Santee Cooper Mateeba-Johns Island transmission line right-of-way (ROW), before running northeast through undeveloped wetlands to Pennys Creek. The proposed transmission line then turns west to parallel the existing Dominion Church Creek-Ritter transmission line ROW towards Maybank Highway. The proposed Santee Cooper transmission line ties into the Dominion Church Creek-Ritter transmission line east of Maybank Highway (See Figure 1).

Methodology

Jurisdictional waters of the U.S., including wetlands, are defined by 33 CFR Part 328.3(b) and are protected by Section 404 of the CWA (33 United States Code [USC] 1344), which is administered and enforced in South Carolina by the USACE (United States Army Corps of Engineers), Charleston District. The landward limits of waters of the U.S. regulatory jurisdiction at the Project Study Area were delineated by Wood. Wood personnel conducted a wetland/waters of the U.S. delineation on March 5, 2019 and September 26, 2019.

Wetlands are defined by the presence of three criteria: hydrophytic vegetation, hydric soils, and evidence of wetland hydrology. Jurisdictional areas were delineated using the three-parameter approach in accordance with the *Corps of Engineers Wetland Delineation Manual*[1] and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)*[2]. Jurisdictional areas were delineated with sequentially numbered flagging tape and mapped using a Trimble Geo XT sub-meter GPS Unit. Paired wetland/upland Atlantic and Gulf Coastal Plain Region Wetland Determination Data Forms (Version 2.0) were completed at several locations (Figure 5) within the Project Study Area.

[1] *USACE. 1987. Corps of Engineers Wetlands Delineation Manual. Environmental Laboratory, Vicksburg, MS.*
[2] *USACE. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). Environmental Laboratory, Vicksburg, MS.*

Wood Environment & Infrastructure Solutions, Inc.
720 Gracern Road, Suite 132
Columbia, South Carolina 29210
Tel: 803-798-1200
www.woodplc.com

RESULTS

Jurisdictional Waters of the U.S./Wetlands

Wood personnel identified jurisdictional waters of the U.S. within the Project Study Area. The following table lists each water of the U.S./wetland feature within the project corridor and their corresponding size. See Figure 5 for waters of the U.S. locations.

Table 1

Feature Type	Name	Acreage	Linear Footage
Non-Wetland Water (non-tidal)	Stream A	0.02	94
Non-Wetland Water (tidal)	Stream B	0.47	1,183
Non-Wetland Water (tidal)	Stream C	0.26	181
Non-Wetland Water (tidal)	Stream D	0.29	271
Non-Wetland Water (tidal)	Open Water 1	0.05	*N/A*
Non-Wetland Water (tidal)	Open Water 2 (Pennys Creek)	1.01	*N/A*
Non-Wetland Water (tidal)	Open Water 3	0.13	*N/A*
Wetland (non-tidal)	Wetland A	0.27	*N/A*
Wetland (non-tidal)	Wetland B	1.14	*N/A*
Wetland (non-tidal)	Wetland C	1.58	*N/A*
Wetland (non-tidal)	Wetland D	1.15	*N/A*
Wetland (non-tidal)	Wetland E	1.19	*N/A*
Wetland (non-tidal)	Wetland F	0.17	*N/A*
Wetland (non-tidal)	Wetland G	0.03	*N/A*
Wetland (non-tidal)	Wetland H	0.22	*N/A*
Wetland (non-tidal)	Wetland I	0.37	*N/A*
Wetland (non-tidal)	Wetland J	0.19	*N/A*
Wetland (non-tidal)	Wetland K	4.90	*N/A*
Wetland (non-tidal)	Wetland L	2.65	*N/A*
Wetland (tidal)	Wetland M	5.76	*N/A*
Wetland (non-tidal)	Wetland N	15.00	*N/A*
Wetland (tidal)	Wetland O	16.16	*N/A*
Upland		18.65	
Project Study Area		**71.66**	

Wetland and Stream Descriptions

Uplands within the Project Study Area have a dense overstory of loblolly pine (*Pinus taeda)*, live oak (*Quercus virginiana)*, red maple (*acer rubrum*), and sweetgum (*Liquidambar styraciflua*). The sapling layer is made up of young species of the overstory, water oak (*Quercus nigra*), american hornbeam (*Carpinus caroliniana*), and American beech (*Fagus grandifolia*). The shrub layer is sparser, made up of inkberry (*Ilex glabra*), wax myrtle (*Morella cerifera*), loblolly pine, Chinese tallow (*Triadica sebifera*), and dwarf palmetto (*Sabal minor*). The herbaceous and woody vines stratum contains broom sedge (*Andropogon virginicus),* dog-fennel (*Eupatorium capillifolium*), southern waxy sedge (*Carex glaucescens*), netted chain fern (*Woodwardia aerolata*), and saw-tooth blackberry (*Rubus argutus*), evening trumpet-flower (*Gelsemium sempervirens*), fringed greenbrier (*Smilax bona-nox)*, muscadine (*Vitis rotundifolia)*, and laurel-leaf greenbrier (*Smilax laurifolia*).

The freshwater non-tidal wetlands (Wetland A, B, C, D, E, F, G, H, I, J, K, L and N) have a similar overstory as the uplands, but a slightly denser sapling layer, including water oak, American hornbeam, and southern magnolia (*Magnolia grandiflora*). There are scattered loblolly pines within the sapling layer as well. The shrub layer consists of dwarf palmetto, southern magnolia, wax myrtle, and loblolly pine. The herb layer is sparse and mostly consisted of woolgrass (*Scirpus cyperinus*) and broom sedge. Woody vines are sparse but consist of muscadine and yellow jessamine where present.

The tidal wetlands (Wetland M and O) consist of a dense herbaceous layer made up of both black rush (*Juncus roemerianus*) and smooth cordgrass (*Spartina alterniflora*).

Stream A (see photograph 5) is a perennial sandbed stream surrounded by Wetland E. The stream is a freshwater stream with a canopy consisting of bald cypress (*Taxodium distichum*), sweetgum, water oak, laurel oak (*Quercus laurifolia*), and southern magnolia. The stream has a sparse understory consisting of yaupon holly (*Ilex vomitoria*), dwarf palmetto, wax myrtle, and horse sugar (*Symplocos tinctorial*).

Streams B, C, and D are wide tidal canals (excavated) surrounded by both tidal wetlands and non-tidal wetlands. The surrounding vegetation is similar to the aforementioned wetlands.

Connection to Waters of the US

The Project Study Area consists of multiple drainage canals (Stream B, C, and D) which all flow into the Stono River, a Traditional Navigable Water of the United States, according to South Carolina Department of Health and Environmental Control. The eastern portion of the Project Study Area flows into Pennys Creek, which is also considered a Navigable Water of the United States. Pennys Creek flows into the Stono River which flows between Johns Island and James Island before confluencing with the Atlantic Ocean.

SUMMARY

Wood has conducted a delineation of Waters of the U.S. within the approximate 71.66 acres of the Project Study Area. Waters of the US located within the Project Study Area are represented on the attached Figure 5. It is our request that the USACE Charleston District verify these jurisdictional waters of the U.S./wetland boundaries as they are represented on the attached figures.

CLOSING

If you have any questions concerning this document, please contact Mr. Brett Sexton at (803) 798-1200.

Sincerely,

Wood Environment & Infrastructure Solutions, Inc.

Brett Sexton
Staff Environmental Scientist

Allen W. Conger, PWS
Senior Principal Scientist

Attachments:

Jurisdictional Determination Request Form
Photograph Appendix
Wetland Determination Data Forms (Atlantic and Gulf Coastal Plain – Version 2.0)
Figures
- Figure 1 – Site Location Map
- Figure 2 – USGS Topographic Map
- Figure 3 – NRCS Soils Map
- Figure 4 – National Wetland Inventory Map
- Figure 5 – Aquatic Resources, Data Point, and Photo Location Map

U.S. Army Corps of Engineers – Charleston District - Regulatory Division

REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD) / DELINEATION

(For Jurisdictional Status and Identifying Wetlands and Other Aquatic Resources)

I. PROPERTY AND AGENT INFORMATION

A. Site Details/Location:

Site Name: Santee Cooper Johns Island - Queensboro 115kV Line Date: March 3, 2020

City/Township/Parish: Johns Island County: Charleston

Latitude/Longitude: Start: 32.73154 N, -80.0883 W ; End: 32.74215 N, -80.08945 W Acreage: 71.66

Tax Map Sequence (TMS) #(s): N/a

Property Address(es): Begins west of the intersection of Comsee Lane and Langston Drive, Charleston County, SC. (See attached figures)

[✔] Please attach a survey/plat map and vicinity map identifying location and review area for the JD/delineation. An accurate depiction of the review area must be provided (survey, tax map, or GPS coordinates). Tax maps may only be used if the site includes the entire tax map parcel.

B. Requestor of Jurisdictional Determination/Delineation *(if there are multiple property owners, please attach additional pages)*

Name: Kevin Driggers

Company Name (*if applicable*): Santee Cooper

Address: 1 Riverwood Drive, Moncks Corner, SC 29461

Phone: 843-761-8000 x 5247 Email: kevin.driggers@santeecooper.com

Check one: [x] I currently own this property

[ ] I plan to purchase this property

[ ] Other, please explain 803-798-1200

C. Agent/Environmental Consultant Acting on Behalf of the Requestor *(if applicable)*:

Consultant/Agent Name: Brett Sexton

Company Name: Wood Environment and Infrastructure Solutions, Inc (Wood)

Address: 720 Gracern Road, Suite 132, Columbia, SC 29210 Phone: 803-798-1200

Email: brett.sexton@woodplc.com

II. REASON FOR REQUEST *(check all that apply)*

[ ] I intend to construct/develop a project or perform activities on this site which would be designed to avoid all aquatic resources.

[ ] I intend to construct/develop a project or perform activities on this site which would be designed to avoid all jurisdictional aquatic resources under Corps authority.

[x] I intend to construct/develop a project or perform activities on this site which may require authorization from the Corps, and the Jurisdictional Determination would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.

[ ] I intend to construct/develop a project or perform activities on this site which may require authorization from the Corps; this request is accompanied by my permit application and the jurisdictional determination is to be used in the permitting process.

[x] I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is subject to the ebb and flow of the tide.

[ ] A Corps jurisdictional determination is required in order to obtain my local/state authorization.

[ ] I intend to contest jurisdiction over a particular aquatic resource and the request the Corps to confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.

[ ] I believe that the site may be comprised entirely of dry land.

[ ] Other: _____

Charleston Office:	**Columbia Office:**	**Conway Office:**
US Army Corps of Engineers Regulatory Division 69A Hagood Avenue Charleston, SC 29403 (ph) 843-329-8044	US Army Corps of Engineers Regulatory Office 1835 Assembly Street, Room 865 B-1 Columbia, SC 29201 (ph) 803-253-3444	US Army Corps of Engineers Regulatory Office 1949 Industrial Park Road, Room 140 Conway, SC 29526 (ph) 843-365-4239

*Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.
Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.
Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.
Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an jurisdictional determination cannot be evaluated nor can a jurisdictional determination be issued.

III. TYPE OF REQUEST:

X **Delineation Concurrence**[1]

____**Approved**[2] **Jurisdictional Determination (AJD) Only**

____**Preliminary**[3] **Jurisdictional Determination (PJD) Only**

____**Approved Jurisdictional Determination (AJD)** with submittal of a Pre-Construction Notification or Department of the Army permit application

____**Preliminary Jurisdictional Determination (PJD)** with submittal of a Pre-Construction Notification or Department of the Army permit application

____**Delineation of Wetlands and/or Other Aquatic Resources Only Conducted By Agent/Environmental Consultant** with submittal of a Pre-Construction Notification or Department of the Army permit application (No jurisdictional determination requested)

____I request that the **Corps delineate** the wetlands and/or other aquatic resources that may be present on my property with the attached **Pre-Construction Notification or Department of the Army permit application**

____I request that the **Corps delineate** the wetlands and/or other aquatic resources that may be present on my property **with a Delineation Only, an AJD or PJD**

____**"No Permit Required" (NPR) Letter** as I believe my proposed activity is not regulated[4]

____**Unclear** as to which jurisdictional determination I would like to request and require additional information to inform my decision

[1] Delineation Concurrence (DC) – A DC provides concurrence that the delineated boundaries of wetlands on a property are a reasonable representation of the aquatic resources on-site. A DC does not address the jurisdictional status of the aquatic resources.

[2]Approved – An AJD is defined in Corps regulations at 33 CFR 331.2. As explained in further detail in RGL 16-01, an AJD is used to indicate that this office has identified the presence or absence of wetlands and/or other aquatic resources on a site, including their accurate location(s) and boundaries, as well as their jurisdictional status. AJDs are valid for 5 years.

[3]Preliminary – A PJD is defined in Corps regulations at 33 CFR 331.2. As explained in further detail in RGL 16-01, a PJD is used to indicate that this office has identified the approximate location(s) and boundaries of wetlands and/or other aquatic resources on a site that are presumed to be subject to regulatory jurisdiction of the Corps of Engineers. Unlike an AJD, a PJD does not represent a definitive, official determination that there are, or that there are not, jurisdictional aquatic resources on a site, and does not have an expiration date.

[4] "No Permit Required" (NPR) Letter- A NPR letter may be provided by the Corps to notify the requestor that an activity will not require a permit (authorization) from the Corps; this letter can only be used if the proposed activity is not a regulated activity, regardless of where the activity may occur. A NPR letter cannot be used to indicate the presence or absence of wetlands and/or other aquatic resources, nor can it be used to determine their jurisdictional status.

IV. **LEGAL RIGHT OF ENTRY**

By signing below, I am indicating that I have the authority, or am acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant U.S. Army Corps of Engineers personnel right of entry to legally access the property(ies) subject to this request for the purposes of conducting on-site investigations (e.g., digging and refilling shallow holes) and issuing a jurisdictional determination. I acknowledge that my signature is an affirmation that I possess the requisite property rights to request a jurisdictional determination on the properties subject to this request.

1 Riverwood Drive, Moncks Corner, SC 29461	Begins west of the intersection of Comsee Lane and Langston Drive, Charleston County, SC.
Mailing Address	Property Address / TMS #(s)
kevin.driggers@santeecooper.com	843-761-8000 x 5247
Email Address	Daytime Phone Number
*Signature:	Kevin Driggers Printed Name and Date

*Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.
Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.
Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.
Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an jurisdictional determination cannot be evaluated nor can a jurisdictional determination be issued.

Santee Cooper Johns Island – Queensboro 115kV Line
Charleston County, South Carolina
Photographic Log

PHOTOLOG SHEET
Client: Santee Cooper
Site name: Johns Island – Queensboro 115kV Line
Project: 6250160115
Date: 3/5/2019
Photo #: 1
Photographer: Brett Sexton
Description: View of cleared uplands near the existing Santee Cooper substation, facing south.

Client: Santee Cooper
Site name: Johns Island – Queensboro 115kV Line
Project: 6250160115
Date: 3/5/2019
Photo #: 2
Photographer: Brett Sexton
Description: View of Wetland B at Data Point WB-7, facing south.

Santee Cooper Johns Island – Queensboro 115kV Line
Charleston County, South Carolina
Photographic Log

PHOTOLOG SHEET
Client: Santee Cooper
Site name: Johns Island – Queensboro 115kV Line
Project: 6250160115
Date: 3/5/2019
Photo #: 3
Photographer: Brett Sexton
Description: View of Wetland C at Data Point WC-7, facing southeast.

Client: Santee Cooper
Site name: Johns Island – Queensboro 115kV Line
Project: 6250160115
Date: 3/5/2019
Photo #: 4
Photographer: Brett Sexton
Description: View of Wetland D within the existing transmission line right-of-way, facing south.

Santee Cooper Johns Island – Queensboro 115kV Line
Charleston County, South Carolina
Photographic Log

PHOTOLOG SHEET
Client: Santee Cooper
Site name: Johns Island – Queensboro 115kV Line
Project: 6250160115
Date: 3/5/2019
Photo #: 5
Photographer: Brett Sexton
Description: View of Stream A, facing east.

Client: Santee Cooper
Site name: Johns Island – Queensboro 115kV Line
Project: 6250160115
Date: 3/5/2019
Photo #: 6
Photographer: Brett Sexton
Description: View of Wetland E, facing east.

Santee Cooper Johns Island – Queensboro 115kV Line
Charleston County, South Carolina
Photographic Log

PHOTOLOG SHEET
Client: Santee Cooper
Site name: Johns Island – Queensboro 115kV Line
Project: 6250160115
Date: 3/5/2019
Photo #: 7
Photographer: Brett Sexton
Description: View of Wetland G at Data Point WG-3, facing north.

Client: Santee Cooper
Site name: Johns Island – Queensboro 115kV Line
Project: 6250160115
Date: 3/5/2019
Photo #: 8
Photographer: Brett Sexton
Description: View of Wetland H at Data Point WH-2, facing north.

PHOTOLOG SHEET
Client: Santee Cooper
Site name: Johns Island – Queensboro 115kV Line
Project: 6250160115
Date: 3/5/2019
Photo #: 9
Photographer: Brett Sexton
Description: View of Wetland I at Data Point WI-13, facing southeast.

Client: Santee Cooper
Site name: Johns Island – Queensboro 115kV Line
Project: 6250160115
Date: 3/5/2019
Photo #: 10
Photographer: Brett Sexton
Description: View of Stream B, north of Wetland J, facing southeast.

PHOTOLOG SHEET
Client: Santee Cooper
Site name: Johns Island – Queensboro 115kV Line
Project: 6250160115
Date: 3/5/2019
Photo #: 11
Photographer: Brett Sexton
Description: View of Wetland K, facing south.

Client: Santee Cooper
Site name: Johns Island – Queensboro 115kV Line
Project: 6250160115
Date: 3/5/2019
Photo #: 12
Photographer: Brett Sexton
Description: View of Stream B, north of Wetland L, facing west.

PHOTOLOG SHEET

Client: Santee Cooper

Site name: Johns Island – Queensboro 115kV Line

Project: 6250160115

Date: 3/5/2019

Photo #: 13

Photographer: Brett Sexton

Description: View of Wetland L, at Wetland Data Point DP-1 facing north.

Client: Santee Cooper

Site name: Johns Island – Queensboro 115kV Line

Project: 6250160115

Date: 3/5/2019

Photo #: 14

Photographer: Brett Sexton

Description: View of Wetland N, facing west, near Data Point WN-12

PHOTOLOG SHEET
Client: Santee Cooper
Site name: Johns Island – Queensboro 115kV Line
Project: 6250160115
Date: 3/5/2019
Photo #: 15
Photographer: Brett Sexton
Description: View of Wetland O, facing north towards Open Water 3.

Client: Santee Cooper
Site name: Johns Island – Queensboro 115kV Line
Project: 6250160115
Date: 3/5/2019
Photo #: 16
Photographer: Brett Sexton
Description: View of Wetland O at Rushland Landing Road, facing northwest.

Santee Cooper Johns Island – Queensboro 115kV Line
Charleston County, South Carolina
Photographic Log

PHOTOLOG SHEET
Client: Santee Cooper
Site name: Johns Island – Queensboro 115kV Line
Project: 6250160115
Date: 3/6/2019
Photo #: 17
Photographer: Brett Sexton
Description: View of Open Water 1, facing west.

Prepared by: BWS 11/1/2019
Checked by: BPK 11/19/2019

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line | City/County: Johns Island / Charleston | Sampling Date: 9/26/2019
Applicant/Owner: Santee Cooper | State: SC | Sampling Point: DP1 - Wet
Investigator(s): Brett Sexton | Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat | Local Relief (concave, convex, none): None | Slope (%): 0
Subregion (LRR or MLRA) LRR T | Lat: 32.75394521 | Long: -80.0773654 | Datum: NA
Soil Map Unit Name: Yonges loamy fine sand | NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☑ No ☐
Wetland Hydrology Present? Yes ☑ No ☐
Is the Sampled Area within a wetland? Yes ☑ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☑ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):
Water Table Present? Yes ☑ No ☐ Depth (inches): 1
Saturation Present? Yes ☑ No ☐ Depth (inches): 1
(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology criteria met.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP1 - Wet

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.	*Quercus virginiana*	25	Y	FACU
2.	*Liquidambar styraciflua*	5		FAC
3.				
4.				
5.				
6.				
		30	= Total Cover	
	50% of total cover: 15		20% of total cover: 6	
Sapling Stratum (Plot size: 30 ft)				
1.	*Juniperus virginiana*	30	Y	FACU
2.	*Celtis laevigata*	5		FACW
3.	*Pinus taeda*	3		FAC
4.	*Triadica sebifera*	3		FAC
5.				
6.				
		41	= Total Cover	
	50% of total cover: 20.5		20% of total cover: 8.2	
Shrub Stratum (Plot size: 30 ft)				
1.	*Baccharis angustifolia*	20	Y	FACW
2.	*Sabal minor*	10	Y	FACW
3.	*Triadica sebifera*	5		FAC
4.	*Ligustrum sinense*	5		FAC
5.	*Pinus taeda*	3		FAC
6.				
		43	= Total Cover	
	50% of total cover: 21.5		20% of total cover: 8.6	
Herb Stratum (Plot size: 30 ft)				
1.	*Panicum virgatum*	70	Y	FAC
2.	*Juncus effusus*	5		OBL
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		75	= Total Cover	
	50% of total cover: 37.5		20% of total cover: 15	
Woody Vine Stratum (Plot size: 30 ft)				
1.	*Smilax rotundifolia*	5	Y	FAC
2.	*Toxicodendron radicans*	5	Y	FAC
3.				
4.				
5.				
		10	= Total Cover	
	50% of total cover: 5		20% of total cover: 2	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71% (A/B)

Prevalence Index worksheet:

OBL species	5	x 1 =	5
FACW species	35	x 2 =	70
FAC species	104	x 3 =	312
FACU species	55	x 4 =	220
UPL species	0	x 5 =	0
Column Totals:	199 (A)		607 (B)

Prevalence Index = B/A = 3.1

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☐ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: DP1 - Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/1	95	10YR 3/4	5			sandy loam	redox
0-12	10YR 4/1	95	10YR 4/4	5			sandy loam	redox
12-18+	10YR 4/1	85	10YR 5/6	15			sandy clay loam	redox

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Hydric soil criteria met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line | City/County: Johns Island / Charleston | Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper | State: SC | Sampling Point: DP2-Wet
Investigator(s): Brett Sexton | Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat | Local Relief (concave, convex, none): None | Slope (%): 0
Subregion (LRR or MLRA) LRR T | Lat: 32.75926905 | Long: -80.05038041 | Datum: NA
Soil Map Unit Name: Capers silty clay loam | NWI Classification: E2EM1N
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☑	No ☐	Is the Sampled Area		
Hydric Soil Present?	Yes ☑	No ☐	within a wetland?	Yes ☑	No ☐
Wetland Hydrology Present?	Yes ☑	No ☐			

Remarks: All three indicators are present, area is a wetland
Wetland data point taken within the marshland (Wetland O).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☑ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present?	Yes	☑	No ☐	Depth (inches):	Surface
Water Table Present?	Yes	☑	No ☐	Depth (inches):	Surface
Saturation Present? (includes capillary fringe)	Yes	☑	No ☐	Depth (inches):	Surface

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Hydrology criteria met.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: DP2-Wet

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
6.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Sapling Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
6.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Shrub Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
6.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Herb Stratum	(Plot size: 30 ft)			
1.	*Juncus roemerianus*	65	Y	OBL
2.	*Spartina alterniflora*	35	Y	OBL
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		100 = Total Cover		
	50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
		= Total Cover		
	50% of total cover:	20% of total cover:		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

OBL species	100	x 1 =	100
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		100 (B)

Prevalence Index = B/A = 1.0

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: DP2-Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18+	10YR 2/1	100					Sandy Loam	>70% masked

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☑ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Hydric soil criteria met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line City/County: Johns Island / Charleston Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper State: SC Sampling Point: WA-10 Up
Investigator(s): Brett Sexton Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat Local Relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA) LRR T Lat: 32.73278959 Long: -80.08919378 Datum: NA
Soil Map Unit Name: Stono fine sandy loam NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ o ☐ If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes N ☑ ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☐ No ☑
Wetland Hydrology Present? Yes ☐ No ☑
Is the Sampled Area within a wetland? Yes ☐ No ☑

Remarks: All three wetland indicators are not present, area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____
Water Table Present? Yes ☐ No ☑ Depth (inches): _____
Saturation Present? Yes ☐ No ☑ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ☐ **No** ☑

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WA-10 Up

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
6.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Sapling Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
6.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Shrub Stratum	(Plot size: 30 ft)			
1.	*Triadica sebifera*	5	Y	FAC
2.				
3.				
4.				
5.				
6.				
		5 = Total Cover		
	50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum	(Plot size: 30 ft)			
1.	*Eupatorium capillifolium*	10	Y	FACU
2.	*Carex glaucescens*	3	Y	OBL
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		13 = Total Cover		
	50% of total cover: 6.5	20% of total cover: 2.6		
Woody Vine Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
		= Total Cover		
	50% of total cover:	20% of total cover:		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

OBL species	3	x 1 =	3
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	18 (A)		58 (B)

Prevalence Index = B/A = 3.2

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☐ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WA-10 Up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10 YR 4/1	100					Loamy Sand	<70% coated
6-18+	10YR 4/2	100					Sand	<70% coated

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Hydric soil criteria not met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line City/County: Johns Island / Charleston Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper State: SC Sampling Point: WA-10 Wet
Investigator(s): Brett Sexton Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Local Relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA) LRR T Lat: 32.73278959 Long: -80.08919378 Datum: NA
Soil Map Unit Name: Stono fine sandy loam NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☑ No ☐
Wetland Hydrology Present? Yes ☑ No ☐
Is the Sampled Area within a wetland? Yes ☑ No ☐

Remarks:
All three parameters present, area is a wetland

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☑ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☑ No ☐ Depth (inches): Surface
Water Table Present? Yes ☑ No ☐ Depth (inches): Surface
Saturation Present? Yes ☑ No ☐ Depth (inches): Surface
(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Adjacent to bottomland hardwood habitat.
Hydrology criteria met.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WA-10 Wet

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
6.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Sapling Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
6.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Shrub Stratum	(Plot size: 30 ft)			
1.	*Triadica sebifera*	10	Y	FAC
2.				
3.				
4.				
5.				
6.				
		10 = Total Cover		
	50% of total cover: 5	20% of total cover: 2		
Herb Stratum	(Plot size: 30 ft)			
1.	*Scirpus cyperinus*	15	Y	OBL
2.	*Ludwigia alternifolia*	10	Y	OBL
3.	*Typha latifolia*	10	Y	OBL
4.	*Eupatorium capillifolium*	5		FACU
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		40 = Total Cover		
	50% of total cover: 20	20% of total cover: 8		
Woody Vine Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
		= Total Cover		
	50% of total cover:	20% of total cover:		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

OBL species	35	x 1 =	35
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	50 (A)		85 (B)

Prevalence Index = B/A = 1.7

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WA-10 Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18+	10YR 3/1	100					Loamy sand	100% coated

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☑ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Hydric soil criteria met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line City/County: Johns Island / Charleston Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper State: SC Sampling Point: WB-7 Up
Investigator(s): Brett Sexton Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat Local Relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA) LRR T Lat: 32.73444893 Long: -80.08936624 Datum: NA
Soil Map Unit Name: Yonges loamy fine sand NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ o ☐ If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes N ☑ ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☐ No ☑
Wetland Hydrology Present? Yes ☐ No ☑
Is the Sampled Area within a wetland? Yes ☐ No ☑

Remarks: All three wetland indicators are not present, area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____
Water Table Present? Yes ☐ No ☑ Depth (inches): _____
Saturation Present? Yes ☐ No ☑ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ☐ **No** ☑

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WB-7 Up

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.	*Pinus taeda*	30	Y	FAC
2.	*Magnolia grandiflora*	25	Y	FAC
3.	*Quercus lyrata*	10		OBL
4.				
5.				
6.				
		65	= Total Cover	
	50% of total cover: 32.5	20% of total cover:	13	
Sapling Stratum (Plot size: 30 ft)				
1.	*Fagus grandifolia*	35	Y	FACU
2.	*Carpinus caroliniana*	25	Y	FAC
3.	*Magnolia grandiflora*	10		FAC
4.				
5.				
6.				
		70	= Total Cover	
	50% of total cover: 35	20% of total cover:	14	
Shrub Stratum (Plot size: 30 ft)				
1.	*Sabal minor*	10	Y	FACW
2.				
3.				
4.				
5.				
6.				
		10	= Total Cover	
	50% of total cover: 5	20% of total cover:	2	
Herb Stratum (Plot size: 30 ft)				
1.	*Woodwardia areolata*	20	Y	OBL
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		20	= Total Cover	
	50% of total cover: 10	20% of total cover:	4	
Woody Vine Stratum (Plot size: 30 ft)				
1.	*Vitis rotundifolia*	20	Y	FAC
2.	*Smilax laurifolia*	5	Y	FACW
3.				
4.				
5.				
		25	= Total Cover	
	50% of total cover: 12.5	20% of total cover:	5	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 88% (A/B)

Prevalence Index worksheet:

OBL species	30	x 1 =	30
FACW species	15	x 2 =	30
FAC species	110	x 3 =	330
FACU species	35	x 4 =	140
UPL species	0	x 5 =	0
Column Totals:	190 (A)		530 (B)

Prevalence Index = B/A = 2.8

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WB-7 Up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10 YR 4/1	100					Loamy Sand	<70% masked
10-18+	10YR 4/2	100					Sand	<70% masked

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Hydric soil criteria not met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line City/County: Johns Island / Charleston Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper State: SC Sampling Point: WB-7 Wet
Investigator(s): Brett Sexton Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat Local Relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA) LRR T Lat: 32.73444893 Long: -80.08936624 Datum: NA
Soil Map Unit Name: Yonges loamy fine sand NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☑ No ☐
Wetland Hydrology Present? Yes ☑ No ☐
Is the Sampled Area within a wetland? Yes ☑ No ☐

Remarks:
All three indicators are present, area is a wetland

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☑ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):
Water Table Present? Yes ☐ No ☑ Depth (inches):
Saturation Present? Yes ☑ No ☐ Depth (inches): 4 inches
(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Adjacent to bottomland hardwood habitat.
Hydrology criteria met.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WB-7 Wet

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.	*Magnolia grandiflora*	60	Y	FAC
2.	*Quercus michauxii*	15		FACW
3.	*Quercus nigra*	10		FAC
4.	*Liquidambar styraciflua*	10		FAC
5.				
6.				
		95	= Total Cover	
	50% of total cover: 47.5	20% of total cover: 19		
Sapling Stratum (Plot size: 30 ft)				
1.	*Carpinus caroliniana*	40	Y	FAC
2.	*Fagus grandifolia*	10	Y	FACU
3.				
4.				
5.				
6.				
		50	= Total Cover	
	50% of total cover: 25	20% of total cover: 10		
Shrub Stratum (Plot size: 30 ft)				
1.	*Sabal minor*	35	Y	FACW
2.	*Quercus nigra*	5		FAC
3.				
4.				
5.				
6.				
		40	= Total Cover	
	50% of total cover: 20	20% of total cover: 8		
Herb Stratum (Plot size: 30 ft)				
1.	*Woodwardia areolata*	15	Y	OBL
2.	*Scirpus cyperinus*	15	Y	OBL
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		30	= Total Cover	
	50% of total cover: 15	20% of total cover: 6		
Woody Vine Stratum (Plot size: 30 ft)				
1.	*Vitis rotundifolia*	10	Y	FAC
2.	*Gelsemium sempervirens*	5	Y	FAC
3.				
4.				
5.				
		15	= Total Cover	
	50% of total cover: 7.5	20% of total cover: 3		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 88% (A/B)

Prevalence Index worksheet:

OBL species	30	x 1 =	30
FACW species	50	x 2 =	100
FAC species	140	x 3 =	420
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	230 (A)		590 (B)

Prevalence Index = B/A = 2.6

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WB-7 Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/1	100					Loamy sand	100% coated
10-14	10YR 4/1	100					Loamy sand	100% coated
14-18+	10YR 4/2	95	10YR 5/4	5	C	M	Loamy sand	

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☑ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Hydric soil criteria met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line City/County: Johns Island / Charleston Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper State: SC Sampling Point: WC-7 Up
Investigator(s): Brendon Kelly / Brett Sexton Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat Local Relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA) LRR T Lat: 32.7373968 Long: -80.0894689 Datum: NA
Soil Map Unit Name: Yonges loamy fine sand NWI Classification: PFO1/4A
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ o ☐ If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes N ☑ ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☐ No ☑
Wetland Hydrology Present? Yes ☐ No ☑
Is the Sampled Area within a wetland? Yes ☐ No ☑

Remarks: All three wetland indicators are not present, area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____
Water Table Present? Yes ☐ No ☑ Depth (inches): _____
Saturation Present? Yes ☐ No ☑ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ☐ **No** ☑

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WC-7 Up

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.	*Pinus taeda*	40	Y	FAC
2.	*Quercus nigra*	25	Y	FAC
3.	*Magnolia virginiana*	20	Y	FACW
4.				
5.				
6.				
		85	= Total Cover	
	50% of total cover: 42.5		20% of total cover: 17	
Sapling Stratum (Plot size: 30 ft)				
1.	*Quercus nigra*	50	Y	FAC
2.	*Carpinus caroliniana*	5		FAC
3.				
4.				
5.				
6.				
		55	= Total Cover	
	50% of total cover: 27.5		20% of total cover: 11	
Shrub Stratum (Plot size: 30 ft)				
1.	*Sabal minor*	5	Y	FACW
2.				
3.				
4.				
5.				
6.				
		5	= Total Cover	
	50% of total cover: 2.5		20% of total cover: 1	
Herb Stratum (Plot size: 30 ft)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
			= Total Cover	
	50% of total cover:		20% of total cover:	
Woody Vine Stratum (Plot size: 30 ft)				
1.	*Gelsemium sempervirens*	10	Y	FAC
2.				
3.				
4.				
5.				
		10	= Total Cover	
	50% of total cover: 5		20% of total cover: 2	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	130	x 3 =	390
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	155 (A)		440 (B)

Prevalence Index = B/A = 2.8

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WC-7 Up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	100					Loamy Sand	<70% masked
8-18+	10YR 4/2	100					Sand	<70% masked

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Hydric soil criteria not met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line | City/County: Johns Island / Charleston | Sampling Date: 3/5/2019

Applicant/Owner: Santee Cooper | State: SC | Sampling Point: WC-7 Wet

Investigator(s): Brendon Kelly / Brett Sexton | Section, Township, Range: NA

Landform: (hillslope, terrace, etc.) Flat | Local Relief (concave, convex, none): None | Slope (%): 0

Subregion (LRR or MLRA) LRR T | Lat: 32.7373968 | Long: -80.0894689 | Datum: NA

Soil Map Unit Name: Yonges loamy fine sand | NWI Classification: PFO1/4A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☑	No ☐	Is the Sampled Area		
Hydric Soil Present?	Yes ☑	No ☐	within a wetland?	Yes ☑	No ☐
Wetland Hydrology Present?	Yes ☑	No ☐			

Remarks:

All three wetland criteria are met, area is a wetland

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☑ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):		
Water Table Present?	Yes ☐	No ☑	Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches):	4 inches	

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Adjacent to bottomland hardwood habitat.

Hydrology criteria met.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WC-7 Wet

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.	*Pinus taeda*	20	Y	FAC
2.	*Magnolia grandiflora*	10	Y	FAC
3.	*Quercus nigra*	10	Y	FAC
4.				
5.				
6.				
		40	= Total Cover	
	50% of total cover: 20	20% of total cover: 8		
Sapling Stratum (Plot size: 30 ft)				
1.	*Carpinus caroliniana*	15	Y	FAC
2.	*Magnolia grandiflora*	15	Y	FAC
3.	*Quercus nigra*	10	Y	FAC
4.	*Quercus lyrata*	5		OBL
5.				
6.				
		45	= Total Cover	
	50% of total cover: 22.5	20% of total cover: 9		
Shrub Stratum (Plot size: 30 ft)				
1.	*Sabal minor*	15	Y	FACW
2.	*Magnolia grandiflora*	5	Y	FAC
3.				
4.				
5.				
6.				
		20	= Total Cover	
	50% of total cover: 10	20% of total cover: 4		
Herb Stratum (Plot size: 30 ft)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
			= Total Cover	
	50% of total cover:	20% of total cover:		
Woody Vine Stratum (Plot size: 30 ft)				
1.	*Vitis rotundifolia*	10	Y	FAC
2.				
3.				
4.				
5.				
		10	= Total Cover	
	50% of total cover: 5	20% of total cover: 2		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 9 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

OBL species	5	x 1 =	5
FACW species	15	x 2 =	30
FAC species	95	x 3 =	285
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	115 (A)		320 (B)

Prevalence Index = B/A = 2.8

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☐ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WC-7 Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100					Loamy sand	100% masked
3-10	10YR 4/1	90	10YR 4/4	10	C	M	Sandy clay loam	
10-18+	10YR 5/2	90	10YR 4/4	10	C	M	Sandy clay loam	

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Hydric soil criteria met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line City/County: Johns Island / Charleston Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper State: SC Sampling Point: WD-7 Up
Investigator(s): Brendon Kelly / Brett Sexton Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat Local Relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA) LRR T Lat: 32.73998056 Long: -80.089591 Datum: NA
Soil Map Unit Name: Charleston loamy fine sand NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ o ☐ If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes N ☑ ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☐ No ☑
Wetland Hydrology Present? Yes ☐ No ☑
Is the Sampled Area within a wetland? Yes ☐ No ☑

Remarks: All three wetland indicators are not present, area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____
Water Table Present? Yes ☐ No ☑ Depth (inches): _____
Saturation Present? Yes ☐ No ☑ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ☐ **No** ☑

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WD-7 Up

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
6.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Sapling Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
6.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Shrub Stratum	(Plot size: 30 ft)			
1.	*Pinus taeda*	10	Y	FAC
2.				
3.				
4.				
5.				
6.				
		10 = Total Cover		
	50% of total cover: 5	20% of total cover: 2		
Herb Stratum	(Plot size: 30 ft)			
1.	*Andropogon virginicus*	70	Y	FAC
2.	*Eupatorium capillifolium*	10		FACU
3.	*Dichanthelium scoparium*	10		FACW
4.	*Pseudognaphalium stramineum*	5		FAC
5.	*Carex lurida*	5		OBL
6.				
7.				
8.				
9.				
10.				
11.				
		100 = Total Cover		
	50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum	(Plot size: 30 ft)			
1.	*Gelsemium sempervirens*	10	Y	FAC
2.				
3.				
4.				
5.				
		10 = Total Cover		
	50% of total cover: 5	20% of total cover: 2		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

OBL species	5	x 1 =	5
FACW species	10	x 2 =	20
FAC species	95	x 3 =	285
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	120 (A)		350 (B)

Prevalence Index = B/A = 2.9

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WD-7 Up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					Loamy Sand	<70% masked
6-10	10YR 4/2	100					Loamy Sand	<70% masked
10-18+	10YR 4/3	100					Loamy Sand	

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Hydric soil criteria not met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line City/County: Johns Island / Charleston Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper State: SC Sampling Point: WD-7 Wet
Investigator(s): Brendon Kelly / Brett Sexton Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat Local Relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA) LRR T Lat: 32.73998056 Long: -80.089591 Datum: NA
Soil Map Unit Name: Charleston loamy fine sand NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☑ No ☐
Wetland Hydrology Present? Yes ☑ No ☐
Is the Sampled Area within a wetland? Yes ☑ No ☐

Remarks:
All three wetland indicators are present, area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____
Water Table Present? Yes ☐ No ☑ Depth (inches): _____
Saturation Present? Yes ☑ No ☐ Depth (inches): 4 inches
(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Taken within transmission line right-of-way.
Hydrology criteria met.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WD-7 Wet

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.				
2.				
3.				
4.				
5.				
6.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Sapling Stratum (Plot size: 30 ft)				
1.	*Quercus nigra*	15	Y	FAC
2.				
3.				
4.				
5.				
6.				
		15 = Total Cover		
	50% of total cover: 7.5	20% of total cover: 3		
Shrub Stratum (Plot size: 30 ft)				
1.	*Morella cerifera*	25	Y	FAC
2.	*Pinus taeda*	10	Y	FAC
3.				
4.				
5.				
6.				
		35 = Total Cover		
	50% of total cover: 17.5	20% of total cover: 7		
Herb Stratum (Plot size: 30 ft)				
1.	*Andropogon virginicus*	25	Y	FAC
2.	*Eupatorium capillifolium*	10		FACU
3.	*Dichanthelium scoparium*	10		FACW
4.	*Pseudognaphalium stramineum*	5		FAC
5.	*Carex lurida*	5		OBL
6.				
7.				
8.				
9.				
10.				
11.				
		55 = Total Cover		
	50% of total cover: 27.5	20% of total cover: 11		
Woody Vine Stratum (Plot size: 30 ft)				
1.	*Gelsemium sempervirens*	15	Y	FAC
2.				
3.				
4.				
5.				
		15 = Total Cover		
	50% of total cover: 7.5	20% of total cover: 3		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

OBL species	5	x 1 =	5
FACW species	10	x 2 =	20
FAC species	95	x 3 =	285
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	120 (A)		350 (B)

Prevalence Index = B/A = 2.9

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WD-7 Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					Loamy sand	100% masked
6-10	10YR 4/2	90	10YR 4/4	10	C	M	Loamy sand	
10-18+	10YR 5/2	70	10YR 5/4	30	C	M	Loamy sand	

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☑ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Hydric soil criteria met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line City/County: Johns Island / Charleston Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper State: SC Sampling Point: WE-5 Up
Investigator(s): Brendon Kelly / Brett Sexton Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat Local Relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA) LRR T Lat: 32.74765116 Long: -80.08917524 Datum: NA
Soil Map Unit Name: Wadmalaw fine sandy loam NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ o ☐ If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes N ☑ ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☐ No ☑
Wetland Hydrology Present? Yes ☐ No ☑
Is the Sampled Area within a wetland? Yes ☐ No ☑

Remarks: All three wetland indicators are not present, area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____
Water Table Present? Yes ☐ No ☑ Depth (inches): _____
Saturation Present? Yes ☐ No ☑ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ☐ **No** ☑

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WE-5 Up

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.	*Pinus taeda*	30	Y	FAC
2.	*Quercus laurifolia*	15	Y	FACW
3.	*Magnolia grandiflora*	10		FAC
4.	*Liquidambar styraciflua*	10		FAC
5.	*Quercus nigra*	10		FAC
6.				
		75	= Total Cover	
	50% of total cover: 37.5		20% of total cover: 15	
Sapling Stratum (Plot size: 30 ft)				
1.	*Magnolia grandiflora*	15	Y	FAC
2.				
3.				
4.				
5.				
6.				
		15	= Total Cover	
	50% of total cover: 7.5		20% of total cover: 3	
Shrub Stratum (Plot size: 30 ft)				
1.	*Sabal minor*	5	Y	FACW
2.				
3.				
4.				
5.				
6.				
		5	= Total Cover	
	50% of total cover: 2.5		20% of total cover: 1	
Herb Stratum (Plot size: 30 ft)				
1.	*Dichanthelium scoparium*	10		FACW
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		10	= Total Cover	
	50% of total cover: 5		20% of total cover: 2	
Woody Vine Stratum (Plot size: 30 ft)				
1.	*Lonicera japonica*	5	Y	FACU
2.				
3.				
4.				
5.				
		5	= Total Cover	
	50% of total cover: 2.5		20% of total cover: 1	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index worksheet:

OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	75	x 3 =	225
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	110 (A)		305 (B)

Prevalence Index = B/A = 2.8

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☐ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WE-5 Up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/2	100					Loamy Sand	<70% masked
12-18+	10YR 2/1	100					Loamy Sand	<70% masked

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Hydric soil criteria not met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line | City/County: Johns Island / Charleston | Sampling Date: 3/5/2019

Applicant/Owner: Santee Cooper | State: SC | Sampling Point: WE-5 Wet

Investigator(s): Brendon Kelly / Brett Sexton | Section, Township, Range: NA

Landform: (hillslope, terrace, etc.) Flat | Local Relief (concave, convex, none): None | Slope (%): 0

Subregion (LRR or MLRA) LRR T | Lat: 32.74765116 | Long: -80.08917524 | Datum: NA

Soil Map Unit Name: Wadmalaw fine sandy loam | NWI Classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☑	No ☐	Is the Sampled Area		
Hydric Soil Present?	Yes ☑	No ☐	within a wetland?	Yes ☑	No ☐
Wetland Hydrology Present?	Yes ☑	No ☐			

Remarks:

All three indicators are present, area is a wetland

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present?	Yes	☑	No ☐	Depth (inches):	Surface
Water Table Present?	Yes	☑	No ☐	Depth (inches):	Surface
Saturation Present? (includes capillary fringe)	Yes	☑	No ☐	Depth (inches):	Surface

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology criteria met.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WE-5 Wet

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.	*Magnolia grandiflora*	40	Y	FAC
2.	*Ulmus americana*	20	Y	FAC
3.	*Quercus shumardii*	20	Y	FAC
4.	*Quercus michauxii*	10		FACW
5.	*Celtis laevigata*	5		FACW
6.				
		95	= Total Cover	
	50% of total cover: 47.5	20% of total cover:	19	
Sapling Stratum (Plot size: 30 ft)				
1.	*Ilex vomitoria*	20	Y	FAC
2.	*Magnolia grandiflora*	10	Y	FAC
3.				
4.				
5.				
6.				
		30	= Total Cover	
	50% of total cover: 15	20% of total cover:	6	
Shrub Stratum (Plot size: 30 ft)				
1.	*Ilex vomitoria*	15	Y	FAC
2.	*Morella cerifera*	15	Y	FAC
3.	*Sabal minor*	10	Y	FACW
4.				
5.				
6.				
		40	= Total Cover	
	50% of total cover: 20	20% of total cover:	8	
Herb Stratum (Plot size: 30 ft)				
1.	*Athyrium asplenioides*	30	Y	FAC
2.	*Woodwardia areolata*	20	Y	OBL
3.	*Carex lurida*	15	Y	OBL
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		65	= Total Cover	
	50% of total cover: 32.5	20% of total cover:	13	
Woody Vine Stratum (Plot size: 30 ft)				
1.	*Smilax laurifolia*	15	Y	FACW
2.				
3.				
4.				
5.				
		15	= Total Cover	
	50% of total cover: 7.5	20% of total cover:	3	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 12 (A)

Total Number of Dominant Species Across All Strata: 12 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

OBL species	35	x 1 =	35
FACW species	40	x 2 =	80
FAC species	170	x 3 =	510
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	245 (A)		625 (B)

Prevalence Index = B/A = 2.6

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WE-5 Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/1	100					Loamy sand	100% masked
8-18+	10YR 3/1	100					Loamy sand	100% masked

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☑ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Hydric soil criteria met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line City/County: Johns Island / Charleston Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper State: SC Sampling Point: WG-3 Up
Investigator(s): Brendon Kelly / Brett Sexton Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat Local Relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA) LRR T Lat: 32.74880386 Long: -80.08922587 Datum: NA
Soil Map Unit Name: Kiawah loamy fine sand NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ o ☐ If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes N ☑ ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☐ No ☑
Wetland Hydrology Present? Yes ☐ No ☑
Is the Sampled Area within a wetland? Yes ☐ No ☑

Remarks: All three wetland indicators are not present, area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____
Water Table Present? Yes ☐ No ☑ Depth (inches): _____
Saturation Present? Yes ☐ No ☑ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ☐ **No** ☑

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WG-3 Up

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.				
2.				
3.				
4.				
5.				
6.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Sapling Stratum (Plot size: 30 ft)				
1.	*Quercus nigra*	20	Y	FAC
2.	*Liquidambar styraciflua*	15	Y	FAC
3.	*Magnolia grandiflora*	5		FAC
4.				
5.				
6.				
		40 = Total Cover		
	50% of total cover: 20	20% of total cover: 8		
Shrub Stratum (Plot size: 30 ft)				
1.	*Morella cerifera*	10	Y	FAC
2.	*Vaccinium corymbosum*	5	Y	FACW
3.				
4.				
5.				
6.				
		15 = Total Cover		
	50% of total cover: 7.5	20% of total cover: 3		
Herb Stratum (Plot size: 30 ft)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Woody Vine Stratum (Plot size: 30 ft)				
1.	*Gelsemium sempervirens*	20	Y	FAC
2.				
3.				
4.				
5.				
		20 = Total Cover		
	50% of total cover: 10	20% of total cover: 4		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	70	x 3 =	210
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	75 (A)		220 (B)

Prevalence Index = B/A = 2.9

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☐ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WG-3 Up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/2	100					Loamy Sand	<70% masked
8-18+	10YR 3/1	100					Loamy Sand	<70% masked

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Hydric soil criteria not met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line | City/County: Johns Island / Charleston | Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper | State: SC | Sampling Point: WG-3 Wet
Investigator(s): Brendon Kelly / Brett Sexton | Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat | Local Relief (concave, convex, none): None | Slope (%): 0
Subregion (LRR or MLRA) LRR T | Lat: 32.7488 | Long: -80.0892259 | Datum: NA
Soil Map Unit Name: Kiawah loamy fine sand | NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☑ No ☐
Wetland Hydrology Present? Yes ☑ No ☐
Is the Sampled Area within a wetland? Yes ☑ No ☐

Remarks:
All three indicators are present, area is a wetland

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____
Water Table Present? Yes ☐ No ☑ Depth (inches): _____
Saturation Present? Yes ☑ No ☐ Depth (inches): Surface
(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Hydrology criteria met.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WG-3 Wet

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.	*Pinus taeda*	70	Y	FAC
2.	*Quercus nigra*	15		FAC
3.	*Liquidambar styraciflua*	5		FAC
4.				
5.				
6.				
		90	= Total Cover	
	50% of total cover: 45		20% of total cover: 18	
Sapling Stratum (Plot size: 30 ft)				
1.	*Quercus nigra*	40	Y	FAC
2.	*Magnolia grandiflora*	5		FAC
3.				
4.				
5.				
6.				
		45	= Total Cover	
	50% of total cover: 22.5		20% of total cover: 9	
Shrub Stratum (Plot size: 30 ft)				
1.	*Vaccinium corymbosum*	15	Y	FACW
2.	*Magnolia grandiflora*	5		FAC
3.	*Morella cerifera*	5		FAC
4.	*Quercus virginiana*	3		FACU
5.				
6.				
		28	= Total Cover	
	50% of total cover: 14		20% of total cover: 5.6	
Herb Stratum (Plot size: 30 ft)				
1.	*Chasmanthium laxum*	15	Y	FACW
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		15	= Total Cover	
	50% of total cover: 7.5		20% of total cover: 3	
Woody Vine Stratum (Plot size: 30 ft)				
1.	*Gelsemium sempervirens*	10	Y	FAC
2.				
3.				
4.				
5.				
		10	= Total Cover	
	50% of total cover: 5		20% of total cover: 2	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	155	x 3 =	465
FACU species	3	x 4 =	12
UPL species	0	x 5 =	0
Column Totals:	188 (A)		537 (B)

Prevalence Index = B/A = 2.9

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WG-3 Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/1	100					Loamy sand	100% masked
9-14	10YR 4/2	97	10YR 5/8	3	C	M	Loamy sand	
10-18+	10YR 5/2	95	10YR 5/8	5	C	M	Loamy sand	

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☑ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Hydric soil criteria met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line City/County: Johns Island / Charleston Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper State: SC Sampling Point: WH-2 Up
Investigator(s): Brendon Kelly / Brett Sexton Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat Local Relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA) LRR T Lat: 32.75487438 Long: -80.08854914 Datum: NA
Soil Map Unit Name: Water NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ o ☐ If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes N ☑ ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☐ No ☑
Wetland Hydrology Present? Yes ☐ No ☑
Is the Sampled Area within a wetland? Yes ☐ No ☑

Remarks: All three wetland indicators are not present, area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____
Water Table Present? Yes ☐ No ☑ Depth (inches): _____
Saturation Present? Yes ☐ No ☑ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ☐ **No** ☑

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WH-2 Up

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.	*Pinus taeda*	70	Y	FAC
2.	*Quercus nigra*	25		FAC
3.				
4.				
5.				
6.				
		95	= Total Cover	
	50% of total cover: 47.5		20% of total cover: 19	
Sapling Stratum (Plot size: 30 ft)				
1.	*Quercus nigra*	40	Y	FAC
2.				
3.				
4.				
5.				
6.				
		40	= Total Cover	
	50% of total cover: 20		20% of total cover: 8	
Shrub Stratum (Plot size: 30 ft)				
1.	*Morella cerifera*	35	Y	FAC
2.	*Ilex glabra*	35	Y	FACW
3.	*Magnolia grandiflora*	15		FAC
4.	*Vaccinium corymbosum*	10		FACW
5.				
6.				
		95	= Total Cover	
	50% of total cover: 47.5		20% of total cover: 19	
Herb Stratum (Plot size: 30 ft)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
			= Total Cover	
	50% of total cover:		20% of total cover:	
Woody Vine Stratum (Plot size: 30 ft)				
1.				
2.				
3.				
4.				
5.				
			= Total Cover	
	50% of total cover:		20% of total cover:	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

OBL species	0	x 1 =	0
FACW species	45	x 2 =	90
FAC species	185	x 3 =	555
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	230 (A)		645 (B)

Prevalence Index = B/A = 2.8

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☐ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WH-2 Up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100					loamy sand	<70% coated
10-18	10YR 3/1	100					loamy sand	no redox

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Hydric soil criteria not met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line | City/County: Johns Island / Charleston | Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper | State: SC | Sampling Point: WH-2 Wet
Investigator(s): Brendon Kelly / Brett Sexton | Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat | Local Relief (concave, convex, none): None | Slope (%): 0
Subregion (LRR or MLRA) LRR T | Lat: 32.75487 | Long: -80.0885491 | Datum: NA
Soil Map Unit Name: Water | NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☑ No ☐
Wetland Hydrology Present? Yes ☑ No ☐
Is the Sampled Area within a wetland? Yes ☑ No ☐

Remarks:
All three indicators are present, area is a wetland

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____
Water Table Present? Yes ☐ No ☑ Depth (inches): _____
Saturation Present? Yes ☑ No ☐ Depth (inches): 4 inches
(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Hydrology criteria met.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WH-2 Wet

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.	*Pinus taeda*	70	Y	FAC
2.	*Quercus nigra*	25	Y	FAC
3.				
4.				
5.				
6.				
		95	= Total Cover	
	50% of total cover: 47.5		20% of total cover: 19	
Sapling Stratum (Plot size: 30 ft)				
1.	*Quercus nigra*	40	Y	FAC
2.				
3.				
4.				
5.				
6.				
		40	= Total Cover	
	50% of total cover: 20		20% of total cover: 8	
Shrub Stratum (Plot size: 30 ft)				
1.	*Morella cerifera*	35	Y	FAC
2.	*Magnolia grandiflora*	15	Y	FAC
3.				
4.				
5.				
6.				
		50	= Total Cover	
	50% of total cover: 25		20% of total cover: 10	
Herb Stratum (Plot size: 30 ft)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
			= Total Cover	
	50% of total cover:		20% of total cover:	
Woody Vine Stratum (Plot size: 30 ft)				
1.				
2.				
3.				
4.				
5.				
			= Total Cover	
	50% of total cover:		20% of total cover:	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	185	x 3 =	555
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	185 (A)		555 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WH-2 Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					Loamy sand	>70% coated
6-18+	10YR 3/1	100					Loamy sand	coated

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☑ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Hydric soil criteria met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line City/County: Johns Island / Charleston Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper State: SC Sampling Point: WI-13 Up
Investigator(s): Brendon Kelly / Brett Sexton Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat Local Relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA) LRR T Lat: 32.75691594 Long: -80.08684125 Datum: NA
Soil Map Unit Name: Wando loamy fine sand, 0 to 6 percent slopes NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ o ☐ If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes N ☑ ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☐ No ☑
Wetland Hydrology Present? Yes ☐ No ☑
Is the Sampled Area within a wetland? Yes ☐ No ☑

Remarks: All three wetland indicators are not present, area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____
Water Table Present? Yes ☐ No ☑ Depth (inches): _____
Saturation Present? Yes ☐ No ☑ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ☐ **No** ☑

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WI-13 Up

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.	*Quercus virginiana*	60	Y	FACU
2.	*Pinus taeda*	25	Y	FAC
3.	*Quercus nigra*	10		FAC
4.				
5.				
6.				
		95	= Total Cover	
	50% of total cover: 47.5		20% of total cover: 19	
Sapling Stratum (Plot size: 30 ft)				
1.				
2.				
3.				
4.				
5.				
6.				
			= Total Cover	
	50% of total cover:		20% of total cover:	
Shrub Stratum (Plot size: 30 ft)				
1.	*Morella cerifera*	40	Y	FAC
2.				
3.				
4.				
5.				
6.				
		40	= Total Cover	
	50% of total cover: 20		20% of total cover: 8	
Herb Stratum (Plot size: 30 ft)				
1.	*Rubus argutus*	5	Y	FAC
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		5	= Total Cover	
	50% of total cover: 2.5		20% of total cover: 1	
Woody Vine Stratum (Plot size: 30 ft)				
1.				
2.				
3.				
4.				
5.				
			= Total Cover	
	50% of total cover:		20% of total cover:	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	80	x 3 =	240
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	140 (A)		480 (B)

Prevalence Index = B/A = 3.4

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☐ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WI-13 Up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100					loamy sand	< 70% coated
10-14	10YR 4/2	100					loamy sand	no redox
14-18+	10YR 4/3	100					loamy sand	

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Hydric soil criteria not met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line | City/County: Johns Island / Charleston | Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper | State: SC | Sampling Point: WI-13 Wet
Investigator(s): Brendon Kelly / Brett Sexton | Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat | Local Relief (concave, convex, none): None | Slope (%): 0
Subregion (LRR or MLRA) LRR T | Lat: 32.75692 | Long: -80.0868413 | Datum: NA
Soil Map Unit Name: Wando loamy fine sand, 0 to 6 percent slopes | NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☑	No ☐	Is the Sampled Area		
Hydric Soil Present?	Yes ☑	No ☐	within a wetland?	Yes ☑	No ☐
Wetland Hydrology Present?	Yes ☑	No ☐			

Remarks:
All three indicators are present, area is a wetland

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present?	Yes	☐	No	☑	Depth (inches):
Water Table Present?	Yes	☐	No	☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	☐	No	☑	Depth (inches):

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Hydrology criteria met.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WI-13 Wet

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
6.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Sapling Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
6.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Shrub Stratum	(Plot size: 30 ft)			
1.	*Morella cerifera*	70	Y	FAC
2.				
3.				
4.				
5.				
6.				
		70 = Total Cover		
	50% of total cover: 35	20% of total cover: 14		
Herb Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Woody Vine Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
		= Total Cover		
	50% of total cover:	20% of total cover:		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	70	x 3 =	210
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	70 (A)		210 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WI-13 Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					loamy sand	>70% coated
6-18+	10YR 3/1	100					loamy sand	100% coated

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☑ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Hydric soil criteria met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line City/County: Johns Island / Charleston Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper State: SC Sampling Point: WJ-2 Up
Investigator(s): Brendon Kelly / Brett Sexton Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat Local Relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA) LRR T Lat: 32.75825841 Long: -80.08564654 Datum: NA
Soil Map Unit Name: Wando loamy fine sand, 0 to 6 percent slopes NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ o ☐ If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☑ significantly disturbed? Are "Normal Circumstances" present? Yes N ☑ ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☐ No ☑
Wetland Hydrology Present? Yes ☐ No ☑
Is the Sampled Area within a wetland? Yes ☐ No ☑

Remarks: All three wetland indicators are not present, area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____
Water Table Present? Yes ☐ No ☑ Depth (inches): _____
Saturation Present? Yes ☐ No ☑ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ☐ **No** ☑

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WJ-2 Up

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.	*Quercus nigra*	25	Y	FAC
2.	*Acer rubrum*	15	Y	FAC
3.	*Liquidambar styraciflua*	15	Y	FAC
4.	*Quercus michauxii*	10		FACW
5.				
6.				
		65	= Total Cover	
	50% of total cover: 32.5	20% of total cover:	13	
Sapling Stratum (Plot size: 30 ft)				
1.	*Quercus nigra*	15	Y	FAC
2.	*Quercus laurifolia*	5		FACW
3.	*Magnolia grandiflora*	5		FAC
4.				
5.				
6.				
		25	= Total Cover	
	50% of total cover: 12.5	20% of total cover:	5	
Shrub Stratum (Plot size: 30 ft)				
1.	*Ligustrum sinense*	15	Y	FAC
2.	*Morella cerifera*	15	Y	FAC
3.	*Magnolia virginiana*	10		FACW
4.	*Quercus nigra*	10		FAC
5.				
6.				
		50	= Total Cover	
	50% of total cover: 25	20% of total cover:	10	
Herb Stratum (Plot size: 30 ft)				
1.	*Galium aparine*	30	Y	FACU
2.	*Mitchella repens*	10		FACU
3.	*Hexastylis arifolia*	10		FAC
4.	*Dichanthelium scoparium*	10		FACW
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		60	= Total Cover	
	50% of total cover: 30	20% of total cover:	12	
Woody Vine Stratum (Plot size: 30 ft)				
1.	*Smilax bona-nox*	10	Y	FAC
2.	*Bignonia capreolata*	10	Y	FAC
3.	*Lonicera japonica*	10	Y	FACU
4.				
5.				
		30	= Total Cover	
	50% of total cover: 15	20% of total cover:	6	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index worksheet:

OBL species	0	x 1 =	0
FACW species	35	x 2 =	70
FAC species	145	x 3 =	435
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	230 (A)		705 (B)

Prevalence Index = B/A = 3.1

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☐ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WJ-2 Up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	100					sand	<70% coated
6-12	10YR 2/1	100					sand	<70% coated
12-18+	10YR 4/1	100					sand	<70% coated

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Hydric soil criteria not met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line City/County: Johns Island / Charleston Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper State: SC Sampling Point: WJ-2 Wet
Investigator(s): Brendon Kelly / Brett Sexton Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat Local Relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA) LRR T Lat: 32.75826 Long: -80.085647 Datum: NA
Soil Map Unit Name: Wando loamy fine sand, 0 to 6 percent slopes NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☑ No ☐
Wetland Hydrology Present? Yes ☑ No ☐
Is the Sampled Area within a wetland? Yes ☑ No ☐

Remarks: All three wetland indicators are present

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____
Water Table Present? Yes ☐ No ☑ Depth (inches): _____
Saturation Present? Yes ☐ No ☑ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ☑ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: 25 ft from canal

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WJ-2 Wet

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.	*Quercus nigra*	25	Y	FAC
2.	*Acer rubrum*	15	Y	FAC
3.	*Liquidambar styraciflua*	15	Y	FAC
4.	*Quercus michauxii*	10		FACW
5.				
6.				
		65	= Total Cover	
	50% of total cover: 32.5	20% of total cover:	13	
Sapling Stratum (Plot size: 30 ft)				
1.	*Quercus nigra*	15	Y	FAC
2.	*Quercus laurifolia*	5		FACW
3.	*Magnolia grandiflora*	5		FAC
4.				
5.				
6.				
		25	= Total Cover	
	50% of total cover: 12.5	20% of total cover:	5	
Shrub Stratum (Plot size: 30 ft)				
1.	*Ligustrum sinense*	15	Y	FAC
2.	*Morella cerifera*	15	Y	FAC
3.	*Magnolia virginiana*	10		FACW
4.	*Quercus nigra*	10		FAC
5.				
6.				
		50	= Total Cover	
	50% of total cover: 25	20% of total cover:	10	
Herb Stratum (Plot size: 30 ft)				
1.	*Galium aparine*	30	Y	FACU
2.	*Mitchella repens*	10		FACU
3.	*Hexastylis arifolia*	10		FAC
4.	*Dichanthelium scoparium*	10		FACW
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		60	= Total Cover	
	50% of total cover: 30	20% of total cover:	12	
Woody Vine Stratum (Plot size: 30 ft)				
1.	*Smilax bona-nox*	10	Y	FAC
2.	*Bignonia capreolata*	10	Y	FAC
3.	*Lonicera japonica*	10	Y	FACU
4.				
5.				
		30	= Total Cover	
	50% of total cover: 15	20% of total cover:	6	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index worksheet:

OBL species	0	x 1 =	0
FACW species	35	x 2 =	70
FAC species	145	x 3 =	435
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	230 (A)		705 (B)

Prevalence Index = B/A = 3.1

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☐ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WJ-2 Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/1	100					loamy sand	<70% coated
9-18+	10YR 2/1	100					loamy sand	saturated

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☑ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Hydric soil criteria not met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line City/County: Johns Island / Charleston Sampling Date: 3/14/2019
Applicant/Owner: Santee Cooper State: SC Sampling Point: WN-12 Up
Investigator(s): Brendon Kelly / Brett Sexton Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat Local Relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA) LRR T Lat: 32.75246707 Long: -80.06218714 Datum: NA
Soil Map Unit Name: Santee loam NWI Classification: PFO1A
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☐ No ☑
Hydric Soil Present? Yes ☐ No ☑
Wetland Hydrology Present? Yes ☐ No ☑
Is the Sampled Area within a wetland? Yes ☐ No ☑

Remarks:
All three indicators are not present, area is not a wetland

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____
Water Table Present? Yes ☐ No ☑ Depth (inches): _____
Saturation Present? Yes ☐ No ☑ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☑

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Hydrology criteria not met.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WN-12 Up

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
6.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Sapling Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
6.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Shrub Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
6.				
		= Total Cover		
	50% of total cover:	20% of total cover:		
Herb Stratum	(Plot size: 30 ft)			
1.	*Lolium perenne*	20	Y	FAC
2.	*Eupatorium capillifolium*	15	Y	FACU
3.	*Polypremum procumbens*	10		FACU
4.	*Stellaria media*	5		FACU
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		50 = Total Cover		
	50% of total cover: 25	20% of total cover: 10		
Woody Vine Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
		= Total Cover		
	50% of total cover:	20% of total cover:		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50%	(A/B)

Prevalence Index worksheet:

OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	50 (A)		180 (B)

Prevalence Index = B/A = 3.6

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is > 50%
- ☐ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☑

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria not met.

SOIL

Sampling Point: WN-12 Up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					loamy sand	not coated
2-18+	10YR 3/1	100					loamy sand	fill dirt

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Hydric soil criteria not met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line | City/County: Johns Island / Charleston | Sampling Date: 3/5/2019
Applicant/Owner: Santee Cooper | State: SC | Sampling Point: WM-Wet
Investigator(s): Brendon Kelly / Brett Sexton | Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat | Local Relief (concave, convex, none): None | Slope (%): 0
Subregion (LRR or MLRA) LRR T | Lat: 32.7549448 | Long: -80.0689031 | Datum: NA
Soil Map Unit Name: Stono fine sandy loam | NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☑ No ☐
Wetland Hydrology Present? Yes ☑ No ☐
Is the Sampled Area within a wetland? Yes ☑ No ☐

Remarks:
All three indicators are present, area is a wetland

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____
Water Table Present? Yes ☐ No ☑ Depth (inches): _____
Saturation Present? Yes ☑ No ☐ Depth (inches): 1
(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Hydrology criteria met.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WM-Wet

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.	*Pinus taeda*	10	Y	FAC
2.	*Quercus virginiana*	10	Y	FACU
3.	*Quercus laurifolia*	4		FACW
4.				
5.				
6.				
		24	= Total Cover	
	50% of total cover: 12		20% of total cover: 4.8	
Sapling Stratum (Plot size: 30 ft)				
1.	*Quercus laurifolia*	5	Y	FACW
2.	*Pinus taeda*	5	Y	FAC
3.				
4.				
5.				
6.				
		10	= Total Cover	
	50% of total cover: 5		20% of total cover: 2	
Shrub Stratum (Plot size: 30 ft)				
1.	*Pinus taeda*	10	Y	FAC
2.	*Sabal minor*	3		FACW
3.	*Ilex glabra*	3		FACW
4.	*Quercus nigra*	3		FAC
5.				
6.				
		19	= Total Cover	
	50% of total cover: 9.5		20% of total cover: 3.8	
Herb Stratum (Plot size: 30 ft)				
1.	*Juncus roemerianus*	15	Y	OBL
2.	*Spartina alterniflora*	15	Y	OBL
3.	*Rubus argutus*	5		FAC
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		35	= Total Cover	
	50% of total cover: 17.5		20% of total cover: 7	
Woody Vine Stratum (Plot size: 30 ft)				
1.				
2.				
3.				
4.				
5.				
			= Total Cover	
	50% of total cover:		20% of total cover:	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 86% (A/B)

Prevalence Index worksheet:

OBL species	30	x 1 =	30
FACW species	15	x 2 =	30
FAC species	33	x 3 =	99
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	88 (A)		199 (B)

Prevalence Index = B/A = 2.3

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WM-Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	100					loamy sand	>70% masked
3-18	10YR 3/1	100					loamy sand	

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☑ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Hydric soil criteria met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line City/County: Johns Island / Charleston Sampling Date: 3/14/2019
Applicant/Owner: Santee Cooper State: SC Sampling Point: WN-12 Wet
Investigator(s): Brendon Kelly / Brett Sexton Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat Local Relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA) LRR T Lat: 32.75247 Long: -80.062187 Datum: NA
Soil Map Unit Name: Santee loam NWI Classification: PFO1A
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☑ No ☐
Wetland Hydrology Present? Yes ☑ No ☐
Is the Sampled Area within a wetland? Yes ☑ No ☐

Remarks: All three wetland indicators are present, area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☑ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____
Water Table Present? Yes ☐ No ☑ Depth (inches): _____
Saturation Present? Yes ☐ No ☑ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ☑ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WN-12 Wet

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.	*Quercus nigra*	25	Y	FAC
2.	*Fraxinus pennsylvanica*	15	Y	FACW
3.	*Acer rubrum*	15	Y	FAC
4.	*Quercus shumardii*	10		FAC
5.				
6.				
		65	= Total Cover	
	50% of total cover: 32.5	20% of total cover:	13	
Sapling Stratum (Plot size: 30 ft)				
1.	*Magnolia grandiflora*	10	Y	FAC
2.	*Quercus shumardii*	10	Y	FAC
3.	*Liquidambar styraciflua*	5		FAC
4.	*Cornus amomum*	5		FACW
5.				
6.				
		30	= Total Cover	
	50% of total cover: 15	20% of total cover:	6	
Shrub Stratum (Plot size: 30 ft)				
1.	*Ilex vomitoria*	30	Y	FAC
2.	*Baccharis halimifolia*	10	Y	FAC
3.	*Quercus nigra*	5		FAC
4.				
5.				
6.				
		45	= Total Cover	
	50% of total cover: 22.5	20% of total cover:	9	
Herb Stratum (Plot size: 30 ft)				
1.	*Chasmanthium laxum*	15	Y	FACW
2.	*Woodwardia areolata*	10	Y	OBL
3.	*Viola sp.*	5		FAC
4.	*Dichanthelium scoparium*	5		FACW
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		35	= Total Cover	
	50% of total cover: 17.5	20% of total cover:	7	
Woody Vine Stratum (Plot size: 30 ft)				
1.	*Vitis rotundifolia*	15	Y	FAC
2.				
3.				
4.				
5.				
		15	= Total Cover	
	50% of total cover: 7.5	20% of total cover:	3	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 10 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

OBL species	10	x 1 =	10
FACW species	40	x 2 =	80
FAC species	140	x 3 =	420
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	190 (A)		510 (B)

Prevalence Index = B/A = 2.7

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☐ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WN-12 Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/2	100					loam	redox
4-12	10YR 2/2	95	10YR 4/4	5			loam	redox
12-18	10YR 2/1	95	10YR 4/4	5			loam	redox
18-24+	10YR 3/1	95	10YR 4/4	5			loam	redox

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Hydric soil criteria met.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Johns Island - Queensboro 115kV Line | City/County: Johns Island / Charleston | Sampling Date: 3/14/2019
Applicant/Owner: Santee Cooper | State: SC | Sampling Point: WN-Wet
Investigator(s): Brendon Kelly / Brett Sexton | Section, Township, Range: NA
Landform: (hillslope, terrace, etc.) Flat | Local Relief (concave, convex, none): None | Slope (%): 0
Subregion (LRR or MLRA) LRR T | Lat: 32.7523474 | Long: -80.06018168 | Datum: NA
Soil Map Unit Name: Wadmalaw fine sandy loam | NWI Classification: PFO1A
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☑ No ☐
Hydric Soil Present? Yes ☑ No ☐
Wetland Hydrology Present? Yes ☑ No ☐
Is the Sampled Area within a wetland? Yes ☑ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Much Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☑ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphangum moss (D8) **(LRR T,U)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches):
Water Table Present? Yes ☑ No ☐ Depth (inches): 1
Saturation Present? Yes ☑ No ☐ Depth (inches): 1
(includes capillary fringe)

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology criteria met.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: WN-Wet

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.	*Acer rubrum*	70	Y	FAC
2.	*Fraxinus pennsylvanica*	15		FACW
3.	*Quercus laurifolia*	5		FACW
4.	*Magnolia grandiflora*	3		FAC
5.				
6.				
		93	= Total Cover	
	50% of total cover: 46.5	20% of total cover: 18.6		
Sapling Stratum (Plot size: 30 ft)				
1.	*Quercus laurifolia*	15	Y	FACW
2.	*Cornus amomum*	15	Y	FACW
3.	*Acer rubrum*	10	Y	FAC
4.	*Liquidambar styraciflua*	3		FAC
5.				
6.				
		43	= Total Cover	
	50% of total cover: 21.5	20% of total cover: 8.6		
Shrub Stratum (Plot size: 30 ft)				
1.	*Sabal minor*	50	Y	FACW
2.	*Morella cerifera*	3		FAC
3.	*Ilex vomitoria*	2		FAC
4.	*Persea borbonia*	2		FACW
5.				
6.				
		57	= Total Cover	
	50% of total cover: 28.5	20% of total cover: 11.4		
Herb Stratum (Plot size: 30 ft)				
1.	*Carex sp.*	20	Y	FAC
2.	*Juncus effusus*	10	Y	OBL
3.	*Saururus cernuus*	5		OBL
4.	*Cyperus*	5		FAC
5.	*Packera glabella*	2		OBL
6.				
7.				
8.				
9.				
10.				
11.				
		42	= Total Cover	
	50% of total cover: 21	20% of total cover: 8.4		
Woody Vine Stratum (Plot size: 30 ft)				
1.	*Toxicodendron radicans*	5	Y	FAC
2.	*Lonicera japonica*	5	Y	FACU
3.				
4.				
5.				
		10	= Total Cover	
	50% of total cover: 5	20% of total cover: 2		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 89% (A/B)

Prevalence Index worksheet:

OBL species	17	x 1 =	17
FACW species	102	x 2 =	204
FAC species	121	x 3 =	363
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	245 (A)		604 (B)

Prevalence Index = B/A = 2.5

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is > 50%
- ☑ Prevalence Index is ≤ 3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ☑ **No** ☐

Remarks: (If observed, list morphological adaptations below)

ERDC/CRREL 2016 Regional Wetland Plant List (Atlantic and Gulf Coastal Plain) used for indicator status.

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: WN-Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/1	100					loam	
2-10	10YR 4/1	90	10YR 4/6	10			sandy clay	
10-18+	GLEY 3/N	75	7.5YR 4/6	25			sandy clay	

[1]Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains

[2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P,T,U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P,T,U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P,T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O,S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P,S,T,U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S,T,U)**
- ☐ Thin Dark Surface (S9) **(LRR S,T,U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☑ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O,P,T)**
- ☐ Umbric Surface (F13) **(LRR P,T,U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P,S,T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches)

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Hydric soil criteria met.

Figure 1. Site Location Map

Johns Island - Queensboro 115kV
Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area (71.66 AC)
- Existing Santee Cooper ROW
- Existing Dominion ROW
- Road Centerline

Santee Cooper

wood.

Job No. 6250160115

Drawn By: BWS

Reviewed By: AWC

Date: 1/10/2020

Project Study Area

Project ties into existing Dominion transmission line

Project begins at existing Santee Cooper substation

0 0.25 0.5 Miles

\\CBA-FS1\projects\Environmental\2012 + Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 1. Site Location Map.mxd

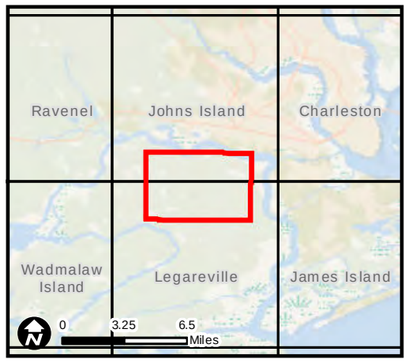


Figure 2. USGS Topographic Map

Johns Island - Queensboro 115kV
Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area (71.66 AC)
- USGS 24k Topo Map Boundaries

Santee Cooper

wood.

Job No. 6250160115
Drawn By: BWS
Reviewed By: AWC
Date: 1/10/2020

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. (Wood) project number 6250160115. Wood assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

Limehouse Sta
Light
Fen
JOHNS ISLAND
Johns Island
Project Study Area
Hickory Hill
Strip Mine
Pennys Creek
Legareville
Johns Island Community Center
Faith Ch
St Johns Ch
Cem
Johns Island Ch
BM
ROAD
HIGHWAY
RIVER
MAYBANK
WOOD
BROWNS
POUND
LINE
OLD

0 0.25 0.5 Miles

\\CBA-FS1\projects\Environmental\2012+ Projects\015 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 2. USGS Topographic Map.mxd

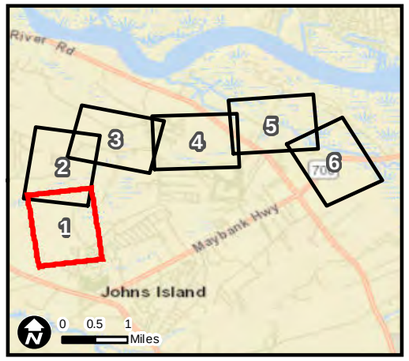


Figure 3.1 Soil Map of the Project Area

Johns Island - Queensboro 115kV
Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area (71.66 AC)
- Existing Santee Cooper ROW
- Existing Dominion ROW

Soil Hydric Rating

- Nonhydric
- Predominantly Nonhydric
- Predominantly Hydric
- Hydric

ID	Name	Drainage	HydricRate
Cg	Capers silty clay loam	Very poorly drained	Hydric
Ch	Charleston loamy fine sand	Moderately well drained	Predominantly Nonhydric
Da	Dawhoo and rutlege loamy fine sand	Very poorly drained	Hydric
Ed	Edisto loamy fine sand	Somewhat poorly drained	Nonhydric
HoA	Hockley loamy fine sand, 0 to 2 percent slopes	Moderately well drained	Predominantly Nonhydric
Ka	Kiawah loamy fine sand	Somewhat poorly drained	Predominantly Nonhydric
Le	Leon fine sand, 0 to 2 percent slopes	Poorly drained	Predominantly Hydric
Me	Meggett clay loam	Poorly drained	Hydric
Se	Santee loam	Very poorly drained	Hydric
Sk	Seabrook loamy fine sand	Somewhat poorly drained	Predominantly Nonhydric
Sa	St. Johns fine sand	Poorly drained	Hydric
St	Stono fine sandy loam	Very poorly drained	Hydric
Ts	Tidal marsh, soft	Very poorly drained	Hydric
Wa	Wadmalaw fine sandy loam	Poorly drained	Hydric
WnB	Wando loamy fine sand, 0 to 6 percent slopes	Moderately well drained	Predominantly Nonhydric
W	Water		Nonhydric
Yo	Yonges loamy fine sand	Poorly drained	Hydric

Job No. 6250160115

Drawn By: BWS

Reviewed By: AWC

Date: 1/10/2020

\\CBA-FS1\Projects\Environmental\2012 + Projects\015 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 3. NRCS Soils Map.mxd

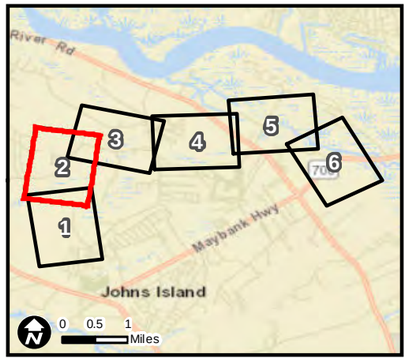


Figure 3.2 Soil Map of the Project Area

Johns Island - Queensboro 115kV
Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area (71.66 AC)
- Existing Santee Cooper ROW
- Existing Dominion ROW

Soil Hydric Rating

- Nonhydric
- Predominantly Nonhydric
- Predominantly Hydric
- Hydric

ID	Name	Drainage	HydricRate
Cg	Capers silty clay loam	Very poorly drained	Hydric
Ch	Charleston loamy fine sand	Moderately well drained	Predominantly Nonhydric
Da	Dawhoo and rutlege loamy fine sand	Very poorly drained	Hydric
Ed	Edisto loamy fine sand	Somewhat poorly drained	Nonhydric
HoA	Hockley loamy fine sand, 0 to 2 percent slopes	Moderately well drained	Predominantly Nonhydric
Ka	Kiawah loamy fine sand	Somewhat poorly drained	Predominantly Nonhydric
Le	Leon fine sand, 0 to 2 percent slopes	Poorly drained	Predominantly Hydric
Me	Meggett clay loam	Poorly drained	Hydric
Se	Santee loam	Very poorly drained	Hydric
Sk	Seabrook loamy fine sand	Somewhat poorly drained	Predominantly Nonhydric
Sa	St. Johns fine sand	Poorly drained	Hydric
St	Stono fine sandy loam	Very poorly drained	Hydric
Ts	Tidal marsh, soft	Very poorly drained	Hydric
Wa	Wadmalaw fine sandy loam	Poorly drained	Hydric
WnB	Wando loamy fine sand, 0 to 6 percent slopes	Moderately well drained	Predominantly Nonhydric
W	Water		Nonhydric
Yo	Yonges loamy fine sand	Poorly drained	Hydric

\\CBA-FS1\Projects\Environmental\2012 + Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 3. NRCS Soils Map.mxd

Santee Cooper

wood.

Job No. 6250160115

Drawn By: BWS

Reviewed By: AWC

Date: 1/10/2020

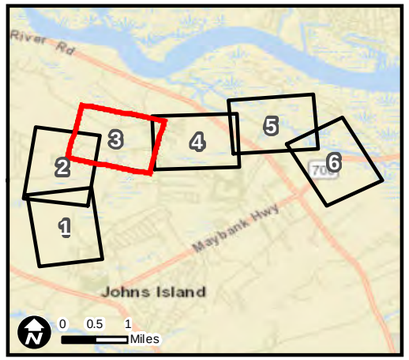


Figure 3.3 Soil Map of the Project Area

Johns Island - Queensboro 115kV
Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area (71.66 AC)
- Existing Santee Cooper ROW
- Existing Dominion ROW

Soil Hydric Rating

- Nonhydric
- Predominantly Nonhydric
- Predominantly Hydric
- Hydric

ID	Name	Drainage	HydricRate
Cg	Capers silty clay loam	Very poorly drained	Hydric
Ch	Charleston loamy fine sand	Moderately well drained	Predominantly Nonhydric
Da	Dawhoo and rutlege loamy fine sand	Very poorly drained	Hydric
Ed	Edisto loamy fine sand	Somewhat poorly drained	Nonhydric
HoA	Hockley loamy fine sand, 0 to 2 percent slopes	Moderately well drained	Predominantly Nonhydric
Ka	Kiawah loamy fine sand	Somewhat poorly drained	Predominantly Nonhydric
Le	Leon fine sand, 0 to 2 percent slopes	Poorly drained	Predominantly Hydric
Me	Meggett clay loam	Poorly drained	Hydric
Se	Santee loam	Very poorly drained	Hydric
Sk	Seabrook loamy fine sand	Somewhat poorly drained	Predominantly Nonhydric
Sa	St. Johns fine sand	Poorly drained	Hydric
St	Stono fine sandy loam	Very poorly drained	Hydric
Ts	Tidal marsh, soft	Very poorly drained	Hydric
Wa	Wadmalaw fine sandy loam	Poorly drained	Hydric
WnB	Wando loamy fine sand, 0 to 6 percent slopes	Moderately well drained	Predominantly Nonhydric
W	Water		Nonhydric
Yo	Yonges loamy fine sand	Poorly drained	Hydric

Job No. 6250160115

Drawn By: BWS

Reviewed By: AWC

Date: 1/10/2020

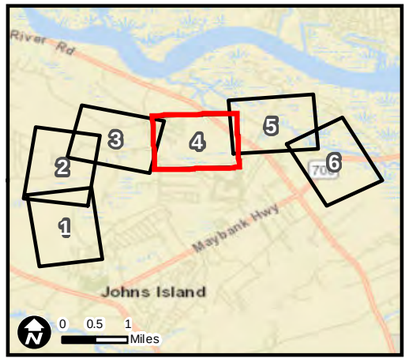


Figure 3.4 Soil Map of the Project Area

Johns Island - Queensboro 115kV
Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area (71.66 AC)
- Existing Santee Cooper ROW
- Existing Dominion ROW

Soil Hydric Rating

- Nonhydric
- Predominantly Nonhydric
- Predominantly Hydric
- Hydric

ID	Name	Drainage	HydricRate
Cg	Capers silty clay loam	Very poorly drained	Hydric
Ch	Charleston loamy fine sand	Moderately well drained	Predominantly Nonhydric
Da	Dawhoo and rutlege loamy fine sand	Very poorly drained	Hydric
Ed	Edisto loamy fine sand	Somewhat poorly drained	Nonhydric
HoA	Hockley loamy fine sand, 0 to 2 percent slopes	Moderately well drained	Predominantly Nonhydric
Ka	Kiawah loamy fine sand	Somewhat poorly drained	Predominantly Nonhydric
Le	Leon fine sand, 0 to 2 percent slopes	Poorly drained	Predominantly Hydric
Me	Meggett clay loam	Poorly drained	Hydric
Se	Santee loam	Very poorly drained	Hydric
Sk	Seabrook loamy fine sand	Somewhat poorly drained	Predominantly Nonhydric
Sa	St. Johns fine sand	Poorly drained	Hydric
St	Stono fine sandy loam	Very poorly drained	Hydric
Ts	Tidal marsh, soft	Very poorly drained	Hydric
Wa	Wadmalaw fine sandy loam	Poorly drained	Hydric
WnB	Wando loamy fine sand, 0 to 6 percent slopes	Moderately well drained	Predominantly Nonhydric
W	Water		Nonhydric
Yo	Yonges loamy fine sand	Poorly drained	Hydric

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

\\CBA-FS1\projects\Environmental\2012 + Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 3- NRCS Soils Map.mxd

Santee Cooper

wood.

Job No. 6250160115

Drawn By: BWS

Reviewed By: AWC

Date: 1/10/2020

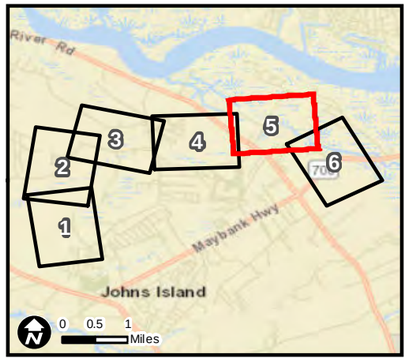


Figure 3.5 Soil Map of the Project Area

Johns Island - Queensboro 115kV
Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area (71.66 AC)
- Existing Santee Cooper ROW
- Existing Dominion ROW

Soil Hydric Rating

- Nonhydric
- Predominantly Nonhydric
- Predominantly Hydric
- Hydric

ID	Name	Drainage	HydricRate
Cg	Capers silty clay loam	Very poorly drained	Hydric
Ch	Charleston loamy fine sand	Moderately well drained	Predominantly Nonhydric
Da	Dawhoo and rutlege loamy fine sand	Very poorly drained	Hydric
Ed	Edisto loamy fine sand	Somewhat poorly drained	Nonhydric
HoA	Hockley loamy fine sand, 0 to 2 percent slopes	Moderately well drained	Predominantly Nonhydric
Ka	Kiawah loamy fine sand	Somewhat poorly drained	Predominantly Nonhydric
Le	Leon fine sand, 0 to 2 percent slopes	Poorly drained	Predominantly Hydric
Me	Meggett clay loam	Poorly drained	Hydric
Se	Santee loam	Very poorly drained	Hydric
Sk	Seabrook loamy fine sand	Somewhat poorly drained	Predominantly Nonhydric
Sa	St. Johns fine sand	Poorly drained	Hydric
St	Stono fine sandy loam	Very poorly drained	Hydric
Ts	Tidal marsh, soft	Very poorly drained	Hydric
Wa	Wadmalaw fine sandy loam	Poorly drained	Hydric
WnB	Wando loamy fine sand, 0 to 6 percent slopes	Moderately well drained	Predominantly Nonhydric
W	Water		Nonhydric
Yo	Yonges loamy fine sand	Poorly drained	Hydric

Santee Cooper

wood.

Job No. 6250160115

Drawn By: BWS

Reviewed By: AWC

Date: 1/10/2020

0 400 800 Feet

\\CBA-FS1\projects\Environmental\2012+ Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 3.NRCS Soils Map.mxd

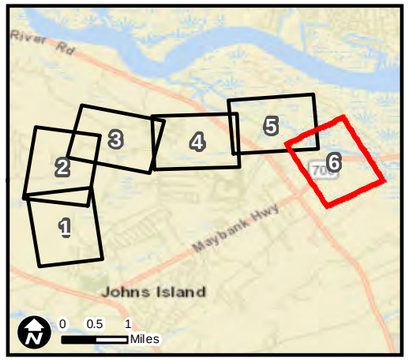


Figure 3.6 Soil Map of the Project Area

Johns Island - Queensboro 115kV
Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area (71.66 AC)
- Existing Santee Cooper ROW
- Existing Dominion ROW

Soil Hydric Rating

- Nonhydric
- Predominantly Nonhydric
- Predominantly Hydric
- Hydric

ID	Name	Drainage	HydricRate
Cg	Capers silty clay loam	Very poorly drained	Hydric
Ch	Charleston loamy fine sand	Moderately well drained	Predominantly Nonhydric
Da	Dawhoo and rutlege loamy fine sand	Very poorly drained	Hydric
Ed	Edisto loamy fine sand	Somewhat poorly drained	Nonhydric
HoA	Hockley loamy fine sand, 0 to 2 percent slopes	Moderately well drained	Predominantly Nonhydric
Ka	Kiawah loamy fine sand	Somewhat poorly drained	Predominantly Nonhydric
Le	Leon fine sand, 0 to 2 percent slopes	Poorly drained	Predominantly Hydric
Me	Meggett clay loam	Poorly drained	Hydric
Se	Santee loam	Very poorly drained	Hydric
Sk	Seabrook loamy fine sand	Somewhat poorly drained	Predominantly Nonhydric
Sa	St. Johns fine sand	Poorly drained	Hydric
St	Stono fine sandy loam	Very poorly drained	Hydric
Ts	Tidal marsh, soft	Very poorly drained	Hydric
Wa	Wadmalaw fine sandy loam	Poorly drained	Hydric
WnB	Wando loamy fine sand, 0 to 6 percent slopes	Moderately well drained	Predominantly Nonhydric
W	Water		Nonhydric
Yo	Yonges loamy fine sand	Poorly drained	Hydric

Ts Cg W Cg Ts Wa Yo HoA Yo St

0 400 800 Feet

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Santee Cooper

wood.

Job No. 6250160115
Drawn By: BWS
Reviewed By: AWC
Date: 1/10/2020

\\CBA-FS1\projects\Environmental\2012+ Projects\015 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 3.NRCS Soils Map.mxd

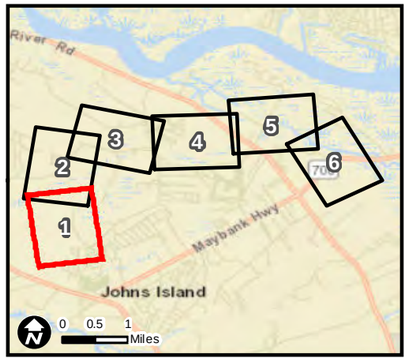


Figure 4.1 National Wetland Inventory Map

Johns Island - Queensboro 115kV
Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area
- Existing Santee Cooper ROW
- Existing Dominion ROW

National Wetland Inventory

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond; Lake; Riverine

Santee Cooper

wood.

Job No.	6250160115
Drawn By:	BWS
Reviewed By:	AWC
Date:	1/10/2020

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. (Wood) project number 6250160115. Wood assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

\\CBA-FS1\projects\Environmental\2012 + Projects\0315 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 4. National Wetland Inventory Map.mxd

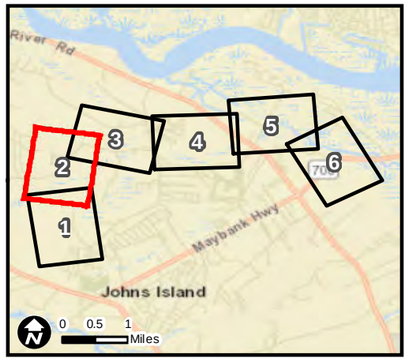


Figure 4.2 National Wetland Inventory Map

Johns Island - Queensboro 115kV
Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area
- Existing Santee Cooper ROW
- Existing Dominion ROW

National Wetland Inventory

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond; Lake; Riverine

Santee Cooper

wood.

Job No.	6250160115
Drawn By:	BWS
Reviewed By:	AWC
Date:	1/10/2020

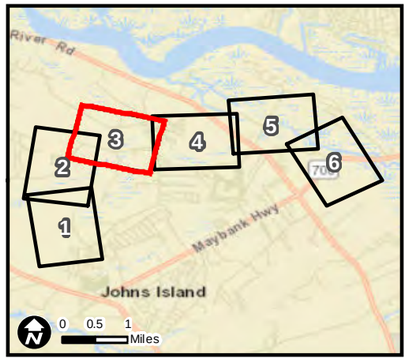


Figure 4.3 National Wetland Inventory Map

Johns Island - Queensboro 115kV
Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area
- Existing Santee Cooper ROW
- Existing Dominion ROW

National Wetland Inventory

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond; Lake; Riverine

Santee Cooper

wood.

Job No.	6250160115
Drawn By:	BWS
Reviewed By:	AWC
Date:	1/10/2020

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. (Wood) project number 6250160115. Wood assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

\\CBA-FS1\projects\Environmental\2012 + Projects\015 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 4. National Wetland Inventory Map.mxd

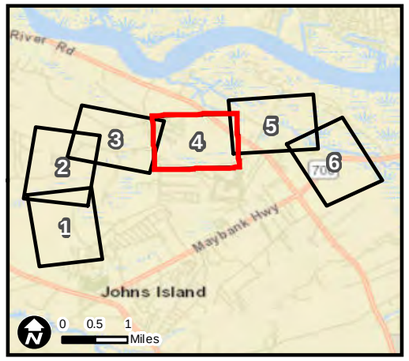


Figure 4.4 National Wetland Inventory Map

Johns Island - Queensboro 115kV
Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area
- Existing Santee Cooper ROW
- Existing Dominion ROW

National Wetland Inventory

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond; Lake; Riverine

Santee Cooper

wood.

Job No.	6250160115
Drawn By:	BWS
Reviewed By:	AWC
Date:	1/10/2020

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. (Wood) project number 6250160115. Wood assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

\\CBA-FS1\projects\Environmental\2012 + Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 4. National Wetland Inventory Map.mxd

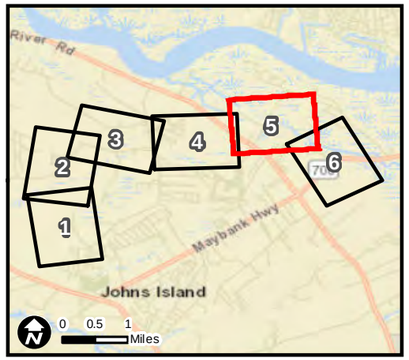


Figure 4.5 National Wetland Inventory Map

Johns Island - Queensboro 115kV
Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area
- Existing Santee Cooper ROW
- Existing Dominion ROW

National Wetland Inventory

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond; Lake; Riverine

Santee Cooper

wood.

Job No.	6250160115
Drawn By:	BWS
Reviewed By:	AWC
Date:	1/10/2020

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. (Wood) project number 6250160115. Wood assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

0 400 800 Feet

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

\\CBA-FS1\projects\Environmental\2012+ Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 4. National Wetland Inventory Map.mxd

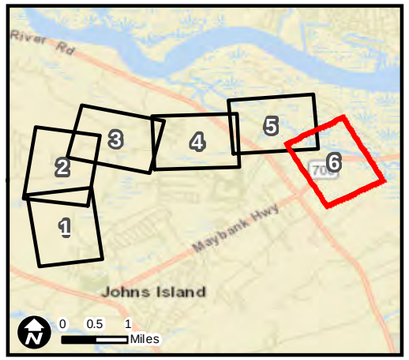


Figure 4.6 National Wetland Inventory Map

Johns Island - Queensboro 115kV
Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area
- Existing Santee Cooper ROW
- Existing Dominion ROW

National Wetland Inventory

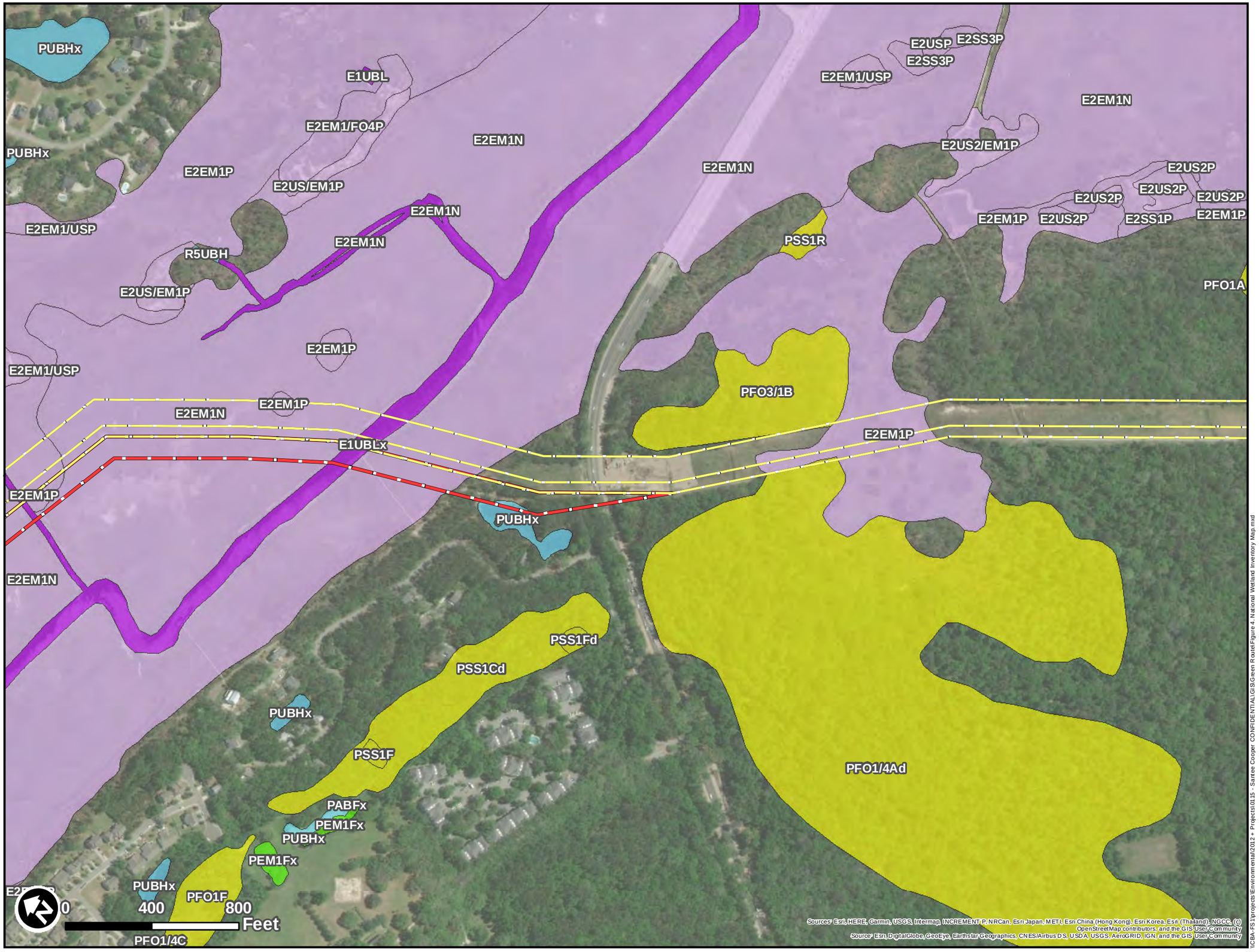
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond; Lake; Riverine

Santee Cooper

wood.

Job No.	6250160115
Drawn By:	BWS
Reviewed By:	AWC
Date:	1/10/2020

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. (Wood) project number 6250160115. Wood assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.



\\CBA-FS1\Projects\Environmental\2012 + Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 4. National Wetland Inventory Map.mxd

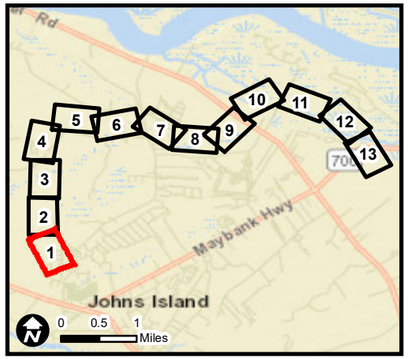


Figure 5.1 Aquatic Resources, Data Point, and Photo Location Map

Johns Island - Queensboro 115kV Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area
- Project Study Area Vertices
- Photo Location and Direction
- Road Centerline
- Data Point

Aquatic Resources

- Non-Wetland Water (non-tidal)
- Non-Wetland Water (tidal)
- Wetland (non-tidal)
- Wetland (tidal)

Santee Cooper

wood.

Job No. 6250160115

Drawn By: BWS

Reviewed By: AWC

Date: 1/14/2020

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. (Wood) project number 6250160115. Wood assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

Feature Type	Name	Linear Footage	Acreage
Non-Wetland Water (non-tidal)	Stream A	94	0.02
Non-Wetland Water (tidal)	Stream B	1183	0.47
Non-Wetland Water (tidal)	Stream C	181	0.26
Non-Wetland Water (tidal)	Stream D	271	0.29
Non-Wetland Water (tidal)	Open Water 1	N/A	0.05
Non-Wetland Water (tidal)	Open Water 2 (Pennys Creek)	N/A	1.01
Non-Wetland Water (tidal)	Open Water 3	N/A	0.13
Wetland (non-tidal)	Wetland A	N/A	0.27
Wetland (non-tidal)	Wetland B	N/A	1.14
Wetland (non-tidal)	Wetland C	N/A	1.58
Wetland (non-tidal)	Wetland D	N/A	1.15
Wetland (non-tidal)	Wetland E	N/A	1.19
Wetland (non-tidal)	Wetland F	N/A	0.17
Wetland (non-tidal)	Wetland G	N/A	0.03
Wetland (non-tidal)	Wetland H	N/A	0.22
Wetland (non-tidal)	Wetland I	N/A	0.37
Wetland (non-tidal)	Wetland J	N/A	0.19
Wetland (non-tidal)	Wetland K	N/A	4.90
Wetland (non-tidal)	Wetland L	N/A	2.65
Wetland (tidal)	Wetland M	N/A	5.76
Wetland (non-tidal)	Wetland N	N/A	15.00
Wetland (tidal)	Wetland O	N/A	16.16
Upland			18.65
Project Study Area			**71.66**

This drawing represents the jurisdictional waters boundary collected in the field by Wood Environment & Infrastructure Solutions, Inc. using sub-meter GPS equipment. Jurisdictional waters may extend beyond the Project Study Area; however, were not delineated nor shown on this map. All jurisdictional boundaries are subject to verification and change by the United States Army Corps of Engineers. This map should be used for preliminary planning purposes only.

P:\Environmental\2012 • Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 5. Aquatic Resources, Data Point, and Photo Location Map.mxd

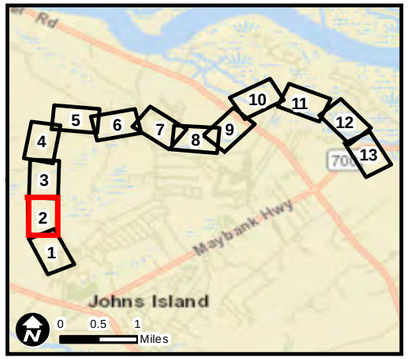


Figure 5.2 Aquatic Resources, Data Point, and Photo Location Map

Johns Island - Queensboro 115kV Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area
- Project Study Area Vertices
- Photo Location and Direction
- Road Centerline
- Data Point

Aquatic Resources

- Non-Wetland Water (non-tidal)
- Non-Wetland Water (tidal)
- Wetland (non-tidal)
- Wetland (tidal)

Feature Type	Name	Linear Footage	Acreage
Non-Wetland Water (non-tidal)	Stream A	94	0.02
Non-Wetland Water (tidal)	Stream B	1183	0.47
Non-Wetland Water (tidal)	Stream C	181	0.26
Non-Wetland Water (tidal)	Stream D	271	0.29
Non-Wetland Water (tidal)	Open Water 1	N/A	0.05
Non-Wetland Water (tidal)	Open Water 2 (Pennys Creek)	N/A	1.01
Non-Wetland Water (tidal)	Open Water 3	N/A	0.13
Wetland (non-tidal)	Wetland A	N/A	0.27
Wetland (non-tidal)	Wetland B	N/A	1.14
Wetland (non-tidal)	Wetland C	N/A	1.58
Wetland (non-tidal)	Wetland D	N/A	1.15
Wetland (non-tidal)	Wetland E	N/A	1.19
Wetland (non-tidal)	Wetland F	N/A	0.17
Wetland (non-tidal)	Wetland G	N/A	0.03
Wetland (non-tidal)	Wetland H	N/A	0.22
Wetland (non-tidal)	Wetland I	N/A	0.37
Wetland (non-tidal)	Wetland J	N/A	0.19
Wetland (non-tidal)	Wetland K	N/A	4.90
Wetland (non-tidal)	Wetland L	N/A	2.65
Wetland (tidal)	Wetland M	N/A	5.76
Wetland (non-tidal)	Wetland N	N/A	15.00
Wetland (tidal)	Wetland O	N/A	16.16
Upland			18.65
Project Study Area			**71.66**

This drawing represents the jurisdictional waters boundary collected in the field by Wood Environment & Infrastructure Solutions, Inc. using sub-meter GPS equipment. Jurisdictional waters may extend beyond the Project Study Area; however, were not delineated nor shown on this map. All jurisdictional boundaries are subject to verification and change by the United States Army Corps of Engineers. This map should be used for preliminary planning purposes only.

Paired Wetland Data Point WC-7
Photo 3
Wetland C
Wetland D
Paired Wetland Data Point WD-7
Photo 4
Dogpatch Ln
0
200
400
Feet

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

\\CBA-FS1\projects\Environmental\2012 - Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 5. Aquatic Resources, Data Point, and Photo Location Map.mxd

Job No. 6250160115
Drawn By: BWS
Reviewed By: AWC
Date: 1/10/2020

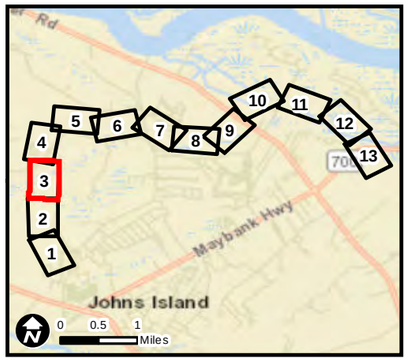


Figure 5.3 Aquatic Resources, Data Point, and Photo Location Map

Johns Island - Queensboro 115kV Transmission Project
Charleston County, South Carolina

Feature Type	Name	Linear Footage	Acreage
Non-Wetland Water (non-tidal)	Stream A	94	0.02
Non-Wetland Water (tidal)	Stream B	1183	0.47
Non-Wetland Water (tidal)	Stream C	181	0.26
Non-Wetland Water (tidal)	Stream D	271	0.29
Non-Wetland Water (tidal)	Open Water 1	N/A	0.05
Non-Wetland Water (tidal)	Open Water 2 (Pennys Creek)	N/A	1.01
Non-Wetland Water (tidal)	Open Water 3	N/A	0.13
Wetland (non-tidal)	Wetland A	N/A	0.27
Wetland (non-tidal)	Wetland B	N/A	1.14
Wetland (non-tidal)	Wetland C	N/A	1.58
Wetland (non-tidal)	Wetland D	N/A	1.15
Wetland (non-tidal)	Wetland E	N/A	1.19
Wetland (non-tidal)	Wetland F	N/A	0.17
Wetland (non-tidal)	Wetland G	N/A	0.03
Wetland (non-tidal)	Wetland H	N/A	0.22
Wetland (non-tidal)	Wetland I	N/A	0.37
Wetland (non-tidal)	Wetland J	N/A	0.19
Wetland (non-tidal)	Wetland K	N/A	4.90
Wetland (non-tidal)	Wetland L	N/A	2.65
Wetland (tidal)	Wetland M	N/A	5.76
Wetland (non-tidal)	Wetland N	N/A	15.00
Wetland (tidal)	Wetland O	N/A	16.16
Upland			18.65
Project Study Area			**71.66**

This drawing represents the jurisdictional waters boundary collected in the field by Wood Environment & Infrastructure Solutions, Inc. using sub-meter GPS equipment. Jurisdictional waters may extend beyond the Project Study Area; however, were not delineated nor shown on this map. All jurisdictional boundaries are subject to verification and change by the United States Army Corps of Engineers. This map should be used for preliminary planning purposes only.

Legend

- Project Study Area
- Project Study Area Vertices
- Photo Location and Direction
- Road Centerline
- Data Point

Aquatic Resources

- Non-Wetland Water (non-tidal)
- Non-Wetland Water (tidal)
- Wetland (non-tidal)
- Wetland (tidal)

Santee Cooper

wood.

Job No. 6250160115
Drawn By: BWS
Reviewed By: AWC
Date: 1/10/2020

Patton Ave
Still Life Dr
Fickling Hill Rd
Michelle Ln
Photo 5
Photo 6
Photo 7
Wetland E
Stream A
Wetland E
Wetland F
Paired Wetland Data Point WE-5
Paired Wetland Data Point WG-3
Wetland G
0
200
400
Feet

\\CBA-FS1\projects\Environmental\2012 - Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 5. Aquatic Resources, Data Point, and Photo Location Map.mxd

Figure 5.4 Aquatic Resources, Data Point, and Photo Location Map

Johns Island - Queensboro 115kV Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area
- Project Study Area Vertices
- Photo Location and Direction
- Road Centerline
- Data Point

Aquatic Resources

- Non-Wetland Water (non-tidal)
- Non-Wetland Water (tidal)
- Wetland (non-tidal)
- Wetland (tidal)

Santee Cooper

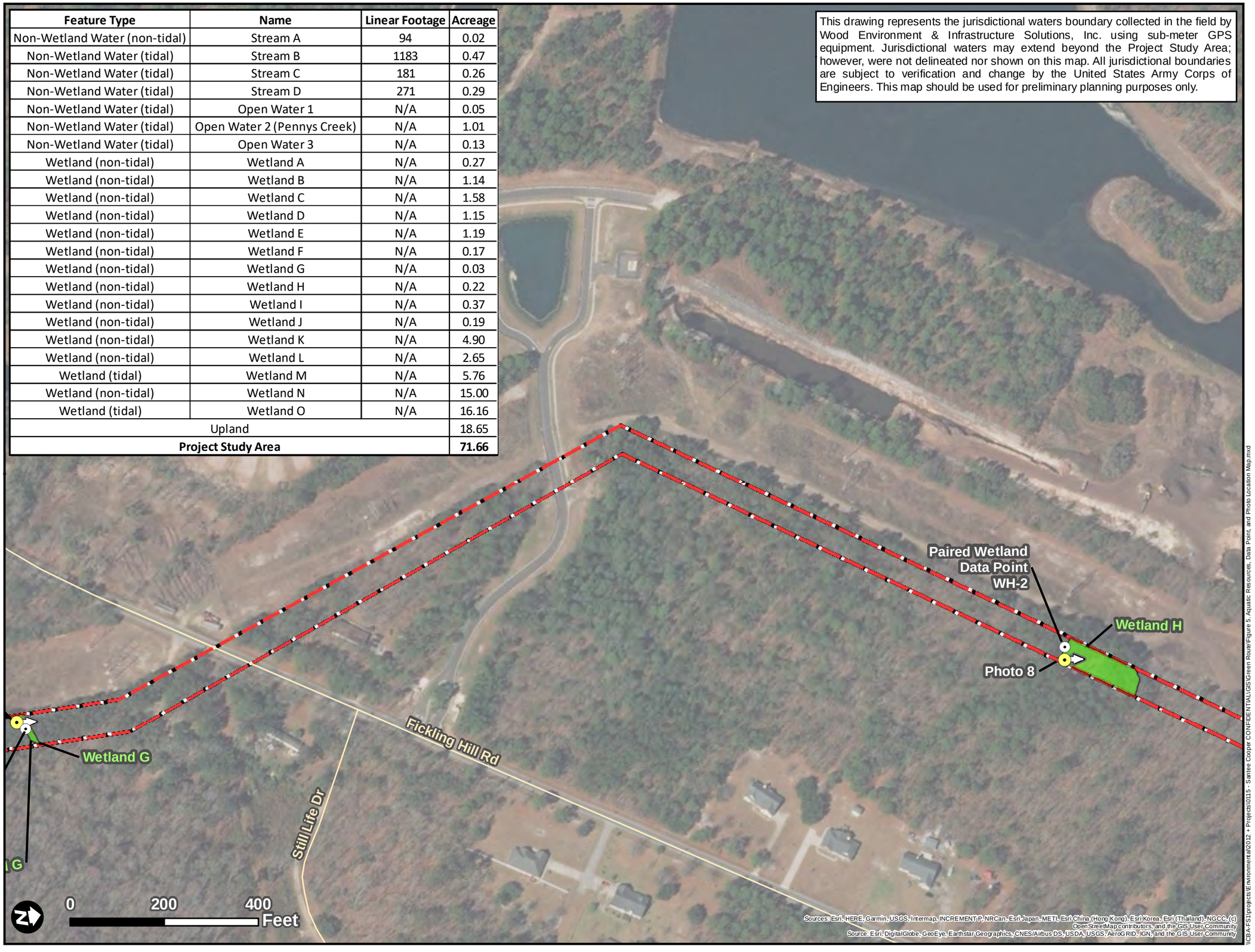
wood.

Job No.	6250160115
Drawn By:	BWS
Reviewed By:	AWC
Date:	1/10/2020

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. (Wood) project number 6250160115. Wood assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

Feature Type	Name	Linear Footage	Acreage
Non-Wetland Water (non-tidal)	Stream A	94	0.02
Non-Wetland Water (tidal)	Stream B	1183	0.47
Non-Wetland Water (tidal)	Stream C	181	0.26
Non-Wetland Water (tidal)	Stream D	271	0.29
Non-Wetland Water (tidal)	Open Water 1	N/A	0.05
Non-Wetland Water (tidal)	Open Water 2 (Pennys Creek)	N/A	1.01
Non-Wetland Water (tidal)	Open Water 3	N/A	0.13
Wetland (non-tidal)	Wetland A	N/A	0.27
Wetland (non-tidal)	Wetland B	N/A	1.14
Wetland (non-tidal)	Wetland C	N/A	1.58
Wetland (non-tidal)	Wetland D	N/A	1.15
Wetland (non-tidal)	Wetland E	N/A	1.19
Wetland (non-tidal)	Wetland F	N/A	0.17
Wetland (non-tidal)	Wetland G	N/A	0.03
Wetland (non-tidal)	Wetland H	N/A	0.22
Wetland (non-tidal)	Wetland I	N/A	0.37
Wetland (non-tidal)	Wetland J	N/A	0.19
Wetland (non-tidal)	Wetland K	N/A	4.90
Wetland (non-tidal)	Wetland L	N/A	2.65
Wetland (tidal)	Wetland M	N/A	5.76
Wetland (non-tidal)	Wetland N	N/A	15.00
Wetland (tidal)	Wetland O	N/A	16.16
Upland			18.65
Project Study Area			**71.66**

This drawing represents the jurisdictional waters boundary collected in the field by Wood Environment & Infrastructure Solutions, Inc. using sub-meter GPS equipment. Jurisdictional waters may extend beyond the Project Study Area; however, were not delineated nor shown on this map. All jurisdictional boundaries are subject to verification and change by the United States Army Corps of Engineers. This map should be used for preliminary planning purposes only.



\\CBA-FS1\projects\Environmental\2012 + Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 5_Aquatic Resources, Data Point, and Photo Location Map.mxd

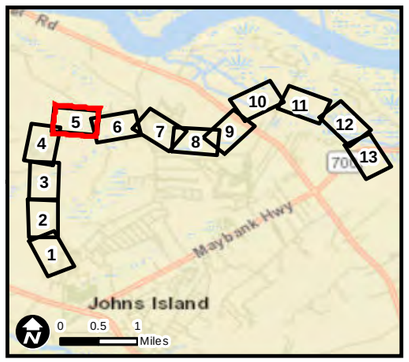


Figure 5.5 Aquatic Resources, Data Point, and Photo Location Map

Johns Island - Queensboro 115kV Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area
- Project Study Area Vertices
- Photo Location and Direction
- Road Centerline
- Data Point

Aquatic Resources

- Non-Wetland Water (non-tidal)
- Non-Wetland Water (tidal)
- Wetland (non-tidal)
- Wetland (tidal)

Santee Cooper

wood.

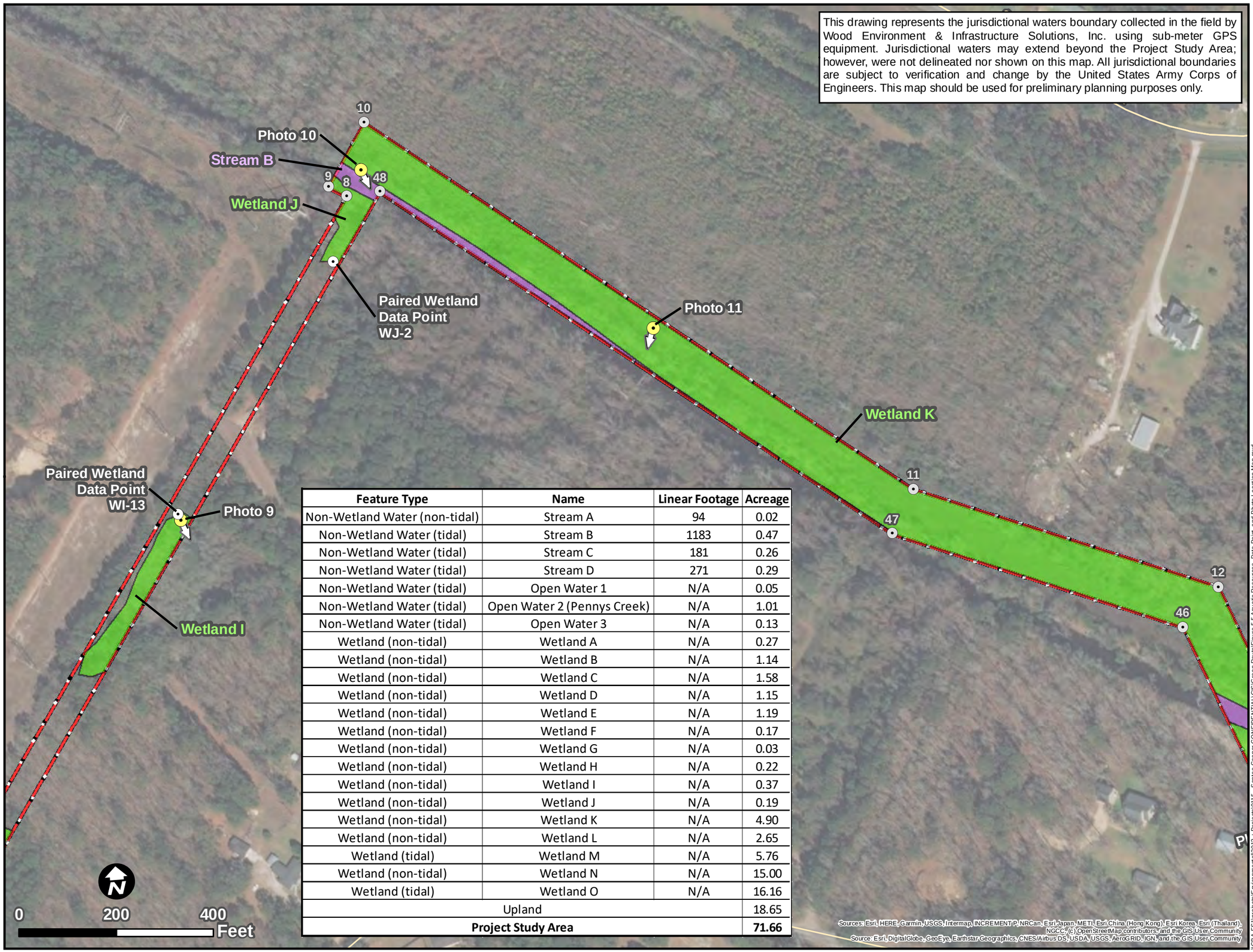
Job No. 6250160115

Drawn By: BWS

Reviewed By: AWC

Date: 1/10/2020

This drawing represents the jurisdictional waters boundary collected in the field by Wood Environment & Infrastructure Solutions, Inc. using sub-meter GPS equipment. Jurisdictional waters may extend beyond the Project Study Area; however, were not delineated nor shown on this map. All jurisdictional boundaries are subject to verification and change by the United States Army Corps of Engineers. This map should be used for preliminary planning purposes only.



Feature Type	Name	Linear Footage	Acreage
Non-Wetland Water (non-tidal)	Stream A	94	0.02
Non-Wetland Water (tidal)	Stream B	1183	0.47
Non-Wetland Water (tidal)	Stream C	181	0.26
Non-Wetland Water (tidal)	Stream D	271	0.29
Non-Wetland Water (tidal)	Open Water 1	N/A	0.05
Non-Wetland Water (tidal)	Open Water 2 (Pennys Creek)	N/A	1.01
Non-Wetland Water (tidal)	Open Water 3	N/A	0.13
Wetland (non-tidal)	Wetland A	N/A	0.27
Wetland (non-tidal)	Wetland B	N/A	1.14
Wetland (non-tidal)	Wetland C	N/A	1.58
Wetland (non-tidal)	Wetland D	N/A	1.15
Wetland (non-tidal)	Wetland E	N/A	1.19
Wetland (non-tidal)	Wetland F	N/A	0.17
Wetland (non-tidal)	Wetland G	N/A	0.03
Wetland (non-tidal)	Wetland H	N/A	0.22
Wetland (non-tidal)	Wetland I	N/A	0.37
Wetland (non-tidal)	Wetland J	N/A	0.19
Wetland (non-tidal)	Wetland K	N/A	4.90
Wetland (non-tidal)	Wetland L	N/A	2.65
Wetland (tidal)	Wetland M	N/A	5.76
Wetland (non-tidal)	Wetland N	N/A	15.00
Wetland (tidal)	Wetland O	N/A	16.16
Upland			18.65
Project Study Area			**71.66**

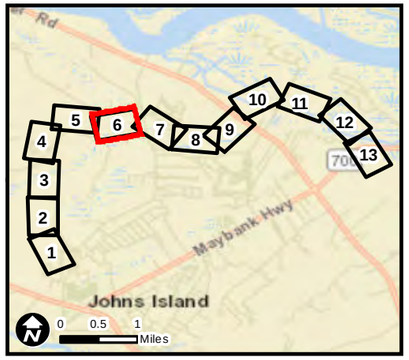


Figure 5.6 Aquatic Resources, Data Point, and Photo Location Map

Johns Island - Queensboro 115kV Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area
- Project Study Area Vertices
- Photo Location and Direction
- Road Centerline
- Data Point

Aquatic Resources

- Non-Wetland Water (non-tidal)
- Non-Wetland Water (tidal)
- Wetland (non-tidal)
- Wetland (tidal)

Santee Cooper

wood.

Job No.	6250160115
Drawn By:	BWS
Reviewed By:	AWC
Date:	1/10/2020

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. (Wood) project number 6250160115. Wood assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

Feature Type	Name	Linear Footage	Acreage
Non-Wetland Water (non-tidal)	Stream A	94	0.02
Non-Wetland Water (tidal)	Stream B	1183	0.47
Non-Wetland Water (tidal)	Stream C	181	0.26
Non-Wetland Water (tidal)	Stream D	271	0.29
Non-Wetland Water (tidal)	Open Water 1	N/A	0.05
Non-Wetland Water (tidal)	Open Water 2 (Pennys Creek)	N/A	1.01
Non-Wetland Water (tidal)	Open Water 3	N/A	0.13
Wetland (non-tidal)	Wetland A	N/A	0.27
Wetland (non-tidal)	Wetland B	N/A	1.14
Wetland (non-tidal)	Wetland C	N/A	1.58
Wetland (non-tidal)	Wetland D	N/A	1.15
Wetland (non-tidal)	Wetland E	N/A	1.19
Wetland (non-tidal)	Wetland F	N/A	0.17
Wetland (non-tidal)	Wetland G	N/A	0.03
Wetland (non-tidal)	Wetland H	N/A	0.22
Wetland (non-tidal)	Wetland I	N/A	0.37
Wetland (non-tidal)	Wetland J	N/A	0.19
Wetland (non-tidal)	Wetland K	N/A	4.90
Wetland (non-tidal)	Wetland L	N/A	2.65
Wetland (tidal)	Wetland M	N/A	5.76
Wetland (non-tidal)	Wetland N	N/A	15.00
Wetland (tidal)	Wetland O	N/A	16.16
Upland			18.65
Project Study Area			**71.66**

This drawing represents the jurisdictional waters boundary collected in the field by Wood Environment & Infrastructure Solutions, Inc. using sub-meter GPS equipment. Jurisdictional waters may extend beyond the Project Study Area; however, were not delineated nor shown on this map. All jurisdictional boundaries are subject to verification and change by the United States Army Corps of Engineers. This map should be used for preliminary planning purposes only.

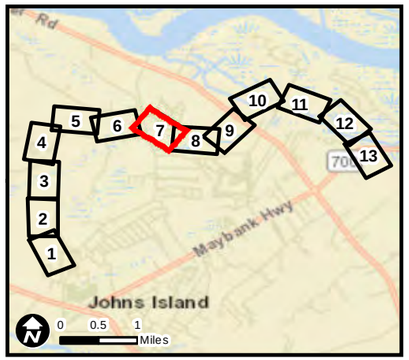


Figure 5.7 Aquatic Resources, Data Point, and Photo Location Map

Johns Island - Queensboro 115kV Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area
- Project Study Area Vertices
- Photo Location and Direction
- Road Centerline
- Data Point

Aquatic Resources

- Non-Wetland Water (non-tidal)
- Non-Wetland Water (tidal)
- Wetland (non-tidal)
- Wetland (tidal)

Feature Type	Name	Linear Footage	Acreage
Non-Wetland Water (non-tidal)	Stream A	94	0.02
Non-Wetland Water (tidal)	Stream B	1183	0.47
Non-Wetland Water (tidal)	Stream C	181	0.26
Non-Wetland Water (tidal)	Stream D	271	0.29
Non-Wetland Water (tidal)	Open Water 1	N/A	0.05
Non-Wetland Water (tidal)	Open Water 2 (Pennys Creek)	N/A	1.01
Non-Wetland Water (tidal)	Open Water 3	N/A	0.13
Wetland (non-tidal)	Wetland A	N/A	0.27
Wetland (non-tidal)	Wetland B	N/A	1.14
Wetland (non-tidal)	Wetland C	N/A	1.58
Wetland (non-tidal)	Wetland D	N/A	1.15
Wetland (non-tidal)	Wetland E	N/A	1.19
Wetland (non-tidal)	Wetland F	N/A	0.17
Wetland (non-tidal)	Wetland G	N/A	0.03
Wetland (non-tidal)	Wetland H	N/A	0.22
Wetland (non-tidal)	Wetland I	N/A	0.37
Wetland (non-tidal)	Wetland J	N/A	0.19
Wetland (non-tidal)	Wetland K	N/A	4.90
Wetland (non-tidal)	Wetland L	N/A	2.65
Wetland (tidal)	Wetland M	N/A	5.76
Wetland (non-tidal)	Wetland N	N/A	15.00
Wetland (tidal)	Wetland O	N/A	16.16
Upland			18.65
Project Study Area			**71.66**

This drawing represents the jurisdictional waters boundary collected in the field by Wood Environment & Infrastructure Solutions, Inc. using sub-meter GPS equipment. Jurisdictional waters may extend beyond the Project Study Area; however, were not delineated nor shown on this map. All jurisdictional boundaries are subject to verification and change by the United States Army Corps of Engineers. This map should be used for preliminary planning purposes only.

Segar St
Wetland M
Wetland N
Brownswood Rd
State Rd S-10-1442
Wetland M
Wetland Data Point WM
Wetland N
Stream D
Stream D
Wetland N
Jeronica Way
Fickling Hill Rd
Rivers Chance Ln
Lawson Ln
0 200 400 Feet

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

\\CBA-FS1\projects\Environmental\2012 - Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 5. Aquatic Resources, Data Point, and Photo Location Map.mxd

Santee Cooper

wood.

Job No. 6250160115
Drawn By: BWS
Reviewed By: AWC
Date: 1/10/2020

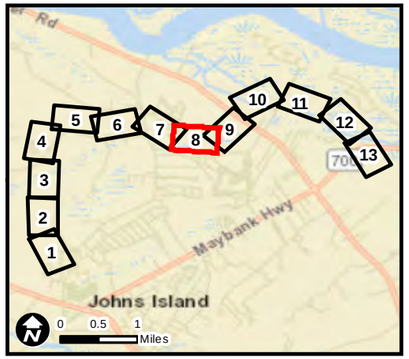


Figure 5.8 Aquatic Resources, Data Point, and Photo Location Map

Johns Island - Queensboro 115kV Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area
- Project Study Area Vertices
- Photo Location and Direction
- Road Centerline
- Data Point

Aquatic Resources

- Non-Wetland Water (non-tidal)
- Non-Wetland Water (tidal)
- Wetland (non-tidal)
- Wetland (tidal)

Santee Cooper

wood.

Job No. 6250160115

Drawn By: BWS

Reviewed By: AWC

Date: 1/10/2020

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. (Wood) project number 6250160115. Wood assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

Feature Type	Name	Linear Footage	Acreage
Non-Wetland Water (non-tidal)	Stream A	94	0.02
Non-Wetland Water (tidal)	Stream B	1183	0.47
Non-Wetland Water (tidal)	Stream C	181	0.26
Non-Wetland Water (tidal)	Stream D	271	0.29
Non-Wetland Water (tidal)	Open Water 1	N/A	0.05
Non-Wetland Water (tidal)	Open Water 2 (Pennys Creek)	N/A	1.01
Non-Wetland Water (tidal)	Open Water 3	N/A	0.13
Wetland (non-tidal)	Wetland A	N/A	0.27
Wetland (non-tidal)	Wetland B	N/A	1.14
Wetland (non-tidal)	Wetland C	N/A	1.58
Wetland (non-tidal)	Wetland D	N/A	1.15
Wetland (non-tidal)	Wetland E	N/A	1.19
Wetland (non-tidal)	Wetland F	N/A	0.17
Wetland (non-tidal)	Wetland G	N/A	0.03
Wetland (non-tidal)	Wetland H	N/A	0.22
Wetland (non-tidal)	Wetland I	N/A	0.37
Wetland (non-tidal)	Wetland J	N/A	0.19
Wetland (non-tidal)	Wetland K	N/A	4.90
Wetland (non-tidal)	Wetland L	N/A	2.65
Wetland (tidal)	Wetland M	N/A	5.76
Wetland (non-tidal)	Wetland N	N/A	15.00
Wetland (tidal)	Wetland O	N/A	16.16
Upland			18.65
Project Study Area			**71.66**

This drawing represents the jurisdictional waters boundary collected in the field by Wood Environment & Infrastructure Solutions, Inc. using sub-meter GPS equipment. Jurisdictional waters may extend beyond the Project Study Area; however, were not delineated nor shown on this map. All jurisdictional boundaries are subject to verification and change by the United States Army Corps of Engineers. This map should be used for preliminary planning purposes only.

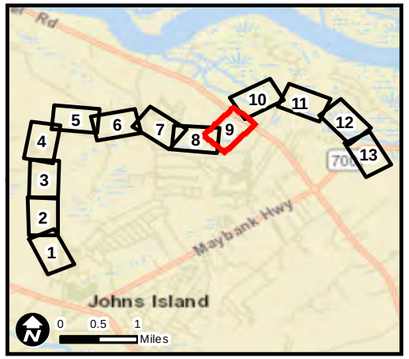


Figure 5.9 Aquatic Resources, Data Point, and Photo Location Map

Johns Island - Queensboro 115kV Transmission Project
Charleston County, South Carolina

Feature Type	Name	Linear Footage	Acreage
Non-Wetland Water (non-tidal)	Stream A	94	0.02
Non-Wetland Water (tidal)	Stream B	1183	0.47
Non-Wetland Water (tidal)	Stream C	181	0.26
Non-Wetland Water (tidal)	Stream D	271	0.29
Non-Wetland Water (tidal)	Open Water 1	N/A	0.05
Non-Wetland Water (tidal)	Open Water 2 (Pennys Creek)	N/A	1.01
Non-Wetland Water (tidal)	Open Water 3	N/A	0.13
Wetland (non-tidal)	Wetland A	N/A	0.27
Wetland (non-tidal)	Wetland B	N/A	1.14
Wetland (non-tidal)	Wetland C	N/A	1.58
Wetland (non-tidal)	Wetland D	N/A	1.15
Wetland (non-tidal)	Wetland E	N/A	1.19
Wetland (non-tidal)	Wetland F	N/A	0.17
Wetland (non-tidal)	Wetland G	N/A	0.03
Wetland (non-tidal)	Wetland H	N/A	0.22
Wetland (non-tidal)	Wetland I	N/A	0.37
Wetland (non-tidal)	Wetland J	N/A	0.19
Wetland (non-tidal)	Wetland K	N/A	4.90
Wetland (non-tidal)	Wetland L	N/A	2.65
Wetland (tidal)	Wetland M	N/A	5.76
Wetland (non-tidal)	Wetland N	N/A	15.00
Wetland (tidal)	Wetland O	N/A	16.16
Upland			18.65
Project Study Area			**71.66**

This drawing represents the jurisdictional waters boundary collected in the field by Wood Environment & Infrastructure Solutions, Inc. using sub-meter GPS equipment. Jurisdictional waters may extend beyond the Project Study Area; however, were not delineated nor shown on this map. All jurisdictional boundaries are subject to verification and change by the United States Army Corps of Engineers. This map should be used for preliminary planning purposes only.

Legend

- Project Study Area
- Project Study Area Vertices
- Photo Location and Direction
- Road Centerline
- Data Point

Aquatic Resources

- Non-Wetland Water (non-tidal)
- Non-Wetland Water (tidal)
- Wetland (non-tidal)
- Wetland (tidal)

Santee Cooper

wood.

Job No. 6250160115

Drawn By: BWS

Reviewed By: AWC

Date: 1/10/2020

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. (Wood) project number 6250160115. Wood assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

River Rd
State Rd S-10-91

Wetland N

0 200 400 Feet

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

\\CBA-FS1\projects\Environmental\2012 + Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 5_Aquatic Resources, Data Point, and Photo Location Map.mxd

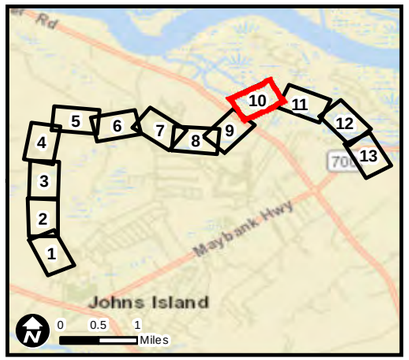


Figure 5.10 Aquatic Resources, Data Point, and Photo Location Map

Johns Island - Queensboro 115kV Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area
- Project Study Area Vertices
- Photo Location and Direction
- Road Centerline
- Data Point

Aquatic Resources

- Non-Wetland Water (non-tidal)
- Non-Wetland Water (tidal)
- Wetland (non-tidal)
- Wetland (tidal)

Feature Type	Name	Linear Footage	Acreage
Non-Wetland Water (non-tidal)	Stream A	94	0.02
Non-Wetland Water (tidal)	Stream B	1183	0.47
Non-Wetland Water (tidal)	Stream C	181	0.26
Non-Wetland Water (tidal)	Stream D	271	0.29
Non-Wetland Water (tidal)	Open Water 1	N/A	0.05
Non-Wetland Water (tidal)	Open Water 2 (Pennys Creek)	N/A	1.01
Non-Wetland Water (tidal)	Open Water 3	N/A	0.13
Wetland (non-tidal)	Wetland A	N/A	0.27
Wetland (non-tidal)	Wetland B	N/A	1.14
Wetland (non-tidal)	Wetland C	N/A	1.58
Wetland (non-tidal)	Wetland D	N/A	1.15
Wetland (non-tidal)	Wetland E	N/A	1.19
Wetland (non-tidal)	Wetland F	N/A	0.17
Wetland (non-tidal)	Wetland G	N/A	0.03
Wetland (non-tidal)	Wetland H	N/A	0.22
Wetland (non-tidal)	Wetland I	N/A	0.37
Wetland (non-tidal)	Wetland J	N/A	0.19
Wetland (non-tidal)	Wetland K	N/A	4.90
Wetland (non-tidal)	Wetland L	N/A	2.65
Wetland (tidal)	Wetland M	N/A	5.76
Wetland (non-tidal)	Wetland N	N/A	15.00
Wetland (tidal)	Wetland O	N/A	16.16
Upland			18.65
Project Study Area			**71.66**

This drawing represents the jurisdictional waters boundary collected in the field by Wood Environment & Infrastructure Solutions, Inc. using sub-meter GPS equipment. Jurisdictional waters may extend beyond the Project Study Area; however, were not delineated nor shown on this map. All jurisdictional boundaries are subject to verification and change by the United States Army Corps of Engineers. This map should be used for preliminary planning purposes only.

Brickyard Rd
State Rd S-10-1958
Open Water 2
Open Water 3
Wetland O
DP2-Wet
Photo 15
Wetland O
Photo 16
Rushland Landing Rd
0
200
400
Feet

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

\\CBA-FS1\projects\Environmental\2012 + Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 5. Aquatic Resources, Data Point, and Photo Location Map.mxd

Santee Cooper

wood.

Job No. 6250160115
Drawn By: BWS
Reviewed By: AWC
Date: 1/10/2020

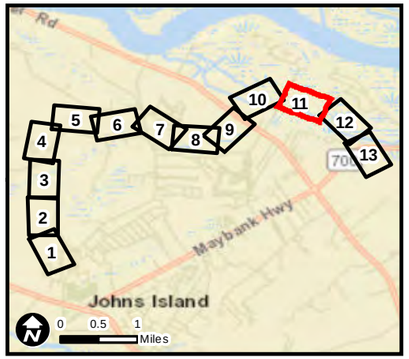


Figure 5.11 Aquatic Resources, Data Point, and Photo Location Map

Johns Island - Queensboro 115kV Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area
- Project Study Area Vertices
- Photo Location and Direction
- Road Centerline
- Data Point

Aquatic Resources

- Non-Wetland Water (non-tidal)
- Non-Wetland Water (tidal)
- Wetland (non-tidal)
- Wetland (tidal)

Santee Cooper

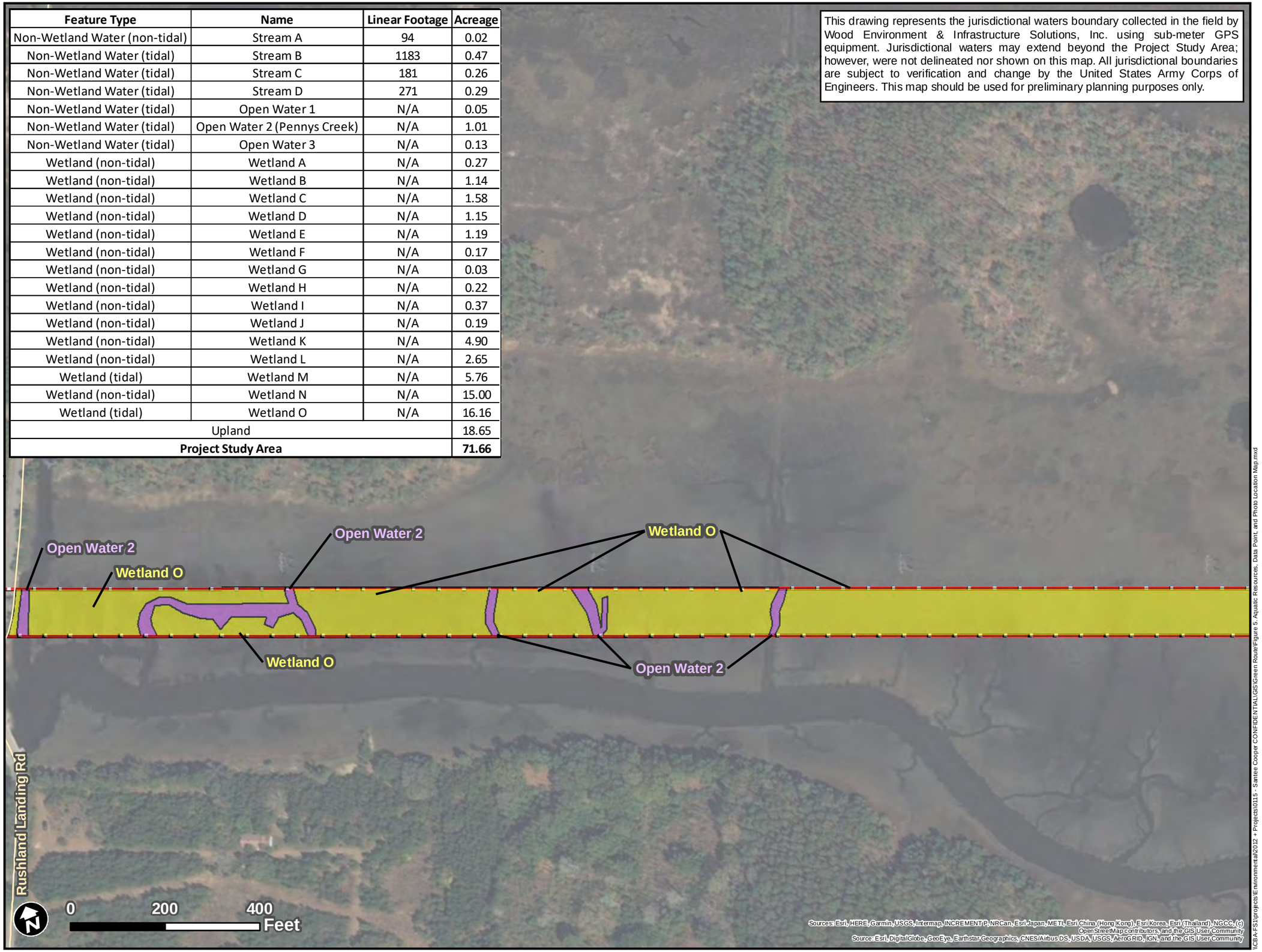
wood.

Job No.	6250160115
Drawn By:	BWS
Reviewed By:	AWC
Date:	1/10/2020

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. (Wood) project number 6250160115. Wood assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

Feature Type	Name	Linear Footage	Acreage
Non-Wetland Water (non-tidal)	Stream A	94	0.02
Non-Wetland Water (tidal)	Stream B	1183	0.47
Non-Wetland Water (tidal)	Stream C	181	0.26
Non-Wetland Water (tidal)	Stream D	271	0.29
Non-Wetland Water (tidal)	Open Water 1	N/A	0.05
Non-Wetland Water (tidal)	Open Water 2 (Pennys Creek)	N/A	1.01
Non-Wetland Water (tidal)	Open Water 3	N/A	0.13
Wetland (non-tidal)	Wetland A	N/A	0.27
Wetland (non-tidal)	Wetland B	N/A	1.14
Wetland (non-tidal)	Wetland C	N/A	1.58
Wetland (non-tidal)	Wetland D	N/A	1.15
Wetland (non-tidal)	Wetland E	N/A	1.19
Wetland (non-tidal)	Wetland F	N/A	0.17
Wetland (non-tidal)	Wetland G	N/A	0.03
Wetland (non-tidal)	Wetland H	N/A	0.22
Wetland (non-tidal)	Wetland I	N/A	0.37
Wetland (non-tidal)	Wetland J	N/A	0.19
Wetland (non-tidal)	Wetland K	N/A	4.90
Wetland (non-tidal)	Wetland L	N/A	2.65
Wetland (tidal)	Wetland M	N/A	5.76
Wetland (non-tidal)	Wetland N	N/A	15.00
Wetland (tidal)	Wetland O	N/A	16.16
Upland			18.65
Project Study Area			**71.66**

This drawing represents the jurisdictional waters boundary collected in the field by Wood Environment & Infrastructure Solutions, Inc. using sub-meter GPS equipment. Jurisdictional waters may extend beyond the Project Study Area; however, were not delineated nor shown on this map. All jurisdictional boundaries are subject to verification and change by the United States Army Corps of Engineers. This map should be used for preliminary planning purposes only.



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

\\CBA-FS1\projects\Environmental\2012 + Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 5_Aquatic Resources, Data Point, and Photo Location Map.mxd

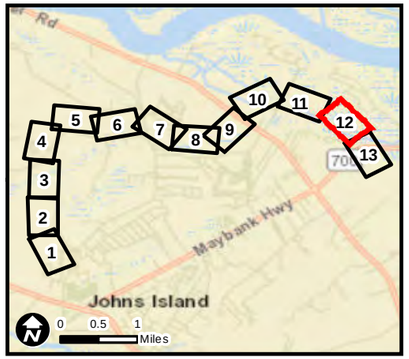


Figure 5.12 Aquatic Resources, Data Point, and Photo Location Map

Johns Island - Queensboro 115kV Transmission Project
Charleston County, South Carolina

Feature Type	Name	Linear Footage	Acreage
Non-Wetland Water (non-tidal)	Stream A	94	0.02
Non-Wetland Water (tidal)	Stream B	1183	0.47
Non-Wetland Water (tidal)	Stream C	181	0.26
Non-Wetland Water (tidal)	Stream D	271	0.29
Non-Wetland Water (tidal)	Open Water 1	N/A	0.05
Non-Wetland Water (tidal)	Open Water 2 (Pennys Creek)	N/A	1.01
Non-Wetland Water (tidal)	Open Water 3	N/A	0.13
Wetland (non-tidal)	Wetland A	N/A	0.27
Wetland (non-tidal)	Wetland B	N/A	1.14
Wetland (non-tidal)	Wetland C	N/A	1.58
Wetland (non-tidal)	Wetland D	N/A	1.15
Wetland (non-tidal)	Wetland E	N/A	1.19
Wetland (non-tidal)	Wetland F	N/A	0.17
Wetland (non-tidal)	Wetland G	N/A	0.03
Wetland (non-tidal)	Wetland H	N/A	0.22
Wetland (non-tidal)	Wetland I	N/A	0.37
Wetland (non-tidal)	Wetland J	N/A	0.19
Wetland (non-tidal)	Wetland K	N/A	4.90
Wetland (non-tidal)	Wetland L	N/A	2.65
Wetland (tidal)	Wetland M	N/A	5.76
Wetland (non-tidal)	Wetland N	N/A	15.00
Wetland (tidal)	Wetland O	N/A	16.16
Upland			18.65
Project Study Area			**71.66**

This drawing represents the jurisdictional waters boundary collected in the field by Wood Environment & Infrastructure Solutions, Inc. using sub-meter GPS equipment. Jurisdictional waters may extend beyond the Project Study Area; however, were not delineated nor shown on this map. All jurisdictional boundaries are subject to verification and change by the United States Army Corps of Engineers. This map should be used for preliminary planning purposes only.

Legend

- Project Study Area
- Project Study Area Vertices
- Photo Location and Direction
- Road Centerline
- Data Point

Aquatic Resources

- Non-Wetland Water (non-tidal)
- Non-Wetland Water (tidal)
- Wetland (non-tidal)
- Wetland (tidal)

Open Water 2
Open Water 2
Wetland O
John
Fenwick Ln
0
200
400
Feet

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Job No. 6250160115
Drawn By: BWS
Reviewed By: AWC
Date: 1/10/2020

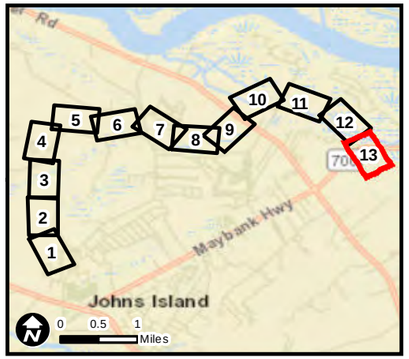


Figure 5.13 Aquatic Resources, Data Point, and Photo Location Map

Johns Island - Queensboro 115kV Transmission Project
Charleston County, South Carolina

Legend

- Project Study Area
- Project Study Area Vertices
- Photo Location and Direction
- Road Centerline
- Data Point

Aquatic Resources

- Non-Wetland Water (non-tidal)
- Non-Wetland Water (tidal)
- Wetland (non-tidal)
- Wetland (tidal)

Feature Type	Name	Linear Footage	Acreage
Non-Wetland Water (non-tidal)	Stream A	94	0.02
Non-Wetland Water (tidal)	Stream B	1183	0.47
Non-Wetland Water (tidal)	Stream C	181	0.26
Non-Wetland Water (tidal)	Stream D	271	0.29
Non-Wetland Water (tidal)	Open Water 1	N/A	0.05
Non-Wetland Water (tidal)	Open Water 2 (Pennys Creek)	N/A	1.01
Non-Wetland Water (tidal)	Open Water 3	N/A	0.13
Wetland (non-tidal)	Wetland A	N/A	0.27
Wetland (non-tidal)	Wetland B	N/A	1.14
Wetland (non-tidal)	Wetland C	N/A	1.58
Wetland (non-tidal)	Wetland D	N/A	1.15
Wetland (non-tidal)	Wetland E	N/A	1.19
Wetland (non-tidal)	Wetland F	N/A	0.17
Wetland (non-tidal)	Wetland G	N/A	0.03
Wetland (non-tidal)	Wetland H	N/A	0.22
Wetland (non-tidal)	Wetland I	N/A	0.37
Wetland (non-tidal)	Wetland J	N/A	0.19
Wetland (non-tidal)	Wetland K	N/A	4.90
Wetland (non-tidal)	Wetland L	N/A	2.65
Wetland (tidal)	Wetland M	N/A	5.76
Wetland (non-tidal)	Wetland N	N/A	15.00
Wetland (tidal)	Wetland O	N/A	16.16
Upland			18.65
Project Study Area			**71.66**

This drawing represents the jurisdictional waters boundary collected in the field by Wood Environment & Infrastructure Solutions, Inc. using sub-meter GPS equipment. Jurisdictional waters may extend beyond the Project Study Area; however, were not delineated nor shown on this map. All jurisdictional boundaries are subject to verification and change by the United States Army Corps of Engineers. This map should be used for preliminary planning purposes only.

Wetland O
Photo 17
Open Water 1
Maybank Hwy
John Fenwick Ln
General Cornwallis Dr
0
200
400
Feet

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

\\CBA-FS1\projects\Environmental\2012 + Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 5_Aquatic Resources, Data Point, and Photo Location Map.mxd

Job No. 6250160115
Drawn By: BWS
Reviewed By: AWC
Date: 1/10/2020

Figure 5.14 Aquatic Resources, Data Point, and Photo Location Map

Johns Island - Queensboro 115kV Transmission Project
Charleston County, South Carolina

Project Study Area Vertices Table

ID	Latitude	Longitude	ID	Latitude	Longitude	ID	Latitude	Longitude	ID	Latitude	Longitude
1	32.73250236	-80.08983503	16	32.75583162	-80.06964858	31	32.76126728	-80.04685105	46	32.7557521	-80.08021717
2	32.73413715	-80.08947922	17	32.75106152	-80.06096855	32	32.76033721	-80.04953674	47	32.75643102	-80.08209473
3	32.73955255	-80.08967051	18	32.75244173	-80.05967332	33	32.75643073	-80.05153921	48	32.75862733	-80.08529107
4	32.74088736	-80.08964389	19	32.75223459	-80.05691446	34	32.75620852	-80.05118029	49	32.7525151	-80.09039978
5	32.74218551	-80.08950033	20	32.75402002	-80.05387375	35	32.7524206	-80.05454185	50	32.74940209	-80.08909173
6	32.74937102	-80.08932392	21	32.75601687	-80.05210583	36	32.75277176	-80.05498161	51	32.74213738	-80.08928705
7	32.75253833	-80.09059939	22	32.76054912	-80.04978262	37	32.75332125	-80.05449378	52	32.74102321	-80.08940387
8	32.75861807	-80.08551785	23	32.76158426	-80.04679353	38	32.75298052	-80.05507408	53	32.74104863	-80.08946272
9	32.75868018	-80.08563403	24	32.75676042	-80.0333301	39	32.75195198	-80.05682573	54	32.74017167	-80.08948629
10	32.75902525	-80.08535459	25	32.75418425	-80.03173668	40	32.75215483	-80.05952742	55	32.74013844	-80.08943873
11	32.75666857	-80.08192486	26	32.75160949	-80.03094892	41	32.75069468	-80.06089767	56	32.73962583	-80.0894525
12	32.75595818	-80.07996027	27	32.75012456	-80.02999524	42	32.7555776	-80.06978298	57	32.73411574	-80.08923463
13	32.75499333	-80.07954036	28	32.7514967	-80.03125022	43	32.75620002	-80.07250552	58	32.73282779	-80.08948409
14	32.75406094	-80.07758661	29	32.75408841	-80.03204341	44	32.75374232	-80.07758045	59	32.7328009	-80.08800063
15	32.75649503	-80.07255041	30	32.75654445	-80.03356142	45	32.75480367	-80.0798044	60	32.73247192	-80.08790532

Santee Cooper

wood.

Job No. 6250160115

Drawn By: BWS

Reviewed By: AWC

Date: 1/10/2020

\\CBA-FS1\projects\Environmental\2012 + Projects\0115 - Santee Cooper CONFIDENTIAL\GIS\Green Route\Figure 5.14 Photograph Location and Direction Map.mxd