

Application, Appendix, DEQ Supplement, Direct Testimony and Exhibits of Virginia Electric and Power Company

Before the State Corporation Commission of Virginia

Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project

Application No. 302

Case No. PUR-2020-00269

Filed: November 18, 2020

Volume 3 of 3

BEFORE THE STATE CORPORATION COMMISSION OF VIRGINIA

APPLICATION OF VIRGINIA ELECTRIC AND POWER COMPANY FOR APPROVAL OF ELECTRIC FACILITIES

Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project

Application No. 302

DEQ Supplement

Case No. PUR-2020-00269

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Based upon consultations with the Virginia Department of Environmental Quality ("DEQ"), Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company") has developed this DEQ Supplement to facilitate review and analysis of the Virginia Rebuild Project by DEQ and other relevant agencies.

1. Project Description

In order to maintain the structural integrity and reliability of its transmission system in compliance with mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, the Company proposes in Greensville County, Virginia, the following:

- Rebuild, entirely within existing right-of-way or on Company-owned property, approximately 1.6 miles of the existing 230 kV overhead single circuit Clubhouse-Dry Bread Line #2201 on single circuit structures, which runs from Structure #2201/1A within the Company's existing Clubhouse Substation to Structure #2201/14 / #254/14 within the Company's existing Dry Bread Substation;
- (ii) Rebuild, entirely within existing right-of-way or on Company-owned property, approximately 10.9 miles of the existing 230 kV overhead single circuit Dry Bread-Lakeview Line #254 on single circuit structures, which runs from Structure #2201/14 / #254/14 within the Company's existing Dry Bread Substation to Structure #254/113 at the Virginia state line; and
- Perform system protection coordination studies and relay resets at Clubhouse and Dry Bread Substations, as well as line terminal upgrade work at Clubhouse Substation.

(collectively, the "Virginia Rebuild Project").

2. Environmental Analysis

The Company solicited comments from all relevant state and local agencies about the proposed Virginia Rebuild Project in October 2020. Copies of these letters are included as <u>Attachment 2.</u>¹ The DEQ provided a letter in response to the Company's scoping request for the proposed Virginia Rebuild Project on October 14, 2020. A copy of this letter is included as <u>Attachment 2.1</u>.

A. Air Quality

The Company will control fugitive dust during construction in accordance with DEQ regulations. During construction, if the weather is dry for an extended period of time, there will be airborne particles from the use of vehicles and equipment within the right-of-way. Minimal earth disturbance will take place and vehicle speed, which is often a factor in airborne particulate, will be kept to a minimum. Erosion and sediment control are addressed in Section 2.G, below. Equipment and vehicles that are powered by gasoline or diesel motors will also be used during the construction of the line so there will be exhaust from those motors.

¹ While some of the letters provided in Attachment 2 were inadvertently dated August 27, 2020, they were actually sent to the identified agencies on October 8, 2020.

The existing transmission corridor currently is maintained for transmission facility operations, and no clearing is proposed. The Virginia Rebuild Project may require some trimming of tree limbs along the right-of-way edges to support construction activities. The Company does not expect to burn cleared material, but if necessary, the Company will coordinate with the responsible locality to ensure all local ordinances and DEQ requirements are met. The Company's tree clearing methods are described in Section 2.K.

B. Water Source (No water source is required for transmission lines so this discussion will focus on potential waterbodies to be crossed by the proposed transmission line rebuild.)

The Virginia Rebuild Project is located within the Meherrin watershed, Hydrologic Unit Code 03010204. According to the U.S. Geological Survey ("USGS") topographic quadrangles (Emporia [1963, rev 2019], Skippers [1963, rev 2019], and Barley [1963, rev 2019]), the existing transmission line crosses six named perennial streams and rivers including: Meherrin River, Falling Run, Fontaine Creek, Cattail Creek, Massie Branch, and Collier Branch. The Virginia Department of Conservation and Recreation's ("DCR") Natural Heritage Data Explorer provides information on streams using the National Hydrography Dataset. According to the Data Explorer mapping service, the transmission right-of-way crosses multiple tributaries.

Any clearing required in the vicinity of streams will be performed by hand within 100 feet of both sides, and vegetation less than three inches in diameter will be left undisturbed.

The Company solicited comments from the Virginia Marine Resources Commission ("VMRC") regarding the proposed Virginia Rebuild Project in October 2020. The VMRC provided comments in a letter dated October 9, 2020 noting that a subaqueous encroachment permit would be required for any encroachments channelward or ordinary high water along non-tidal, natural rivers and streams with a drainage area of five square miles or greater at the crossing location. See <u>Attachment 2.B.1</u>. The right-of-way crosses one VMRC jurisdictional water with drainage areas greater than five square miles, the Meherrin River. A Joint Permit Application ("JPA") will be submitted for review by the VMRC, DEQ and the U.S. Army Corps of Engineers (the "Corps") to authorize jurisdictional crossings and for any impacts to jurisdictional features. See Section 2.D below.

C. Discharge of Cooling Waters

No discharge of cooling waters is associated with the Virginia Rebuild Project.

D. Tidal and Non-tidal Wetlands

No tidal wetlands were identified within the proposed Virginia Rebuild project area.

Wetlands Impact Consultation

Within the Virginia Rebuild Project right-of-way, the Company delineated wetlands and other waters of the United States using the *Routine Determination Method* as outlined in the *1987 Corps of Engineers Wetland Delineation Manual* and methods described in the *2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region* (Version 2.0). The Company submitted the results of this delineation to the Corps on October 26, 2020 for confirmation. See <u>Attachment 2.D.1</u>. Total jurisdictional resources within the proposed Rebuild Project right-of-way are provided in Table 1 and detailed in <u>Attachment 2.D.1</u>.

| Resource | Area (±) | |
|---|----------------------|--|
| Palustrine Forested Wetland | 6.3 AC | |
| Palustrine Emergent Wetland | 39.0 AC | |
| Palustrine Scrub Shrub | 1.8 AC | |
| Open Waters (Palustrine Unconsolidated Bottom) | 0.5 AC | |
| Upper Perennial Stream | 0.6 AC (3,071 LF) | |
| Lower Perennial Stream | 1.0 AC | |
| Intermittent Stream | 0.3 AC (1,919 LF) | |
| Jurisdictional Ditch | 0.003 AC (21 LF) | |

Table 1. Jurisdictional Resources within Virginia Rebuild Project Right-of-Way

The Company solicited comments from the DEQ's Office of Wetland and Stream Protection (OWSP) in October 2020. The Company received a response on October 5, 2020, from the DEQ's OWSP, which recommends that impacts to wetlands and streams should be minimized to the maximum extent practicable. Temporary impacts should be restored to pre-existing conditions, and permanent impacts should be compensated for in accordance with all applicable state regulations and laws. Based on DEQ's review, the project may require a Virginia Water Protection ("VWP") individual permit or general permit coverage. A JPA may be submitted for further evaluation and final permit need determination by DEQ. See <u>Attachment 2.D.2</u>.

Prior to construction, the Company will obtain any necessary permits to impact jurisdictional resources.

E. Solid and Hazardous Waste

On behalf of the Company, C2 Environmental, Inc. ("C2E") conducted database searches for solid and hazardous wastes, and petroleum release sites within a 0.5-mile radius of the Virginia Rebuild Project. Publicly available data from the Environmental Protection Agency ("EPA") Facility Registry System ("FRS") were obtained and include *Comprehensive Environmental Response, Compensation and Liability Act* ("CERCLA")/Superfund; *Resource Conservation and Recovery Act* ("RCRA"); and brownfield sites. Comparison with the EPA's NEPAssist Tool resulted in identifying four registered RCRA facilities present within 0.5-mile of the project.

DEQ records were also searched for the presence of solid waste management facilities, Voluntary Remediation Program sites, petroleum releases, and registered tank facilities within 0.5-mile of the Virginia Rebuild Project. No solid waste management facilities, Voluntary Remediation Program sites, or petroleum release sites were identified, and one registered tank facility was identified. Tables listing these results are included in <u>Attachment 2.E.1</u>.

F. Natural Heritage, Threatened and Endangered Species

On behalf of the Company, C2E conducted online database searches for threatened and endangered species in the vicinity of the Virginia Rebuild Project, including the U.S. Fish and Wildlife ("USFWS") Information, Planning, and Conservation ("IPaC") system, the USFWS Critical Habitat for Threatened and Endangered Species Mapper, the USFWS Bald Eagle Concentration Area Map, the Virginia Department of Wildlife Resources ("DWR") Virginia Fish and Wildlife Information Service ("VAFWIS"), the DWR Northern Long-eared Bat ("NLEB") Winter Habitat and Roost Trees Map, the DCR, the Natural Heritage Data Explorer ("NHDE"), and the Center for Conservation Biology ("CCB") Bald Eagle Nest Locator. The results are presented in Table 2 below.

| Species | Status* | Database | Results |
|--|---------|--|---|
| Northern long- eared bat (Myotis septentrionalis) | FT, ST | USFWS-IPaC, DWR-NLEB Winter Habitat and Roost Tree Map | No known hibernacula or summer roosts are identified in the vicinity of the project. |

Table 2. Threatened and endangered species within the Virginia Rebuild Project vicinity

| Roanoke logperch (Percina rex) | FE, SE | USFWS-IPaC | Noted as potentially occurring in the vicinity of the project. Because no instream work is proposed, no impacts are expected. |
|---|-----------|---|--|
| Atlantic pigtoe (Fusconaia masoni) | (P)FT, ST | USFWS-IPaC | Noted as potentially occurring in the vicinity of the project. Because no instream work is proposed, no impacts are expected. |
| Yellow lance (Elliptio lanceolata) | FT | USFWS-IPaC | Noted as potentially occurring in the vicinity of the project. Because no instream work is proposed, no impacts are expected. |
| Loggerhead shrike (Lanius ludovicianus) | ST | VAFWIS | Observed within the vicinity of the project. |
| Green floater (Lasmigona subviridis) | ST | VAFWIS | Observed within the vicinity of the project. |
| Reclining bulrush (Scirpus flaccidifoliius) | ST | DCR-NHDE | Noted as potentially occurring in the vicinity of the project. |
| Bald eagle (Haliaeetus leucocephalus) | FP | CCB Eagle Nest Locator; USFWS Eagle Concentration Areas | No bald eagle nests are located within 660 feet of the project area. No bald eagle concentration areas are present within the project vicinity. |

*FT: federally threatened, FE: federally endangered, FP: federally protected, ST: stated threatened, SE: state endangered, (P): proposed

A copy of the database search results can be found in <u>Attachment 2.F.1</u>. Additionally, the Company requested comments from the USFWS, DWR and DCR regarding the Virginia Rebuild Project in October 2020. A response from DCR was received via an email dated October 8, 2020 stating that there are no impacts to Planning, Parks and Recreation ("PRR") resources. See <u>Attachment 2.F.2</u>. The response from DCR, Division of Natural Heritage is included as <u>Attachment 2.F.3</u>. The response from

DWR is included as <u>Attachment 2.F.4</u>. A project review from the DCR's DNH was received on November 13, 2020, and is included herein as <u>Attachment 2.F.5</u>. The Company will also obtain all necessary permits prior to construction, including authorization from the VMRC, DEQ, and the Corps, and coordination with the DWR, DCR, USFS, and USFWS, as necessary, will take place through the respective permit processes to avoid and minimize impacts to listed species.

New and updated information is continually added to the DCR's Biotics database. Following the DCR-DNH SCC planning stage project review, the Company shall resubmit project information with completed information services order form and a map to DCR-DNH or submit the project on-line through the Natural Heritage Data Explorer. This review shall occur during the final stage of engineering and upon any major modifications of the project during construction (e.g., deviations, permanent or temporary, from the original study area and/or the relocation of a tower(s) into sensitive areas) for an update on natural heritage information and coordination of potential project modifications to avoid and minimize impacts to natural heritage resources.

G. Erosion and Sediment Control

The DEQ approved the Company's *Standards & Specification for Erosion & Sediment Control and Stormwater Management for Construction of Linear Electric Transmission Facilities (TE VEP 8000).* These specifications are given to the Company's contractors and require erosion and sediment control measures to be in place before construction of the line begins and specifies the requirements for rehabilitation of the right-of-way. A copy of the current DEQ approval letter dated August 13, 2019 is provided as <u>Attachment 2.G.1</u>. According to the approval letter, coverage was effective through August 12, 2020. The Company submitted the renewal application on August 3, 2020 and is awaiting approval.

H. Archaeological, Historic, Scenic, Cultural or Architectural Resources

Dutton + Associates was retained by the Company to conduct a Stage I Pre-Application Analysis for the proposed Virginia Rebuild Project. This analysis was completed in August 2020 and submitted to VDHR in November 2020. In addition, the Virginia Cultural Resource Information System ("VCRIS") inventory was rechecked in October 2020, which confirmed the accuracy of the data submitted in the Stage I Pre-Application Analysis. The report is included as <u>Attachment 2.H.1</u>. Preliminary background research was conducted pursuant to the *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (VDHR 2008) for proposed transmission line improvements. As detailed by VDHR guidance, consideration was given to: National Historic Landmark ("NHL") properties located within a 1.5-mile radius of the project centerline; National Register of Historic Places ("NRHP") listed properties, battlefields, and historic landscapes located within a 1.0-mile radius of the project centerline; NRHP-eligible sites located within a 0.5-mile radius of the project centerline; and, archaeological sites located within the project right-of-way.

Archaeological Resources

A total of 18 previously recorded archaeological sites are located within or directly adjacent to the existing right-of-way. Of these, two have been determined not eligible for listing in the NRHP. The remaining resources have not been evaluated. The table below provides the archaeological resource within the Virginia Rebuild Project right-of-way.

| Resource ID# | Resource Name | National Register Status* | | |
|-----------------|---------------------|------------------------------|--|--|
| | | | | |
| 44GV0095 | Archaeological Site | Not Evaluated | | |
| 44GV0104 | Archaeological Site | Not Evaluated | | |
| 44GV0106 | Archaeological Site | Not Evaluated | | |
| 44GV0107 | Archaeological Site | Not Evaluated | | |
| 44GV0108 | Archaeological Site | Not Evaluated | | |
| 44GV0128 | Archaeological Site | Not Evaluated | | |
| 44GV0153 | Archaeological Site | Not Evaluated | | |
| 44GV0154 | Archaeological Site | Not Evaluated | | |
| 44GV0159 | Archaeological Site | Not Evaluated | | |
| 44GV0161 | Archaeological Site | Not Evaluated | | |
| 44GV0162 | Archaeological Site | Not Evaluated | | |
| 44GV0163 | Archaeological Site | Not Evaluated | | |
| 44GV0262 | Archaeological Site | Not Evaluated | | |
| 44GV0263 | Archaeological Site | Not Evaluated | | |
| 44GV0264 | Archaeological Site | Not Evaluated | | |

 Table 3. Archaeological resources within the Virginia Rebuild Project Right-of-Way

| Resource ID# | Resource Name | National Register Status* | |
|-----------------|---------------------|------------------------------|--|
| 44GV0265 | Archaeological Site | Not Evaluated | |
| 44GV0423 | Archaeological Site | Not Eligible | |
| 44GV0454 | Archaeological Site | Not Eligible | |

* No archaeological field work was conducted as part of this effort, and previously recorded sites within or adjacent to the project were not assessed at this time. No impacts to any archaeological resources are anticipated at this time. Resources will be assessed for existing conditions and to confirm avoidance of impacts as project planning progresses.

Architectural Resources

No NHL-listed architectural resources are located within the 1.5-mile buffer. There are no NRHP listed resources, landscapes, or battlefields within the 1.0-mile of the project area. One property that has been determined eligible for listing on the NRHP is within 1.0-mile of the project area, and one property that has been determined eligible for listing on the NRHP is within 0.5-mile of the project area. A summary of the previously identified architectural resources are provided in Table 4 below.

Table 4. Previously recorded architectural resources within or adjacent to theVirginia Rebuild Project right-of-way

| Resource ID# | Resource Name | NRHP Status | Distance to Centerline (Miles) |
|-----------------|---|---------------|-----------------------------------|
| 040-0010 | Chambliss House (Historic), Woodview (Historic/Current) | NRHP Eligible | 0.1 |
| 040-0047 | Brink Polling House (Current), Voting House, Brink Road (Function/Location) | NRHP Eligible | 1.0 |

I. Chesapeake Bay Preservation Areas

Construction, installation, operation, and maintenance of electric transmission lines are conditionally exempt from the Chesapeake Bay Preservation Act as stated in the exemption for public utilities, railroads, public roads, and facilities in 9 VAC 25-830-150. The proposed Virginia Rebuild Project is located outside of Chesapeake Bay Preservation Act jurisdictional counties.

J. Wildlife Resources

Agency databases were reviewed, and agency consultations were initiated with the USWFS, DWR, and DCR to determine if the proposed Virginia Rebuild Project has the potential to affect any threatened or endangered species. As discussed in Section 2.F, certain federal and state listed species were identified as confirmed and potentially occurring in the project area. The Company will coordinate with the USFWS, DWR, and DCR as appropriate to determine whether surveys are necessary and to minimize impacts on wildlife resources. The proposed Virginia Rebuild

Project is a rebuild of a transmission line within existing right-of-way and minimal clearing needed to support construction activities. As such, no loss of wildlife habitat is anticipated.

K. Recreation, Agricultural and Forest Resources

The Virginia Rebuild Project is expected to have minimal incremental impacts on recreational, agricultural, and forest resources as no additional right-of-way is required. The general character of the Virginia Rebuild Project area is characterized as predominantly agricultural and forested lands as well as woody wetlands and low intensity developed land. The Virginia Scenic Rivers Act seeks to identify, designate, and protect rivers and streams that possess outstanding scenic, recreational, historic, and natural characteristics of statewide significance for future generations. There is one designated Potential Scenic River, the Meherrin River, within the vicinity of the Virginia Rebuild Project.

There are no state or local parks located within the existing right-of-way between the Clubhouse Substation and the Virginia state line. Additionally, there are no parks located within a mile of the right-of-way.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. Land that does not meet the criteria for prime farmland can be considered "farmland of statewide importance." The criteria for defining and delineating farmland of statewide importance are determined by the Virginia Department of Agriculture and Consumer Services. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Other areas that are not identified as having national or statewide importance can be considered to be "farmland of local importance." This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance. A total of 94.0 acres of prime farmland and 42.7 acres of farmland of statewide importance are located within the Virginia Rebuild Project right-of-way. The project area is generally zoned A-1 Agricultural. According to the county Comprehensive Plan, the majority of the existing transmission line corridor is located within areas designated for rural residential and low density residential future land use.

Where agricultural uses are present, these activities have been occurring within the right-of-way while the existing transmission line has been in operation since 1962. The Virginia Rebuild Project may result in temporary impacts to farmland during construction but would otherwise not be expected to impact farmlands and would not alter the agricultural use.

Under the Virginia Open-Space Land Act, any public body can acquire title or rights to real property to provide means of preservation of open-space land. Such conservation easements must be held for no less than five years in duration and can be held in perpetuity. According to the DCR's Natural Heritage Data Explorer, no conservation easements were found within 1 mile of the project.

The width of the existing transmission line right-of-way is approximately 150 feet. The proposed Virginia Rebuild Project is the rebuild of an existing transmission line, and no additional right-of-way is required. The Virginia Rebuild Project proposes to retain the existing right-of-way as currently utilized but may require additional trimming of tree limbs along the right-of-way edges and/or trimming for access roads along the corridor to support construction activities. Trees and brush located within 100 feet of streams will be cleared by hand in accordance with the Company approved Erosion and Sediment Control specifications.

Any tree along the right-of-way that is tall enough to endanger the conductors if it were to break at the stump or uproot and fall directly towards the conductors and exhibits signs or symptoms of disease or structural defect that make it an elevated risk for falling will be designated as a "danger tree" and may be removed. The Company's arborist will contact the property owner if possible before any danger trees are cut, except in emergency situations. The Company's Forestry Coordinator will field inspect the right-of-way and designate any danger trees present. Qualified contractors working in accordance with the Company's Electric Transmission specifications will perform all danger tree cutting. The Virginia Rebuild Project is expected to have minimal, if any, impact on forest resources as the proposed Virginia Rebuild Project involves rebuilding an existing line which is already cleared and maintained for existing facility operation and no additional right-of-way is required.

In October 2020, the Company solicited DCR and VOF for comments on the proposed Virginia Rebuild Project. The VOF responded via email dated October 8, 2020 that there are no existing or proposed VOF open-space easements in the immediate vicinity of the project. See attachment 2.K.1.

L. Use of Pesticides and Herbicides

Of the techniques available, selective foliar is the preferred method of herbicide application. The Company typically maintains transmission line right-of-way by means of selective, low volume applications of EPA approved, non-restricted use herbicides. The goal of this method is to exclude tall growing brush species from the right-of-way by establishing early successional plant communities of native grasses, forbs, and low growing woody vegetation. "Selective" application means the Company sprays only the undesirable plant species (as opposed to broadcast applications). "Low volume" application means the Company uses only the volume of herbicide necessary to remove the selected plant species. The mixture of herbicides used varies from one cycle to the next to avoid the development of resistance by the targeted plants. There are four means of dispersal available to the Company, including by-hand application, backpack, fixed nozzle-radiarc, and aerial. Very little right-of-way maintenance incorporates aerial equipment. The Company uses licensed contractors to perform this work that are either certified applicators or registered technicians in the Commonwealth of Virginia.

DEQ has previously requested that only herbicides approved for aquatic use by the EPA or the USFWS be used in or around any surface water. The Company intends to comply with this request.

M. Geology and Mineral Resources

According to the Division of Geology and Mineral Resources Interactive Geologic Map, the Virginia Rebuild Project is located in the Piedmont physiographic province of Virginia and consists primarily of gravel and sand, granite and granodiorite, and metavolcanic rock. According to the USGS topographic maps and the Division of Mines, Minerals and Energy ("DMME") online mapping, there are no active mines or stone quarries within the limits of the Virginia Rebuild Project. The Virginia Rebuild Project right-of-way does transect a sand or gravel quarry site located south of Route 611 (Dry Bread Road), west of Route 627 (Brink Road) and north of Route 639 (Rock Bridge Road). The site is not listed by the DMME. The DMME mapping does identify the Brink Mine approximately 1.0 mile west of the Virginia Rebuild Project. The Brink Mine is listed as "Closed/Closing", and the Skippers Quarry is an active site. The Company does not anticipate that the rebuild of the existing transmission line will result in negative impacts on the geology or mineral resources in the proposed Virginia Rebuild Project area.

N. Transportation Infrastructure

The width of the existing transmission line right-of-way is approximately 150 feet and is currently maintained for operation of the existing transmission facilities. The Virginia portion of the transmission line corridor extends approximately 1.6 miles from the Clubhouse Substation to the Dry Bread Substation and continues for approximately 10.9 miles from the Dry Bread Substation to Structure #254/113 at the Virginia state line. The project includes seven road crossings all within Greensville County. The road crossings within the Virginia Rebuild Project area consist of low traffic volume county roads.

The Company will submit applications for land use permits and traffic control plans to the Virginia Department of Transportation ("VDOT") for the aerial crossings of VDOT maintained roads and construction entrances from the VDOT right-of-way as needed. These permits will be obtained prior to construction. The Company solicited VDOT for comments in October 2020.

The existing Virginia Rebuild Project right-of-way does not cross any railroad tracks.

The Company has reviewed the Federal Aviation Administration's ("FAA's") website (<u>https://oeaaa.faa.gov/oeaaa/external/portal.jsp</u>) to identify airports within 10.0 miles of the Virginia Rebuild Project. Based on this review, one FAA-restricted

airport was identified; Emporia-Greensville Regional Airport, approximately 5.5 miles east of the Clubhouse Substation. The Company solicited comments from the Virginia Department of Aviation ("DOAv") and the FAA regarding the Virginia Rebuild Project in October 2020. The DOAv responded via email dated October 15, 2020 that there are no public use airports within 20,000 linear feet of the project. Unless support structures or temporary cranes will reach a height of 200 feet above ground level, no airspace case would be required by the Federal Aviation Administration (the "FAA"). See <u>Attachment 2.N.1</u>.

The Company will coordinate with VDOT, DOAv, and the FAA as necessary to obtain all appropriate approvals.

Attachments



BY EMAIL

Mr. Troy Andersen US Fish and Wildlife Service Ecological Services Virginia Field Office 6669 Short Lane Gloucester, Virginia 23061

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Mr. Andersen,

Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service life, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

The Company is preparing an application for Certificate of Public Convenience and Necessity ("CPCN") from the Virginia State Corporation Commission ("SCC"). Pursuant to Va. Code §15.2-2202, the Company is writing to notify you of the proposed Rebuild Project in advance of this SCC filing. We respectfully request that you submit any comments or additional information you feel would have bearing on the Project within 30 days of the date of this letter. Enclosed is a Project Overview Map depicting the rebuild route and project location.

If you would like to receive a GIS shapefile of the rebuild route to assist in your project review or if you have any questions, please do not hesitate to contact Rachel Studebaker at (804) 217-1847 or <u>Rachel.M.Studebaker@dominionenergy.com</u>. We appreciate your assistance with this project review and look forward to any additional information you may have to offer.

Regards,

Jason P. Ericson Director, Environmental Services





BY EMAIL

Ms. Amy Ewing Virginia Department of Wildlife Resources PO Box 90778 Henrico, Virginia 23228

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Ms. Ewing,

Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service life, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

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Regards,

Jason P. Ericson Director, Environmental Services



BY EMAIL

Ms. Robbie Ruhr Planning Bureau Department of Conservation and Recreation 600 East Main Street, 17th Floor Richmond, Virginia 23219

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Ms. Ruhr,

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Regards,

Jason P. Ericson Director, Environmental Services





BY EMAIL

Ms. Bettina Rayfield Manager Environmental Impact Review and Long Range Priorities Program Office of Environmental Impact Review Department of Environmental Quality PO Box 1105 Richmond, Virginia 23218

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Ms. Rayfield,

Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service life, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

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Regards,

Jason P. Ericson Director, Environmental Services

Dominion Energy Virginia 10900 Nuckols Rd, 4th Floor Glen Allen, VA 23060 DominionEnergy.com

October 5, 2020



BY EMAIL

Mr. Terry Lasher Assistant State Forester Virginia Department of Forestry 900 Natural Resources Drive Charlottesville, Virginia 22903

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Mr. Lasher,

Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service life, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

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Regards,

Jason P. Ericson Director, Environmental Services



BY EMAIL

Mr. Peter Kube US Army Corps of Engineers Norfolk District, Eastern Section 803 Front Street Norfolk, Virginia 23510

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Mr. Kube,

Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service life, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

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Regards,

Jason P. Ericson Director, Environmental Services





BY EMAIL

Ms. Rene Hypes Environmental Review Coordinator, Division of Natural Heritage Department of Conservation and Recreation 600 East Main Street, Suite 1400 Richmond, Virginia 23219

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Ms. Hypes,

Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service life, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

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Regards,

Jason P. Ericson Director, Environmental Services



BY EMAIL

Ms. Michelle Henicheck Office of Wetlands and Streams Department of Environmental Quality PO Box 1105 Richmond, Virginia 23218

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Ms. Henicheck,

Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service life, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

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C2 Environmental delineated wetlands and other waters of the United States using the Routine Determination Method as outlined in the 1987 Corps of Engineers Wetland Delineation Manual and methods described in the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). The limits of these features are illustrated on the attached Delineation Map and a breakdown of features is provided below in Table 1. The limits of wetlands of other waters of the United States will be submitted to the U.S. Army Corps of Engineers for confirmation.

Clubhouse to Lakeview 10/5/2020 Page 2 of 2

| PFO (Acres) | PSS (Acres) | PEM (Acres) | Open Waters (Acres) | Stream Channels (R2) Acres (LF) | Stream Channels (R3) Acres (LF) | Stream Channels (R4) Acres (LF) | Jurisdictional Ditch Acres (LF) |
|----------------|----------------|----------------|----------------------------------|---|---|---|---------------------------------------|
| 6.3 | 1.8 | 39.0 | 0.5 | 1.0 (243) | 0.6 (3,071) | 0.3 (1,919) | 0.003 (21) |

If you would like to receive a GIS shapefile of the rebuild route to assist in your project review or if you have any questions, please do not hesitate to contact Rachel Studebaker at (804) 217-1847 or <u>Rachel.M.Studebaker@dominionenergy.com</u>. We appreciate your assistance with this project review and look forward to any additional information you may have to offer.

Regards,

Jason P. Ericson Director, Environmental Services





BY EMAIL

Mr. Jaime Robb Department of Environmental Quality VWP Permit Manager, Piedmont Regional Office 4949-A Cox Road Glen Allen, Virginia 23060

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Mr. Robb,

Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service life, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

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Regards,

Jason P. Ericson Director, Environmental Services





BY EMAIL

Mr. Keith Tignor Endangered Plant and Insect Species Program Virginia Department of Agriculture and Consumer Affairs 102 Governor Street Richmond, Virginia 23219

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Mr. Tignor,

Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service life, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

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Regards,

Jason P. Ericson Director, Environmental Services



BY EMAIL

Mr. Tony Watkinson Habitat Management Division Virginia Marine Resources Commission Building 96, 380 Fenwick Road Fort Monroe, Virginia 23651

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Mr. Watkinson,

Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service life, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

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Regards,

Jason P. Ericson Director, Environmental Services

Dominion Energy Virginia 10900 Nuckols Rd, 4th Floor Glen Allen, VA 23060 DominionEnergy.com

August 27, 2020



Mr. Robert Alexander Obstruction Evaluation Specialist Federal Aviation Administration FAA Eastern Regional Office 159-30 Rockaway Blvd Jamaica, New York 11434

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Mr. Alexander,

Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service life, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

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If you would like to receive a GIS shapefile of the rebuild route to assist in your project review or if you have any questions, please do not hesitate to contact me directly at (434)532-7579 or Nancy.R.Reid@Dominionenergy.com. We appreciate your assistance with this project review and look forward to any additional information you may have to offer.

Regards,

Nancy Reid

Nancy R. Reid Siting and Permitting Specialist

Dominion Energy Virginia 10900 Nuckols Rd, 4th Floor Glen Allen, VA 23060 DominionEnergy.com

August 27, 2020

BY EMAIL

Mr. Scott Denny Airport Services Division Virginia Department of Aviation 5702 Gulfstream Road Richmond, Virginia 23250 scott.denny@doav.virginia.gov

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Mr. Denny,

Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service life, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

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Regards,

Nancy Reid

Nancy R. Reid Siting and Permitting Specialist

Attachment: Project Overview Map

Attachment 2 Page 14 of 17







August 27, 2020

Mr. Christopher G. Hall, P.E. District Engineer Virginia Department of Transportation Hampton Roads District Office 7511 Burbage Drive Suffolk, Virginia 23435

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Mr. Hall,

Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service life, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

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Regards,

Nancy Reid

Nancy R. Reid Siting and Permitting Specialist

Dominion Energy Virginia 10900 Nuckols Rd, 4th Floor Glen Allen, VA 23060 DominionEnergy.com



August 27, 2020

Mr. Roger Kirchen Review and Compliance Division Department of Historic Resources 2801 Kensington Avenue Richmond, Virginia 23221

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Mr. Kirchen,

Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service life, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

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Regards,

Nancy Reid

Nancy R. Reid Siting and Permitting Specialist



August 27, 2020

BY EMAIL

Ms. Martha Little Virginia Outdoors Foundation 600 East Main Street, Suite 402 Richmond, Virginia 23219 ImpactReview@VOF.org

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Ms. Little,

Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service life, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

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Regards,

Nancy Reid

Nancy R. Reid Siting and Permitting Specialist



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY Street address: 629 East Main Street, Richmond, Virginia 23219 Mailing address: P.O. Box 1105, Richmond, Virginia 23218 www.deq.virginia.gov

Matthew J. Strickler Secretary of Natural Resources

October 14, 2020

David K. Paylor Director

(804) 698-4000 1-800-592-5482

Rachel Studebaker Environmental Specialist II Dominion Energy Services 120 Tredegar Street Richmond, VA 23219

RE: Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project; Greensville County, Virginia

Dear Ms. Studebaker:

This letter is in response to the scoping request for the above-referenced project.

As you may know, the Department of Environmental Quality, through its Office of Environmental Impact Review (DEQ-OEIR), is responsible for coordinating Virginia's review of environmental impacts for electric power generating projects and power line projects in conjunction with the licensing process of the State Corporation Commission.

DOCUMENT SUBMISSIONS

In order to ensure an effective coordinated review of the environmental impact analysis may be sent directly to OEIR. We request that you submit one electronic to <u>eir@deq.virginia.gov</u> (25 MB maximum) or make the documents available for download at a website, file transfer protocol (ftp) site or the VITA LFT file share system (Requires an "invitation" for access. An invitation request should be sent to <u>eir@deq.virginia.gov</u>.). The required "Wetlands Impact Consultation" can be sent directly to Michelle Henicheck at michelle.henicheck @deq.virginia.gov or at the address above.

ENVIRONMENTAL REVIEW UNDER VIRGINIA CODE 56-46.1

While this Office does not participate in scoping efforts beyond the advice given herein, other agencies are free to provide scoping comments concerning the preparation of the environmental impact analysis document. Accordingly, Dominion should coordinate with the following state agencies and those localities and Planning District Commissions, including but not limited to:

Department of Environmental Quality:

- o DEQ Regional Office
- Air Division
- o Office of Wetlands and Stream Protection

- o Office of Local Government Programs
- Division of Land Protection and Revitalization
- Office of Stormwater Management

Department of Conservation and Recreation Department of Health Department of Agriculture and Consumer Services Department of Game and Inland Fisheries Virginia Marine Resources Commission Department of Historic Resources Department of Mines, Minerals, and Energy Department of Forestry Department of Transportation

DATA BASE ASSISTANCE

Below is a list of databases that may assist you in the preparation of a NEPA document:

• DEQ Online Database: Virginia Environmental Geographic Information Systems

Information on Permitted Solid Waste Management Facilities, Impaired Waters, Petroleum Releases, Registered Petroleum Facilities, Permitted Discharge (Virginia Pollution Discharge Elimination System Permits) Facilities, Resource Conservation and Recovery Act (RCRA) Sites, Water Monitoring Stations, National Wetlands Inventory:

- o <a>www.deq.virginia.gov/ConnectWithDEQ/VEGIS.aspx
- DEQ Virginia Coastal Geospatial and Educational Mapping System (GEMS)

Virginia's coastal resource data and maps; coastal laws and policies; facts on coastal resource values; and direct links to collaborating agencies responsible for current data: o http://128.172.160.131/gems2/

• MARCO Mid-Atlantic Ocean Data Portal

The Mid-Atlantic Ocean Data Portal is a publicly available online toolkit and resource center that consolidates available data and enables users to visualize and analyze ocean resources and human use information such as fishing grounds, recreational areas, shipping lanes, habitat areas, and energy sites, among others.

http://portal.midatlanticocean.org/visualize/#x=-73.24&y=38.93&z=7&logo=true&controls=true&basemap=Ocean&tab=data&legends=false&la yers=true

• DHR Data Sharing System.

Survey records in the DHR inventory:

- o www.dhr.virginia.gov/archives/data_sharing_sys.htm
- DCR Natural Heritage Search

Produces lists of resources that occur in specific counties, watersheds or physiographic regions: o <u>www.dcr.virginia.gov/natural_heritage/dbsearchtool.shtml</u>

• DGIF Fish and Wildlife Information Service

Information about Virginia's Wildlife resources:

- o <u>http://vafwis.org/fwis/</u>
- Total Maximum Daily Loads Approved Reports
 - o <u>https://www.deq.virginia.gov/programs/water/waterqualityinformationtmdls/tmdl/tmdlde</u> <u>velopment/approvedtmdlreports.aspx</u>
- Virginia Outdoors Foundation: Identify VOF-protected land
 - o http://vof.maps.arcgis.com/home/index.html
- Environmental Protection Agency (EPA) Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Database: Superfund Information Systems

Information on hazardous waste sites, potentially hazardous waste sites and remedial activities across the nation, including sites that are on the National Priorities List (NPL) or being considered for the NPL:

- o <u>www.epa.gov/superfund/sites/cursites/index.htm</u>
- EPA RCRAInfo Search

Information on hazardous waste facilities:

- o <u>www.epa.gov/enviro/facts/rcrainfo/search.html</u>
- Total Maximum Daily Loads Approved Reports
 - https://www.deq.virginia.gov/programs/water/waterqualityinformationtmdls/tmdl/tmdlde velopment/approvedtmdlreports.aspx
- EPA Envirofacts Database

EPA Environmental Information, including EPA-Regulated Facilities and Toxics Release Inventory Reports:

- o <u>www.epa.gov/enviro/index.html</u>
- EPA NEPAssist Database

Facilitates the environmental review process and project planning: <u>http://nepaassisttool.epa.gov/nepaassist/entry.aspx</u>

If you have questions about the environmental review process, please feel free to contact me (telephone (804) 698-4204 or e-mail bettina.rayfield@deq.virginia.gov).

I hope this information is helpful to you.

Sincerely,

But Raf-

Bettina Rayfield, Program Manager Environmental Impact Review and Long-Range Priorities



Attachment 2.B.1 Page 1 of 2

COMMONWEALTH of VIRGINIA

Matthew J. Strickler Secretary of Natural Resources Marine Resources Commission 380 Fenwick Road Bldg 96 Fort Monroe, VA 23651-1064

Steven G. Bowman Commissioner

October 9, 2020

Dominion Energy Services Attn: Rachel Studebaker 120 Tredegar Street Richmond, VA 23219

> Re: Clubhouse to Lakeview 230kV Rebuild Project, Greensville County, Virginia

Dear Ms. Studebaker

This will respond to the request for comments regarding the Clubhouse to Lakeview 230kV Rebuild Project, prepared by Dominion Energy Services. Specifically, Dominion Energy Services has proposed to rebuild approximately 12.5 miles of existing overhead transmission lines in Greensville County, Virginia.

We reviewed the provided documents and found that the proposed project may be within the jurisdictional areas of the Virginia Marine Resources Commission (VMRC) and may require a permit from this agency.

Please be advised that the VMRC, pursuant to §28.2-1200 et seq of the Code of Virginia, has jurisdiction over any encroachments in, on, or over the beds of the bays, ocean, rivers, streams, or creeks which are the property of the Commonwealth. Accordingly, if any portion of the subject project involves any encroachments channelward of ordinary high water along non-tidal, natural rivers and streams with a drainage area greater than 5-square miles, a permit may be required from our agency. Any jurisdictional impacts will be reviewed by the VMRC during the Joint Permit Application process and any permit issued by the VMRC will specify necessary special conditions for the project. Should the proposed project change, a new review by this agency may be required relative to these jurisdictional areas.

If you have any questions please contact me at (757) 247-8063 or by email at justin.worrell@mrc.virginia.gov. Thank you for the opportunity to comment.

Sincerely,

mits houce

Justin Worrell

An Agency of the Natural Resources Secretariat www.mrc.virginia.gov Telephone (757) 247-2200 (757) 247-2292 V/TDD Information and Emergency Hotline 1-800-541-4646 V/TDD Dominion Energy Services October 9, 2020 Page Two

Environmental Engineer, Habitat Management

JDW/tlb HM



October 21, 2020

Regulator of the Day U.S. Army Corps of Engineers 803 Front Street Norfolk, VA 23510 Via email: <u>cenao-reg_rod@usace.army.mil</u>

Subject: Request for Preliminary Jurisdictional Determination TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Start: Latitude: 36.718542 Longitude: -77.585233 End: Latitude: 36.545257 Longitude: -77.646638 Greensville County, VA C2 Environmental Project No. 0115

Dear Sir or Madam:

C2 Environmental (C2 Env) has been retained by Virginia Electric and Power Company, doing business as Dominion Energy Virginia to conduct a field investigation of wetlands and waters of the U.S. (WOUS) on the project known as TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild. Dominion Energy Virginia is conducting an evaluation of the Virginia portion of the study area for an existing transmission line right of way (ROW) rebuild. The approximate 378.5 acre (12.5 mile) study area is located within the Meherrin River, Fountains Creek, Cattail Creek, Massie Branch, and Collier Branch drainage basins in Greensville County, Virginia (Appendix A, Sheet 1). The Virginia portion of the study area starts at the Clubhouse Substation located northeast of Brunswick Road (Route 607), southwest of Pleasant Shade Drive (Route 58), and generally runs to the southwest and ends at the Virginia / North Carolina border located west of Caret Path (Route 631). The required materials from the field investigation are enclosed.

On behalf of Dominion Energy Virginia, C2 Env is submitting this information to the Corps for their review and approval for issuance of a Preliminary Jurisdictional Determination. C2 Env staff would be pleased to meet with the Corps onsite to review the provided information if necessary. Please contact Scott Kupiec for any requests related to this matter. Thank you for your attention to this request.

Regards,

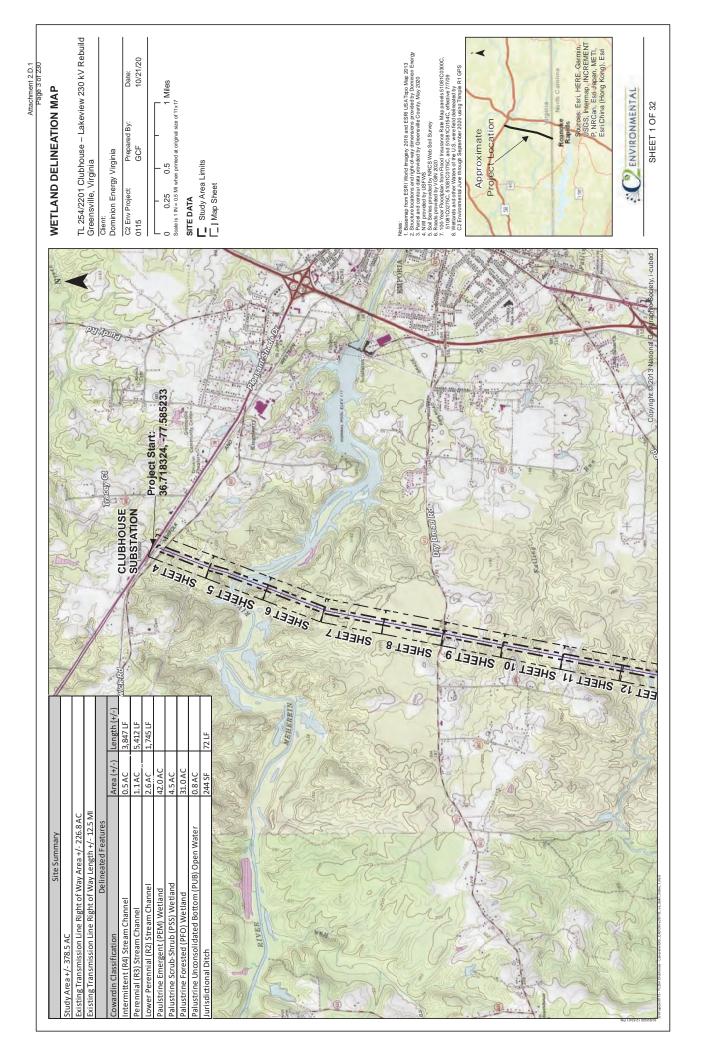
Scott Kupiec, PWD Senior Environmental Scientist Email: skupiec@c2environmental.com

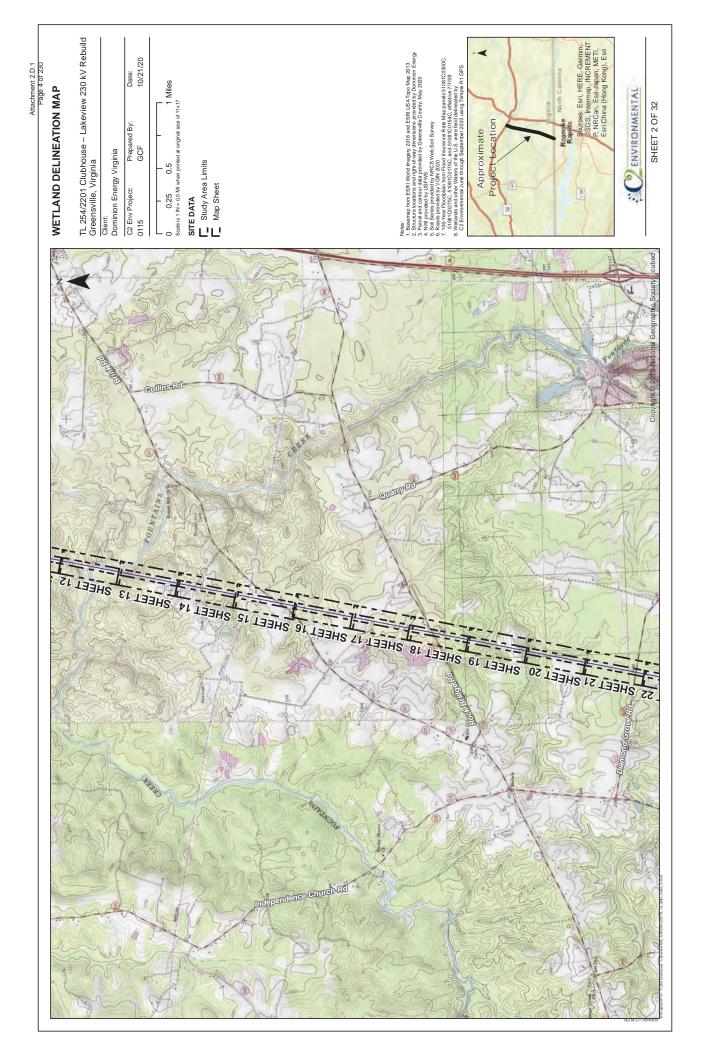
- Appendix A: Project Graphics
- Appendix B: Corps Data Sheets
- Appendix C: Jurisdictional Determination Request Form and Site Information Summary Sheet
- Appendix D: Existing Condition Photographs

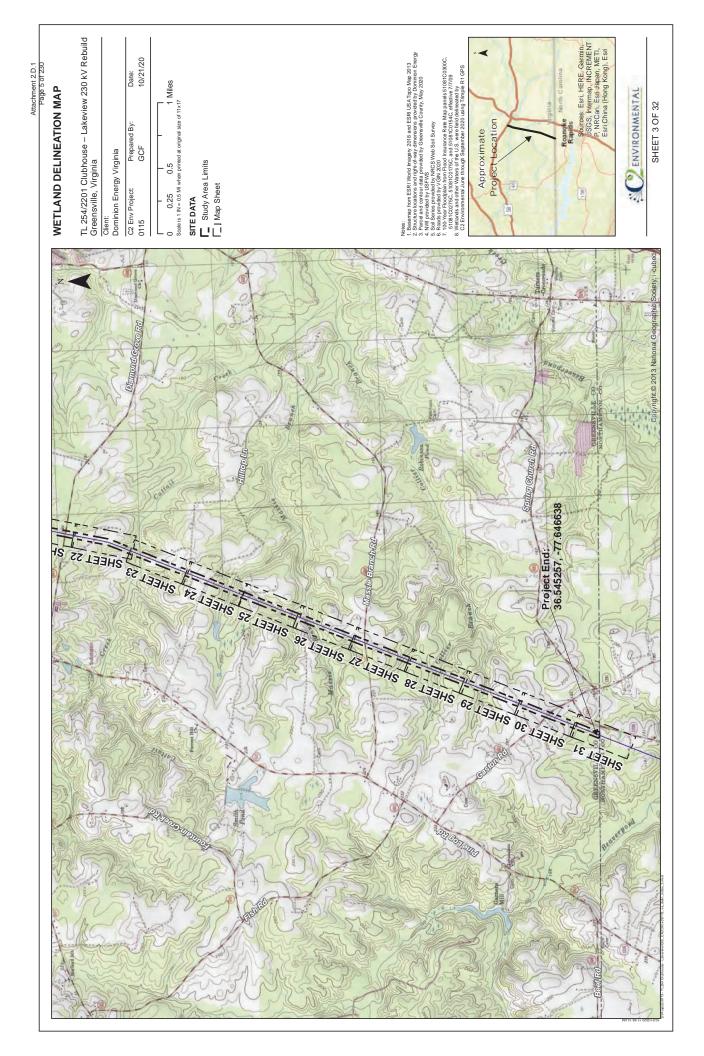
CC: Ms. Rachel Studebaker - Dominion Energy Virginia

APPENDIX A

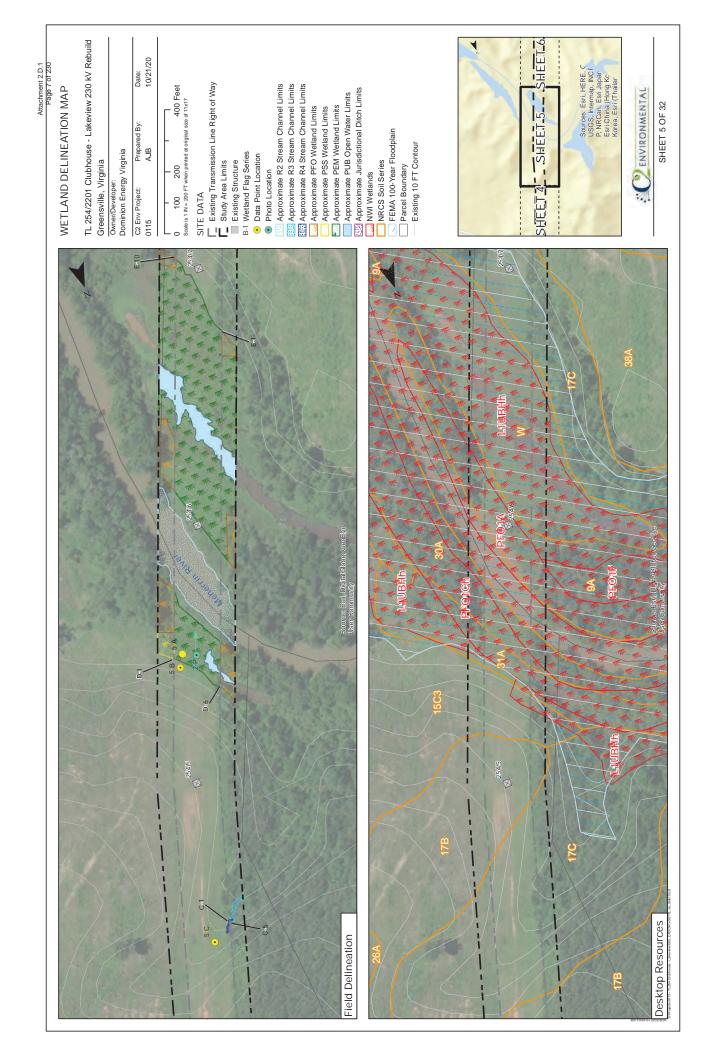
Project Graphics

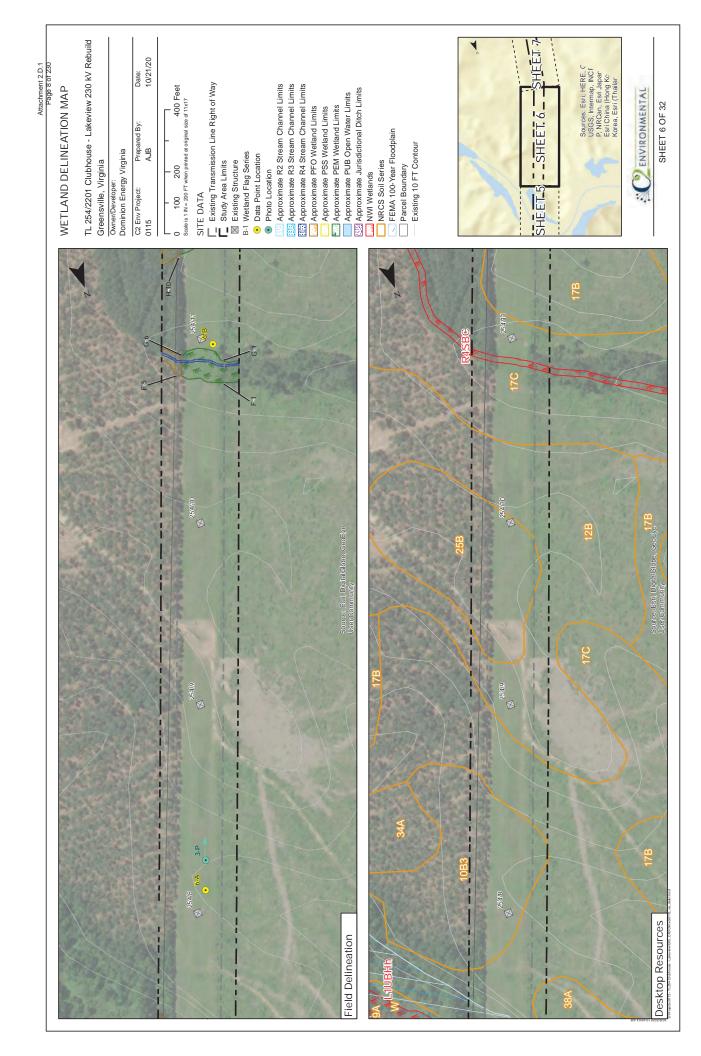


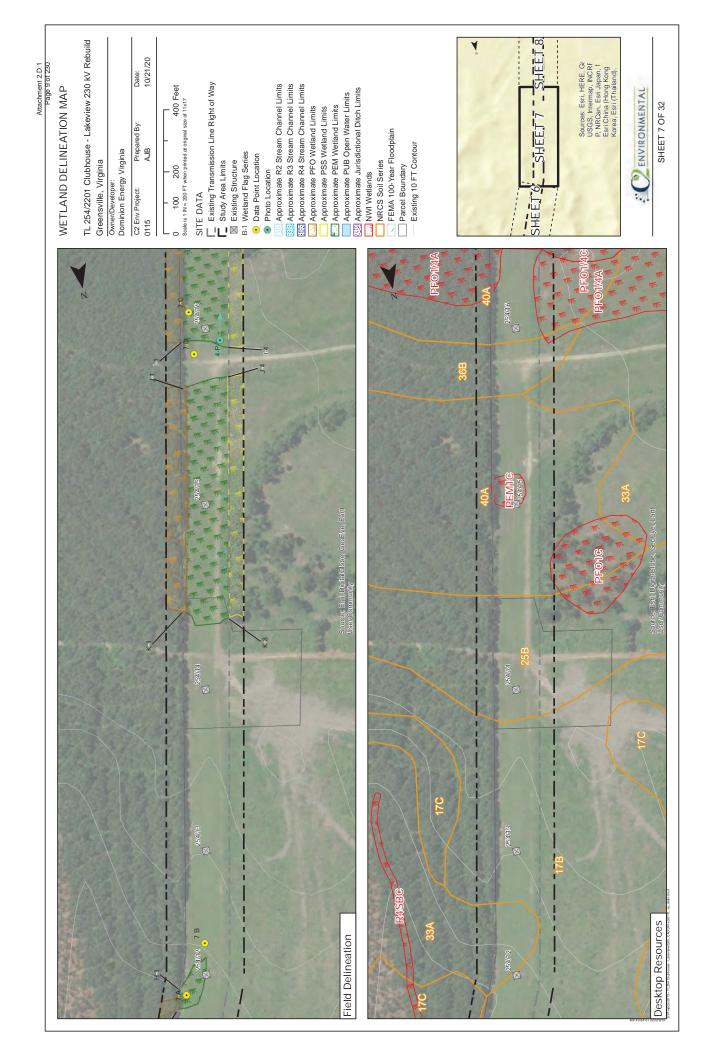


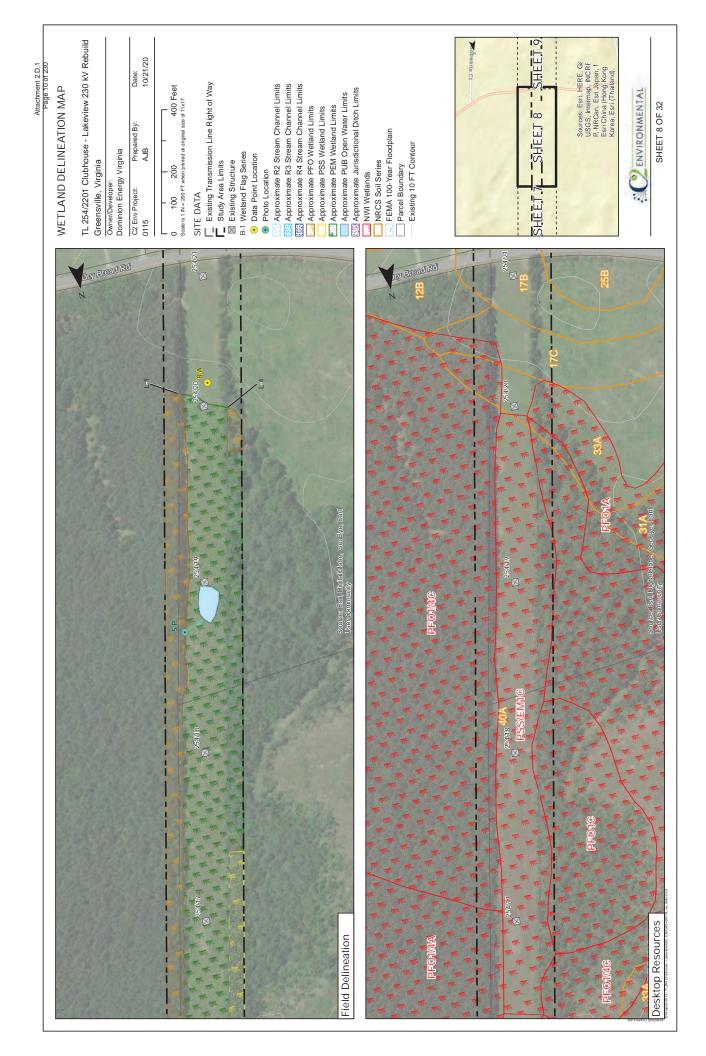


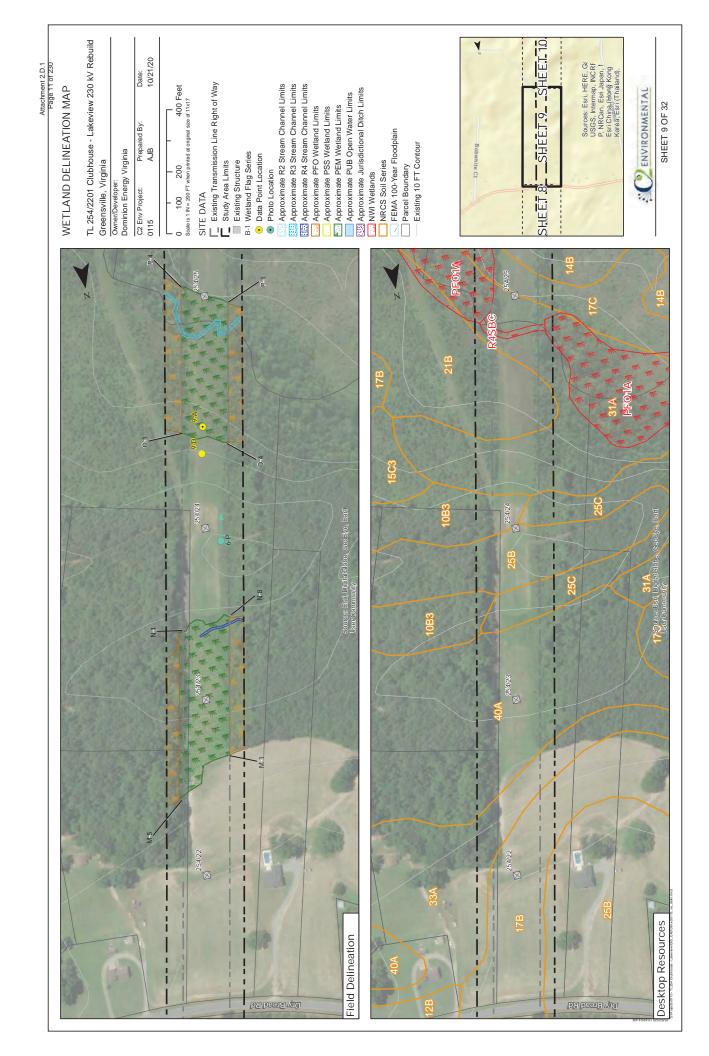


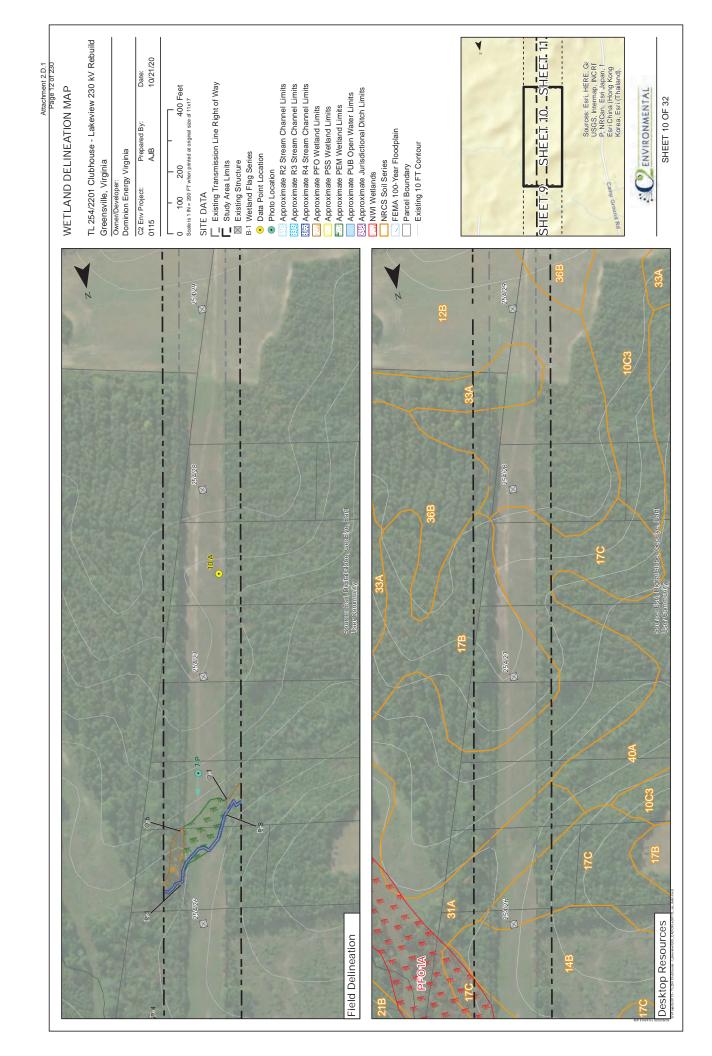


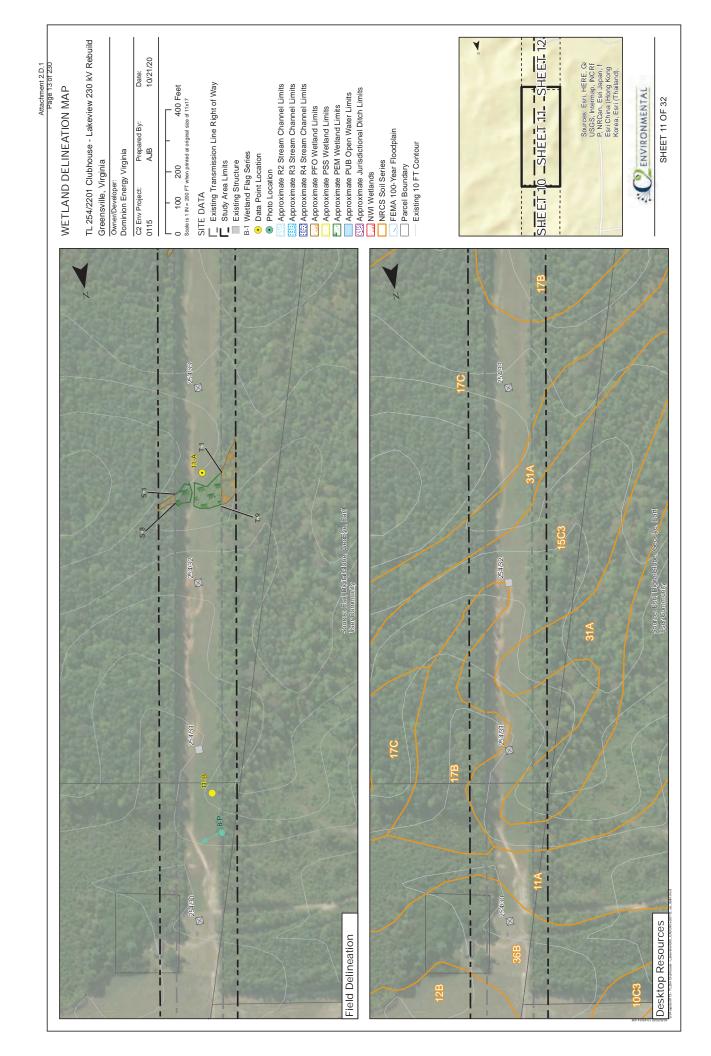


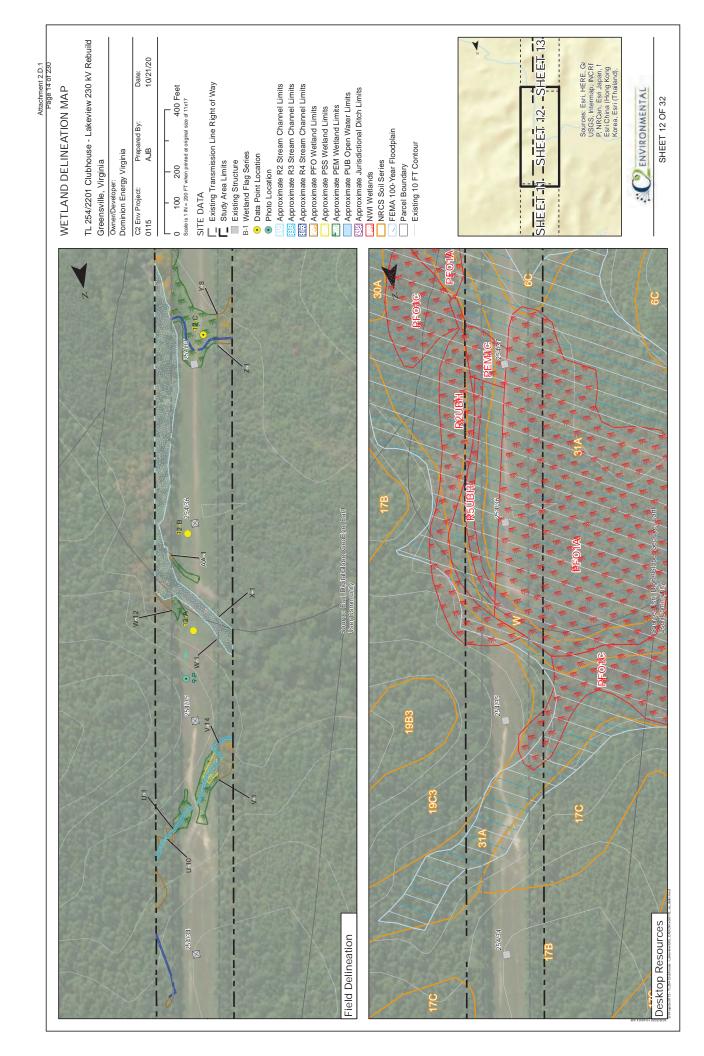


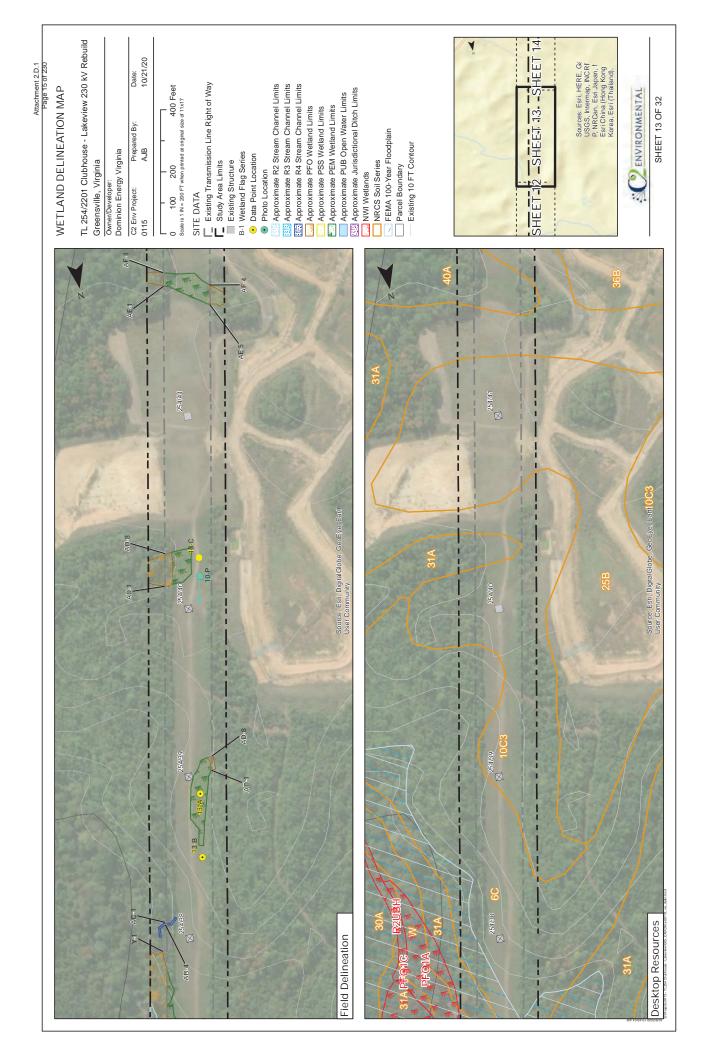


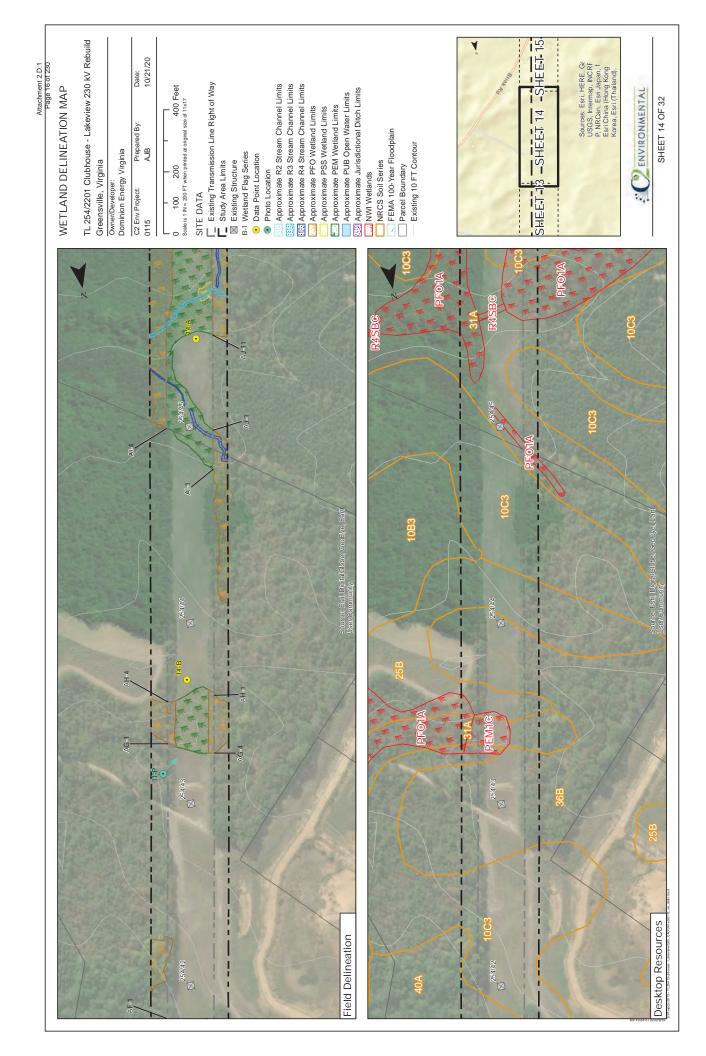


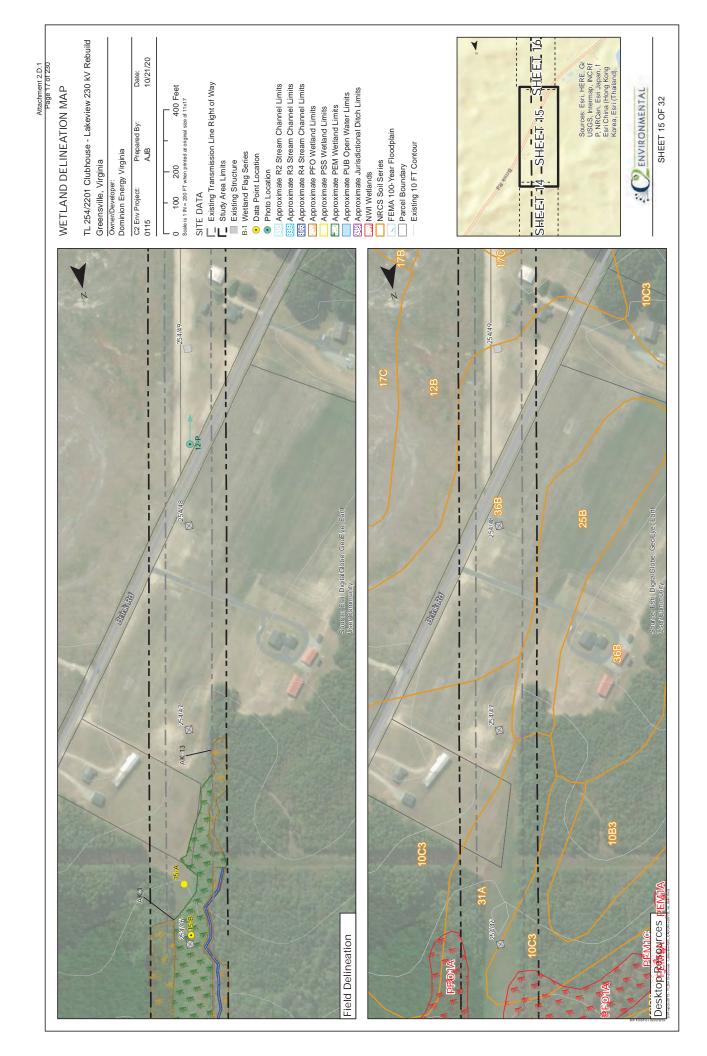




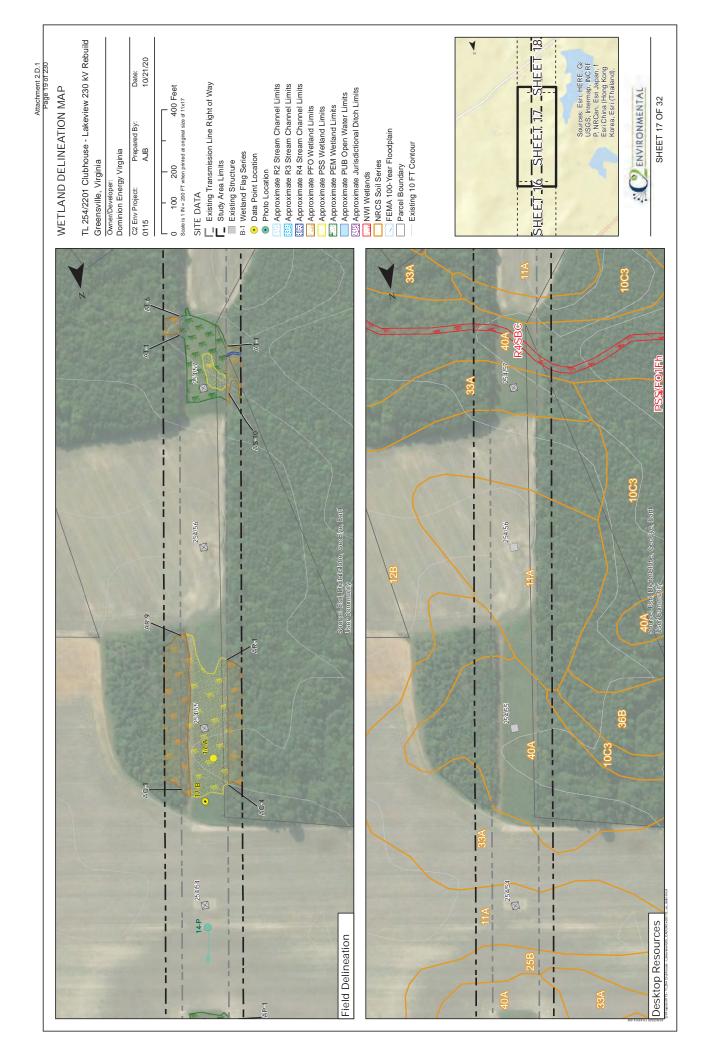


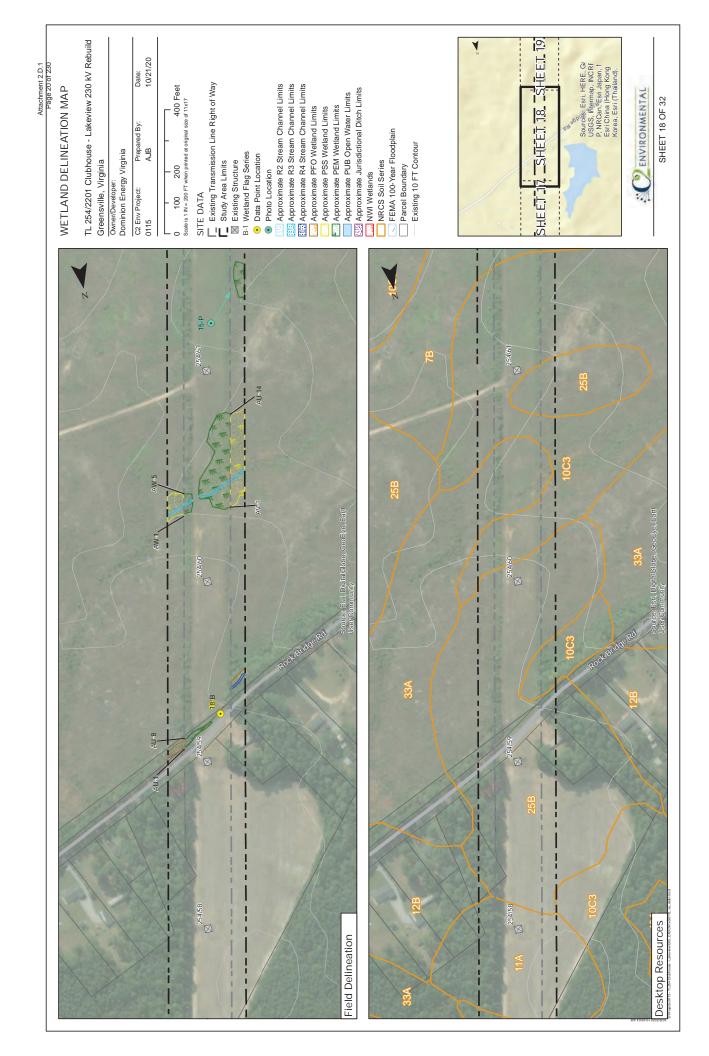


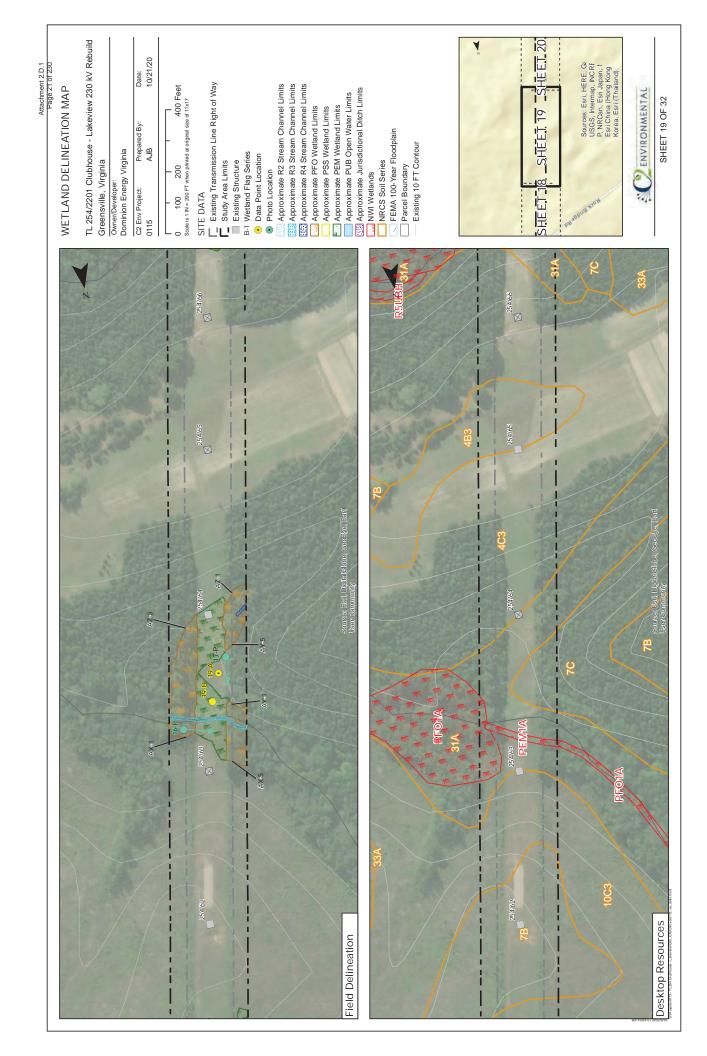


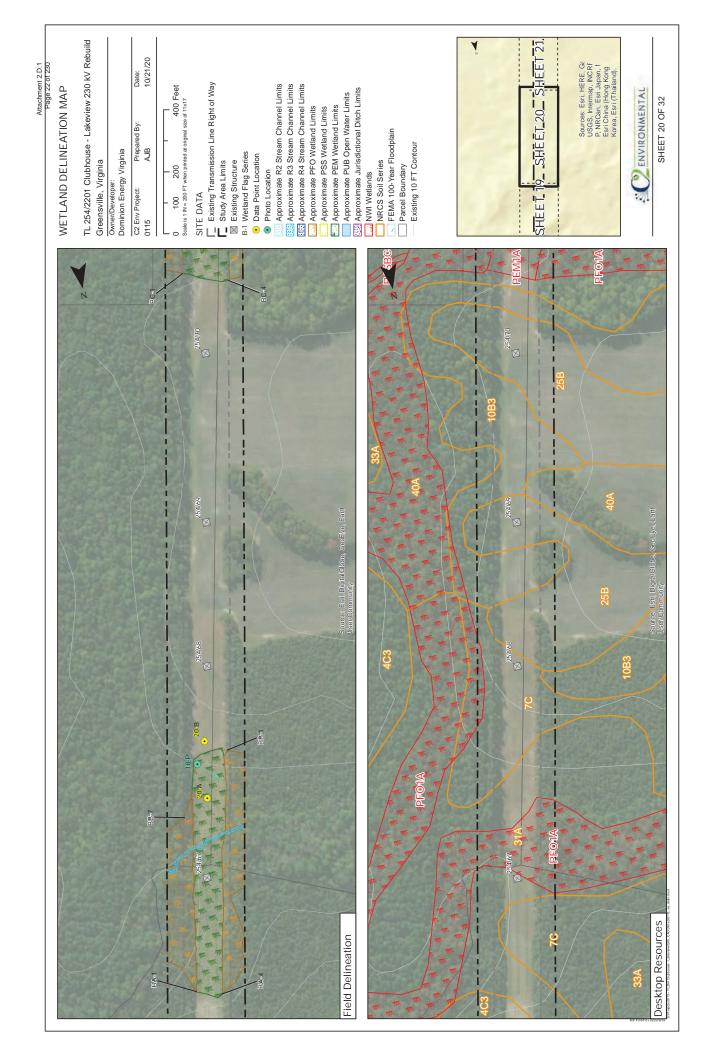




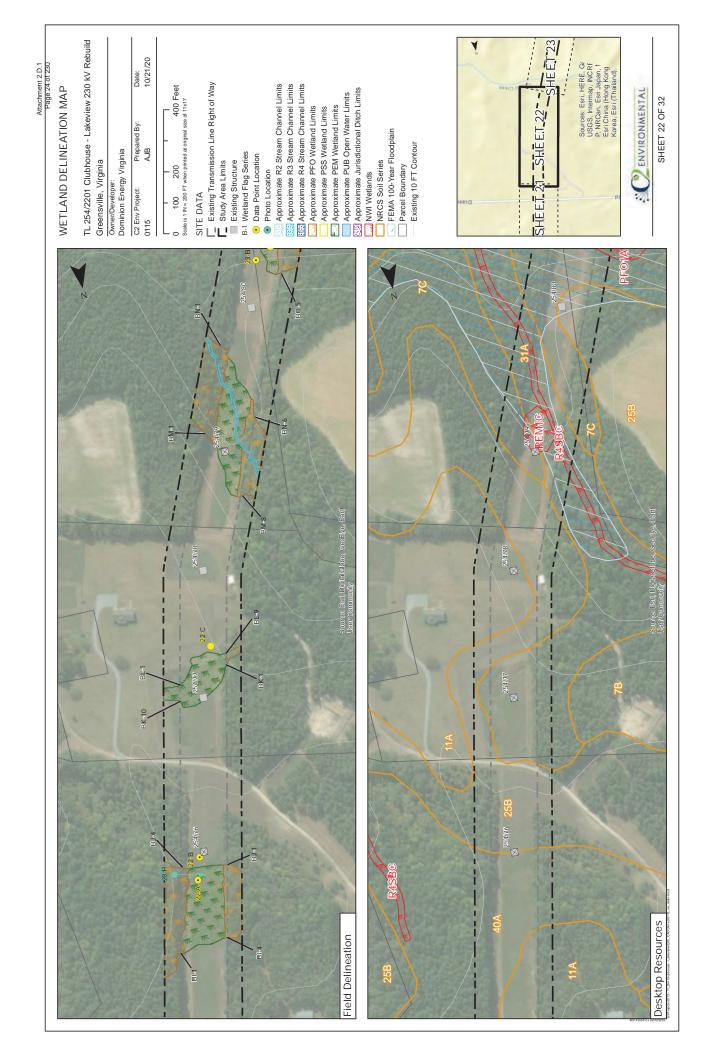


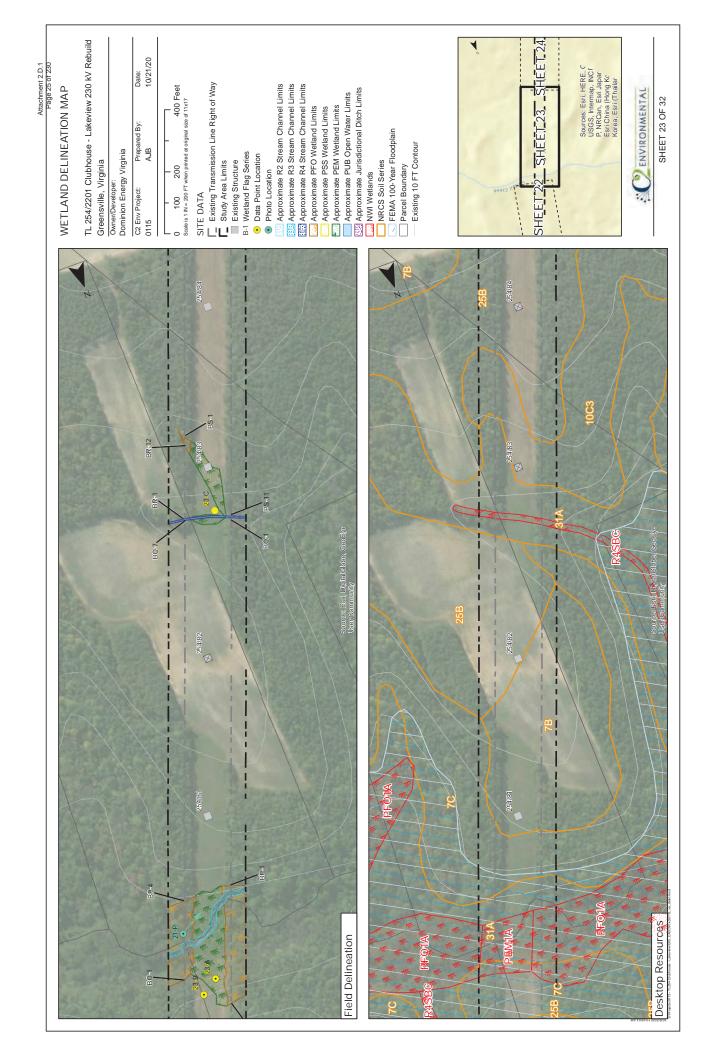


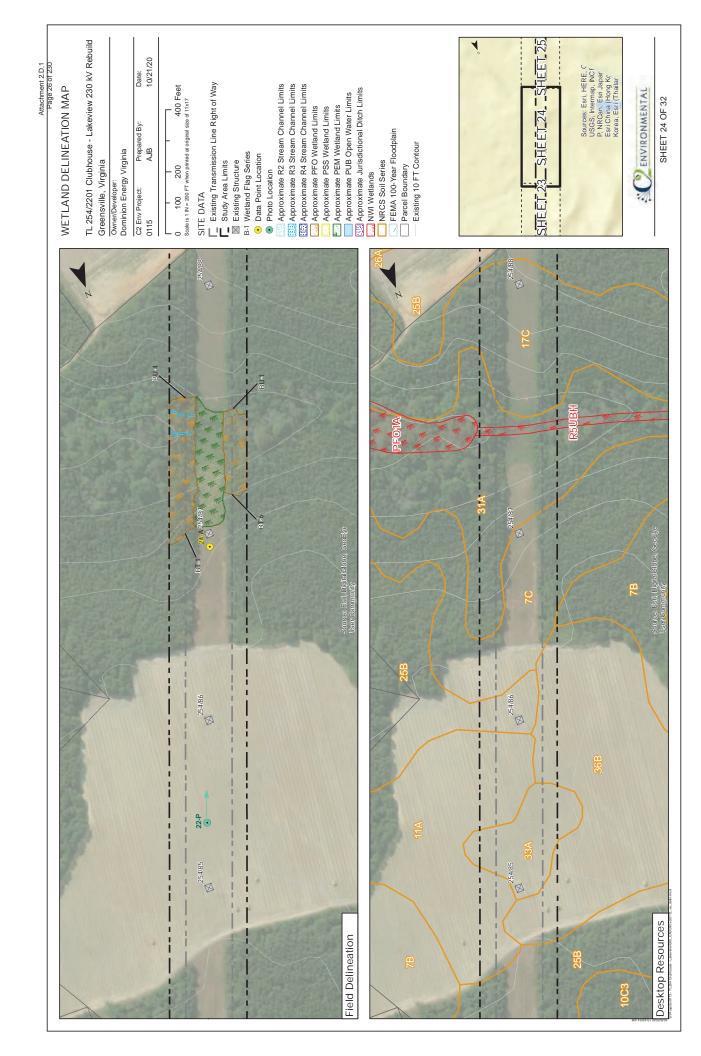


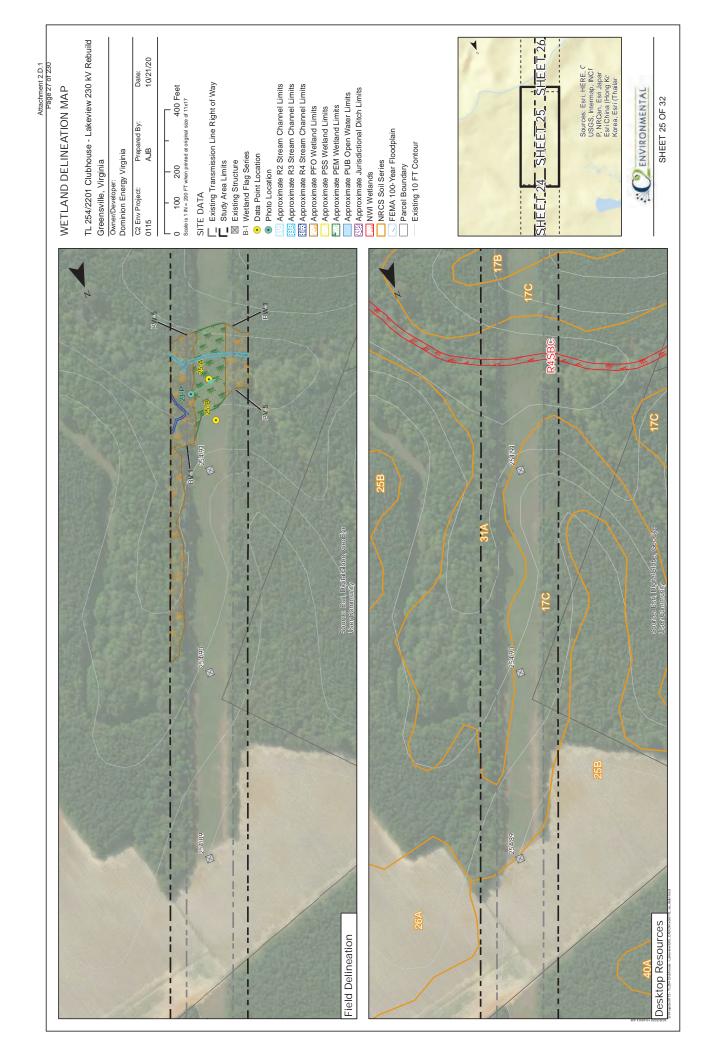


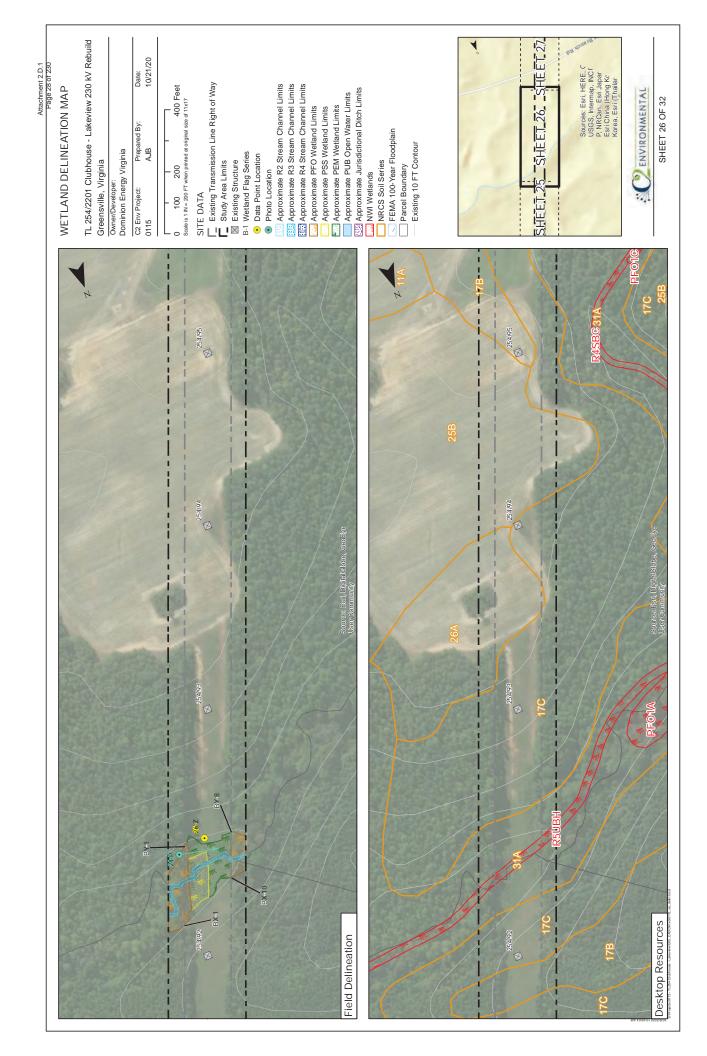


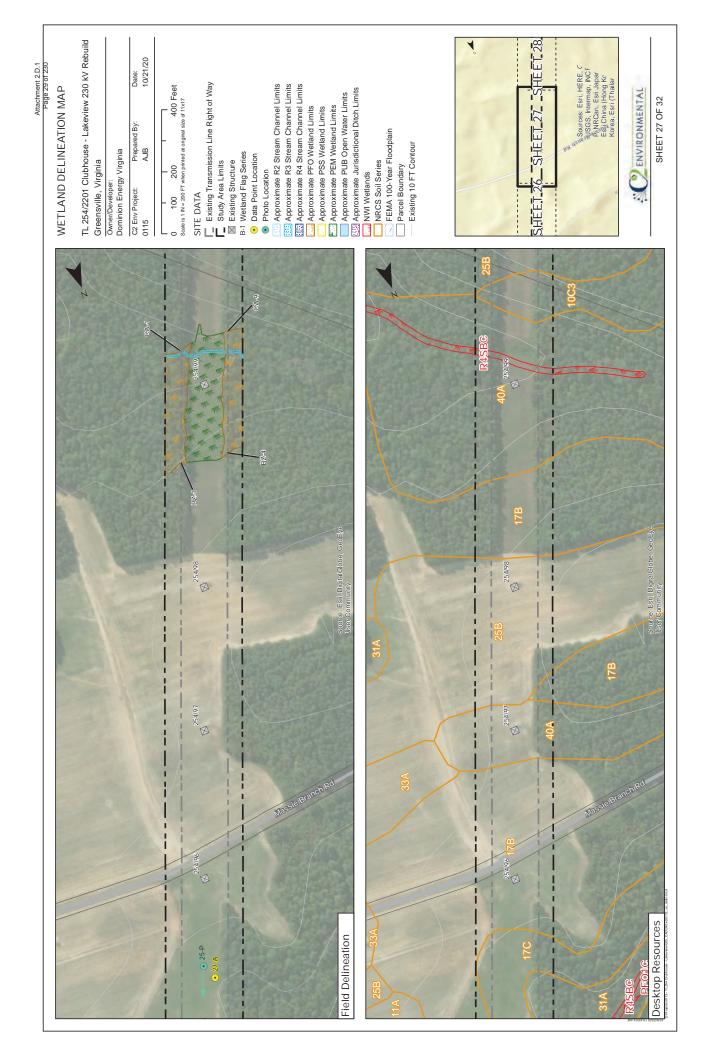


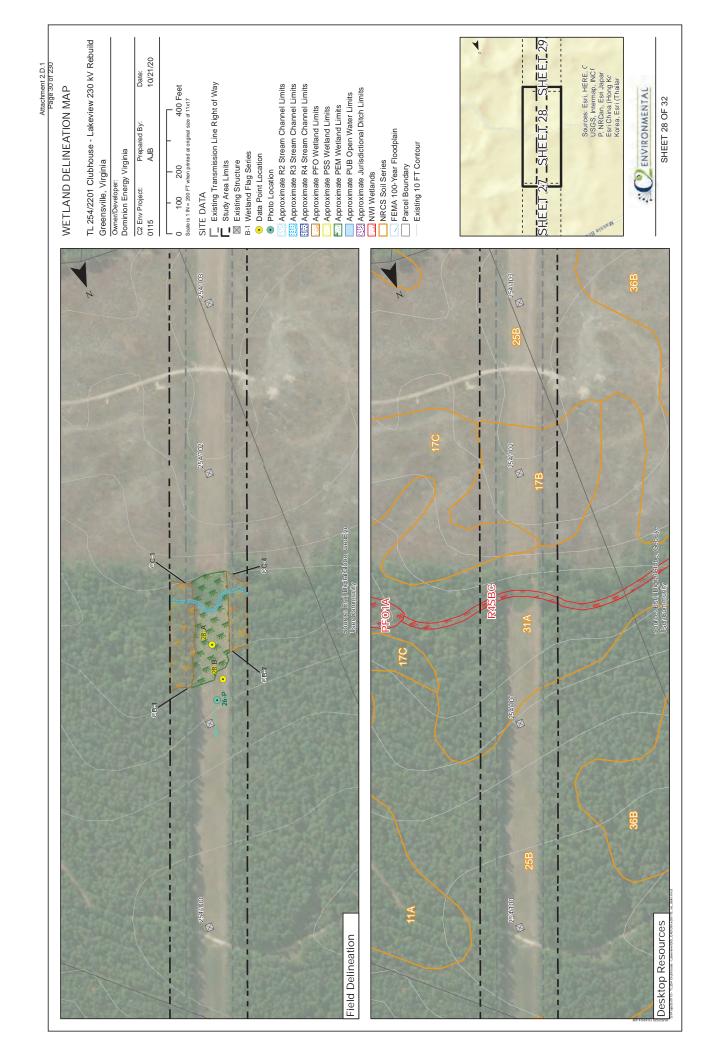


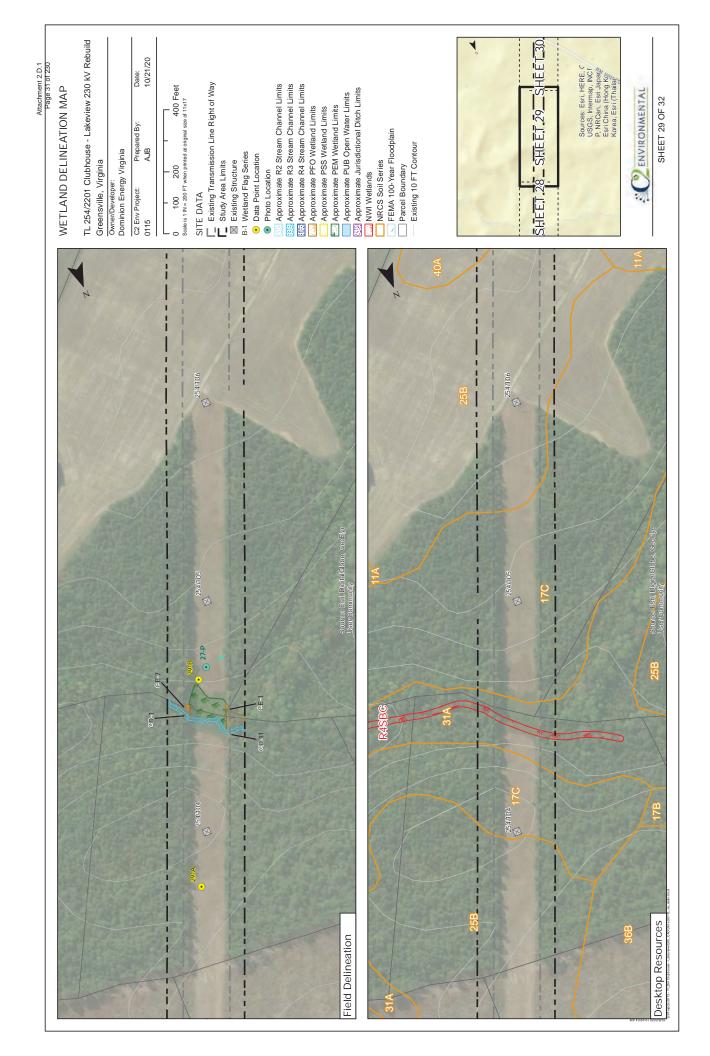


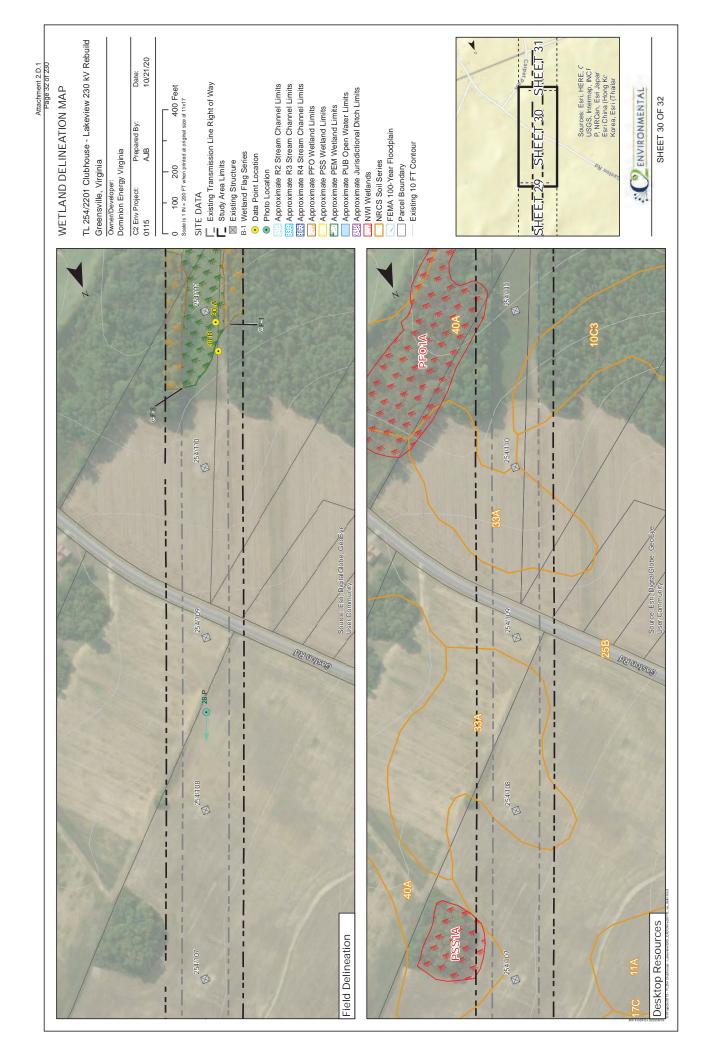


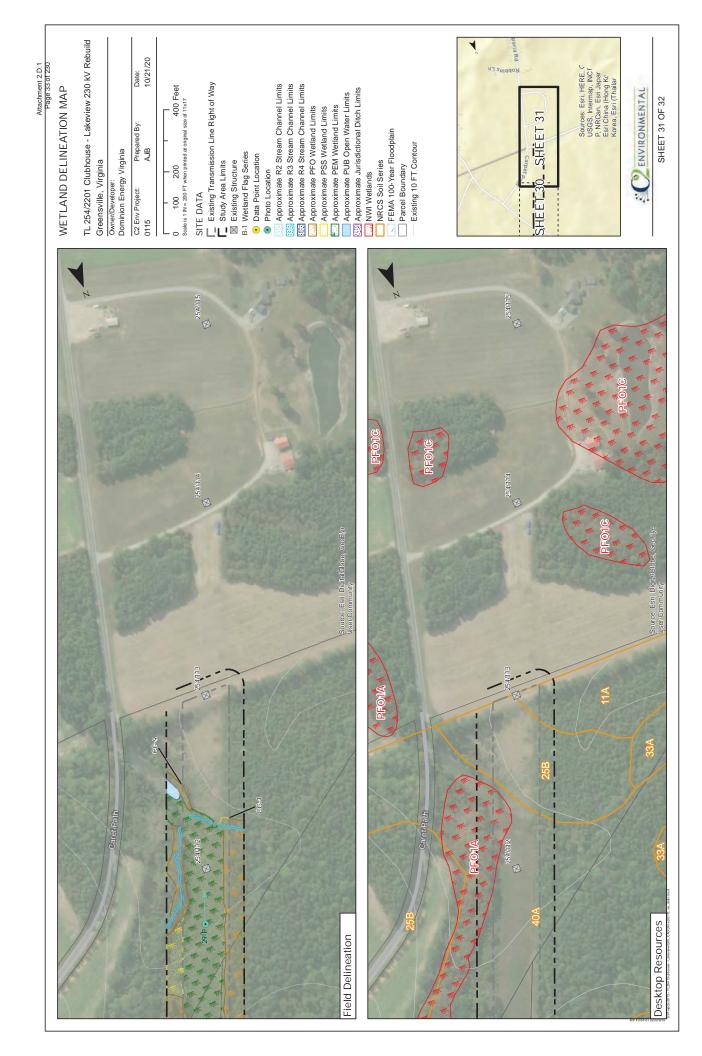












| Coil Man Lloit | Carias Nama | Undria Dating |
|----------------|--|---------------|
| Soil Map Unit | Series Name | Hydric Rating |
| 10B3 10C3 | Craven clay loam, 2 to 6 percent slopes, severely eroded | Yes Yes |
| | Craven clay loam, 6 to 12 percent slopes, severely eroded | |
| 11A 12B | Dothan loamy sand, 0 to 2 percent slopes | No |
| 126 14B | Emporia loamy fine sand, 2 to 6 percent slopes | No No |
| 14D 15B3 | Fluvanna loam, 2 to 7 percent slopes | No |
| | Fluvanna clay loam, 2 to 7 percent slopes, severely eroded | |
| 15C3 | Fluvanna clay loam, 7 to 15 percent slopes, severely eroded | No |
| 17B | Fluvanna-Mattaponi complex, 2 to 7 percent slopes | No |
| 17C | Fluvanna-Mattaponi complex, 7 to 15 percent slopes | No |
| 19C3 | Georgeville clay loam, 7 to 15 percent slopes, severely eroded | No |
| 20B | Helena gravelly coarse sandy loam, 2 to 7 percent slopes | No |
| 21B | Iredell loam, 2 to 7 percent slopes | Yes |
| 25B | Mattaponi sandy loam, 2 to 6 percent slopes | No |
| 25C | Mattaponi gravelly sandy loam, 6 to 15 percent slopes | No |
| 26A | Orangeburg loamy sand, 0 to 2 percent slopes | No |
| 30A | Riverview silt loam, 0 to 2 percent slopes, frequently flooded | No |
| 31A | Roanoke loam, 0 to 2 percent slopes, frequently flooded | Yes |
| 33A | Slagle fine sandy loam, 0 to 3 percent slopes | Yes |
| 36B | Uchee loamy sand, 0 to 6 percent slopes | No |
| 37 | Udorthents, smoothed, 0 to 25 percent slopes | No |
| 38A | Wickham fine sandy loam, 0 to 3 percent slopes | Yes |
| 40A | Woodington fine sandy loam, 0 to 2 percent slopes | Yes |
| 4B3 | Appling sandy clay loam, 2 to 7 percent slopes, severely eroded | No |
| 4C3 | Appling sandy clay loam, 7 to 15 percent slopes, severely eroded | No |
| 6C | Appling-Louisburg complex, 7 to 15 percent slopes | No |
| 7B | Appling-Mattaponi complex, 2 to 7 percent slopes | No |
| 7C | Appling-Mattaponi complex, 7 to 15 percent slopes | No |
| 9A | Chenneby silt loam, 0 to 2 percent slopes, frequently flooded | No |
| W | Water | Unranked |

WETLAND DELINEATION MAP TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Greensville, Virginia Client: Dominion Energy Virginia C2 Env Project: Prepared By: Date: 0115 GCF 10/21/20 Approximate Project Location Roanoke North Carolina Rapids

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri

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SHEET 32 OF 32

Attachment 2.D.1 Page 34 of 230

APPENDIX B

Corps Data Sheets

| | | | | Attachment 2.D.1 Page 36 of 230 | | |
|---|--|---------------------------------|---|--|--|--|
| U.S. Army Co WETLAND DETERMINATION DATA SHE See ERDC/EL TR-07-24; the p | | • | Requirement | # 299 50 0: 250 #: 0710-xxxx, Exp: Pending Control Symbol EXEMPT: R 335-15, paragraph 5-2a) | | |
| Project/Site: TL 254/2201 Clubhouse - Lakeview | w 230 kV Rebuild | City/County: Greensville | | Sampling Date: 06/30/20 | | |
| Applicant/Owner: Dominion Energy Virginia | | | State: VA | Sampling Point: 4-A | | |
| Investigator(s): S. Kupiec | Se | ection, Township, Range: | | | | |
| Landform (hillside, terrace, etc.): Drainageway | Loca | I relief (concave, convex, nor | ne): Concave | Slope (%): 4-6 | | |
| Subregion (LRR or MLRA): LRR P, MLRA 133A | Lat: 36.715083 | Long: -77.5 | 586775 | Datum: | | |
| Soil Map Unit Name: Fluvanna-Mattaponi compl | | 0 | NWI classifica | tion: N/A | | |
| Are climatic / hydrologic conditions on the site typ | | ? Yes X | | explain in Remarks.) | | |
| Are Vegetation, Soil, or Hydrology | - | | | ? Yes X No | | |
| Are Vegetation, Soil, or Hydrology | | | n any answers in Re | | | |
| | | | - | | | |
| SUMMARY OF FINDINGS – Attach sit | e map showing sa | impling point location | s, transects, in | nportant features, etc. | | |
| Hydrophytic Vegetation Present? Yes | s No X | Is the Sampled Area | | | | |
| Hydric Soil Present? Yes | s No X | within a Wetland? | Yes | No X | | |
| Wetland Hydrology Present? Yes | s No X | | | | | |
| Remarks: | | | | | | |
| Upland above Flag A-16. | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| HYDROLOGY | | | | | | |
| Wetland Hydrology Indicators: | | Se | condary Indicators | (minimum of two required) | | |
| Primary Indicators (minimum of one is required; | check all that apply) | <u></u> | Surface Soil Crac | | | |
| Surface Water (A1) | Aquatic Fauna (B13) | | | ed Concave Surface (B8) | | |
| High Water Table (A2) | Marl Deposits (B15) (L | .RR U) | Drainage Patterns (B10) | | | |
| Saturation (A3) | Hydrogen Sulfide Odor | | Moss Trim Lines (B16) | | | |
| Water Marks (B1) | Oxidized Rhizospheres | | | | | |
| Sediment Deposits (B2) | Presence of Reduced | | Crayfish Burrows (C8) | | | |
| Drift Deposits (B3) Algal Mat or Crust (B4) | _ Recent Iron Reduction Thin Muck Surface (C7 | . , | Saturation Visible on Aerial Imagery (C9) | | | |
| Iron Deposits (B5) | Other (Explain in Rema | | Geomorphic Position (D2) Shallow Aquitard (D3) | | | |
| Inundation Visible on Aerial Imagery (B7) | | | FAC-Neutral Test (D5) | | | |
| Water-Stained Leaves (B9) | | | Sphagnum Moss (D8) (LRR T, U) | | | |
| Field Observations: | | | | | | |
| | o X Depth (inches |): | | | | |
| Water Table Present? Yes No | Depth (inches |): | | | | |
| Saturation Present? Yes No | Depth (inches |): Wetland Hyd | drology Present? | Yes <u>No X</u> | | |
| (includes capillary fringe) | | | | | | |
| Describe Recorded Data (stream gauge, monito | ring well, aerial photos, | previous inspections), if avail | able: | | | |
| | | | | | | |
| Remarks: | | | | | | |
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Attachment 2.D.1 Page 37 of 230

| | | of plants. | | Sampling Point: 4-A | _ |
|--|---------------------|--|---------------------|--|------------------------|
| ree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
| (Flot size. 30) | % Cover | Species | Status | | |
| | | | | Number of Dominant Species | |
| | | | | That Are OBL, FACW, or FAC:(A | 4) |
| | | | | Total Number of Dominant | |
| l. | | | | Species Across All Strata: 4 (E | 3) |
| | | | | Percent of Dominant Species | |
| S | | | | That Are OBL, FACW, or FAC: 25.0% (A | √B) |
| | | =Total Cover | | Prevalence Index worksheet: | |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: | |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 | |
| . Liriodendron tulipifera | 15 | Yes | FACU | FACW species 0 x 2 = 0 | • |
| · · · · · · · · · · · · · · · · · · · | | | | FAC species 40 x 3 = 120 | • |
| 3. | | | | FACU species 55 $x 4 = 220$ | • |
| ··· | | | | UPL species $35 \times 5 = 175$ | • |
| · · · · · · · · · · · · · · · · · · · | | | | | (D) |
| · | | | | () | (B) |
|) | | | | Prevalence Index = B/A = 3.96 | • |
| | | =Total Cover | | Hydrophytic Vegetation Indicators: | |
| 50% of total cover: | 8 20% | of total cover: | 3 | 1 - Rapid Test for Hydrophytic Vegetation | |
| Shrub Stratum (Plot size: 30) | | | | 2 - Dominance Test is >50% | |
| . Rhus copallinum | 35 | Yes | UPL | 3 - Prevalence Index is $≤3.0^{1}$ | |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 3. | | | | | |
| !. | | | | | |
| 5. | | | | | |
|). | | | | ¹ Indicators of hydric soil and wetland hydrology muspresent, unless disturbed or problematic. | St De |
| | 35 | =Total Cover | | Definitions of Five Vegetation Strata: | |
| FOW of total approx | | | 7 | - | |
| 50% of total cover: | 18 20% | of total cover: | 7 | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in | |
| <u>Herb Stratum</u> (Plot size: 30) | | | | (7.6 cm) or larger in diameter at breast height (DBF | |
| . Solidago altissima | 40 | Yes | | | |
| | | | FACU | | |
| 0 | 25 | Yes | FACU | Sapling – Woody plants, excluding woody vines, | H). |
| | 25 15 | Yes No | | approximately 20 ft (6 m) or more in height and less | H). |
| 3. Verbesina alternifolia | | | FAC | | H). |
| 3. Verbesina alternifolia | 15 | No | FAC | approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody Plants, excluding woody vines, | H). |
| Verbesina alternifolia Sedge spp. | 15 | No | FAC | approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. | H). |
| Verbesina alternifolia Sedge spp. | 15 | No | FAC | 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. | H). s |
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| Verbesina alternifolia Sedge spp. Sedge | 15 | No | FAC | 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. | H). s |
| Verbesina alternifolia Sedge spp. Sedge | 15 | No | FAC | 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, includin herbaceous vines, regardless of size, and woody | H). s |
| Verbesina alternifolia Sedge spp. Sedge | 15 | No | FAC | 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, includin herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately ft (1 m) in height. | H). s ng ly 3 |
| Verbesina alternifolia Sedge spp. Sedge | | No No | FAC | 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, includin herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately | H). s ng ly 3 |
| Verbesina alternifolia Sedge spp. | 15 15 | No No Total Cover | FAC FAC | 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, includin herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately ft (1 m) in height. | H). s ng ly 3 |
| Verbesina alternifolia Sedge spp. | 15 15 | No No | FAC | 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, includin herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately ft (1 m) in height. | H). s ng ly 3 |
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| Sedge spp. | | No No No Total Cover of total cover: | FAC FAC | 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, includin herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximatel ft (1 m) in height. Woody Vine - All woody vines, regardless of height Hydrophytic | H). s ng ly 3 |
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SOIL

| Depth | Matrix | - | Podov | Featur | 00 | | | | , | |
|--|-------------------------------|-----------|-------------------|-----------------|------------------------|-------------------------|-------------------------------------|---------------------------------|--------------------|--------------------------|
| (inches) | Color (moist) | % | Color (moist) | reatur % | Type ¹ | Loc ² | То | exture | Pom | narks |
| <u> </u> | | | | /0 | Туре | LUC | | | Kein | Iaiks |
| 0-6 | 7.5YR 4/4 | 100 | | | | · | Loam | y/Clayey | | |
| 6-20 | 7.5YR 4/6 | 100 | | | | | Loam | y/Clayey | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |
| Type: C-C | oncentration, D=Depl | letion RM | -Reduced Matrix M | S-Mas | ked Sand | Grains | | ² Location: PL = | Pore Lining, M=I | Matrix |
| | Indicators: (Applica | | | | | | | | Problematic Hy | |
| Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) | | | | S, T, U) | 1 cm Muck (A9) (LRR O) | | | | | |
| Histic Ep | bipedon (A2) | | | | | | 2 cm Muck (A10) (LRR S) | | | |
| Black Hi | stic (A3) | | (MLRA 153B, 153D) | | | | Coast Prair | rie Redox (A16) | | |
| | n Sulfide (A4) | | Loamy Mucky | | | RR O) | (outside MLRA 150A) | | | |
| Stratified | Layers (A5) | | Loamy Gleye | d Matri | x (F2) | | Reduced Vertic (F18) | | | |
| | Bodies (A6) (LRR P, | T. U) | Depleted Mat | | · · / | | (outside MLRA 150A, 150B) | | | 0B) |
| | icky Mineral (A7) (LR | | Redox Dark S | Surface | (F6) | | Piedmont Floodplain Soils (F19) (LR | | | (F19) (LRR P, T) |
| Muck Pr | esence (A8) (LRR U) |) | Depleted Dar | k Surfa | ce (F7) | | | | s Bright Floodplai | |
| | ıck (A9) (LRR P, T) | · | Redox Depres | ssions | (F8) | | | (MLRA 1 | 0 1 | ~ / |
| | d Below Dark Surface | e (A11) | Marl (F10) (L | | 、 , | | | | t Material (F21) | |
| Thick Da | ark Surface (A12) | () | Depleted Och | ric (F1 | 1) (MLRA | 151) | | Very Shallow Dark Surface (F22) | | |
| Coast P | rairie Redox (A16) (N | ILRA 150 | | | | |), P, T) | (outside | MLRA 138, 152 | A in FL, 154) |
| Sandy M | lucky Mineral (S1) (L | .RR O, S) | Umbric Surfa | ce (F13 | B) (LRR P | , T, U) | | Barrier Isla | nds Low Chroma | a Matrix (TS7) |
| Sandy G | Gleyed Matrix (S4) | | Delta Ochric | (F17) (I | MLRA 15 | 1) | | (MLRA 1 | 53B, 153D) | |
| | edox (S5) | | Reduced Ver | · · · | | • | 60B) | | lain in Remarks) | |
| | Matrix (S6) | | Piedmont Flo | | <i>,</i> . | | | 、 . | , | |
| | rface (S7) (LRR P, S | . T. U) | Anomalous B | • | ` | , 、 | , | | | |
| Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) | | | | ` | - / | ³ Indicators | of hydrophytic ve | egetation and | | |
| (ILRR S, T, U) Very Shallow Dark Surface (F22) | | | | | | | hydrology must k | • | | |
| (| -, -, -, | | (MLRA 138 | | ` | , | | | listurbed or probl | 1 / |
| estrictive | Layer (if observed): | | | | | | | | | |
| Type: | | | | | | | | | | |
| Depth (inches): | | | | | Hydrid | c Soil Present? | Yes | No X | | |

| | Attachment 2.D.1 | | |
|---|--|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) | | |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 06/30/20 | | |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 4-B | | |
| Investigator(s): S. Kupiec Section, Township, Range: | | | |
| Landform (hillside, terrace, etc.): Drainageway Local relief (concave, convex, non | e): Concave Slope (%): 2-3 | | |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.715226 Long: -77.5 | 86757 Datum: | | |
| Soil Map Unit Name: Fluvanna-Mattaponi complex | NWI classification: N/A | | |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes X | No (If no, explain in Remarks.) | | |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal Circu | Imstances" present? Yes X No | | |
| | n any answers in Remarks.) | | |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations | s, transects, important features, etc. | | |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? Wetland Hydrology Present? Yes X No No | Yes <u>X</u> No | | |
| Remarks: Wetland at Flag A-13. | | | |
| HYDROLOGY | | | |
| Wetland Hydrology Indicators: Se | condary Indicators (minimum of two required) | | |
| Primary Indicators (minimum of one is required; check all that apply) | Surface Soil Cracks (B6) | | |
| Surface Water (A1) Aquatic Fauna (B13) | _ Sparsely Vegetated Concave Surface (B8) | | |
| High Water Table (A2) Marl Deposits (B15) (LRR U) Saturation (A3) Hydrogen Sulfide Odor (C1) | _Drainage Patterns (B10) Moss Trim Lines (B16) | | |
| Water Marks (B1) X Oxidized Rhizospheres on Living Roots (C3) | Dry-Season Water Table (C2) | | |
| Sediment Deposits (B2) Presence of Reduced Iron (C4) | Crayfish Burrows (C8) | | |
| Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) | Saturation Visible on Aerial Imagery (C9) | | |
| | Geomorphic Position (D2) | | |
| Iron Deposits (B5) Other (Explain in Remarks) | _ Shallow Aquitard (D3) | | |
| Inundation Visible on Aerial Imagery (B7) X Water-Stained Leaves (B9) | _FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U) | | |
| Field Observations: | | | |
| Surface Water Present? Yes No X Depth (inches): | | | |
| Water Table Present? Yes No X Depth (inches): | | | |
| Saturation Present? Yes No X Depth (inches): Wetland Hyd | Irology Present? Yes X No | | |
| (includes capillary fringe) | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if availa | able: | | |
| | | | |
| Remarks: | | | |
| | | | |
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Attachment 2.D.1 Page 40 of 230

| VEGETATION (Five Strata) - Use scienti | fic names o | of plants. | | Sampling Point: 4-B |
|--|-------------|-----------------|-----------|---|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2. | | | | That Are OBL, FACW, or FAC: 3 (A) |
| 3 | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 4 (B) |
| 5. | | | | Percent of Dominant Species |
| 6. | | | | That Are OBL, FACW, or FAC: 75.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 80 x 1 = 80 |
| 1 | | | | FACW species 5 $x 2 = 10$ |
| 2. | | | | FAC species $10 \times 3 = 30$ |
| 2 | | | | FACU species $30 \times 4 = 120$ |
| 4 | | | | $\frac{1}{120}$ UPL species 0 x 5 = 0 |
| 5. | | | | |
| | | | | Column Totals: 125 (A) 240 (B) |
| 6 | | | | Prevalence Index = B/A = 1.92 |
| | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | 20% | of total cover: | | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1. Salix nigra | 15 | Yes | OBL | X_3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4 | | | | |
| 5. | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | 15 = | Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: 6 | 3 20% | of total cover: | 3 | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. Juncus effusus | 30 | Yes | OBL | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. Solidago altissima | 30 | Yes | FACU | Sapling – Woody plants, excluding woody vines, |
| 3. Carex lupulina | 25 | Yes | OBL | approximately 20 ft (6 m) or more in height and less |
| 4. Dichanthelium dichotomum | 10 | No | FAC | than 3 in. (7.6 cm) DBH. |
| 5. Ludwigia alternifolia | 10 | No | OBL | Shrub - Woody Plants, excluding woody vines, |
| 6. Carex albolutescens | 5 | No | FACW | approximately 3 to 20 ft (1 to 6 m) in height. |
| | | | TACT | |
| | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3 |
| 9 | | | | ft (1 m) in height. |
| 10 | | | | Woody Vine – All woody vines, regardless of height. |
| 11 | | | | woody whe - Air woody whes, regardless of height. |
| | | =Total Cover | | |
| | 5 20% | of total cover: | 22 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2. | | | | |
| 3 | | | | |
| 4 | | | | |
| 5. | | | | Hydrophytic |
| | : | =Total Cover | | Vegetation |
| 50% of total cover: | 20% | of total cover: | | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | · |

SOIL Sampling Point: 4-B Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix Loc² Color (moist) % Color (moist) Texture (inches) % Type¹ Remarks 2.5Y 4/2 5 С ΡL 0-8 95 10YR 5/6 Loamy/Clayey Prominent redox concentrations 8-20 2.5Y 4/1 80 10YR 5/8 15 С Μ Loamy/Clayey Prominent redox concentrations 10YR 5/6 С Prominent redox concentrations 5 ΡL ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:

| | Attachment 2.D.1 | | |
|---|--|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) | | |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 06/30/2020 | | |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 5-A | | |
| Investigator(s): S. Kupiec Section, Township, Range: | | | |
| Landform (hillside, terrace, etc.): Drainageway Local relief (concave, convex, none | e): Flat Slope (%): 0-1 | | |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.709763 Long: -77.58 | | | |
| Soil Map Unit Name: Roanoke loam | NWI classification: PFO1Ch | | |
| | No (If no, explain in Remarks.) | | |
| | mstances" present? Yes X No | | |
| | any answers in Remarks.) | | |
| | | | |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations | , transects, important reatures, etc. | | |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? Wetland Hydrology Present? Yes X No No | Yes <u>X</u> No | | |
| Remarks: Wetland at Flag D-2. | | | |
| HYDROLOGY | | | |
| | | | |
| Wetland Hydrology Indicators: Sec Primary Indicators (minimum of one is required; check all that apply) Sec | condary Indicators (minimum of two required) Surface Soil Cracks (B6) | | |
| Surface Water (A1) Aquatic Fauna (B13) | Sparsely Vegetated Concave Surface (B8) | | |
| X High Water Table (A2) Marl Deposits (B15) (LRR U) | Drainage Patterns (B10) | | |
| X Saturation (A3) Hydrogen Sulfide Odor (C1) | Moss Trim Lines (B16) | | |
| Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) | Dry-Season Water Table (C2) | | |
| Sediment Deposits (B2) Presence of Reduced Iron (C4) | Crayfish Burrows (C8) | | |
| Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Algal Mat or Crust (B4) Thin Muck Surface (C7) X | Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) | | |
| Iron Deposits (B5) Other (Explain in Remarks) | Shallow Aquitard (D3) | | |
| | FAC-Neutral Test (D5) | | |
| X Water-Stained Leaves (B9) | Sphagnum Moss (D8) (LRR T, U) | | |
| Field Observations: | • | | |
| Surface Water Present? Yes No X Depth (inches): | | | |
| Water Table Present? Yes X No Depth (inches): 8 | | | |
| | rology Present? Yes X No | | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if availa | | | |
| Describe Recorded Data (Stream gauge, monitoring weil, aenai priotos, previous inspections), il availa | Die. | | |
| | | | |
| Remarks: | | | |
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VEGETATION (Five Strata) - Use scientific names of plants

| VEGETATION (Five Strata) - Use scientif | ic names | of plants. | | Sampling Point: 5-A |
|--|-----------------|-----------------|-----------|---|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: 5 (A) |
| 3 | | | | Total Number of Dominant |
| 4. | | | | Species Across All Strata: 5 (B) |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: 100.0% (A/B) |
| | : | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 120 x 1 = 120 |
| 1. cer negundo | 5 | Yes | FAC | FACW species x 2 =50 |
| 2. raxinus penns I anica | 5 | Yes | FACW | FAC species 30 x 3 = 90 |
| 3. | | | | FACU species 10 x 4 = 40 |
| 4. | | | | UPL species $0 \times 5 = 0$ |
| 5. | | | | Column Totals: 185 (A) 300 (B) |
| 6. | | | | Prevalence Index = $B/A = 1.62$ |
| | 10 : | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: 5 | | of total cover: | 2 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1. orella cerifera | 25 | Yes | FAC | X 3 - Prevalence Index is ≤3.0 ¹ |
| 2. | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. | | | | |
| 4. | | | | |
| 5 | | | | |
| 6. | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| | 25 | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: 1 | | of total cover: | 5 | |
| Herb Stratum (Plot size: 30) | 2070 | | | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| 1. Leersia or oides | 50 | Yes | OBL | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. Carex lupulina | 35 | Yes | OBL | Conting Weedurlegte custuding weeduring |
| | 15 | No | OBL | Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less |
| | | | | than 3 in. (7.6 cm) DBH. |
| 4. alium aparine | <u>10</u> 10 | No | FACU | Shrub - Woody Plants, excluding woody vines, |
| 5. ersicaria sagittata | | No | OBL | approximately 3 to 20 ft (1 to 6 m) in height. |
| 6. pha latifolia | 10 | No | OBL | |
| 7. <u>L simachia ciliata</u> | <u> </u> | No | FACW | Herb – All herbaceous (non-woody) plants, including |
| 8. mpatiens capensis | | No | FACW | herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3 |
| 9. oehmeria c lindrica | 5 | No | FACW | ft (1 m) in height. |
| 10. Carex albolutescens | 5 | No | FACW | Woody Vine – All woody vines, regardless of height. |
| 11 | | | | woody vine - Air woody vines, regardless of height. |
| | | =Total Cover | | |
| 50% of total cover: 7 | 5 20% | of total cover: | 30 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3. | | | | |
| 4 | | | | |
| 5 | | | | Hydrophytic |
| | | =Total Cover | | Vegetation |
| 50% of total cover: | 20% | of total cover: | | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | |

I

| | cription: (Describe | to the dep | | | | ator or co | onfirm the a | bsence of ir | dicators.) | | |
|-------------------|---|-------------|---------------|-------------------------------------|-------------------|------------------|---|-------------------|--|------------------------|--|
| Depth (inches) | Matrix Color (moist) | % | Color (moist) | ox Featur % | Type ¹ | Loc ² | ² Texture Rem | | | 2 | |
| · · · · · · | | | | | | | | | | | |
| 0-8 | 2.5Y 4/2 | 65 | 7.5YR 5/8 | 25 | C | M | Loamy/C | ayey | Prominent redox cor | ncentration | |
| | | | 7.5YR 4/6 | 10 | С | PL | | | Prominent redox cor | ncentration | |
| 8-20 | 2.5Y 4/1 | 90 | 7.5YR 4/6 | 10 | <u> </u> | | Loamy/C | ayey | Prominent redox cor | ncentration | |
| | | · | | | | | | | | | |
| | oncentration, D=Dep Indicators: (Applica | | | | | d Grains. | | | Pore Lining, M=Matri Problematic Hydric | | |
| Histosol | | | Thin Dark S | | | S, T, U) | | 1 cm Muck | (A9) (LRR O) | | |
| Histic Ep | pipedon (A2) | | Barrier Islar | nds 1 cm | Muck (S | 12) | 2 cm Muck (A10) (LRR S) | | | | |
| Black Hi | istic (A3) | | (MLRA 15 | 53B, 153 | D) | | | Coast Prair | t Prairie Redox (A16) | | |
| Hydroge | en Sulfide (A4) | | Loamy Muc | Loamy Mucky Mineral (F1) (LRR O) (d | | | | | MLRA 150A) | | |
| Stratified | d Layers (A5) | | Loamy Gley | Loamy Gleyed Matrix (F2) Red | | | | Reduced V | ertic (F18) | | |
| Organic | Bodies (A6) (LRR P | , T, U) | X Depleted Ma | Depleted Matrix (F3) (outs | | | | (outside | MLRA 150A, 150B) | | |
| 5 cm Mı | ucky Mineral (A7) (LR | RR P, T, U) | Redox Dark | Surface | (F6) | | | Piedmont F | loodplain Soils (F19) |) (LRR P, ⁻ | |
| Muck Pr | esence (A8) (LRR U |) | Depleted Da | ark Surfa | ice (F7) | | Anomalous Bright Floodplain S | | | oils (F20) | |
| 1 cm Mu | uck (A9) (LRR P, T) | | Redox Depr | essions | (F8) | | | (MLRA 1 | 53B) | | |
| Depleted | d Below Dark Surface | e (A11) | Marl (F10) (| LRR U) | | | | Red Parent | Material (F21) | | |
| Thick Da | ark Surface (A12) | | Depleted Oc | chric (F1 | 1) (MLR/ | A 151) | | Very Shallo | w Dark Surface (F22 | 2) | |
| | rairie Redox (A16) (N | | | o | | | | | MLRA 138, 152A in | . , | |
| | /lucky Mineral (S1) (L | .RR 0, S) | Umbric Surf | | | | | nds Low Chroma Ma | trix (TS7) | | |
| | Gleyed Matrix (S4) | | Delta Ochrid | | | | (MLRA 153B, 153D) | | | | |
| | Redox (S5) | | Reduced Ve | | | | | Other (Expl | ain in Remarks) | | |
| | Matrix (S6) | | Piedmont F | • | , | , . | - | | | | |
| | rface (S7) (LRR P, S | | Anomalous | - | | | 0) | 3 | | | |
| | e Below Surface (S8 | 5) | (MLRA 14 | | | | ³ Indicators of hydrophytic vegetation a | | | | |
| (LRR | S, T, U) | | Very Shallo | | | | | | nydrology must be pi | | |
| | | | (MLRA 13 | 38, 152A | IN FL, I | 54) | | uniess di | sturbed or problema | tic. | |
| | Layer (if observed): | | | | | | | | | | |
| Type: | | | | | | | | | | | |
| Depth (i | nches): | | | | | | Hydric So | oil Present? | Yes X | No | |
| Remarks: | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

| | | Attachment 2.D.1 | | |
|--|---|--|--|--|
| U.S. Army Corps of Eng WETLAND DETERMINATION DATA SHEET – Atlantic See ERDC/EL TR-07-24; the proponent a | c and Gulf Coastal Plain Regi | OMB Control #: 0710-xxxx, Exp: Pending | | |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebu | ild City/County: Greensvil | leSampling Date: 06/30/20 | | |
| Applicant/Owner: Dominion Energy Virginia | | State: VA Sampling Point: 5-B | | |
| Investigator(s): S. Kupiec | Section, Township, Range: | | | |
| Landform (hillside, terrace, etc.): Slope | Local relief (concave, convex, | none): Convex Slope (%): 2-4 | | |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.710 | | 77.589141 Datum: | | |
| Soil Map Unit Name: Fluvanna clay loam | <u> </u> | NWI classification: N/A | | |
| Are climatic / hydrologic conditions on the site typical for this tim | ne of year? Yes X | No (If no, explain in Remarks.) | | |
| Are Vegetation, Soil, or Hydrologysignific | | Circumstances" present? Yes X No | | |
| | | | | |
| Are Vegetation, Soil, or Hydrologynatural | | plain any answers in Remarks.) | | |
| SUMMARY OF FINDINGS – Attach site map show | wing sampling point locati | ons, transects, important features, etc. | | |
| Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes No No Wetland Hydrology Present? Yes No No | | Yes No_X | | |
| Remarks: Upland at Flag D-2. | | | | |
| L HYDROLOGY | | | | |
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of two required) | | |
| Primary Indicators (minimum of one is required; check all that | apply) | Surface Soil Cracks (B6) | | |
| Surface Water (A1) Aquatic Faun | · , | Sparsely Vegetated Concave Surface (B8) | | |
| | s (B15) (LRR U) | Drainage Patterns (B10) | | |
| | Ifide Odor (C1) | Moss Trim Lines (B16) | | |
| | zospheres on Living Roots (C3) Reduced Iron (C4) | Dry-Season Water Table (C2) Crayfish Burrows (C8) | | |
| | Reduced from (C4) Reduction in Tilled Soils (C6) | Saturation Visible on Aerial Imagery (C9) | | |
| Algal Mat or Crust (B4) Thin Muck St | | Geomorphic Position (D2) | | |
| | n in Remarks) | Shallow Aquitard (D3) | | |
| Inundation Visible on Aerial Imagery (B7) | | FAC-Neutral Test (D5) | | |
| Water-Stained Leaves (B9) | | Sphagnum Moss (D8) (LRR T, U) | | |
| Field Observations: | | — | | |
| Surface Water Present? Yes No X Dept | th (inches): | | | |
| | th (inches): | | | |
| | th (inches): Wetland | Hydrology Present? Yes No X | | |
| (includes capillary fringe) | Labotec providuo inconcitione) if a | | | |
| Describe Recorded Data (stream gauge, monitoring well, aeria | I photos, previous inspections, ii a | vallable. | | |
| | | | | |
| Remarks: | | | | |
| | | | | |
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| | | | | |

Attachment 2.D.1 Page 46 of 230

C1 . 、 . . .+ifi/

| VEGETATION (Five Strata) - Use scient | ific names o | of plants. | | Sampling Point: 5-B |
|--|--------------|-----------------|-----------|--|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 2. | | | | Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A) |
| 3. | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 6 (B) |
| 5 6. | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B) |
| | | Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 $x 1 = 0$ |
| 1 | | | | FACW species 0 $x 2 = 0$ |
| 2. | | | | FAC species 70 x 3 = 210 |
| 3. | | | | FACU species $85 \times 4 = 340$ |
| 4. | | | | UPL species 0 x 5 = 0 |
| 5. | | | | Column Totals: 155 (A) 550 (B) |
| 6. | | | | Prevalence Index = $B/A = 3.55$ |
| | | Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | | of total cover: | | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1. orella cerifera | 5 | Yes | FAC | 3 - Prevalence Index is ≤3.0 ¹ |
| 2. | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | 1 |
| 6. | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 0. | 5 = | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | | of total cover: | 1 | - |
| Herb Stratum (Plot size: 30) | 5 2070 | | | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| 1. erbesina alternifolia | 45 | Yes | FAC | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. chillea millefolium | 35 | Yes | FACU | |
| 3. Solidago altissima | 25 | No | FACU | Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less |
| 4. Lespede a cuneata | 20 | No | FACU | than 3 in. (7.6 cm) DBH. |
| | 5 | No | FAC | Shrub - Woody Plants, excluding woody vines, |
| ů | | INU | TAC | approximately 3 to 20 ft (1 to 6 m) in height. |
| 6 7 | | | | |
| | | | | Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody |
| 8 9. | | | | plants, except woody vines, less than approximately 3 |
| 10 | | | | ft (1 m) in height. |
| 10 | | | | Woody Vine – All woody vines, regardless of height. |
| 11 | 120 | Total Cover | | |
| E00/ of total acular | | | 26 | |
| | 65 20% | of total cover: | 26 | |
| Woody Vine Stratum (Plot size: 30) | 10 | Vaa | EAC | |
| 1. Smilax bona nox | <u> </u> | Yes | FAC | |
| 2. itis rotundifolia | 5 | Yes | FAC | |
| 3. arthenocissus uin uefolia | 5 | Yes | FACU | |
| 4. | | | | |
| 5 | | Tatal Or | | Hydrophytic |
| | | =Total Cover | A | Vegetation |
| | | of total cover: | 4 | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | ons below.) | | | |

5-B

Sampling Point:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix Color (moist) % Color (moist) Loc² Texture Remarks (inches) % Type¹ 7.5YR 5/6 0-6 100 Loamy/Clayey ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Gravel Depth (inches): 6 Hydric Soil Present? Yes No X Remarks:

SOIL

| | Attachment 2.D.1 |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 06/30/20 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 5-C |
| Investigator(s): S. Kupiec Section, Township, Range: | |
| Landform (hillside, terrace, etc.): Drainageway Local relief (concave, convex, non | e): <u>Concave</u> Slope (%): <u>6-8</u> |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.712133 Long: -77.5 | 588492 Datum: |
| Soil Map Unit Name: Fluvanna-Mattaponi complex | NWI classification: N/A |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes X | No (If no, explain in Remarks.) |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal Circu | Imstances" present? Yes X No |
| Are Vegetation, Soil, or Hydrologynaturally problematic? (If needed, explain | n any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations | s, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes No X Is the Sampled Area Hydric Soil Present? Yes No X within a Wetland? Wetland Hydrology Present? Yes No X | Yes No X |
| Remarks: Upland Above Line C. | |
| L HYDROLOGY | |
| Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Aquatic Fauna (B13) High Water Table (A2) Marl Deposits (B15) (LRR U) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) Sediment Deposits (B2) Presence of Reduced Iron (C4) Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Algal Mat or Crust (B4) Thin Muck Surface (C7) Iron Deposits (B5) Other (Explain in Remarks) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) | Condary 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) Sphagnum Moss (D8) (LRR T, U) |
| (includes capillary fringe) | Irology Present? Yes No X |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if availa | able: |
| Remarks: | |

Attachment 2.D.1 Page 49 of 230

VEGETATION (Five Strata) - Use scientific names of plants

| VEGETATION (Five Strata) - Use scienti | fic names | of plants. | | Sampling Point:5-C |
|---|------------|-----------------|-----------|--|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: <u>3</u> (A) |
| 3 | | | | Total Number of Dominant |
| 4. | | | | Species Across All Strata: 6 (B) |
| 5 | | | | Percent of Dominant Species |
| 6. | | | | That Are OBL, FACW, or FAC: 50.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. Li uidambar st raciflua | 25 | Yes | FAC | FACW species 10 x 2 = 20 |
| 2. Cercis canadensis | 10 | Yes | UPL | FAC species 70 x 3 = 210 |
| 3. | | | | FACU species 70 x 4 = 280 |
| 4. | | | | UPL species 40 x 5 = 200 |
| 5. | | | | Column Totals: 190 (A) 710 (B) |
| 6. | | | | Prevalence Index = $B/A = 3.74$ |
| | 35 | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: 1 | | of total cover: | 7 | 1 - Rapid Test for Hydrophytic Vegetation |
| | 8 20% | or total cover. | 7 | |
| Shrub Stratum (Plot size: 30) | 45 | N/s s | | 2 - Dominance Test is >50% |
| 1. hus copallinum | 15 | Yes | UPL | 3 - Prevalence Index is $\leq 3.0^{1}$ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4. | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | 15 | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 8 20% | of total cover: | 3 | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. Solidago altissima | 55 | Yes | FACU | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. erbesina alternifolia | 25 | Yes | FAC | Sapling – Woody plants, excluding woody vines, |
| 3. I mus h strix | 15 | No | UPL | approximately 20 ft (6 m) or more in height and less |
| 4. Lespede a cuneata | 15 | No | FACU | than 3 in. (7.6 cm) DBH. |
| 5. ubus argutus | 10 | No | FAC | Shrub - Woody Plants, excluding woody vines, |
| 6. Dichanthelium scoparium | 10 | No | FACW | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7 | | | | Herb – All herbaceous (non-woody) plants, including |
| 8. | | | | herbaceous vines, regardless of size, and woody |
| 9. | | | | plants, except woody vines, less than approximately 3 |
| 10. | | | | ft (1 m) in height. |
| 11. | | | | Woody Vine - All woody vines, regardless of height. |
| | 130 | =Total Cover | | |
| 50% of total cover: 6 | | of total cover: | 26 | |
| Woody Vine Stratum (Plot size: 30) | 2070 | | 20 | |
| 1. itis rotundifolia | 10 | Yes | FAC | |
| 2. | 10 | 103 | TAU | |
| | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | Hydrophytic |
| | | =Total Cover | | Vegetation |
| 50% of total cover: | 5 20% | of total cover: | 2 | Present? Yes No X |
| Remarks: (If observed, list morphological adaptatio | ns below.) | | | |

I

Remarks

5-C

Sampling Point:

²Location: PL=Pore Lining, M=Matrix.

1 cm Muck (A9) (LRR O)

2 cm Muck (A10) (LRR S)

Coast Prairie Redox (A16)

(outside MLRA 150A)

Red Parent Material (F21)

(outside MLRA 150A, 150B)

Very Shallow Dark Surface (F22)

Piedmont Floodplain Soils (F19) (LRR P, T)

Anomalous Bright Floodplain Soils (F20)

(outside MLRA 138, 152A in FL, 154)

No X

Barrier Islands Low Chroma Matrix (TS7)

Reduced Vertic (F18)

(MLRA 153B)

Indicators for Problematic Hydric Soils³:

Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes Remarks:

SOIL

Depth

(inches)

0-20

Histosol (A1)

Histic Epipedon (A2)

Hydrogen Sulfide (A4)

Stratified Layers (A5)

Organic Bodies (A6) (LRR P, T, U)

Depleted Below Dark Surface (A11)

Coast Prairie Redox (A16) (MLRA 150A)

Sandy Mucky Mineral (S1) (LRR O, S)

Muck Presence (A8) (LRR U)

1 cm Muck (A9) (LRR P, T)

Thick Dark Surface (A12)

5 cm Mucky Mineral (A7) (LRR P, T, U)

Black Histic (A3)

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

%

100

Matrix Color (moist)

2.5Y 5/6

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

Color (moist)

Redox Features

%

Thin Dark Surface (S9) (LRR S, T, U)

Loamy Mucky Mineral (F1) (LRR O)

Depleted Ochric (F11) (MLRA 151)

Umbric Surface (F13) (LRR P, T, U)

Iron-Manganese Masses (F12) (LRR O, P, T)

Barrier Islands 1 cm Muck (S12)

(MLRA 153B, 153D)

Loamy Gleyed Matrix (F2)

Redox Dark Surface (F6)

Redox Depressions (F8)

Marl (F10) (LRR U)

Depleted Dark Surface (F7)

Depleted Matrix (F3)

Type¹

Loc²

Texture

Loamy/Clayey

| | | | | Attachment 2.D.1 Page 51 of 230 | | |
|---|--|---------------------------------------|--|---|--|--|
| U.S. Army WETLAND DETERMINATION DATA S See ERDC/EL TR-07-24; th | | 0 | Requirement | #299 51 01 230 #: 0710-xxxx, Exp: Pending Control Symbol EXEMPT: R 335-15, paragraph 5-2a) | | |
| Project/Site: TL 254/2201 Clubhouse - Lake | view 230 kV Rebuild | City/County: Greensville | | Sampling Date: 06/30/20 | | |
| Applicant/Owner: Dominion Energy Virgin | nia | | State: VA | Sampling Point: 6-A | | |
| Investigator(s): S. Kupiec | Sec | ction, Township, Range: | | - | | |
| Landform (hillside, terrace, etc.): Drainagew | vay Local | relief (concave, convex, nor | ne): Concave | Slope (%): 2-4 | | |
| Subregion (LRR or MLRA): LRR P, MLRA 13 | 33A Lat: <u>36.705539</u> | Long: -77. | 591566 | Datum: | | |
| Soil Map Unit Name: Fluvanna-Mattaponi co | mplex | | NWI classificat | tion: <u>N/A</u> | | |
| Are climatic / hydrologic conditions on the site | e typical for this time of year? | Yes X | No (If no, e | explain in Remarks.) | | |
| Are Vegetation, Soil, or Hydrol | logysignificantly distu | rbed? Are "Normal Circ | umstances" present | ? Yes X No | | |
| Are Vegetation, Soil, or Hydrol | logynaturally problem | atic? (If needed, explai | in any answers in Re | marks.) | | |
| SUMMARY OF FINDINGS – Attach | site map showing sar | npling point location | is, transects, im | portant features, etc. | | |
| Hydric Soil Present? | Yes No X Yes X No X Yes No X X | Is the Sampled Area within a Wetland? | Yes | No <u>X</u> | | |
| Remarks: Upland near Structure 254/8. | | | | | | |
| HYDROLOGY | | | | | | |
| Wetland Hydrology Indicators: | | <u>S</u> | econdary Indicators | (minimum of two required) | | |
| Primary Indicators (minimum of one is requir | | | Surface Soil Crac | | | |
| Surface Water (A1) | Aquatic Fauna (B13) | | Sparsely Vegetate Drainage Patterns | ed Concave Surface (B8) | | |
| High Water Table (A2) Saturation (A3) | Marl Deposits (B15) (LF Hydrogen Sulfide Odor | | Moss Trim Lines (| | | |
| Water Marks (B1) | Oxidized Rhizospheres | | Dry-Season Wate | | | |
| Sediment Deposits (B2) | Presence of Reduced Ir | | Crayfish Burrows (C8) | | | |
| Drift Deposits (B3) | Recent Iron Reduction i | | | on Aerial Imagery (C9) | | |
| Algal Mat or Crust (B4) Iron Deposits (B5) | Thin Muck Surface (C7) Other (Explain in Rema | | Geomorphic Posit Shallow Aquitard | () | | |
| Inundation Visible on Aerial Imagery (B7 | | rks) | FAC-Neutral Test | | | |
| Water-Stained Leaves (B9) |) | — | Sphagnum Moss | | | |
| Field Observations: | | | - · · | | | |
| Surface Water Present? Yes | No X Depth (inches): | : | | | | |
| Water Table Present? Yes | No X Depth (inches): | | | | | |
| Saturation Present? Yes | No X Depth (inches): | Wetland Hyd | drology Present? | Yes No X | | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, mo | | rovious inspections) if avai | lahla. | | | |
| Describe Recorded Data (stream gauge, mo | filloning wen, aenai priotos, p | | | | | |
| | | | | | | |
| Remarks: | | | | | | |
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Attachment 2.D.1 Page 52 of 230

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: 6-A Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status Dominance Test worksheet: 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: (A) 1 _____ 3. Total Number of Dominant Species Across All Strata: 4. 4 (B) _____ 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 25.0% (A/B) =Total Cover Prevalence Index worksheet: 50% of total cover: 20% of total cover: Total % Cover of: Multiply by: Sapling Stratum (Plot size: 30) OBL species 0 x 1 = 0 x 2 = FACW species 0 0 1. _____ 30 x 3 = FAC species 90 2. _____ x 4 = FACU species 55 220 3. _____ _____ 0 4. UPL species x 5 = 0 Column Totals: 85 (A) 310 5. _____ (B) 6. Prevalence Index = B/A = 3.65 =Total Cover Hydrophytic Vegetation Indicators: 20% of total cover: 1 - Rapid Test for Hydrophytic Vegetation 50% of total cover: Shrub Stratum (Plot size: 30) 2 - Dominance Test is >50% 3 - Prevalence Index is $≤3.0^1$ 1. Problematic Hydrophytic Vegetation¹ (Explain) 2. _____ 3. ____ 4. _____ 5. _____ ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 6. =Total Cover Definitions of Five Vegetation Strata: 20% of total cover: 50% of total cover: Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. Herb Stratum (Plot size: 30 (7.6 cm) or larger in diameter at breast height (DBH). 1. Dichanthelium dichotomum 30 Yes FAC 2. Solidago altissima 30 Yes FACU Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less 25 3. estuca spp Yes than 3 in. (7.6 cm) DBH. 25 4. uthamia spp Yes 15 5. udbec ia hirta No FACU Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. chillea millefolium 10 6. No FACU 7. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody 8. _____ plants, except woody vines, less than approximately 3 9. ft (1 m) in height. 10. Woody Vine - All woody vines, regardless of height. 11. 135 =Total Cover 50% of total cover: _____68 ___ 20% of total cover: ____27 Woody Vine Stratum (Plot size: 30) 1. _____ _____ 2. 3. _____ 4. 5. Hydrophytic =Total Cover Vegetation 20% of total cover: Present? 50% of total cover: No X Yes

Remarks: (If observed, list morphological adaptations below.)

| Depth | cription: (Describe Matrix | | | x Featur | | | | | | | |
|--|--|------------|-----------------------------|----------|-------------------|----------------------|--|--|--|--|--|
| inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks | | | |
| 0-4 | 10YR 4/3 | 100 | | | | | Loamy/Clayey | | | | |
| - | | | | | | | | | | | |
| 4-6 | 10YR 4/2 | 90 | 10YR 4/6 | 10 | C | M | Loamy/Clayey | Prominent redox concentrations | | | |
| | | | | | | <u> </u> | | | | | |
| | | · | | | _ | ; | | | | | |
| | oncentration, D=Depl | | | | | Grains. | | PL=Pore Lining, M=Matrix. | | | |
| - | Indicators: (Applica | ble to all | | | | 0 T () | | for Problematic Hydric Soils ³ : | | | |
| Histosol | · , | | Thin Dark Su | ` | <i>,</i> . | | | luck (A9) (LRR O) | | | |
| | pipedon (A2) | | Barrier Islan | | ` | 12) | 2 cm Muck (A10) (LRR S) Coast Prairie Redox (A16) | | | | |
| Black Histic (A3) (MLRA 153B, 15 | | | | | | | | | | | |
| Hydrogen Sulfide (A4) Loamy Mucky Mine | | | | | | RR U) | · · | ide MLRA 150A) | | | |
| | d Layers (A5) | T 11) | Loamy Gley | | · · / | | Reduced Vertic (F18) (outside MLRA 150A, 150B) | | | | |
| | Bodies (A6) (LRR P, | | X Depleted Ma | · · / | | | , | , , | | | |
| | ucky Mineral (A7) (LR esence (A8) (LRR U) | |) Redox Dark Depleted Da | | · · · | | | ont Floodplain Soils (F19) (LRR P, T Ious Bright Floodplain Soils (F20) | | | |
| | uck (A9) (LRR P, T) | | Redox Depre | | · · / | | (MLRA 153B) | | | | |
| | d Below Dark Surface | Δ11) | Marl (F10) (I | | (10) | | - | rrent Material (F21) | | | |
| | ark Surface (A12) | (,,,,) | Depleted Oc | , | 1) (MI RA | 151) | | | | | |
| | rairie Redox (A16) (M | II RA 150 | | ` | <i>,</i> . | , | | | | | |
| | /ucky Mineral (S1) (L | | Umbric Surfa | | ` | , 、 | Barrier Islands Low Chroma Matrix (TS7) | | | | |
| | Gleyed Matrix (S4) | - (-) | Delta Ochric | ` | <i>,</i> , | | (MLRA 153B, 153D) | | | | |
| - | Redox (S5) | | Reduced Ve | . , . | | , | | | | | |
| | Matrix (S6) | | Piedmont Fl | oodplain | Soils (F | 19) (MLR. | A 149A) | . , | | | |
| | rface (S7) (LRR P, S | , T, U) | Anomalous I | | | , . | | | | | |
| Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) | | | | | | ³ Indicat | ors of hydrophytic vegetation and | | | | |
| (LRR | S, T, U) | | Very Shallov (MLRA 13 | | ` | , | | and hydrology must be present, ss disturbed or problematic. | | | |
| | Layer (if observed): | | | | | | | | | | |
| Type: | Compaction | | | | | | | | | | |
| Donth (| nches): | 6 | | | | | Hydric Soil Prese | ent? Yes X No | | | |

| | Attachment 2.D.1 Page 54 of 230 | | |
|--|---|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending | | |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Gre | eensville Sampling Date: 06/30/2020 | | |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 6-B | | |
| Investigator(s): S. Kupiec Section, Township, F | | | |
| | onvex, none): Convex Slope (%): 4-6 | | |
| | Long: -77.593705 Datum: | | |
| Soil Map Unit Name: Fluvanna-Mattaponi complex | NWI classification: N/A | | |
| | X No (If no, explain in Remarks.) | | |
| | ormal Circumstances" present? Yes X No | | |
| | ded, explain any answers in Remarks.) | | |
| SUMMARY OF FINDINGS – Attach site map showing sampling point lo | | | |
| A second a | | | |
| Hydrophytic Vegetation Present? Yes No X Is the Sampled Ar Hydric Soil Present? Yes No X within a Wetland? Wetland Hydrology Present? Yes No X | | | |
| Remarks: | | | |
| Upland above Flag G-3. | | | |
| | | | |
| | | | |
| | | | |
| HYDROLOGY | | | |
| Wetland Hydrology Indicators: | Surface Soil Creaks (R6) | | |
| Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) True Aquatic Plants (B14) | Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) | | |
| High Water Table (A2) Hydrogen Sulfide Odor (C1) | Drainage Patterns (B10) | | |
| Saturation (A3) Oxidized Rhizospheres on Living Roots (C | | | |
| Water Marks (B1) Presence of Reduced Iron (C4) | Dry-Season Water Table (C2) | | |
| Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) | | | |
| Drift Deposits (B3) Thin Muck Surface (C7) | Saturation Visible on Aerial Imagery (C9) | | |
| Algal Mat or Crust (B4)Other (Explain in Remarks)Other (Explain in Remarks) | Stunted or Stressed Plants (D1) Geomorphic Position (D2) | | |
| Inundation Visible on Aerial Imagery (B7) | Shallow Aquitard (D3) | | |
| Water-Stained Leaves (B9) | Microtopographic Relief (D4) | | |
| Aquatic Fauna (B13) | FAC-Neutral Test (D5) | | |
| Field Observations: | | | |
| Surface Water Present? Yes No X Depth (inches): | | | |
| Water Table Present? Yes No X Depth (inches): Octavation December 2010 Vice No X Depth (inches): | | | |
| Saturation Present? Yes No X Depth (inches): We (includes capillary fringe) | etland Hydrology Present? Yes No X | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection | is), if available: | | |
| | | | |
| Remarks: | | | |
| Tomarks. | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Attachment 2.D.1 Page 55 of 230

| VEGETATION (Five Strata) - Use scienti | fic names | of plants. | | Sampling Point:6-B | |
|---|---------------|-----------------|-----------|---|----------|
| | Absolute | Dominant | Indicator | | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: | |
| 1 | | | | Number of Dominant Species | |
| 2 | | | | That Are OBL, FACW, or FAC: 0 | (A) |
| 3 | | | | Total Number of Dominant | |
| 4 | | | | Species Across All Strata: 4 | (B) |
| 5. | | | | Percent of Dominant Species | |
| 6. | | | | That Are OBL, FACW, or FAC: 0.0% | (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: | |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: | |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 $x 1 = 0$ | _ |
| 1. | | | | FACW species $0 	 x^2 = 0$ | _ |
| 2. | | | | | - |
| | | | | | _ |
| 3. | | <u> </u> | | FACU species 50 $x 4 = 200$ | _ |
| 4 | | | | UPL species <u>40</u> x 5 = <u>200</u> | _ |
| 5 | | | | Column Totals: 110 (A) 460 | (B) |
| 6 | | | | Prevalence Index = $B/A = 4.18$ | _ |
| | | =Total Cover | | Hydrophytic Vegetation Indicators: | |
| 50% of total cover: | 20% | of total cover: | | 1 - Rapid Test for Hydrophytic Vegetation | |
| Shrub Stratum (Plot size: 30) | | | | 2 - Dominance Test is >50% | |
| 1 | | | | 3 - Prevalence Index is ≤3.0 ¹ | |
| 2. | | | | 4 - Morphological Adaptations ¹ (Provide sup | porting |
| 3 | | | | data in Remarks or on a separate sheet) | |
| 1 | | | | Problematic Hydrophytic Vegetation ¹ (Expla | in) |
| 5. | | | | | |
| | | | | ¹ Indicators of hydric soil and wetland hydrology r | must be |
| 6 | | Tatal Osuar | | present, unless disturbed or problematic. | |
| | - | =Total Cover | | Definitions of Five Vegetation Strata: | |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, | 0.14 |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 (7.6 cm) or larger in diameter at breast height (D | |
| 1. teridium a uilinum | 35 | Yes | FACU | | , Bri). |
| 2. estuca spp | 35 | Yes | | Sapling - Woody plants, excluding woody vines | |
| 3. Silphium compositum | 25 | Yes | UPL | approximately 20 ft (6 m) or more in height and I | ess |
| 4. upatorium rotundifolium | 20 | No | FAC | than 3 in. (7.6 cm) DBH. | |
| 5. arthenium integrifolium | 15 | No | UPL | Shrub - Woody Plants, excluding woody vines, | |
| 6. chillea millefolium | 10 | No | FACU | approximately 3 to 20 ft (1 to 6 m) in height. | |
| 7. | | | | Llorb All horhogoous (non woody) planta ingly | ding |
| 8. | | | | Herb – All herbaceous (non-woody) plants, inclu herbaceous vines, regardless of size, and wood | <u> </u> |
| 9. | | | | plants, except woody vines, less than approxima | |
| 10. | | | | 3 ft (1 m) in height. | |
| | | | | Woody Vine – All woody vines, regardless of he | aht |
| 11 | | | | woody vine vin woody vines, regulated of he | Jigint. |
| | | =Total Cover | | | |
| 50% of total cover: 7 | 0 20% | of total cover: | 28 | | |
| Woody Vine Stratum (Plot size: 30) | | | | | |
| 1. arthenocissus uin uefolia | 5 | Yes | FACU | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| ··· | 5 | =Total Cover | | Hydrophytic | |
| ENO/ of total actions | | of total cover: | 4 | Vegetation Present? Ves No Y | |
| | | or lotal cover: | 1 | Present? Yes No X | |
| Remarks: (Include photo numbers here or on a sepa | arate sheet.) | | | | |

| Depth | cription: (Describe Matrix | | | x Featur | | | | | | |
|-------------|-------------------------------|-----------|--------------------|------------|-------------------|------------------|---------------------------------|-------------------------|-------------------|----------------|
| inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | | Rema | arks |
| 0-4 | 10YR 3/3 | 100 | | | | | Loamy/Clay | /ev | | |
| 4-20 | 10YR 5/3 | 85 | 10YR 5/6 | 15 | С | M | Loamy/Clay | | Distinct redox c | oncentrations |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Гуре: С=С | oncentration, D=Depl | etion, RM | =Reduced Matrix, I | NS=Mas | ked Sand | d Grains. | ² L0 | | =Pore Lining, M | |
| lydric Soil | Indicators: | | | | | | | Indicators | for Problemat | ic Hydric Soil |
| Histosol | (A1) | | Polyvalue B | elow Sur | face (S8 |) (MLRA | 147, 148) | 2 cm l | Muck (A10) (ML | RA 147) |
| Histic E | pipedon (A2) | | Thin Dark S | urface (S | 69) (MLR | A 147, 14 | 48) Coast Prairie Redox (A16) | | | |
| Black H | istic (A3) | | Loamy Muc | ky Miner | al (F1) (N | /LRA 136 | 6) (MLRA 147, 148) | | | |
| Hydroge | en Sulfide (A4) | | Loamy Gley | ed Matri | x (F2) | | | Piedm | ont Floodplain \$ | Soils (F19) |
| Stratifie | d Layers (A5) | | Depleted Ma | atrix (F3) | | | | (ML | RA 136, 147) | |
| 2 cm M | uck (A10) (LRR N) | | Redox Dark | Surface | (F6) | | Red Parent Material (F21) | | | |
| Deplete | d Below Dark Surface | e (A11) | Depleted Da | ark Surfa | ce (F7) | | (outside MLRA 127, 147, 148) | | | |
| Thick D | ark Surface (A12) | | Redox Depr | essions | (F8) | | Very Shallow Dark Surface (F22) | | | |
| | /ucky Mineral (S1) | | Iron-Mangai | | . , | 2) (LRR I | | | | |
| | Gleyed Matrix (S4) | | MLRA 13 | | , | | | | 、 · | |
| | Redox (S5) | | Umbric Surf | , | B) (MLRA | 122, 136 | 6) | ³ Indicators | of hydrophytic | vegetation and |
| | Matrix (S6) | | Piedmont F | | , . | | | | | • |
| | rface (S7) | | Red Parent | • | | , . | - | | disturbed or pr | • |
| Restrictive | Layer (if observed): | | | | | | | | | |
| Type: | | | | | | | | | | |
| Donth /i | nches): | | | | | | Hydric Soil | Present? | Yes | No X |

| | Attachment 2.D.1 |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville Applicant/Owner: Dominion Energy Virginia | Sampling Date: 07/01/2020 State: VA Sampling Point: 7-A |
| Investigator(s): S. Kupiec Section, Township, Range: | |
| Landform (hillside, terrace, etc.): Drainageway Local relief (concave, convex, none | e): <u>Concave</u> Slope (%): <u>2-3</u> |
| Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 36.000035 Long: -77.5 | 94127 Datum: |
| Soil Map Unit Name: Slagle fine sandy loam | NWI classification: N/A |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal Circuit | No (If no, explain in Remarks.) mstances" present? Yes X No any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations | |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? | Yes X No |
| Remarks: Wetland at Flag H-8. | |
| HYDROLOGY | |
| Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) True Aquatic Plants (B14) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) X Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Other (Explain in Remarks) | condary 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) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) |
| Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): | rology Present? Yes X No |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if availa | ble: |
| Remarks: | |

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| VEGETATION (FIVe Strata) – Use scientil | | or plants. | | Sampling Point:7-A |
|--|---------------------|----------------------|---------------------|--|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1. 2. | | | | Number of Dominant Species That Are OBL, FACW, or FAC:(A) |
| 3. 4. | | | | Total Number of Dominant Species Across All Strata: <u>2</u> (B) |
| 5 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1 | | | | FACW species 75 x 2 = 150 |
| 2. | | | | FAC species $20 \times 3 = 60$ |
| 3. | | | | FACU species 30 x 4 = 120 |
| 4 | | | | UPL species $0 \times 5 = 0$ |
| 5 | | | | Column Totals: 125 (A) 330 (B) |
| 6 | | | | Prevalence Index = $B/A = 2.64$ |
| 0. | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | | of total cover: | | 1 - Rapid Test for Hydrophytic Vegetation |
| | 2070 | or total cover. | | 2 - Dominance Test is >50% |
| | | | | |
| 1 | | | | X 3 - Prevalence Index is $\leq 3.0^{1}$ |
| 2. | | | | 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 3. | | | | |
| 4 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 5 6. | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | | of total cover: | | - |
| | 2070 | or total cover. | | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| <u>Herb Stratum</u> (Plot size: <u>30</u>) 1. <i>Dichanthelium scoparium</i> | 75 | Yes | FACW | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. Juncus tenuis | 20 | No | FAC | |
| | | | | Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less |
| 3. runella ulgaris | <u>15</u> 5 | <u>No</u> | FACU FACU | than 3 in. (7.6 cm) DBH. |
| 4. <u>ubus argutus</u> 5. | 5 | INO | FACU | Shrub - Woody Plants, excluding woody vines, |
| 6. | | | | approximately 3 to 20 ft (1 to 6 m) in height. |
| | | | | |
| 7 | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately |
| 9 | | · | | 3 ft (1 m) in height. |
| 10 | | | | Woody Vine – All woody vines, regardless of height. |
| 11 | | Tatal Osuar | | |
| | | =Total Cover | | |
| 50% of total cover: 5 | 8 20% | of total cover: | 23 | |
| Woody Vine Stratum (Plot size: 30) | 10 | X | 54.011 | |
| 1. arthenocissus uin uefolia | 10 | Yes | FACU | |
| 2. | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | Hydrophytic |
| | | =Total Cover | | Vegetation |
| 50% of total cover: 5 | 520% | of total cover: | 2 | Present? Yes X No |
| Remarks: (Include photo numbers here or on a sepa | rate sheet.) | | | |

| Depth | Matrix | | Redo | x Featur | es | | | | | |
|---|----------------------|------------|---------------------|----------|-------------------|------------------|---------------------------------|--------------------------------------|--|--|
| inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks | | |
| 0-6 | 5YR 5/2 | 80 | 5YR 5/8 | 15 | С | М | Loamy/Clayey | Prominent redox concentrations | | |
| | | | 5YR 4/6 | 5 | С | PL | | Prominent redox concentrations | | |
| 6-20 | 2.5Y 6/1 | 80 | 5YR 5/8 | 20 | С | Μ | Loamy/Clayey | Prominent redox concentrations | | |
| | | | | | | | | | | |
| | oncentration, D=Dep | letion, RM | I=Reduced Matrix, N | //S=Mas | ked Sand | Grains. | | PL=Pore Lining, M=Matrix. | | |
| lydric Soil I | | | | | | | | cators for Problematic Hydric Soils | | |
| Histosol | | | Polyvalue B | | . , | | - | 2 cm Muck (A10) (MLRA 147) | | |
| | pipedon (A2) | | Thin Dark S | ` | , , | | | | | |
| Black Hi | · · · | | Loamy Mucl | | . , . | ILRA 136 | · | (MLRA 147, 148) | | |
| | n Sulfide (A4) | | Loamy Gley | | · · / | | Piedmont Floodplain Soils (F19) | | | |
| | Layers (A5) | | X Depleted Ma | . , | | | (MLRA 136, 147) | | | |
| | ck (A10) (LRR N) | | Redox Dark | | . , | | Red Parent Material (F21) | | | |
| ' | Below Dark Surface | e (A11) | Depleted Da | | . , | | (outside MLRA 127, 147, 148) | | | |
| | ark Surface (A12) | | Redox Depr | | . , | | Very Shallow Dark Surface (F22) | | | |
| | lucky Mineral (S1) | | Iron-Mangar | | sses (F12 | 2) (LRR 1 | N,0 | Other (Explain in Remarks) | | |
| | eleyed Matrix (S4) | | MLRA 13 | , | | 100 104 | a) ³ Indi | actors of hydrophytic vegetation and | | |
| Sandy Redox (S5) Umbric Surface (F13) (MLRA 122, 1) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (ML | | | | | | | | | | |
| | face (S7) | | Red Parent | • | | , . | | unless disturbed or problematic. | | |
| | _ayer (if observed): | | | | . / . | | | | | |
| Type: | | | | | | | | | | |
| . , | nches): | | | | | | Hydric Soil Prese | ent? Yes X No | | |

| | Attachment 2.D.1 Page 60 of 230 |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 7/1/2020 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 7-B |
| Investigator(s): S. Kupiec Section, Township, Range: | |
| Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none | e): <u>Convex</u> Slope (%): <u>2-4</u> |
| Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 36.699875 Long: -77.5 | 594127 Datum: |
| Soil Map Unit Name: Slagle fine sandy loam | NWI classification: N/A |
| | mstances" present? Yes X No |
| Hydrophytic Vegetation Present?YesNoXIs the Sampled AreaHydric Soil Present?YesNoXwithin a Wetland?Wetland Hydrology Present?YesNoX | Yes No X |
| Remarks: Upland above Flag H-6. | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: Set Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Surface Water (A1) True Aquatic Plants (B14) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Other (Explain in Remarks) | condary 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) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) |
| Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): | rology Present? Yes <u>No X</u> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available | ble: |
| Remarks: | |

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| VEGETATION (Five Strata) - Use scientif | ic names | of plants. | | Sampling Point: 7-B |
|---|--------------|-----------------|-----------|--|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: 3 (A) |
| 3 | | | | Total Number of Dominant |
| 4. | | | | Species Across All Strata: 6 (B) |
| 5 | | | | Percent of Dominant Species |
| 6. | | | | That Are OBL, FACW, or FAC: 50.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1 | | | | FACW species 70 x 2 = 140 |
| 2. | | | | FAC species 15 $x 3 = 45$ |
| 3 | | | | FACU species $55 \times 4 = 220$ |
| 1 | | | | $\frac{1}{1} \frac{1}{1} \frac{1}$ |
| 4 5 | | | | Column Totals: 140 (A) 405 (B) |
| 6. | | | | Prevalence Index = $B/A = 2.89$ |
| 0. | | Tatal Causer | | |
| | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | 20% | of total cover: | | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | 2 - Dominance Test is >50% |
| 1 | | | | 3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| 3 | | | | data in Remarks or on a separate sheet) |
| 4 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). |
| 1. Dichanthelium scoparium | 45 | Yes | FACW | |
| 2. cnanthemum tenuifolium | 25 | Yes | FACW | Sapling – Woody plants, excluding woody vines, |
| 3. udbec ia hirta | 25 | Yes | FACU | approximately 20 ft (6 m) or more in height and less |
| 4. estuca spp | 25 | Yes | | than 3 in. (7.6 cm) DBH. |
| 5. ubus argutus | 15 | No | FACU | Shrub - Woody Plants, excluding woody vines, |
| 6. chillea millefolium | 10 | No | FACU | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. upatorium rotundifolium | 5 | No | FAC | Herb – All herbaceous (non-woody) plants, including |
| 8. | | | | herbaceous vines, regardless of size, and woody |
| 9. | | | | plants, except woody vines, less than approximately |
| 10. | | | | 3 ft (1 m) in height. |
| 11. | | | | Woody Vine – All woody vines, regardless of height. |
| | 150 | =Total Cover | | |
| 50% of total cover: 7 | | of total cover: | 30 | |
| Woody Vine Stratum (Plot size: 30) | 2070 | | 00 | |
| 1. Campsis radicans | 10 | Yes | FAC | |
| Campsis radicans Smilax bona nox | 5 | Yes | FAC | |
| | 5 | 162 | FACU | |
| 3. | | | | |
| 4. | | | | |
| 5 | | | | Hydrophytic |
| | | =Total Cover | 0 | Vegetation |
| 50% of total cover: 8 | | of total cover: | 3 | Present? Yes No X |
| Remarks: (Include photo numbers here or on a sepa | rate sheet.) | | | |

| Profile Desc Depth | Matrix | to the de | • | ument t x Featui | | itor or co | onfirm the abs | ence of indicators.) | | |
|-----------------------|----------------------|------------|----------------------------|---------------------|-------------------|------------------|---------------------------------|--|--|--|
| (inches) | Color (moist) | % | Color (moist) | % x i eatu | Type ¹ | Loc ² | Texture | Remarks | | |
| 0-4 | 10YR 4/3 | 95 | 10YR 4/6 | 5 | С | М | Loamy/Clay | ey Distinct redox concentrations | | |
| 4-20 | 10YR 4/4 | 95 | 10YR 4/6 | 5 | С | М | Loamy/Clay | Distinct redox concentrations | | |
| | | | | | | | | | | |
| lydric Soil I | | letion, RM | | | | | | Decation: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils | | |
| Histosol | (A1) vipedon (A2) | | Polyvalue B Thin Dark S | | | - | | 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) | | |
| Black His | • • • • | | Loamy Much | , | , . | | - | (MLRA 147, 148) | | |
| | n Sulfide (A4) | | Loamy Gley | | . , . | | 0) | Piedmont Floodplain Soils (F19) | | |
| | Layers (A5) | | Depleted Ma | | . , | | | (MLRA 136, 147) | | |
| | ck (A10) (LRR N) | | Redox Dark | . , | | | | Red Parent Material (F21) | | |
| | Below Dark Surface | e (A11) | Depleted Da | | . , | | (outside MLRA 127, 147, 148) | | | |
| | irk Surface (A12) | | Redox Depr | | . , | | Very Shallow Dark Surface (F22) | | | |
| | lucky Mineral (S1) | | Iron-Mangar | | . , |) (I RR I | | | | |
| | leyed Matrix (S4) | | MLRA 13 | | | -) (| -1 | | | |
| | edox (S5) | | Umbric Surf | <i>,</i> | 3) (MI RA | 122.130 | 6) | ³ Indicators of hydrophytic vegetation and | | |
| | Matrix (S6) | | Piedmont FI | • | , . | | | wetland hydrology must be present, | | |
| | face (S7) | | Red Parent | • | | , . | - | unless disturbed or problematic. | | |
| Restrictive L | _ayer (if observed): | | | | | | | | | |
| Type: | | | | | | | | | | |
| Dopth (in | nches): | | | | | | Hydric Soil | Present? Yes No X | | |

| | | | | | achment 2.D.1 2age 63 of 230 | |
|--|--|---------------------------------------|---------------|---|---|--|
| U.S. Army WETLAND DETERMINATION DATA SI See ERDC/EL TR-07-24; th | | ains and Piedm | 0 | OMB Control #: 0710 Requirement Contr | -290 03 01 230 0-xxxx, Exp: Pending ol Symbol EXEMPT: -15, paragraph 5-2a) | |
| Project/Site: TL 254/2201 Clubhouse - Lake | eview 230 kV Rebuild | City/County | : Greensville | San | npling Date: 7/1/2020 | |
| Applicant/Owner: Dominion Energy Virgin | nia | | | State: VA San | npling Point: 7-C | |
| Investigator(s): S. Kupiec | | Section, Townsh | hip, Range: | | | |
| Landform (hillside, terrace, etc.): Flat | Lc | - ocal relief (concav | | ie): None | Slope (%): 0-1 | |
| Subregion (LRR or MLRA): LRR P, MLRA 13 | | · · | | | Datum: | |
| Soil Map Unit Name: Woodington fine sandy | | | | NWI classification: | N/A | |
| Are climatic / hydrologic conditions on the site | | | | | n in Remarks.) | |
| Are Vegetation, Soil, or Hydrol | | | | imstances" present? | | |
| Are Vegetation, Soil, or Hydrol | | | | n any answers in Remark | | |
| SUMMARY OF FINDINGS – Attach | | | | - | | |
| | Sile map showing a | samping por | | | | |
| Hydric Soil Present? | Yes X No Yes X No Yes X No | Is the Sample within a Wetla | | Yes <u>X</u> No | | |
| Remarks: Wetland at Flag I-2. | | <u> </u> | | | | |
| HYDROLOGY | | | | | | |
| Wetland Hydrology Indicators: Primary Indicators (minimum of one is required) | | | <u>Se</u> | econdary Indicators (mini | | |
| Surface Water (A1) | True Aquatic Plants | (B14) | | Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) | | |
| High Water Table (A2) | Hydrogen Sulfide Oc | | _ | Drainage Patterns (B10 | | |
| Saturation (A3) | X Oxidized Rhizospher | • | ots (C3) | Moss Trim Lines (B16) | | |
| Water Marks (B1) | Presence of Reduce | | | _ Dry-Season Water Tab | le (C2) | |
| Sediment Deposits (B2) Drift Deposits (B3) | Recent Iron Reduction | | (C6) | Crayfish Burrows (C8) Saturation Visible on A | orial Imageny (CQ) | |
| Algal Mat or Crust (B4) | Other (Explain in Re | . , | | Stunted or Stressed Pla | | |
| Iron Deposits (B5) | •••••• | , , , , , , , , , , , , , , , , , , , | X | Geomorphic Position (I | . , | |
| Inundation Visible on Aerial Imagery (B7 | 7) | | _ | Shallow Aquitard (D3) | , | |
| Water-Stained Leaves (B9) | | | | Microtopographic Relie | | |
| Aquatic Fauna (B13) | | | X | FAC-Neutral Test (D5) | | |
| Field Observations: | No. Y. Donth (inch | - 1 - | | | | |
| Surface Water Present? Yes Water Table Present? Yes | No X Depth (inch No X Depth (inch | | | | | |
| Saturation Present? Yes | No X Depth (inch | | Wetland Hyd | Irology Present? | Yes X No | |
| (includes capillary fringe) | · · · | | | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | | | | |
| Remarks: | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
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| | | | | | | |

Attachment 2.D.1 Page 64 of 230

| vegeration (Five Strata) – Use scientif | ic names | or plants. | | Sampling Point: 7-C |
|---|--------------|-----------------|-----------|--|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1. 2. | | | | Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) |
| 3 | | | | Total Number of Dominant Species Across All Strata: 2 (B) |
| 5 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | $\frac{1}{\text{OBL species}} 5 \qquad \frac{1}{\text{x 1} = 5}$ |
| 4 | | | | FACW species 105 $x 2 = 210$ |
| 2 | | | | FAC species $0 \times 3 = 0$ |
| 3 | | | | FACU species $10 	 x4 = 40$ |
| 4. | | | | $\frac{1}{10} x = \frac{1}{10}$ UPL species 0 x 5 = 0 |
| 4 5 | | | | · |
| | | | | |
| 6 | | Tatal Osuan | | Prevalence Index = $B/A = 2.13$ |
| | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | 20% | of total cover: | | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | X 3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| 3 | | | | data in Remarks or on a separate sheet) |
| 4. | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. Dichanthelium scoparium | 60 | Yes | FACW | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. cnanthemum tenuifolium | 25 | Yes | FACW | Sapling – Woody plants, excluding woody vines, |
| 3. Juncus effusus | 20 | No | FACW | approximately 20 ft (6 m) or more in height and less |
| 4. udbec ia hirta | 10 | No | FACU | than 3 in. (7.6 cm) DBH. |
| 5. hexia mariana | 5 | No | OBL | Shrub - Woody Plants, excluding woody vines, |
| 6. | | | | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. | | | | Herb – All herbaceous (non-woody) plants, including |
| 8. | | | | herbaceous vines, regardless of size, and woody |
| 9 | | | | plants, except woody vines, less than approximately |
| 10 | | | | 3 ft (1 m) in height. |
| 11. | | | | Woody Vine – All woody vines, regardless of height. |
| | 120 | =Total Cover | | |
| 50% of total cover: 6 | | of total cover: | 24 | |
| | 2078 | or total cover. | 24 | |
| Woody Vine Stratum (Plot size: 30) 1. | | | | |
| | | · | | |
| 2. | | | | |
| 3 | | | | |
| 4. | | | | |
| 5 | | | | Hydrophytic |
| | | =Total Cover | | Vegetation |
| 50% of total cover: | 20% | of total cover: | | Present? Yes X No |
| Remarks: (Include photo numbers here or on a sepa | rate sheet.) | | | |

| Depth | cription: (Describe Matrix | to the de | | ument tl x Featur | | tor or co | onfirm the absence o | of indicators.) |
|--|---|-----------|----------------------------|----------------------|---------------------------------|---------------------------------|----------------------------|--|
| (inches) | Color (moist) | % | Color (moist) | <u>%</u> | Type ¹ | Loc ² | Texture | Remarks |
| 0-6 | 10YR 4/2 | 70 | 10YR 5/8 | 25 | С | М | Loamy/Clayey | Prominent redox concentrations |
| | | | 10YR 4/6 | 5 | С | М | | Prominent redox concentrations |
| 6-20 | 2.5Y 5/1 | 85 | 10YR 5/8 | 15 | С | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| ¹ Type: C=C Hydric Soil | oncentration, D=Depl | etion, RN | =Reduced Matrix, N | /IS=Mas | ked Sand | Grains. | | PL=Pore Lining, M=Matrix. ators for Problematic Hydric Soil: |
| Histosol | | | Polyvalue B | elow Sur | face (S8) | (MLRA | | cm Muck (A10) (MLRA 147) |
| Histic Epipedon (A2) Thin Dark Surface (S9) (MLRA 147, 7 | | | | - | 48) Coast Prairie Redox (A16) | | | |
| Black Histic (A3) Loamy Mucky Mineral (F1) (MLRA 13 | | | | LRA 136 | 6) (MLRA 147, 148) | | | |
| Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) | | | | | Piedmont Floodplain Soils (F19) | | | |
| Stratified Layers (A5) X Depleted Matrix (F3) | | | | | (MLRA 136, 147) | | | |
| 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) | | | | | Red Parent Material (F21) | | | |
| Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) | | | | | (outside MLRA 127, 147, 148) | | | |
| | Thick Dark Surface (A12) Redox Depressions (F8) | | | | | Very Shallow Dark Surface (F22) | | |
| Thick D | Sandy Mucky Mineral (S1)Iron-Manganese Masses (F12) (LRR | | | | !) (LRR N | I,C | Other (Explain in Remarks) | |
| Thick D Sandy N | , , | | MLRA 13 | 5) | | | 31 | |
| Thick D Sandy M Sandy C | Gleyed Matrix (S4) | | | · | | 100 10/ | | stave of hundred builts us waterties, and |
| Thick D Sandy M Sandy C Sandy F | Bleyed Matrix (S4) Redox (S5) | | Umbric Surf | | | | | |
| Thick D Sandy M Sandy C Sandy F Stripped | Gleyed Matrix (S4) Redox (S5) I Matrix (S6) | | Umbric Surf Piedmont Fl | oodplain | Soils (F1 | 9) (MLR | A 148) w | vetland hydrology must be present, |
| Thick D Sandy M Sandy C Sandy F Sandy F Dark Su | Bleyed Matrix (S4) Redox (S5) I Matrix (S6) rface (S7) | | Umbric Surf | oodplain | Soils (F1 | 9) (MLR | A 148) w | ators of hydrophytic vegetation and retland hydrology must be present, nless disturbed or problematic. |
| Thick D Sandy M Sandy C Sandy F Sandy F Dark Su | Gleyed Matrix (S4) Redox (S5) I Matrix (S6) | | Umbric Surf Piedmont Fl | oodplain | Soils (F1 | 9) (MLR | A 148) w | vetland hydrology must be present, |

| | Attachment 2.D.1 | | | | | |
|--|---|--|--|--|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending | | | | | |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 7/1/2020 | | | | | |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 7-D | | | | | |
| Investigator(s): S. Kupiec Section, Township, Range: | | | | | | |
| Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, no | one): Convex Slope (%):2-4 | | | | | |
| Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 36.694535 Long: -77 | | | | | | |
| Soil Map Unit Name: Uchee loamy sand | NWI classification: N/A | | | | | |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes X Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal Circlescope" | No (If no, explain in Remarks.) rcumstances" present? Yes No ain any answers in Remarks.) ns, transects, important features, etc. | | | | | |
| Hydrophytic Vegetation Present?YesNoXIs the Sampled AreaHydric Soil Present?YesNoXwithin a Wetland?Wetland Hydrology Present?YesNoX | Yes No X | | | | | |
| Remarks: Upland at Flag I-2. | | | | | | |
| HYDROLOGY | | | | | | |
| Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) True Aquatic Plants (B14) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Other (Explain in Remarks) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) | 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) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) | | | | | |
| Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): | ydrology Present? Yes <u>No X</u> | | | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | | | | |
| Remarks: | | | | | | |

Attachment 2.D.1 Page 67 of 230

| VEGETATION (Five Strata) - Use scienti | fic names | of plants. | | Sampling Point: 7-D |
|---|---------------|-----------------|-----------|--|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: 1 (A) |
| 3 | | | | Total Number of Dominant |
| 4. | | | | Species Across All Strata: 4 (B) |
| 5. | | | | Percent of Dominant Species |
| 6. | | | | That Are OBL, FACW, or FAC: 25.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | 2070 | | | $\begin{array}{c c c c c c c c c c c c c c c c c c c $ |
| | | | | |
| 1 | | | | FACW species 0 $x 2 = 0$ |
| 2 | | | | FAC species 5 $x = 15$ |
| 3 | | | | FACU species <u>55</u> x 4 = <u>220</u> |
| 4 | | | | UPL species25 x 5 =125 |
| 5 | | | | Column Totals: 85 (A) 360 (B) |
| 6 | | | | Prevalence Index = B/A = 4.24 |
| | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | 20% | of total cover: | | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | 2 - Dominance Test is >50% |
| 1 | | | | 3 - Prevalence Index is ≤3.0 ¹ |
| 2. | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| 3 | | | | data in Remarks or on a separate sheet) |
| 4 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6. | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | | of total cover: | | - |
| | 2078 | or total cover. | | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| Herb Stratum (Plot size: 30) | 45 | | | (7.6 cm) or larger in diameter at breast height (DBH). |
| 1. estuca spp | 45 | Yes | | |
| 2. Centaurea stoebe | 25 | Yes | UPL | Sapling – Woody plants, excluding woody vines, |
| 3. Lespede a cuneata | 25 | Yes | FACU | approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. |
| 4. udbec ia hirta | 20 | No | FACU | |
| 5. chillea millefolium | 10 | No | FACU | Shrub - Woody Plants, excluding woody vines, |
| 6 | | | | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7 | | | | Herb – All herbaceous (non-woody) plants, including |
| 8. | | | | herbaceous vines, regardless of size, and woody |
| 9. | | | | plants, except woody vines, less than approximately |
| 10. | | | | 3 ft (1 m) in height. |
| 11. | | | | Woody Vine – All woody vines, regardless of height. |
| | 125 : | =Total Cover | | |
| 50% of total cover: 6 | | of total cover: | 25 | |
| | 2078 | or total cover. | 20 | |
| Woody Vine Stratum (Plot size: 30) | - | N/s s | 540 | |
| 1. Campsis radicans | 5 | Yes | FAC | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | Hydrophytic |
| | 5 : | =Total Cover | | Vegetation |
| 50% of total cover: | 3 20% | of total cover: | 1 | Present? Yes No X |
| Remarks: (Include photo numbers here or on a sepa | arate sheet.) | | | · |

SOIL Sampling Point: 7-D Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix (inches) Color (moist) % Color (moist) % Loc² Texture Remarks Type¹ 10YR 4/3 0-2 100 Loamy/Clayey ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (MLRA 147, 148) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Thin Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Loamy Mucky Mineral (F1) (MLRA 136) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Red Parent Material (F21) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) (outside MLRA 127, 147, 148) Thick Dark Surface (A12) Redox Depressions (F8) Very Shallow Dark Surface (F22) Sandy Mucky Mineral (S1) Iron-Manganese Masses (F12) (LRR N, Other (Explain in Remarks) Sandy Gleyed Matrix (S4) MLRA 136) Sandy Redox (S5) Umbric Surface (F13) (MLRA 122, 136) ³Indicators of hydrophytic vegetation and Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Red Parent Material (F21) (MLRA 127, 147, 148) unless disturbed or problematic. Dark Surface (S7) Restrictive Layer (if observed): Type: **Gravel Compaction** Depth (inches): 2 Hydric Soil Present? Yes No Х Remarks:

| | Attachment 2.D.1 |
|---|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont F See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Gree | eensville Sampling Date: 7/1/2020 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 8-A |
| Investigator(s): S. Kupiec Section, Township, R | |
| | onvex, none): Convex Slope (%): 1-3 |
| Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 36.688172 Lo | |
| Soil Map Unit Name: Slagle fine sandy loam | NWI classification: N/A |
| | X No (If no, explain in Remarks.) |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Nor | rmal Circumstances" present? Yes X No |
| | ed, explain any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing sampling point lo | |
| Linderstration Decembra Von No V Is the Sampled Arr | |
| Hydrophytic Vegetation Present? Yes No X Is the Sampled Are Hydric Soil Present? Yes No X within a Wetland? Wetland Hydrology Present? Yes No X | |
| Remarks: Upland at Flag L-3. | |
| | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) True Aquatic Plants (B14) | Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) |
| High Water Table (A2) Hydrogen Sulfide Odor (C1) | Drainage Patterns (B10) |
| Saturation (A3) Oxidized Rhizospheres on Living Roots (C3 | |
| Water Marks (B1) Presence of Reduced Iron (C4) | Dry-Season Water Table (C2) |
| Sediment Deposits (B2) Prift Deposits (P2) This Muck Surface (C7) | Crayfish Burrows (C8) |
| Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Other (Explain in Remarks) | Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) |
| Iron Deposits (B5) | Geomorphic Position (D2) |
| Inundation Visible on Aerial Imagery (B7) | Shallow Aquitard (D3) |
| Water-Stained Leaves (B9) | Microtopographic Relief (D4) |
| Aquatic Fauna (B13) | FAC-Neutral Test (D5) |
| Field Observations: | |
| Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): | |
| | tland Hydrology Present? Yes No _ X |
| (includes capillary fringe) | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections | s), if available: |
| Remarks: | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Attachment 2.D.1 Page 70 of 230

VEGETATION (Five Strata) - Use scientific names of plants

| VEGETATION (Five Strata) - Use scientif | fic names | of plants. | | Sampling Point: 8-A |
|---|-----------|-------------------|-----------|--|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC:(A) |
| 3 | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 5 (B) |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: 20.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | 6 of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. Li uidambar st raciflua | 25 | Yes | FAC | FACW species 15 x 2 = 30 |
| 2. | | | | FAC species 25 x 3 = 75 |
| 3. | | | | FACU species 45 x 4 = 180 |
| 4. | | | | UPL species 20 x 5 = 100 |
| 5. | | | | Column Totals: 105 (A) 385 (B) |
| 6. | | | | Prevalence Index = $B/A = 3.67$ |
| | 25 | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: 1 | - | 6 of total cover: | 5 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | 2 - Dominance Test is >50% |
| 1. hus copallinum | 15 | Yes | FACU | $3 - \text{Prevalence Index is } \le 3.0^1$ |
| 2. | 10 | | 17100 | 4 - Morphological Adaptations ¹ (Provide supporting |
| 3. | | · | | data in Remarks or on a separate sheet) |
| 4. | | · | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 4. 5. | | · | | |
| | | · | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | 45 | Total Cavar | | present, unless disturbed or problematic. |
| | | =Total Cover | 0 | Definitions of Five Vegetation Strata: |
| | 3 20% | 6 of total cover: | 3 | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| Herb Stratum (Plot size: 30) | 05 | | | (7.6 cm) or larger in diameter at breast height (DBH). |
| 1. estuca spp | 35 | Yes | | |
| 2. I mus h strix | 20 | Yes | UPL | Sapling – Woody plants, excluding woody vines, |
| 3. ubus argutus | 20 | Yes | FACU | approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. |
| 4. Dichanthelium scoparium | 15 | No | FACW | |
| 5. chillea millefolium | 5 | No | FACU | Shrub - Woody Plants, excluding woody vines, |
| 6. Lespede a cuneata | 5 | No | FACU | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7 | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, and woody |
| 9 | | | | plants, except woody vines, less than approximately 3 ft (1 m) in height. |
| 10 | | | | |
| 11 | | | | Woody Vine – All woody vines, regardless of height. |
| | 100 | =Total Cover | | |
| 50% of total cover: 5 | 0 20% | 6 of total cover: | 20 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | | =Total Cover | | Hydrophytic Vegetation |
| 50% of total cover: | | 6 of total cover: | | Present? Yes No X |
| Remarks: (Include photo numbers here or on a sepa | | | | |
| | | | | |

| Depth | Matrix | | Redo | ox Featur | es | | | | cators.) | | |
|---------------------------|-----------------------------------|-------------|---------------------------|-----------|-------------------|------------------|------------|-------------------------|---|------------------------------|--|
| inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | · | Rema | arks | |
| 0-12 | 7.5YR 5/6 | 100 | | | | | Loamy/Cla | vev | | | |
| 12-20 | 2.5Y 5/3 | 75 | 7.5YR 4/6 | 25 | С | М | Loamy/Cla | | ominent redox | concentrations | |
| | | | | | | | | | | | |
| Type: C=Co lydric Soil | oncentration, D=Dep ndicators: | letion, RM | =Reduced Matrix, I | MS=Mas | ked Sand | d Grains. | ²L | | Pore Lining, M for Problemat | =Matrix. tic Hydric Soils | |
| Histosol | . , | | Polyvalue B | | | , . | - | | uck (A10) (ML | | |
| | pipedon (A2) | | Thin Dark S | | , . | | - | | Prairie Redox (| A16) | |
| Black Hi | . , | | Loamy Muc | • | . , . | ILRA 13 | 6) | • | (MLRA 147, 148) Piedmont Floodplain Soils (F19) | | |
| | n Sulfide (A4) I Layers (A5) | | Loamy Gley | | . , | | | | (MLRA 136, 147) | | |
| | ck (A10) (LRR N) | | Depleted Ma Redox Dark | | | | | | | | |
| | Below Dark Surface | ~ (\ 1 1) | Depleted Dark | | . , | | | | ed Parent Material (F21) | | |
| | rk Surface (A12) | e (ATT) | Redox Depr | | | | | | (outside MLRA 127, 147, 148) Very Shallow Dark Surface (F22) | | |
| | lucky Mineral (S1) | | Iron-Manga | | . , | 2) (I DD I | M | | Explain in Rem | . , | |
| | leyed Matrix (S4) | | MLRA 13 | | 3303 (1 12 | | α, | | | laiks) | |
| | edox (S5) | | Umbric Surf | , | B) (MI RA | 122 13 | 5) | ³ Indicators | of hydrophytic | vegetation and | |
| | Matrix (S6) | | Piedmont F | | , . | | - | | | ist be present, | |
| | face (S7) | | Red Parent | • | | , . | | | disturbed or pr | • | |
| Restrictive I | _ayer (if observed): | | | | | | | | | | |
| Type: | | | | | | | | | | | |
| Depth (ir | nches): | | | | | | Hydric Soi | I Present? | Yes | No X | |
| emarks: | | | | | | | | | | | |

| | | | | A | ttachment 2.D.1 Page 72 of 230 |
|--|---|---------------------------------|---------------------|---------------------|--|
| U.S. Army WETLAND DETERMINATION DATA S See ERDC/EL TR-07-24; t | | ains and Piedm | 0 | Requirement Cor | Page 72 of 230 710-xxxx, Exp: Pending ntrol Symbol EXEMPT: 35-15, paragraph 5-2a) |
| Project/Site: TL 254/2201 Clubhouse - Lake | eview 230 kV Rebuild | City/County | : Greensville | S | ampling Date: 7/1/2020 |
| Applicant/Owner: Dominion Energy Virgi | inia | | | State: VA S | ampling Point: 9-A |
| Investigator(s): S. Kupiec | | Section, Townsh | hip, Range: | | · |
| Landform (hillside, terrace, etc.): Flat | Lo | ocal relief (concav | | e): None | Slope (%): 0-1 |
| Subregion (LRR or MLRA): LRR P, MLRA 1 | | | Long: -77.59 | | Datum: |
| Soil Map Unit Name: Iredell Ioam | | | ~~ | NWI classificatior | n: N/A |
| Are climatic / hydrologic conditions on the site | e typical for this time of ye | ar? | Yes X N | | lain in Remarks.) |
| Are Vegetation, Soil, or Hydro | | | | nstances" present? | Yes X No |
| Are Vegetation, Soil, or Hydro | | | | any answers in Rema | |
| SUMMARY OF FINDINGS – Attach | | | | - | |
| | Site map showing a | r I | | | |
| Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? | Yes X No Yes X No Yes X No | Is the Sample within a Wetla | | Yes <u>X</u> N | lo |
| Remarks: Wetland at Flag O-2. | | | | | |
| L HYDROLOGY | | | | | |
| Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) | etland Hydrology Indicators: imary Indicators (minimum of one is required; check all that apply) Surface Water (A1) True Aquatic Plants (B14) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) X Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Other (Explain in Remarks) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) eld Observations: No X Depth (inches): ater Table Present? Yes No X Depth (inches): Wetlan | | | | |
| Describe Recorded Data (stream gauge, mo | onitoring well, aerial photos | s, previous inspec | ctions), if availar | ole: | |
| Remarks: | | | | | |

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VEGETATION (Five Strata) – Use scientific names of plants

| VEGETATION (Five Strata) - Use scient | ific names | of plants. | | Sampling Point: | 9-A | |
|--|---------------|-----------------|-----------|---|---------------------------|--|
| | Absolute | Dominant | Indicator | | | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: | | |
| 1 | | | | Number of Dominant Species | | |
| 2 | | | | That Are OBL, FACW, or FAC: | 6 (A) | |
| 3 | | | | Total Number of Dominant | | |
| 4 | | | | Species Across All Strata: | 7 (B) | |
| 5 | | | | Percent of Dominant Species | | |
| 6. | | | | | 85.7% (A/B) | |
| | | =Total Cover | | Prevalence Index worksheet: | | |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Mu | ultiply by: | |
| Sapling Stratum (Plot size: 30) | | | | OBL species 30 x 1 = | 30 | |
| 1. cer rubrum | 15 | Yes | FAC | FACW species 60 x 2 = | 120 | |
| 2. Li uidambar st raciflua | 5 | Yes | FAC | FAC species 45 x 3 = | 135 | |
| 3. Liriodendron tulipifera | 5 | Yes | FACU | FACU species 5 x 4 = | 20 | |
| 4 | | | | UPL species 0 x 5 = | 0 | |
| 5 | | | | Column Totals: 140 (A) | 305 (B) | |
| 6 | | | | Prevalence Index = B/A = | 2.18 | |
| | 25 | =Total Cover | | Hydrophytic Vegetation Indicators: | | |
| 50% of total cover: | 13 20% | of total cover: | 5 | 1 - Rapid Test for Hydrophytic Ve | getation | |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% | | |
| 1. Salix nigra | 5 | Yes | OBL | X 3 - Prevalence Index is ≤3.0 ¹ | | |
| 2. | | | | 4 - Morphological Adaptations ¹ (Pr | rovide supporting | |
| 3. | | | | data in Remarks or on a separa | ate sheet) | |
| 4. | | | | Problematic Hydrophytic Vegetation | on ¹ (Explain) | |
| 5. | | | | ¹ Indicators of hydric soil and wetland h | | |
| 6. | | | | present, unless disturbed or problema | | |
| | 5 | =Total Cover | | Definitions of Five Vegetation Strata | | |
| 50% of total cover: | 3 20% | of total cover: | 1 | Tree – Woody plants, excluding wood | | |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in h | | |
| 1. h nchospora inexpansa | 40 | Yes | FACW | (7.6 cm) or larger in diameter at breast height (DB | | |
| 2. upatorium rotundifolium | 25 | Yes | FAC | Sapling – Woody plants, excluding wo | oody vines | |
| 3. leocharis obtusa | 25 | Yes | OBL | approximately 20 ft (6 m) or more in h | • | |
| 4. hel pteris palustris | 15 | No | FACW | than 3 in. (7.6 cm) DBH. Shrub - Woody Plants, excluding woody vines, | | |
| 5. Dichanthelium scoparium | 5 | No | FACW | | | |
| 6. | | | | approximately 3 to 20 ft (1 to 6 m) in h | | |
| 7. | | | | | | |
| 8. | | | | Herb – All herbaceous (non-woody) pl herbaceous vines, regardless of size, | | |
| 0 | | | | plants, except woody vines, less than | | |
| 10 | | | | 3 ft (1 m) in height. | | |
| | | | | Woody Vine – All woody vines, regard | dless of height. | |
| 11 | 110 | =Total Cover | | | | |
| 50% of total cover: | | | 22 | | | |
| | 20% | of total cover: | | | | |
| Woody Vine Stratum (Plot size: 30) | | | | | | |
| 1. | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | Hydrophytic | | |
| | | =Total Cover | | Vegetation | | |
| 50% of total cover: | 20% | of total cover: | | Present? Yes X No | | |
| Remarks: (Include photo numbers here or on a sep | arate sheet.) | | | | | |

| nches) | | | Itede | x Featur | 65 | | | | | | |
|----------------|--------------------|------------|--------------------|-----------|-------------------|------------------|---------------------------------|---|--|--|--|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks | | | |
| 0-5 | 2.5Y 4/1 | 85 | 10YR 3/6 | 15 | С | PL | Loamy/Cla | yey Prominent redox concentrations | | | |
| 5-20 | 2.5Y 6/1 | 85 | 10YR 5/6 | 15 | | M | Sandy | Prominent redox concentrations | | | |
| Гуре: C=Con | centration, D=Dep | letion, RM | =Reduced Matrix, N | //S=Mas | ked Sand | d Grains. | 22 | ocation: PL=Pore Lining, M=Matrix. | | | |
| ydric Soil Ind | | | | | | | | Indicators for Problematic Hydric Soils | | | |
| Histosol (A | , | | Polyvalue B | | • | , . | | 2 cm Muck (A10) (MLRA 147) | | | |
| Histic Epip | | | Thin Dark S | | | | | Coast Prairie Redox (A16) | | | |
| Black Histi | () | | Loamy Mucl | • | . , . | /LRA 136 | | | | | |
| | Sulfide (A4) | | Loamy Gley | ed Matri | x (F2) | | Piedmont Floodplain Soils (F19) | | | | |
| Stratified L | • • • • | | X Depleted Ma | . , | | | (MLRA 136, 147) | | | | |
| 2 cm Muck | (A10) (LRR N) | | Redox Dark | Surface | (F6) | | Red Parent Material (F21) | | | | |
| Depleted E | Below Dark Surface | e (A11) | Depleted Da | irk Surfa | ce (F7) | | | (outside MLRA 127, 147, 148) | | | |
| Thick Dark | Surface (A12) | | Redox Depr | essions | (F8) | | Very Shallow Dark Surface (F22) | | | | |
| Sandy Muc | cky Mineral (S1) | | Iron-Mangar | nese Ma | sses (F12 | 2) (LRR 🛚 | Ν, | Other (Explain in Remarks) | | | |
| Sandy Gle | yed Matrix (S4) | | MLRA 13 | 5) | | | | | | | |
| X Sandy Rec | dox (S5) | | Umbric Surf | ace (F13 | B) (MLRA | 122, 136 | 5) | ³ Indicators of hydrophytic vegetation and | | | |
| Stripped M | latrix (S6) | | Piedmont Fl | oodplair | Soils (F | 19) (MLR | 2A 148) | wetland hydrology must be present, | | | |
| Dark Surfa | ice (S7) | | Red Parent | Material | (F21) (M | LRA 127 | , 147, 148) | unless disturbed or problematic. | | | |
| estrictive La | yer (if observed): | | | | | | | | | | |
| Type: | | | | | | | | | | | |
| Depth (incl | hes): | | | | | | Hydric Soi | I Present? Yes X No | | | |
| emarks: | | | | | | | • | | | | |

| | Attachment 2.D.1 |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 7/1/2020 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 9-B |
| Investigator(s): S. Kupiec Section, Township, Range: | |
| Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, non | e): Convex Slope (%): 2-4 |
| Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 36.682228 Long: -77.5 | |
| Soil Map Unit Name: Roanoke loam | NWI classification: N/A |
| | No (If no, explain in Remarks.) |
| | mstances" present? Yes X No |
| | n any answers in Remarks.) |
| | |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations | s, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes No X Is the Sampled Area Hydric Soil Present? Yes No X within a Wetland? Wetland Hydrology Present? Yes No X | Yes No X |
| Remarks: Upland at Flag O-2. | |
| L HYDROLOGY | |
| Wetland Hydrology Indicators: Set Primary Indicators (minimum of one is required; check all that apply) | condary 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) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) |
| Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): | Irology Present? Yes <u>No X</u> able: |
| Remarks: | |

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VEGETATION (Five Strata) - Use scientific names of plants

| VEGETATION (Five Strata) - Use scientif | fic names | of plants. | | Sampling Point:9-B |
|---|-----------|-----------------|-----------|--|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2. | | | | That Are OBL, FACW, or FAC: 0 (A) |
| 3. | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 5 (B) |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: 0.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. Liriodendron tulipifera | 20 | Yes | FACU | FACW species 0 x 2 = 0 |
| 2. runus serotina | 5 | Yes | FACU | FAC species $0 	 x 3 = 0$ |
| 3. | | | | FACU species 130 x 4 = 520 |
| 4. | | | | UPL species $0 \times 5 = 0$ |
| 5. | | ······ | | Column Totals: 130 (A) 520 (B) |
| 6. | | · | | Prevalence Index = $B/A = 4.00$ |
| | 25 | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: 1 | | of total cover: | 5 | 1 - Rapid Test for Hydrophytic Vegetation |
| <u>Shrub Stratum</u> (Plot size: 30) | | | | 2 - Dominance Test is >50% |
| 1 | | | | $3 - Prevalence Index is \leq 3.0^{1}$ |
| 2 | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| 3. | | | | data in Remarks or on a separate sheet) |
| 4. | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| | | · · | | |
| 5. | | · · | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6. | | Tatal Cause | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| Herb Stratum (Plot size: 30) | | | | (7.6 cm) or larger in diameter at breast height (DBH). |
| 1. ubus argutus | 50 | Yes | FACU | |
| 2. ndropogon irginicus | 25 | Yes | FACU | Sapling – Woody plants, excluding woody vines, |
| 3. upatorium capillifolium | 20 | No | FACU | approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. |
| 4. uthamia spp | 15 | No | | |
| 5. chillea millefolium | 5 | No | FACU | Shrub - Woody Plants, excluding woody vines, |
| 6 | | | | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7 | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, and woody |
| 9 | | | | plants, except woody vines, less than approximately 3 ft (1 m) in height. |
| 10 | | | | |
| 11 | | | | Woody Vine – All woody vines, regardless of height. |
| | 115 | =Total Cover | | |
| 50% of total cover: 5 | 8 20% | of total cover: | 23 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. Lonicera aponica | 5 | Yes | FACU | |
| 2 | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | · | | Li uluon la dio |
| | 5 | =Total Cover | | Hydrophytic Vegetation |
| 50% of total cover: 3 | | of total cover: | 1 | Present? Yes No X |
| Remarks: (Include photo numbers here or on a sepa | | | | |
| | | | | |

SOIL Sampling Point: 9-B Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix (inches) Color (moist) % Color (moist) % Loc² Texture Remarks Type¹ 10YR 4/3 0-2 100 Loamy/Clayey ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (MLRA 147, 148) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Thin Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Loamy Mucky Mineral (F1) (MLRA 136) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Red Parent Material (F21) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) (outside MLRA 127, 147, 148) Thick Dark Surface (A12) Redox Depressions (F8) Very Shallow Dark Surface (F22) Sandy Mucky Mineral (S1) Iron-Manganese Masses (F12) (LRR N, Other (Explain in Remarks) Sandy Gleyed Matrix (S4) MLRA 136) Sandy Redox (S5) Umbric Surface (F13) (MLRA 122, 136) ³Indicators of hydrophytic vegetation and Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Red Parent Material (F21) (MLRA 127, 147, 148) unless disturbed or problematic. Dark Surface (S7) Restrictive Layer (if observed): Type: Gravel Depth (inches): 2 Hydric Soil Present? Yes No Х Remarks:

| | | | Attachment 2 | | | | |
|---|---|---------------------------------------|---|---------------------|--|--|--|
| U.S. Arm WETLAND DETERMINATION DATA See ERDC/EL TR-07-24 | Page 78 of OMB Control #: 0710-xxxx, Exp Requirement Control Symbol I (Authority: AR 335-15, paragra | : Pending EXEMPT: | | | | | |
| Project/Site: TL 254/2201 Clubhouse - La | akeview 230 kV Rebuild | City/County: Greensville | Sampling Date | e: 7/ <u>1/2020</u> | | | |
| Applicant/Owner: Dominion Energy Vi | | | State: VA Sampling Poir | | | | |
| Investigator(s): S. Kupiec | - | Section, Township, Range: | | | | | |
| Landform (hillside, terrace, etc.): Drainag | | al relief (concave, convex, nor | e): Concave Slope (% | .)· 4-6 | | | |
| Subregion (LRR or MLRA): LRR P, MLRA | | | 600149 Datum: | | | | |
| Soil Map Unit Name: Fluvanna-Mattaponi | | | NWI classification: N/A | | | | |
| Are climatic / hydrologic conditions on the | · · · | ır? Yes X | No (If no, explain in Rema | orke) | | | |
| Are Vegetation, Soil, or Hyd | | | imstances" present? Yes X | | | | |
| | | | | | | | |
| Are Vegetation, Soil, or Hyd | | | n any answers in Remarks.) | | | | |
| SUMMARY OF FINDINGS – Attac | ch site map showing s | ampling point location | s, transects, important fea | tures, etc. | | | |
| Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? | Yes No X Yes No X Yes No X | Is the Sampled Area within a Wetland? | Yes <u>No X</u> | | | | |
| Upland south of Structure 254/27. | | | | | | | |
| HYDROLOGY | | | | | | | |
| Wetland Hydrology Indicators: | | <u>Se</u> | condary Indicators (minimum of two | o required) | | | |
| Primary Indicators (minimum of one is rec | | | Surface Soil Cracks (B6) | | | | |
| Surface Water (A1) | Aquatic Fauna (B13) | | Sparsely Vegetated Concave Sur | face (B8) | | | |
| High Water Table (A2) | Marl Deposits (B15) (I | | Drainage Patterns (B10) | | | | |
| Saturation (A3) Water Marks (B1) | Hydrogen Sulfide Odd | or (C1) es on Living Roots (C3) | Moss Trim Lines (B16) 3) Dry-Season Water Table (C2) | | | | |
| Sediment Deposits (B2) | Presence of Reduced | | Crayfish Burrows (C8) | | | | |
| Drift Deposits (B3) | Recent Iron Reduction | | Saturation Visible on Aerial Image | erv (C9) | | | |
| Algal Mat or Crust (B4) | Thin Muck Surface (C | | Geomorphic Position (D2) | | | | |
| Iron Deposits (B5) | Other (Explain in Rem | | Shallow Aquitard (D3) | | | | |
| Inundation Visible on Aerial Imagery (| (B7) | _ | FAC-Neutral Test (D5) | | | | |
| Water-Stained Leaves (B9) | | | Sphagnum Moss (D8) (LRR T, U) |) | | | |
| Field Observations: | | | | | | | |
| Surface Water Present? Yes | No X Depth (inches | , <u> </u> | | | | | |
| Water Table Present? Yes | No X Depth (inches | | | | | | |
| Saturation Present? Yes | No X Depth (inches | s): Wetland Hyd | Irology Present? Yes | No X | | | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, i | manitoring wall parial photos | | | | | | |
| Describe Recorded Data (Stream gauge, i | monitoring weil, aenai priotos, | previous inspections, il avail | adie: | | | | |
| Remarks: | | | | | | | |
| Relief too steep for geomorphic position. | | | | | | | |
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Attachment 2.D.1 Page 79 of 230

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| VEGETATION (Five Strata) – Use scientif | ic names | of plants. | | Sampling Point: 10-A |
|--|---------------------|----------------------|---------------------|--|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species That Are OBL, FACW, or FAC: (A) |
| 3 | | | | Total Number of Dominant Species Across All Strata: <u>6</u> (B) |
| 5. 6. | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. uercus rubra | 15 | Yes | FACU | FACW species 0 x 2 = 0 |
| 2. | | | | FAC species 45 x 3 = 135 |
| 3. | | | | FACU species 70 x 4 = 280 |
| 4. | | | | UPL species $0 \times 5 = 0$ |
| 5 | | | | Column Totals: 115 (A) 415 (B) |
| | | | | |
| 6 | | | | |
| | | =Total Cover | _ | Hydrophytic Vegetation Indicators: |
| 50% of total cover: 8 | 20% | of total cover: | 3 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | 2 - Dominance Test is >50% |
| 1 | | | | 3 - Prevalence Index is ≤3.0 ¹ |
| 2. | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4. | | | | |
| 5. | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6. | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | | of total cover: | | - |
| | 20% | or lotal cover. | | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| Herb Stratum (Plot size: 30) | | | | (7.6 cm) or larger in diameter at breast height (DBH). |
| 1. <u>ndropogon irginicus</u> | 35 | Yes | FAC | |
| 2. ac era tomentosa | 20 | Yes | FACU | Sapling – Woody plants, excluding woody vines, |
| 3. upatorium capillifolium | 15 | Yes | FACU | approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. |
| 4 | | | | |
| 5 | | | | Shrub - Woody Plants, excluding woody vines, |
| 6 | | | | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7 | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, and woody |
| 9 | | | | plants, except woody vines, less than approximately 3 |
| 10. | | | | ft (1 m) in height. |
| 11. | | | | Woody Vine - All woody vines, regardless of height. |
| | 70 | =Total Cover | | |
| 50% of total cover: 3 | | of total cover: | 14 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. Lonicera aponica | 20 | Yes | FACU | |
| | | | | |
| | 10 | Yes | FAC | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | Hydrophytic |
| | 30 | =Total Cover | | Vegetation |
| 50% of total cover:1 | 520% | of total cover: | 6 | Present? Yes No X |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | |

10-A

Sampling Point:

| epth nches) | Matrix Color (moist) | % | Color (moist) | x Features % | Type ¹ | Loc ² | Те | xture | Rer | marks | |
|---|-------------------------|--------------------------|--|-----------------------------------|-------------------|------------------|---|---|---------------|----------------------------|--|
| 0-20 | 10YR 3/3 | 100 | | | | | | y/Clayey | | | |
| 0-20 | 101K 3/3 | 100 | | | | | LUalli | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
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| | | | | | | | | | | | |
| | | | | | | | | | | | |
| /pe: C=Conc | centration, D=Dep | letion, RM=R | educed Matrix, N | MS=Maske | ed Sanc | d Grains. | | ² Location: PL=Pc | re Lining, M= | =Matrix. | |
| dric Soil Ind | licators: (Applica | ble to all LR | Rs, unless othe | erwise no | oted.) | | | Indicators for Pre | oblematic Hy | ydric Soils ³ : | |
| Histosol (A1 | 1) | | Thin Dark S | urface (SS | 9) (LRR | S, T, U) | | 1 cm Muck (A | .9) (LRR O) | | |
| Histic Epipe | edon (A2) | - | Barrier Islan | ds 1 cm N | /luck (S | 12) | | 2 cm Muck (A10) (LRR S) | | | |
| Black Histic | c (A3) | - | (MLRA 15 | 53B, 153D |) | | | Coast Prairie Redox (A16) | | | |
| Hydrogen Sulfide (A4) | | | Loamy Muck | ky Mineral | (F1) (L | RR O) | | (outside MLRA 150A) | | | |
| Stratified Layers (A5) | | Loamy Gleyed Matrix (F2) | | | | | Reduced Vertic (F18) | | | | |
| Organic Bodies (A6) (LRR P, T, U) | | Depleted Ma | atrix (F3) | | | | (outside MLRA 150A, 150B) | | | | |
| 5 cm Mucky Mineral (A7) (LRR P, T, U) | | Redox Dark Surface (F6) | | | | | Piedmont Floodplain Soils (F19) (LRR P, | | | | |
| Muck Prese | ence (A8) (LRR U) |) – | Depleted Dark Surface (F7) | | | | | Anomalous Bright Floodplain Soils (F20) | | | |
| 1 cm Muck | (A9) (LRR P, T) | - | Redox Depressions (F8) | | | | | (MLRA 153B) | | | |
| Depleted Be | elow Dark Surface | e (A11) | Marl (F10) (LRR U) | | | | | Red Parent Material (F21) | | | |
| Thick Dark | Surface (A12) | · · · - | Depleted Ochric (F11) (MLRA 151) | | | | | Very Shallow Dark Surface (F22) | | | |
| | ie Redox (A16) (N | 1LRA 150A) | Iron-Manganese Masses (F12) (LRR O, P, 1 | | | | | P, T) (outside MLRA 138, 152A in FL, 154) | | | |
| Sandy Mucl | ky Mineral (S1) (L | .RR 0, S) | Umbric Surface (F13) (LRR P, T, U) | | | | | Barrier Islands Low Chroma Matrix (TS7) | | | |
| Sandy Gley | ved Matrix (S4) | - | Delta Ochric (F17) (MLRA 151) | | | | | (MLRA 153B, 153D) | | | |
| Sandy Red | | - | Reduced Ve | | | | 50B) | Other (Explain | n in Remarks | .) | |
| Stripped Ma | | - | Piedmont Fl | oodplain § | Soils (F | 19) (MLR | A 149A) | | | | |
| Dark Surfac | ce (S7) (LRR P, S | , T, U) | Anomalous | | | | | | | | |
| | Below Surface (S8 | | (MLRA 14 | 49A, 153C | , 153D) | | , | ³ Indicators of | hydrophytic v | vegetation and | |
| (LRR S, T, U) Very Shallow Dark Surface (F22) | | | wetland hy | etland hydrology must be present, | | | | | | | |
| | | - | (MLRA 13 | | | | | unless dist | urbed or prob | lematic. | |
| estrictive Lay | ver (if observed): | | | | | | | | | | |
| Туре: | | | | | | | | | | | |
| Depth (inch | ies): | | | | | | Hydri | c Soil Present? | Yes | No X | |
| emarks: | | | | | | | 1 | | | | |

SOIL

| | | | Attachment 2.D.1 | | | | |
|---|--|-----------------------------------|--|--|--|--|--|
| U.S. Army C WETLAND DETERMINATION DATA SH See ERDC/EL TR-07-24; the | | 0 | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) | | | | |
| Project/Site: TL 254/2201 Clubhouse - Lakevie | ew 230 kV Rebuild City | /County: Greensville | Sampling Date: 7/2/2020 | | | | |
| Applicant/Owner: Dominion Energy Virginia | a | | State: VA Sampling Point: 11-A | | | | |
| Investigator(s): S. Kupiec | Section, | Township, Range: | | | | | |
| Landform (hillside, terrace, etc.): Slope | Local relief | (concave, convex, none | e): Convex Slope (%): 2-4 | | | | |
| Subregion (LRR or MLRA): LRR P, MLRA 133 | A Lat: <u>36.669158</u> | Long: -77.60 | 02042 Datum: | | | | |
| Soil Map Unit Name: Fluvanna-Mattaponi com | | | NWI classification: N/A | | | | |
| Are climatic / hydrologic conditions on the site t | ypical for this time of year? | Yes <u>X</u> | No (If no, explain in Remarks.) | | | | |
| Are Vegetation, Soil, or Hydrolog | gysignificantly disturbed? | Are "Normal Circu | mstances" present? Yes X No | | | | |
| Are Vegetation, Soil, or Hydrolog | | | any answers in Remarks.) | | | | |
| SUMMARY OF FINDINGS – Attach s | | | s, transects, important features, etc. | | | | |
| Hydric Soil Present? Ye | | ne Sampled Area nin a Wetland? | Yes No X | | | | |
| Remarks: Upland at Flag T-2. | | | | | | | |
| HYDROLOGY | | | | | | | |
| Wetland Hydrology Indicators: | | Sec | condary Indicators (minimum of two required) | | | | |
| Primary Indicators (minimum of one is required | | | Surface Soil Cracks (B6) | | | | |
| Surface Water (A1) High Water Table (A2) | Aquatic Fauna (B13) Marl Deposits (B15) (LRR U) | | Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) | | | | |
| Saturation (A3) | Hydrogen Sulfide Odor (C1) | | Moss Trim Lines (B16) | | | | |
| Water Marks (B1) | Oxidized Rhizospheres on Liv | ving Roots (C3) | | | | | |
| Sediment Deposits (B2) | Presence of Reduced Iron (C | - | Crayfish Burrows (C8) | | | | |
| Drift Deposits (B3) | Recent Iron Reduction in Tille | ed Soils (C6) | | | | | |
| Algal Mat or Crust (B4) | Thin Muck Surface (C7) | | Geomorphic Position (D2) | | | | |
| Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) | Other (Explain in Remarks) | — | Shallow Aquitard (D3) FAC-Neutral Test (D5) | | | | |
| Water-Stained Leaves (B9) | | | Sphagnum Moss (D8) (LRR T, U) | | | | |
| Field Observations: | | <u> </u> | | | | | |
| | No X Depth (inches): | | | | | | |
| | No X Depth (inches): | — | | | | | |
| | No X Depth (inches): | Wetland Hydr | rology Present? Yes No X | | | | |
| (includes capillary fringe) | | | | | | | |
| Describe Recorded Data (stream gauge, monit | toring well, aerial photos, previou | us inspections), if availa | ble: | | | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| | | | | | | | |
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Attachment 2.D.1 Page 82 of 230

~ . . . 1:1: . . 、 .

| VEGETATION (Five Strata) – Use scientif | ic names | of plants. | | Sampling Point: 11-A |
|--|---------------------|----------------------|---------------------|--|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1. 2. | | | | Number of Dominant Species That Are OBL, FACW, or FAC: (A) |
| 3 | | | | Total Number of Dominant Species Across All Strata: <u>6</u> (B) |
| 5 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>16.7%</u> (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. Li uidambar st raciflua | 15 | Yes | FAC | FACW species 5 x 2 = 10 |
| 2. | | | | FAC species 30 x 3 = 90 |
| 3. | | | | FACU species 70 x 4 = 280 |
| 4. | | | | UPL species 15 x 5 = 75 |
| 5. | | | | Column Totals: 120 (A) 455 (B) |
| 6. | | | | Prevalence Index = $B/A = 3.79$ |
| | 15 | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: 8 | | of total cover: | 3 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | 2 - Dominance Test is >50% |
| 1. accinium stamineum | 15 | Yes | FACU | 3 - Prevalence Index is ≤3.0 ¹ |
| 2. hus copallinum | 15 | Yes | UPL | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. | | | | |
| 4. | | | | |
| 5 | | | | 1 |
| 6. | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| | 30 | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: 1 | | of total cover: | 6 | - |
| Herb Stratum (Plot size: 30) | 2070 | of total cover. | | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| 1. teridium a uilinum | 35 | Yes | FACU | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. Ilium ineale | <u></u> | Yes | FACU | |
| | 10 | No | FAC | Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less |
| | 5 | | | than 3 in. (7.6 cm) DBH. |
| Saccharum giganteum Dichanthelium dichotomum | | No | FACW | |
| | 5 | No | FAC | Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. |
| 6. | | | | |
| 7 | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3 |
| 9 | | | | ft (1 m) in height. |
| 10 | | | | Woody Vine – All woody vines, regardless of height. |
| 11 | | | | woody whice will woody whice, regulateds of height. |
| | | =Total Cover | | |
| 50% of total cover: 3 | 5 20% | of total cover: | 14 | |
| Woody Vine Stratum (Plot size: 30) | _ | | | |
| 1. Lonicera aponica | 5 | Yes | FACU | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | Hydrophytic |
| | | =Total Cover | | Vegetation |
| 50% of total cover: 3 | 3 20% | of total cover: | 1 | Present? Yes No X |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | |

Attachment 2.D.1 Page 83 of 230

| Depth | Matrix | | | x Featur | | | | nce of indicators.) | | |
|--|-------------------------------|------------|--------------------|------------|--------------------------|---|---------------------------------|---|--|--|
| inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks | | |
| 0-6 | 10YR 4/4 | 100 | | | | | Loamy/Clayey | , | | |
| | | | | | | | | | | |
| 6-20 | 10YR 5/6 | 85 | 10YR 6/2 | 15 | D | M | Loamy/Clayey | <u>/</u> | | |
| | | • | | | | | | | | |
| | | <u> </u> | | | | | | | | |
| | | <u> </u> | | | | | | | | |
| | | · | | | | | | | | |
| Гуре: С=Со | oncentration, D=Depl | etion, RM | =Reduced Matrix, N | /IS=Masl | ked Sand | Grains. | ² Locatio | on: PL=Pore Lining, M=Matrix. | | |
| lydric Soil | ndicators: (Applica | ble to all | LRRs, unless othe | erwise n | oted.) | | Indicat | ors for Problematic Hydric Soils ³ : | | |
| Histosol | | | Thin Dark S | | | | | m Muck (A9) (LRR O) | | |
| Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) | | | | | 12) | | m Muck (A10) (LRR S) | | | |
| | Histic (A3) (MLRA 153B, 153D) | | | | | | | ast Prairie Redox (A16) | | |
| _ · · | n Sulfide (A4) | | Loamy Much | • | | RR O) | | | | |
| Stratified | I Layers (A5) | | Loamy Gley | ed Matrix | (F2) | | Reduced Vertic (F18) | | | |
| Organic | Bodies (A6) (LRR P, | T, U) | Depleted Ma | atrix (F3) | outside MLRA 150A, 150B) | | | | | |
| 5 cm Mu | cky Mineral (A7) (LR | R P, T, U) | Redox Dark | Surface | (F6) | | Pie | edmont Floodplain Soils (F19) (LRR P, T | | |
| Muck Pr | esence (A8) (LRR U) |) | Depleted Da | rk Surfa | ce (F7) | | | omalous Bright Floodplain Soils (F20) | | |
| 1 cm Mu | ck (A9) (LRR P, T) | | Redox Depr | essions (| (F8) | | (| MLRA 153B) | | |
| Depleted | Below Dark Surface | e (A11) | Marl (F10) (I | _RR U) | | | Re | d Parent Material (F21) | | |
| Thick Da | rk Surface (A12) | | Depleted Oc | hric (F1 | 1) (MLRA | 151) | Ve | ry Shallow Dark Surface (F22) | | |
| Coast P | airie Redox (A16) (M | ILRA 1504 | A) Iron-Mangar | nese Mas | sses (F12 | 2) (LRR C | D, P, T) (0 | outside MLRA 138, 152A in FL, 154) | | |
| Sandy N | lucky Mineral (S1) (L | RR 0, S) | Umbric Surf | ace (F13 |) (LRR P | , T, U) | Ba | rrier Islands Low Chroma Matrix (TS7) | | |
| Sandy G | leyed Matrix (S4) | | Delta Ochric | : (F17) (N | ILRA 15 | 1) | (MLRA 153B, 153D) | | | |
| Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, | | | | | | 150A, 15 | 50B) Oth | ner (Explain in Remarks) | | |
| Stripped | Matrix (S6) | | Piedmont Fl | oodplain | Soils (F1 | 9) (MLR | A 149A) | | | |
| Dark Su | face (S7) (LRR P, S | , T, U) | Anomalous | Bright Fl | oodplain | Soils (F2 | 0) | | | |
| Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) | | | | | | ³ Indicators of hydrophytic vegetation and | | | | |
| (LRR | S, T, U) | | Very Shallow | v Dark S | urface (F | 22) | wetland hydrology must be prese | | | |
| | | | (MLRA 13 | 8, 152A | in FL, 15 | 54) | ι | unless disturbed or problematic. | | |
| estrictive I | _ayer (if observed): | | | | | | | | | |
| Type: | | | | | | | | | | |
| Depth (inches): | | | | | | | Hydric Soil Present? Yes No X | | | |

| | | | Attachment 2.D.1 |
|--|--|----------------------------|--|
| WETLAND DETERMINATION DATA | Corps of Engineers SHEET – Atlantic and Gulf C he proponent agency is CE | • | OMB Control #: 0710-xxxx, Exp: Pending |
| Project/Site: TL 254/2201 Clubhouse - Lake | eview 230 kV Rebuild Ci | ity/County: Greensville | Sampling Date: 7/2/2020 |
| Applicant/Owner: Dominion Energy Virgi | inia | | State: VA Sampling Point: 11-B |
| Investigator(s): S. Kupiec | Sectior | n, Township, Range: | |
| Landform (hillside, terrace, etc.): Drainage | way Local relie | ef (concave, convex, no | ne): Concave Slope (%): 4-6 |
| Subregion (LRR or MLRA): LRR P, MLRA 1 | | Long: -77. | |
| Soil Map Unit Name: Roanoke loam | | | NWI classification: N/A |
| Are climatic / hydrologic conditions on the sit | e typical for this time of year? | Yes X | No (If no, explain in Remarks.) |
| Are Vegetation, Soil, or Hydro | | d? Are "Normal Circ | umstances" present? Yes X No |
| Are Vegetation, Soil, or Hydro | | | in any answers in Remarks.) |
| | | | ns, transects, important features, etc. |
| | | | |
| Hydrophytic Vegetation Present? | | the Sampled Area | |
| Hydric Soil Present? Wetland Hydrology Present? | | ithin a Wetland? | Yes <u>No X</u> |
| Remarks: | Yes <u>No X</u> | | |
| Upland near Structure 254/31. | | | |
| | | | |
| | | | |
| | | | |
| L HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | S | econdary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is requi | red: check all that apply) | <u> </u> | Surface Soil Cracks (B6) |
| Surface Water (A1) | Aquatic Fauna (B13) | | Sparsely Vegetated Concave Surface (B8) |
| High Water Table (A2) | Marl Deposits (B15) (LRR U | | Drainage Patterns (B10) |
| Saturation (A3) | Hydrogen Sulfide Odor (C1) | | Moss Trim Lines (B16) |
| Water Marks (B1) | Oxidized Rhizospheres on I | o | Dry-Season Water Table (C2) |
| Sediment Deposits (B2) Drift Deposits (B3) | Presence of Reduced Iron (Recent Iron Reduction in Ti | | Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) |
| Algal Mat or Crust (B4) | Thin Muck Surface (C7) | | Geomorphic Position (D2) |
| Iron Deposits (B5) | Other (Explain in Remarks) | , | Shallow Aquitard (D3) |
| Inundation Visible on Aerial Imagery (B | 7) |) | X FAC-Neutral Test (D5) |
| Water-Stained Leaves (B9) | | _ | Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: | | | |
| Surface Water Present? Yes | No X Depth (inches): | | |
| Water Table Present? Yes Saturation Present? Yes | No X Depth (inches): No X Depth (inches): | Wotland Hy | drology Present? Yes No X |
| Saturation Present? Yes (includes capillary fringe) | No X Depth (inches): | Wenand Hy | drology Present? Yes No X |
| Describe Recorded Data (stream gauge, mo | onitoring well, aerial photos, previ | ious inspections), if avai | ilable: |
| | | | |
| | | | |
| Remarks: | | | |
| | | | |
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| | | | |

Attachment 2.D.1 Page 85 of 230

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

| VEGETATION (FIVe Strata) – Use scientif | | of plants. | | Sampling Point:11-B |
|--|---------------------|----------------------|---------------------|--|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1. 2. | | | | Number of Dominant Species That Are OBL, FACW, or FAC:4(A) |
| 3. 4. | | | | Total Number of Dominant Species Across All Strata: 6 (B) |
| 5 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC:66.7% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. Li uidambar st raciflua | 10 | Yes | FAC | FACW species 20 x 2 = 40 |
| 2. | | | | FAC species 70 x 3 = 210 |
| 3. | | | | FACU species $0 	 x 4 = 0$ |
| 4. | | | | UPL species $0 \times 5 = 0$ |
| 5. | | | | Column Totals: 90 (A) 250 (B) |
| 6. | | | | Prevalence Index = $B/A = 2.78$ |
| | 10 | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: 5 | | of total cover: | 2 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | $3 - Prevalence Index is \leq 3.0^{1}$ |
| | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2 | | | | |
| 4 | | | | |
| 5 | | | | 1 |
| 6. | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 0 | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | | of total cover: | | - |
| | 20% | or total cover. | | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| Herb Stratum (Plot size: 30) | 20 | Vaa | | (7.6 cm) or larger in diameter at breast height (DBH). |
| erbesina alternifolia Dichanthelium scoparium | <u> </u> | Yes Yes | FAC | |
| | | | FACW | Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less |
| 3. upatorium spp | 20 | Yes | | than 3 in. (7.6 cm) DBH. |
| 4. estuca spp | 20 | Yes | | |
| 5 | | | | Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. |
| 6. | | | | |
| 7. | | | | Herb - All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 |
| 9 | | | | ft (1 m) in height. |
| 10 | | | | Woody Vine – All woody vines, regardless of height. |
| 11 | | | | woody vine – All woody vines, regardless of height. |
| | | =Total Cover | | |
| 50% of total cover: 4 | 5 20% | of total cover: | 18 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. itis rotundifolia | 30 | Yes | FAC | |
| 2 | | | | |
| 3. | | | | |
| 4. | | | | |
| 5 | | | | Hydrophytic |
| | 30 | =Total Cover | | Vegetation |
| 50% of total cover:1 | 5 20% | of total cover: | 6 | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | |

Attachment 2.D.1 Page 86 of 230

| | Matrix | • | | x Featu | | | onfirm the absence o | , mareaterely | |
|---|----------------------|---|---|---|--|---|--|--|--|
| Depth (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks | |
| 0-4 | 10YR 3/2 | 100 | | | | | | | |
| 0-4 | 101R 3/2 | 100 | | | | | Loamy/Clayey | | |
| 4-6 | 10YR 5/4 | 100 | | | | | Loamy/Clayey | | |
| 6-20 | 10YR 5/3 | 100 | | | | · | Loamy/Clayey | | |
| | | | | | | | | | |
| Type: C=Co | oncentration, D=Depl | letion, RM=l | Reduced Matrix, I | MS=Mas | ked Sand | d Grains. | ² Location: P | PL=Pore Lining, M=Matrix. | |
| Histosol Histic Ep Black Hi Hydroge Stratifiec Organic 5 cm Mu Muck Pr 1 cm Mu Depletec Thick Da Coast Pr Sandy M Sandy R Sandy R Stripped Dark Sun Polyvalu | pipedon (A2) | T, U) R P, T, U)) (A11) ILRA 150A) RR O, S) | Thin Dark S Barrier Islan (MLRA 15 Loamy Mucl Loamy Gley Depleted Ma Redox Dark Depleted Da Redox Depr Marl (F10) (Depleted Oa | urface (\$ ds 1 cm 53B, 153 ky Miner ed Matri atrix (F3) Surface ark Surfa essions LRR U) chric (F1 hese Ma ace (F1; c (F17) (ertic (F18 oodplair Bright F 19A, 153 w Dark S | S9) (LRR Muck (S BD) al (F1) (L x (F2)) (F6) ace (F7) (F8) 1) (MLRA Sses (F1) 3) (LRR F MLRA 15 3) (LRR F MLRA 15 3) (MLRA 5) (MLRA Soils (F loodplain 3C, 153D) Surface (F | 12) .RR O) 2) (LRR C 2) (LRR C 2) (LRR C 2) (JRR C 2) (LRR C 2) (JRR C 2) (J | 1 cm Mu 2 cm Mu Coast P (outside Reduced (outside Piedmor Anomald (MLR/ Red Par Very Shi (Outside Anomald (MLR/ 00B) A 149A) 0) ³ Indicato wetlar | for Problematic Hydric Soils ³ : uck (A9) (LRR O) uck (A10) (LRR S) trairie Redox (A16) de MLRA 150A) d Vertic (F18) de MLRA 150A, 150B) nt Floodplain Soils (F19) (LRR P, T) ous Bright Floodplain Soils (F20) A 153B) rent Material (F21) allow Dark Surface (F22) de MLRA 138, 152A in FL, 154) slands Low Chroma Matrix (TS7) A 153B, 153D) Explain in Remarks) ors of hydrophytic vegetation and nd hydrology must be present, s disturbed or problematic. | |
| Destat 11 1 | _ayer (if observed): | | | | | | | | |

| | Attachment 2.D.1 Page 87 of 230 |
|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain F See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Green | nsville Sampling Date: 7/2/20 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 12-A |
| Investigator(s): S. Kupiec Section, Township, Rar | nge: |
| Landform (hillside, terrace, etc.): Slope Local relief (concave, con- | vex, none): Convex Slope (%): 1-2 |
| | ng: -77.603128 Datum: |
| Soil Map Unit Name: Roanoke Loam | NWI classification: R2UBH |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes | K No (If no, explain in Remarks.) |
| | nal Circumstances" present? Yes X No |
| | d, explain any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing sampling point lo | |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Ar Hydric Soil Present? Yes No X within a Wetland? Wetland Hydrology Present? Yes No X | |
| Remarks: Upland at Line W. | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Aquatic Fauna (B13) High Water Table (A2) Marl Deposits (B15) (LRR U) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3 Sediment Deposits (B2) Presence of Reduced Iron (C4) Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Algal Mat or Crust (B4) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Field Observations: Field Observations: | Secondary Indicators (minimum of two required) |
| Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Wetlage Wetlage | and Hydrology Present? Yes <u>No X</u> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections) | , if available: |
| Remarks: | |

Attachment 2.D.1 Page 88 of 230

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: 12-A Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status Dominance Test worksheet: 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: 2 (A) 3. _____ Total Number of Dominant _____ Species Across All Strata: 4. 3 (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 66.7% (A/B) =Total Cover Prevalence Index worksheet: 50% of total cover: 20% of total cover: Total % Cover of: Multiply by: Sapling Stratum (Plot size: 30) OBL species 0 x 1 = 0 x 2 = FACW species 0 0 1. _____ 105 FAC species x 3 = 315 2. _____ x 4 = FACU species 40 160 3. _____ 0 x 5 = 4. _____ UPL species 0 Column Totals: 145 (A) 475 5. _____ (B) 6. Prevalence Index = B/A = 3.28 =Total Cover Hydrophytic Vegetation Indicators: 20% of total cover: 1 - Rapid Test for Hydrophytic Vegetation 50% of total cover: Shrub Stratum (Plot size: 30) X 2 - Dominance Test is >50% 3 - Prevalence Index is $\leq 3.0^{1}$ 1. Problematic Hydrophytic Vegetation¹ (Explain) 2. _____ 3. _____ 4. _____ 5. ¹Indicators of hydric soil and wetland hydrology must be _____ present, unless disturbed or problematic. 6. =Total Cover Definitions of Five Vegetation Strata: 20% of total cover: 50% of total cover: Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. Herb Stratum (Plot size: 30) (7.6 cm) or larger in diameter at breast height (DBH). I mus irginicus 60 Yes FAC 1. 2. Dichanthelium dichotomum 30 Yes FAC Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less 25 3. FACU Solidago altissima No than 3 in. (7.6 cm) DBH. 15 4. ubus argutus No FAC 5. ____ Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. 6. _____ 7. ____ Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody 8. _____ plants, except woody vines, less than approximately 3 _____ 9. ft (1 m) in height. 10. Woody Vine - All woody vines, regardless of height. 11. 130 =Total Cover 50% of total cover: _____65 ____20% of total cover: _____26 Woody Vine Stratum (Plot size: 30) 15 Yes 1. Lonicera aponica FACU 2. 3. _____ 4. 5. Hydrophytic 15 =Total Cover Vegetation 20% of total cover: Present? Yes X 50% of total cover: 8 3 No Remarks: (If observed, list morphological adaptations below.)

12-A

Sampling Point:

| epth nches) | Matrix Color (moist) | % | Color (moist) | x Features % Typ | e ¹ Loc ² | Textur | e | Rem | narks |
|---|-------------------------|------------|----------------------------|---------------------|---------------------------------|---------------|--|----------------|----------------|
| · · · · | | | | <u> </u> | 200 | | | Ren | |
| 0-20 | 10YR 5/4 | 100 | | <u> </u> | | Loamy/Cl | ayey | | |
| | | | | | | | | | |
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| | | | | | | | | | |
| | contration D Dan | ation DM D | aduard Matrix | | and Craina | 21.0 | | a Lining M | Motrix |
| | centration, D=Dep | | | | | | cation: PL=Pol | | - |
| Histosol (/ | | | | urface (S9) (L | - | | 1 cm Muck (As | 5 | unc 30113 . |
| - | bedon (A2) | - | | ds 1 cm Muck | | | 2 cm Muck (A | | |
| Black Hist | . , | - | | 3B, 153D) | (0) | | Coast Prairie I | | |
| - | Sulfide (A4) | | | ky Mineral (F1 |) (I RR 0) | | (outside ML | , | |
| Stratified Layers (A5) Loamy Gleyed Mat | | | , | /、 / | | Reduced Verti | | | |
| Organic Bodies (A6) (LRR P, T, U) | | | Depleted Ma | | | | (outside MLRA 150A, 150B) | | |
| 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | Redox Dark Surface (F6) | | | | Piedmont Floodplain Soils (F19) (LRR P, T | | |
| Muck Presence (A8) (LRR U) | | | Depleted Dark Surface (F7) | | | | Anomalous Bright Floodplain Soils (F20) | | |
| | k (A9) (LRR P, T) | - | | essions (F8) | , | | | | () |
| | Below Dark Surface | (A11) | Marl (F10) (I | LRR U) | | | Red Parent Ma | | |
| | k Surface (A12) | • | | hric (F11) (M | LRA 151) | | Very Shallow Dark Surface (F22) | | |
| | irie Redox (A16) (N | ILRA 150A) | | nese Masses (| | O, P, T) | D, P, T) (outside MLRA 138, 152A in FL, 154) | | |
| - | cky Mineral (S1) (L | - | | ace (F13) (LR | | · · · · | Barrier Islands | Low Chroma | a Matrix (TS7) |
| Sandy Gle | eyed Matrix (S4) | • | | ; (F17) (MLRA | | | | 3, 153D) | |
| Sandy Re | | • | | ertic (F18) (ML | | 150B) | Other (Explain | in Remarks) | |
| Stripped N | | • | Piedmont FI | oodplain Soils | ; (F19) (MLI | RA 149A) | | | |
| Dark Surfa | ace (S7) (LRR P, S | , T, U) | Anomalous | Bright Floodpl | ain Soils (F | 20) | | | |
| Polyvalue | Below Surface (S8 |) | (MLRA 14 | 9A, 153C, 15 | 3D) | | ³ Indicators of I | nydrophytic v | egetation and |
| (LRR S | , T, U) | | Very Shallov | v Dark Surfac | e (F22) | | wetland hyd | Irology must | be present, |
| | | - | (MLRA 13 | 88, 152A in FL | ., 154) | | unless distu | irbed or probl | ematic. |
| strictive La | ayer (if observed): | | | | | | | | |
| Туре: | | | | | | | | | |
| Depth (inc | hes): | | | | | Hydric So | oil Present? | Yes | No X |
| | | | | | | | | | |

SOIL

| | | Attachment 2.D.1 | | | |
|--|-----------------------------------|--|--|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Co See ERDC/EL TR-07-24; the proponent agency is CEC | 0 | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) | | | |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City | //County: Greensville | Sampling Date: 7/20/20 | | | |
| Applicant/Owner: Dominion Energy Virginia | | State: VA Sampling Point: 12-B | | | |
| | Township, Range: | | | | |
| | (concave, convex, none | e): Convex Slope (%): 1-2 | | | |
| | Long: -77.6 | | | | |
| Soil Map Unit Name: Roanoke loam | Long | NWI classification: PFO1A | | | |
| • | Vee V | | | | |
| Are climatic / hydrologic conditions on the site typical for this time of year? | | No (If no, explain in Remarks.) | | | |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed? | | mstances" present? Yes X No | | | |
| Are Vegetation, Soil, or Hydrologynaturally problematic? | (If needed, explain | any answers in Remarks.) | | | |
| SUMMARY OF FINDINGS – Attach site map showing sampli | ng point locations | s, transects, important features, etc. | | | |
| | ne Sampled Area nin a Wetland? | Yes No_X | | | |
| Upland at Structure 254/36. | | | | | |
| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | Sec | condary Indicators (minimum of two required) | | | |
| Primary Indicators (minimum of one is required; check all that apply) | | Surface Soil Cracks (B6) | | | |
| Surface Water (A1) Aquatic Fauna (B13) | | Sparsely Vegetated Concave Surface (B8) | | | |
| High Water Table (A2) Marl Deposits (B15) (LRR U) | | Drainage Patterns (B10) | | | |
| Saturation (A3) Hydrogen Sulfide Odor (C1) | uing Dooto (C2) | Moss Trim Lines (B16) | | | |
| Water Marks (B1) Oxidized Rhizospheres on Li Sediment Deposits (B2) Presence of Reduced Iron (C | | bots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) | | | |
| Drift Deposits (B3) Recent Iron Reduction in Tille | | | | | |
| Algal Mat or Crust (B4) Thin Muck Surface (C7) | | Geomorphic Position (D2) | | | |
| Iron Deposits (B5) Other (Explain in Remarks) | | Shallow Aquitard (D3) | | | |
| Inundation Visible on Aerial Imagery (B7) | | FAC-Neutral Test (D5) | | | |
| Water-Stained Leaves (B9) | <u> </u> | _Sphagnum Moss (D8) (LRR T, U) | | | |
| Field Observations: | | | | | |
| Surface Water Present? Yes No X Depth (inches): | | | | | |
| Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): | | rology Present? Yes No X | | | |
| (includes capillary fringe) | | | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previou | us inspections), if availa | able: | | | |
| | | | | | |
| Remarks: | | | | | |
| Itemarks. | | | | | |
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Attachment 2.D.1 Page 91 of 230

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: 12-B Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status Dominance Test worksheet: 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: 3 (A) _____ 3. Total Number of Dominant Species Across All Strata: 5 4. (B) _____ 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 60.0% (A/B) =Total Cover Prevalence Index worksheet: 50% of total cover: 20% of total cover: Total % Cover of: Multiply by: Sapling Stratum (Plot size: 30) OBL species 0 x 1 = 0 x 2 = FACW species 25 50 1. _____ 75 FAC species x 3 = 225 2. _____ FACU species 60 x 4 = 240 3. _____ x 5 = 4. UPL species 0 0 Column Totals: 160 (A) 515 5. _____ (B) 3.22 6. Prevalence Index = B/A = =Total Cover Hydrophytic Vegetation Indicators: 20% of total cover: 1 - Rapid Test for Hydrophytic Vegetation 50% of total cover: Shrub Stratum (Plot size: 30) X 2 - Dominance Test is >50% 3 - Prevalence Index is $\leq 3.0^{1}$ 1. Problematic Hydrophytic Vegetation¹ (Explain) 2. _____ 3. ____ 4. _____ 5. _____ ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 6. =Total Cover Definitions of Five Vegetation Strata: 20% of total cover: 50% of total cover: Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. Herb Stratum (Plot size: 30) (7.6 cm) or larger in diameter at breast height (DBH). 1. Solidago altissima 50 Yes FACU 2. ubus argutus 25 Yes FAC Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less 25 3. Dichanthelium scoparium Yes FACW than 3 in. (7.6 cm) DBH. 10 4. l mus irginicus No FAC 5. Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. 6. _____ 7. ____ _ Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody 8. _____ plants, except woody vines, less than approximately 3 _____ 9. ft (1 m) in height. 10. Woody Vine - All woody vines, regardless of height. 11. 110 =Total Cover 50% of total cover: 55 20% of total cover: 22 Woody Vine Stratum (Plot size: 30) 1. Smilax glauca 40 Yes FAC 10 2. Lonicera aponica Yes FACU 3. 4. 5. Hydrophytic 50 =Total Cover Vegetation 20% of total cover: Present? Yes X 50% of total cover: 25 10 No

Remarks: (If observed, list morphological adaptations below.)

12-B

Sampling Point:

| epth nches) 0-6 | Color (moist) 2.5Y 5/4 | <u>%</u> 95 | Color (moist) 10YR 5/6 | x Featur <u>%</u> 5 | Type ¹ C | Loc ² | Texture Loamy/Clayey | | Rer Distinct redox | marks | |
|-----------------------------------|--|---------------------------------|---------------------------------|--|------------------------|------------------|---|--|--|--|--|
| 0-6 | 2.5Y 5/4 | 95 | 10YR 5/6 | 5 | С | Μ | Loamy/Clayey | Г |)istinct redax | aanaantrationa | |
| · | | | | | | | | | | concentrations | |
| | | | | | | | | - <u> </u> | | | |
| | centration, D=Deple dicators: (Applicat | | | | | d Grains. | | | re Lining, M= | -Matrix. ydric Soils ³ : | |
| Histosol (A | , | | Thin Dark S | | | | | ` | 9) (LRR O) | | |
| | | | | Barrier Islands 1 cm Muck (S12) | | | | | 2 cm Muck (A10) (LRR S) Coast Prairie Redox (A16) | | |
| Black Histi | | | (MLRA 153B, 153D) | | | | | | , , | | |
| | Sulfide (A4) | Loamy Mucky Mineral (F1) (LRR O | | | | .RR () | | | RA 150A) | | |
| _ | ayers (A5) | Loamy Gleyed Matrix (F2) | | | | | ced Verti | | | | |
| Organic Bodies (A6) (LRR P, T, U) | | | Depleted Ma | ` ' | | | | (outside MLRA 150A, 150B) Biodmont Electrolain Soile (E10) (LBB D. J | | | |
| | | | | _Redox Dark Surface (F6) Depleted Dark Surface (F7) | | | | Piedmont Floodplain Soils (F19) (LRR P, 1 Anomalous Bright Floodplain Soils (F20) | | | |
| | | | | | | | | • | ain Soils (F20) | | |
| _ | (A9) (LRR P, T) | | Redox Depr | | (F8) | | | RA 153 | , | | |
| | Below Dark Surface | (A11) | Marl (F10) (| | | | | | aterial (F21) | | |
| _ | surface (A12) | | Depleted Oc | | | | | | Dark Surface | | |
| | irie Redox (A16) (MI | |) Iron-Mangar | nese Ma | sses (F12 | 2) (LRR C |), P, T) (ou | tside ML | RA 138, 152 | 2A in FL, 154) | |
| Sandy Mu | cky Mineral (S1) (LF | RR 0, S) | Umbric Surf | ace (F13 | 3) (LRR F | P, T, U) | Barrier Islands Low Chroma Matrix (TS7) | | | | |
| Sandy Gle | yed Matrix (S4) | | Delta Ochric | : (F17) (N | MLRA 15 | 1) | (MLRA 153B, 153D) | | | | |
| Sandy Red | dox (S5) | | Reduced Ve | rtic (F18 | B) (MLRA | 150A, 15 | 0B) Other | · (Explain | in Remarks |) | |
| Stripped N | latrix (S6) | | Piedmont Fl | oodplain | o Soils (F | 19) (MLR | A 149A) | | | | |
| Dark Surfa | ace (S7) (LRR P, S, | T, U) | Anomalous | Bright Fl | oodplain | Soils (F2 | | | | | |
| Polyvalue | Below Surface (S8) | | (MLRA 14 | 9A, 153 | C, 153D) | | ³ Indicators of hydrophytic vegetation and | | | egetation and | |
| (LRR S, | T, U) | | Very Shallow Dark Surface (F22) | | | 22) | we | tland hyc | Irology must | be present, | |
| | | | (MLRA 13 | 88, 152A | in FL, 1 | 54) | un | ess distu | irbed or prob | lematic. | |
| | yer (if observed): | | | | | | | | | | |
| Type: Co | ompaction | | | | | | | | | | |
| Depth (inc | hes): | 6 | | | | | Hydric Soil Pre | sent? | Yes | No X | |
| emarks: | | | | | | | | | | | |

| | | Attachment 2.D.1 | | |
|--|---------------------------------------|--|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and G See ERDC/EL TR-07-24; the proponent agency is | 0 | OMB Control #: 0710-xxxx, Exp: Pending | | |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild | City/County: Greensville | Sampling Date: 7/20/2020 | | |
| Applicant/Owner: Dominion Energy Virginia | | State: VA Sampling Point: 12-C | | |
| Investigator(s): S. Kupiec S | ection, Township, Range: | | | |
| Landform (hillside, terrace, etc.): Drainageway Loca | al relief (concave, convex, no | ne): <u>Concave</u> Slope (%): <u>1-2</u> | | |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.661679 | Long: -77. | 603881 Datum: | | |
| Soil Map Unit Name: Roanoke loam | | NWI classification: PFO1A | | |
| Are climatic / hydrologic conditions on the site typical for this time of year | r? Yes X | No (If no, explain in Remarks.) | | |
| Are Vegetation, Soil, or Hydrologysignificantly dist | urbed? Are "Normal Circ | umstances" present? Yes X No | | |
| Are Vegetation, Soil, or Hydrologynaturally probler | | in any answers in Remarks.) | | |
| SUMMARY OF FINDINGS – Attach site map showing sa | | | | |
| · · · · · · | | | | |
| Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No | Is the Sampled Area within a Wetland? | Yes X No | | |
| Remarks: | | | | |
| Wetland at Flag Z-4. | | | | |
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| HYDROLOGY | | | | |
| Wetland Hydrology Indicators: | <u>Sr</u> | econdary Indicators (minimum of two required) | | |
| Primary Indicators (minimum of one is required; check all that apply) | | Surface Soil Cracks (B6) | | |
| Surface Water (A1)Aquatic Fauna (B13) | _ | Sparsely Vegetated Concave Surface (B8) | | |
| High Water Table (A2) Marl Deposits (B15) (L | · · · · · · · · · · · · · · · · · · · | Drainage Patterns (B10) | | |
| Saturation (A3)Hydrogen Sulfide Odo Water Marks (B1) X Oxidized Rhizosphere | | Moss Trim Lines (B16) Dry-Season Water Table (C2) | | |
| Sediment Deposits (B2) Presence of Reduced | • · · · – | Crayfish Burrows (C8) | | |
| Drift Deposits (B3) | | Saturation Visible on Aerial Imagery (C9) | | |
| Algal Mat or Crust (B4) Thin Muck Surface (C | | X Geomorphic Position (D2) | | |
| Iron Deposits (B5)Other (Explain in Rem | · · · · · · · · · · · · · · · · · · · | Shallow Aquitard (D3) | | |
| Inundation Visible on Aerial Imagery (B7) | <u>></u> | X FAC-Neutral Test (D5) | | |
| X Water-Stained Leaves (B9) | | Sphagnum Moss (D8) (LRR T, U) | | |
| Field Observations: Surface Water Present? Yes No X Depth (inches | s). | | | |
| Water Table Present? Yes No X Depth (inches | · | | | |
| Saturation Present? Yes No X Depth (inches | · | drology Present? Yes X No | | |
| (includes capillary fringe) | | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, | previous inspections), if avai | ilable: | | |
| | | | | |
| Remarks: | | | | |
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Attachment 2.D.1 Page 94 of 230

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: 12-C Absolute Dominant Indicator Tree Stratum (Plot size: 30) % Cover Species? Status Dominance Test worksheet: 1. Number of Dominant Species 2. That Are OBL, FACW, or FAC: 2 (A) _____ 3. Total Number of Dominant Species Across All Strata: 4. 3 (B) _____ 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 66.7% (A/B) Prevalence Index worksheet: =Total Cover 50% of total cover: 20% of total cover: Total % Cover of: Multiply by: Sapling Stratum (Plot size: 30) OBL species 45 x 1 = 45 FACW species 20 x 2 = 40 1. _____ 0 FAC species x 3 = 0 2. _____ FACU species 5 x 4 = 20 3. _____ _____ 0 4. UPL species x 5 = 0 Column Totals: 70 (A) 105 5. _____ (B) 1.50 6. Prevalence Index = B/A = =Total Cover Hydrophytic Vegetation Indicators: 20% of total cover: 1 - Rapid Test for Hydrophytic Vegetation 50% of total cover: Shrub Stratum (Plot size: 30) X 2 - Dominance Test is >50% X 3 - Prevalence Index is $\leq 3.0^{1}$ 1. Problematic Hydrophytic Vegetation¹ (Explain) 2. 3. _____ 4. _____ 5. _____ ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 6. =Total Cover Definitions of Five Vegetation Strata: 20% of total cover: 50% of total cover: Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. Herb Stratum (Plot size: 30) (7.6 cm) or larger in diameter at breast height (DBH). 1. Juncus effusus 45 Yes OBL 2. 25 Yes upatorium spp Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less Dichanthelium scoparium 20 3. Yes FACW than 3 in. (7.6 cm) DBH. _____5 No 4. mbrosia artemisiifolia FACU 5. Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. 6. 7. ____ Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody 8. _____ _____ plants, except woody vines, less than approximately 3 9. ft (1 m) in height. 10. Woody Vine - All woody vines, regardless of height. 11. 95 =Total Cover 50% of total cover: _____48 ___ 20% of total cover: _____19 Woody Vine Stratum (Plot size: 30) 1. _____ _____ 2. 3. _____ 4. 5. Hydrophytic =Total Cover Vegetation 20% of total cover: Present? Yes X 50% of total cover: No Remarks: (If observed, list morphological adaptations below.)

SOIL Sampling Point: 12-C Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix Loc² Color (moist) % Color (moist) Texture (inches) % Type¹ Remarks 2.5Y 4/2 С Loamy/Clayey 0-4 70 10YR 3/6 10 Μ Prominent redox concentrations 10YR 4/6 5 С ΡL Prominent redox concentrations 10YR 5/8 С Prominent redox concentrations 15 Μ 4-20 2.5Y 4/2 80 10YR 5/8 20 С Μ Loamy/Clayey Prominent redox concentrations ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:

| | Attachment 2.D.1 |
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| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Pla See ERDC/EL TR-07-24; the proponent agency is CECW-CO- | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: | Greensville Sampling Date: 7/20/20 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 13-A |
| Investigator(s): S. Kupiec Section, Township | , Range: |
| | , convex, none): Concave Slope (%): 4-6 |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.659181 | Long: -77.604614 Datum: |
| Soil Map Unit Name: Craven clay loam | NWI classification: N/A |
| | s X No (If no, explain in Remarks.) |
| | Normal Circumstances" present? Yes X No |
| | eeded, explain any answers in Remarks.) |
| | |
| SUMMARY OF FINDINGS – Attach site map showing sampling poin | t locations, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes X No Is the Sample Hydric Soil Present? Yes X No within a Weth Wetland Hydrology Present? Yes X No | |
| Remarks: Wetland at Flag AC-5. | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | Surface Soil Cracks (B6) |
| Surface Water (A1) Aquatic Fauna (B13) | Sparsely Vegetated Concave Surface (B8) |
| High Water Table (A2) Marl Deposits (B15) (LRR U) | Drainage Patterns (B10) |
| Saturation (A3)Hydrogen Sulfide Odor (C1) Water Marks (B1) X Oxidized Rhizospheres on Living Roots | Moss Trim Lines (B16) s (C3) Dry-Season Water Table (C2) |
| Sediment Deposits (B2) Presence of Reduced Iron (C4) | Crayfish Burrows (C8) |
| Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C | |
| Algal Mat or Crust (B4) Thin Muck Surface (C7) | Geomorphic Position (D2) |
| Iron Deposits (B5) Other (Explain in Remarks) | Shallow Aquitard (D3) |
| Inundation Visible on Aerial Imagery (B7) | X FAC-Neutral Test (D5) |
| Water-Stained Leaves (B9) | Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: | |
| Surface Water Present? Yes No X Depth (inches): | |
| Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): | Wetland Hydrology Present? Yes X No |
| (includes capillary fringe) | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect | ions), if available: |
| | |
| Remarks: | |
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| VEGETATION (Five Strata) – Use scienti | fic names | of plants. | | Sampling Point: 13-A |
|--|---------------------|----------------------|---------------------|---|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1. 2. | | | | Number of Dominant Species That Are OBL, FACW, or FAC:2 (A) |
| 3 | | | | Total Number of Dominant Species Across All Strata: <u>3</u> (B) |
| 5 6 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 5 x 1 = 5 |
| 1 | | | | FACW species 65 x 2 = 130 |
| 2. | | | | FAC species 10 x 3 = 30 |
| 3. | | | | FACU species $0 	 x 4 = 0$ |
| 4. | | | | UPL species $0 \times 5 = 0$ |
| 5. | | | | Column Totals: 80 (A) 165 (B) |
| 6. | | | | Prevalence Index = $B/A = 2.06$ |
| | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | | of total cover: | | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | X 3 - Prevalence Index is $\leq 3.0^{1}$ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. | | | | |
| · · · · · · · · · · · · · · · · · · · | | | | |
| 4. | | | | |
| 5. | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| Herb Stratum (Plot size: 30) 1. <u>Scleria spp</u> | 50 | Yes | | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. cnanthemum tenuifolium | 30 | Yes | FACW | Sapling - Woody plants, excluding woody vines, |
| 3. upatorium perfoliatum | 15 | No | FACW | approximately 20 ft (6 m) or more in height and less |
| 4. Dichanthelium scoparium | 15 | No | FACW | than 3 in. (7.6 cm) DBH. |
| 5. <u>Setaria pumila</u> | 5 | No | FAC | Shrub - Woody Plants, excluding woody vines, |
| 6. hexia mariana | 5 | No | FACW | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. Ludwigia palustris | 5 | No | OBL | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, and woody |
| 9 | | | | plants, except woody vines, less than approximately 3 $ft (4, m)$ is backet |
| 10 | | | | ft (1 m) in height. |
| 11 | | | | Woody Vine – All woody vines, regardless of height. |
| | 125 | =Total Cover | | |
| 50% of total cover: 6 | 3 20% | of total cover: | 25 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. Smilax glauca | 5 | Yes | FAC | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | Librahana ka Ala |
| | 5 | =Total Cover | | Hydrophytic Vegetation |
| 50% of total cover: | | of total cover: | 1 | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | | | | · |
| , , , | , | | | |

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| Depth | Matrix | | | x Featur | | | onfirm the absence of | · · · · · · · · · · · · · · · · · · · | | | |
|-----------------|----------------------------------|---------------|-----------------------------|----------|-------------------|----------------------|--|---|--|--|--|
| inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks | | | |
| 0-4 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | | | | |
| 4-8 | 10YR 5/2 | 80 | 10YR 4/4 | 15 | С | М | Loamy/Clayey | Distinct redox concentrations | | | |
| | | | 10YR 4/6 | 5 | С | PL | | Prominent redox concentrations | | | |
| 8-20 | 10YR 5/2 | 80 | 10YR 4/6 | 15 | С | М | Loamy/Clayey | Prominent redox concentrations | | | |
| | | | 7.5YR 4/4 | 5 | С | М | | Distinct redox concentrations | | | |
| | oncentration, D=Dep | | | | | d Grains. | | PL=Pore Lining, M=Matrix. | | | |
| 5 | Indicators: (Applica | able to all | | | , | 0 T IN | | for Problematic Hydric Soils ³ : | | | |
| Histosol | | | Thin Dark S | ` | , , | | 1 cm Muck (A9) (LRR O) | | | | |
| | pipedon (A2) | | Barrier Islan | | ` | 12) | 2 cm Muck (A10) (LRR S) Coast Prairie Redox (A16) | | | | |
| | istic (A3) | | (MLRA 15 | | , | | (outside MLRA 150A) | | | | |
| | en Sulfide (A4) | Loamy Muc | - | . , . | RR U) | Reduced Vertic (F18) | | | | | |
| | d Layers (A5) | Loamy Gley | | | | | | | | | |
| | Bodies (A6) (LRR P | X Depleted Ma | . , | | | , | ide MLRA 150A, 150B) | | | | |
| | ucky Mineral (A7) (LF | | | | · · · | | | ont Floodplain Soils (F19) (LRR P, T) | | | |
| | esence (A8) (LRR U |) | Depleted Da | | · · / | | Anomalous Bright Floodplain Soils (F20) | | | | |
| | uck (A9) (LRR P, T) | - (\ 4 4 \ | Redox Depr | | (F8) | | (MLRA 153B) Rod Parent Material (E21) | | | | |
| | d Below Dark Surface | e (A11) | Marl (F10) (| , | | 1 1 7 1 | Red Parent Material (F21) | | | | |
| | ark Surface (A12) | | Depleted Oc | ` | <i>,</i> . | , | Very Shallow Dark Surface (F22) (outside MLRA 138, 152A in FL, 154) | | | | |
| | rairie Redox (A16) (N | | , <u> </u> | | , | , . | Barrier Islands Low Chroma Matrix (TS7) | | | | |
| | /lucky Mineral (S1) (L | .KK (0, 3) | Umbric Surf Delta Ochric | ` | <i>,</i> . | | | | | | |
| | Gleyed Matrix (S4) Redox (S5) | | Reduced Ve | ``` | | , | (MLRA 153B, 153D) 50B) Other (Explain in Remarks) | | | | |
| | Matrix (S6) | | Piedmont Fl | ` | <i>,</i> , , | | | | | | |
| | rface (S7) (LRR P, S | : Т II) | Anomalous | • | ` | <i>,</i> . | , | | | | |
| | le Below Surface (S8 | | (MLRA 14 | 0 | • | ` | ³ Indicators of hydrophytic vegetation and | | | | |
| - | S, T, U) | <i>')</i> | Very Shallov | | | | wetland hydrology must be present, | | | | |
| LINI | 5, 1, 0) | | (MLRA 13 | | | | | as disturbed or problematic. | | | |
| | Layer (if observed): | | | | | | | | | | |
| Type: | | | | | | | | | | | |
| Depth (inches): | | | | | | | Hydric Soil Present? Yes X No | | | | |

| | Attachment 2.D.1 |
|---|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coasta See ERDC/EL TR-07-24; the proponent agency is CECW-0 | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/Cour | nty: Greensville Sampling Date: 7/20/20 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 13-B |
| Investigator(s): S. Kupiec Section, Town | nship, Range: |
| | cave, convex, none): Concave Slope (%): 4-6 |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.659741 | Long: -77.604487 Datum: |
| Soil Map Unit Name: Appling-Louisburg complex | NWI classification: N/A |
| Are climatic / hydrologic conditions on the site typical for this time of year? | Yes X No (If no, explain in Remarks.) |
| | Are "Normal Circumstances" present? Yes X No |
| | (If needed, explain any answers in Remarks.) |
| | |
| SUMMARY OF FINDINGS – Attach site map showing sampling p | point locations, transects, important reatures, etc. |
| | ampled Area Wetland? Yes No X |
| Remarks: Upland below Flag AC-10. | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Aquatic Fauna (B13) High Water Table (A2) Marl Deposits (B15) (LRR U) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Oxidized Rhizospheres on Living R Sediment Deposits (B2) Presence of Reduced Iron (C4) Drift Deposits (B3) Recent Iron Reduction in Tilled Soil Algal Mat or Crust (B4) Thin Muck Surface (C7) Iron Deposits (B5) Other (Explain in Remarks) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) | Crayfish Burrows (C8) |
| Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Ves No X Depth (inches): | Wetland Hydrology Present? Yes <u>No X</u> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins | spections), if available: |
| Remarks: | |

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. . .

| VEGETATION (Five Strata) – Use scienti | fic names | of plants. | | Sampling Point: 13-B |
|--|---------------------|----------------------|---------------------|---|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1. 2. | | | | Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) |
| 3. 4. | | | | Total Number of Dominant Species Across All Strata: <u>4</u> (B) |
| 5. 6. | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1 | | | | FACW species 5 x 2 = 10 |
| 2. | | | | FAC species 80 x 3 = 240 |
| 3. | | | | FACU species 45 x 4 = 180 |
| 4. | | | | UPL species $0 \times 5 = 0$ |
| 5. | | | | Column Totals: 130 (A) 430 (B) |
| 6. | | | | Prevalence Index = $B/A = 3.31$ |
| | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | | of total cover: | | 1 - Rapid Test for Hydrophytic Vegetation |
| <u>Shrub Stratum</u> (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | $3 - \text{Prevalence Index is } \le 3.0^{1}$ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2 | | | | |
| | | | | |
| 4. | | | | |
| 5. | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). |
| 1. <i>I mus irginicus</i> | 40 | Yes | FAC | (7.0 cm) of larger in diameter at breast height (DDH). |
| 2. upatorium rotundifolium | 25 | Yes | FAC | Sapling – Woody plants, excluding woody vines, |
| 3. chillea millefolium | 15 | No | FACU | approximately 20 ft (6 m) or more in height and less |
| 4. Dichanthelium scoparium | 5 | No | FACW | than 3 in. (7.6 cm) DBH. |
| 5. Lespede a cuneata | 5 | No | FACU | Shrub - Woody Plants, excluding woody vines, |
| 6. runella ulgaris | 5 | No | FAC | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7 | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, and woody |
| 9 | | | | plants, except woody vines, less than approximately 3 |
| 10. | | | | ft (1 m) in height. |
| 11. | | | | Woody Vine – All woody vines, regardless of height. |
| | 95 | =Total Cover | | |
| 50% of total cover: 4 | 8 20% | of total cover: | 19 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. alactia olubilis | 25 | Yes | FACU | |
| 2. Campsis radicans | 10 | Yes | FAC | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | 35 | =Total Cover | | Hydrophytic |
| 50% of total cover: 1 | | of total cover: | 7 | Vegetation Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | | | | |
| nomanto. In observed, not morphological adaptation | 10 001010.) | | | I |

| epth | Matrix | | Redo | ox Featu | res | | | | | | | |
|------------------------|-----------------------|--|---|------------|-----|---------|---|--|--------------|--------------|----------|--|
| nches) Color (moist) % | | Color (moist) % Type ¹ Loc ² | | | | Texture | | Remarks | | | | |
| 0-6 | 10YR 3/3 | 100 | | | | | Loam | y/Clayey | | | | |
| | | | | · | | · | | | | | | |
| Гуре: C=Cc | Dincentration, D=Depl | etion, RM=R | educed Matrix, | MS=Mas | | Grains. | | ² Location: | PL=Por | e Lining, M= | =Matrix. | |
| ydric Soil I | Indicators: (Applica | ole to all LF | Rs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils ³ : | | | | |
| Histosol | | | Thin Dark Surface (S9) (LRR S, T, U) | | | | | 1 cm Muck (A9) (LRR O) | | | | |
| | pipedon (A2) | | Barrier Islands 1 cm Muck (S12) | | | | | 2 cm Muck (A10) (LRR S) | | | | |
| Black His | | (MLRA 153B, 153D) | | | | | Coast Prairie Redox (A16) | | | | | |
| Hydrogen Sulfide (A4) | | | Loamy Mucky Mineral (F1) (LRR O) | | | | | (outside MLRA 150A) | | | | |
| Stratified | Layers (A5) | Loamy Gleyed Matrix (F2) | | | | | | ed Vertio | | | | |
| Organic | Bodies (A6) (LRR P, | Depleted Matrix (F3) | | | | | (outs | side ML | RA 150A, 1 | 50B) | | |
| 5 cm Mu | cky Mineral (A7) (LR | Redox Dark Surface (F6) | | | | | Piedm | ont Floo | dplain Soils | (F19) (L | RR P, | |
| Muck Pre | esence (A8) (LRR U) | Depleted Da | Depleted Dark Surface (F7) | | | | | Anomalous Bright Floodplain Soils (F20) | | | | |
| 1 cm Mu | ck (A9) (LRR P, T) | - | Redox Depressions (F8) | | | | | (MLRA 153B) | | | | |
| Depleted | Below Dark Surface | (A11) | Marl (F10) (LRR U) | | | | | Red Parent Material (F21) | | | | |
| Thick Da | ark Surface (A12) | _ | Depleted Ochric (F11) (MLRA 151) | | | | | Very Shallow Dark Surface (F22) | | | | |
| Coast Pr | airie Redox (A16) (M | LRA 150A) | Iron-Manganese Masses (F12) (LRR O, P, T) | | | | |) (outside MLRA 138, 152A in FL, 154) | | | | |
| Sandy M | lucky Mineral (S1) (L | RR O, S) | Umbric Surface (F13) (LRR P, T, U) | | | | | Barrier Islands Low Chroma Matrix (TS7) | | | | |
| Sandy G | ileyed Matrix (S4) | Delta Ochric (F17) (MLRA 151) | | | | | (MLRA 153B, 153D) | | | | | |
| Sandy R | edox (S5) | Reduced Ve | Other (Explain in Remarks) | | | | | | | | | |
| Stripped | Matrix (S6) | - | Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | | | | | |
| Dark Sur | face (S7) (LRR P, S, | Anomalous | 0) | | | | | | | | | |
| | e Below Surface (S8) | (MLRA 149A, 153C, 153D) | | | | | ³ Indicators of hydrophytic vegetation and | | | | | |
| | S, T, U) | Very Shallow Dark Surface (F22) | | | | | wetland hydrology must be present, | | | | | |
| | | | (MLRA 1 | | | | | | - | rbed or prob | | |
| estrictive L | _ayer (if observed): | | | | | | | | | | | |
| Type: | Compaction | | | | | | | | | | | |
| Depth (inches): 6 | | | | | | | Hydric Soil Present? Yes No X | | | | | |

| | Attachment 2.D.1 |
|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Reg See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensvi Applicant/Owner: Dominion Energy Virginia | Ile Sampling Date: 7/20/2020 State: VA Sampling Point: 13-C |
| Investigator(s): S. Kupiec Section, Township, Range: | |
| Landform (hillside, terrace, etc.): Drainageway Local relief (concave, convex, | none): Concave Slope (%): 4-6 |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.657137 Long: - | 77.605137 Datum: |
| Soil Map Unit Name: Craven clay loam | NWI classification: N/A |
| | Circumstances" present? Yes X No |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes No X within a Wetland? Wetland Hydrology Present? Yes No X No X | Yes No_X |
| Remarks: Upland above Flag AD-4. | |
| | Que des la d'acteur (minimum of two roquirod) |
| Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Aquatic Fauna (B13) High Water Table (A2) Marl Deposits (B15) (LRR U) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) Sediment Deposits (B2) Presence of Reduced Iron (C4) Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Algal Mat or Crust (B4) Thin Muck Surface (C7) Iron Deposits (B5) Other (Explain in Remarks) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) | 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) Sphagnum Moss (D8) (LRR T, U) |
| Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): | Hydrology Present? Yes No X |
| | |
| Remarks: | |

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| VEGETATION (Five Strata) – Use scient | | of plants. | | Sampling Point:13-C |
|--|---------------------|----------------------|---------------------|---|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1. 2. | | | | Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A) |
| 3 4 | | | | Total Number of DominantSpecies Across All Strata:5(B) |
| 5 6 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species <u>5</u> x 1 = <u>5</u> |
| 1 | | | | FACW species 25 x 2 = 50 |
| 2. | | | | FAC species 155 x 3 = 465 |
| 3. | | | | FACU species 30 x 4 = 120 |
| 4. | | | | UPL species $0 	 x 5 = 0$ |
| 5. | | | | Column Totals: 215 (A) 640 (B) |
| 6. | | | | Prevalence Index = $B/A = 2.98$ |
| | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | 20% | of total cover: | | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1. S mphoricarpos orbiculatus | 20 | Yes | FACU | 3 - Prevalence Index is ≤3.0 ¹ |
| 2. | 20 | 100 | 17100 | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2 | | | | |
| | | | | |
| 4 | | | | |
| 5. | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| | 10 20% | of total cover: | 4 | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). |
| 1. ubus argutus | 55 | Yes | FAC | |
| 2. erbesina alternifolia | 35 | Yes | FAC | Sapling – Woody plants, excluding woody vines, |
| 3. Dichanthelium scoparium | 25 | No | FACW | approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. |
| 4. upatorium capillifolium | 5 | No | FACU | |
| 5. chillea millefolium | 5 | No | FACU | Shrub - Woody Plants, excluding woody vines, |
| 6. Juncus effusus | 5 | No | OBL | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7 | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, and woody |
| 9 | | | | plants, except woody vines, less than approximately 3 ft (1 m) in height. |
| 10 | | | | |
| 11 | | | | Woody Vine – All woody vines, regardless of height. |
| | 130 | =Total Cover | | |
| 50% of total cover: | 65 20% | of total cover: | 26 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. Smilax bona nox | 35 | Yes | FAC | |
| 2. itis rotundifolia | 25 | Yes | FAC | |
| 3. Smilax glauca | 5 | No | FAC | |
| 4. | | | | |
| 5. | | | | |
| | 65 | =Total Cover | | Hydrophytic Vegetation |
| 50% of total cover: | | of total cover: | 13 | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | | | | |
| | | | | |

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SOIL Sampling Point: 13-C Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix Color (moist) % Color (moist) Loc² Texture Remarks (inches) % Type¹ 10YR 3/2 0-2 100 Loamy/Clayey 2-20 10YR 3/4 100 Loamy/Clayey ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:

| | | Attachment 2.D.1 Page 105 of 230 | | | |
|--|--|---|--|--|--|
| U.S. Army Corp WETLAND DETERMINATION DATA SHEE See ERDC/EL TR-07-24; the pro | T – Atlantic and Gulf Coastal Plain F | OMB Control #: 0710-xxxx, Exp: Pending | | | |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 2 | 230 kV Rebuild City/County: Gree | nsville Sampling Date: 7/21/2020 | | | |
| Applicant/Owner: Dominion Energy Virginia | | State: VA Sampling Point: 14-A | | | |
| Investigator(s): S. Kupiec | Section, Township, Rar | nge: | | | |
| Landform (hillside, terrace, etc.): Slope | Local relief (concave, con | vex, none): Convex Slope (%): 4-6 | | | |
| Subregion (LRR or MLRA): LRR P, MLRA 133A | Lat: 36.648795 | ng: <u>-77.607195</u> Datum: | | | |
| Soil Map Unit Name: Craven clay loam | | NWI classification: N/A | | | |
| Are climatic / hydrologic conditions on the site typica | al for this time of year? Yes X | K No (If no, explain in Remarks.) | | | |
| Are Vegetation, Soil, or Hydrology | | nal Circumstances" present? Yes X No | | | |
| Are Vegetation, Soil, or Hydrology | | d, explain any answers in Remarks.) | | | |
| | | cations, transects, important features, etc. | | | |
| | | | | | |
| Hydrophytic Vegetation Present? Yes | No X Is the Sampled Ar | | | | |
| Hydric Soil Present? Yes_ | No X within a Wetland? | ? Yes <u>No X</u> | | | |
| Wetland Hydrology Present? Yes | No X | | | | |
| Remarks: Upland near Flag AJ-10. | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of two required) | | | |
| Primary Indicators (minimum of one is required; ch Surface Water (A1) A | Aquatic Fauna (B13) | Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) | | | |
| | Marl Deposits (B15) (LRR U) | Drainage Patterns (B10) | | | |
| | Hydrogen Sulfide Odor (C1) | Moss Trim Lines (B16) | | | |
| | Dxidized Rhizospheres on Living Roots (C3 | | | | |
| | Presence of Reduced Iron (C4) | Crayfish Burrows (C8) | | | |
| | Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) | Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) | | | |
| | Other (Explain in Remarks) | Shallow Aquitard (D3) | | | |
| Inundation Visible on Aerial Imagery (B7) | | FAC-Neutral Test (D5) | | | |
| Water-Stained Leaves (B9) | | Sphagnum Moss (D8) (LRR T, U) | | | |
| Field Observations: | | | | | |
| Surface Water Present? Yes No | X Depth (inches): | | | | |
| Water Table Present? Yes No Saturation Present? Yes No | X Depth (inches): | and Hydrology Drecont? Vac No X | | | |
| Saturation Present? Yes <u>No</u> (includes capillary fringe) | X Depth (inches): Wetla | and Hydrology Present? Yes No X | | | |
| Describe Recorded Data (stream gauge, monitorin | g well, aerial photos, previous inspections) | , if available: | | | |
| | | | | | |
| | | | | | |
| Remarks: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

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VEGETATION (Five Strata) - Use scientific names of plants

| VEGETATION (Five Strata) - Use scienti | ific names | of plants. | | Sampling Point: 14-A |
|---|------------|-----------------|-----------|---|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: 2 (A) |
| 3 | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 4 (B) |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: 50.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. Liriodendron tulipifera | 15 | Yes | FACU | FACW species 0 x 2 = 0 |
| 2. Li uidambar st raciflua | 15 | Yes | FAC | FAC species 60 x 3 = 180 |
| 3. | | | | FACU species 60 x 4 = 240 |
| 4. | | | | UPL species $0 \times 5 = 0$ |
| 5. | | | | Column Totals: 120 (A) 420 (B) |
| 6. | | | | Prevalence Index = $B/A = 3.50$ |
| | 30 | Total Cover | | Hydrophytic Vegetation Indicators: |
| FOU/ of total acutor | | of total cover: | c | 5 . 5 . 5 |
| | 15 20% | or total cover. | 6 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | 2 - Dominance Test is >50% |
| 1 | | | | 3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. teridium a uilinum | 45 | Yes | FACU | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. ndropogon irginicus | 30 | Yes | FAC | Sapling – Woody plants, excluding woody vines, |
| 3. ubus argutus | 15 | No | FAC | approximately 20 ft (6 m) or more in height and less |
| 4 | | | | than 3 in. (7.6 cm) DBH. |
| 5. | | | | Shrub - Woody Plants, excluding woody vines, |
| 6 | | | | approximately 3 to 20 ft (1 to 6 m) in height. |
| | | | | |
| 7 | | | | Herb – All herbaceous (non-woody) plants, including |
| 8. | | | | herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3 |
| 9 | | | | ft (1 m) in height. |
| 10 | | | | Woody Vine – All woody vines, regardless of height. |
| 11 | | | | woody vine – All woody vines, regardless of height. |
| | | =Total Cover | | |
| 50% of total cover:4 | 15 20% | of total cover: | 18 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4. | | | | |
| 5. | | | _ | |
| | | Total Cover | | Hydrophytic Vegetation |
| 50% of total cover: | | of total cover: | | Present? Yes No X |
| Remarks: (If observed, list morphological adaptatio | | | | · |
| | | | | |

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SOIL Sampling Point: 14-A Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix Color (moist) % Color (moist) Loc² Texture Remarks (inches) % Type¹ 10YR 3/2 0-4 100 Sandy 4-20 10YR 5/4 100 Sandy ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:

| | | | Attachment 2.D.1 Page 108 of 230 |
|--|--|------------------|--|
| WETLAND DETERMINATION DATA SH | Corps of Engineers EET – Atlantic and Gulf Coastal Plai proponent agency is CECW-CO-F | Ŭ | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
| Project/Site: TL 254/2201 Clubhouse - Lakevie | ew 230 kV Rebuild City/County: G | Greensville | Sampling Date: 7/21/20 |
| Applicant/Owner: Dominion Energy Virginia | 1 | | State: VA Sampling Point: 14-B |
| Investigator(s): S. Kupiec | Section, Township, | Range: | |
| Landform (hillside, terrace, etc.): Slope | Local relief (concave, | convex, none) | : <u>Convex</u> Slope (%): <u>2-4</u> |
| Subregion (LRR or MLRA): LRR P, MLRA 133 | A_Lat: <u>36.651718</u> | Long: -77.606 | 5338 Datum: |
| Soil Map Unit Name: Uchee loamy sand | | | NWI classification: N/A |
| Are climatic / hydrologic conditions on the site ty | ypical for this time of year? Yes | s <u>X</u> No | o (If no, explain in Remarks.) |
| Are Vegetation, Soil, or Hydrolog | gysignificantly disturbed? Are "N | Normal Circum | Istances" present? Yes X No |
| Are Vegetation, Soil, or Hydrolog | | eded, explain a | any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach si | | t locations, | transects, important features, etc. |
| Li barbata Manatatian Dreconto | V N- Io the Comple | 1 4 0 | |
| Hydric Soil Present? Ye | es X No Is the Sampled es No X within a Wetla es No X | | Yes No X |
| Remarks: Upland at Flag AH-3. | | | |
| HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | Seco | ondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required | | | Surface Soil Cracks (B6) |
| Surface Water (A1) High Water Table (A2) | Aquatic Fauna (B13) Marl Deposits (B15) (LRR U) | | Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) |
| Saturation (A3) | Hydrogen Sulfide Odor (C1) | | Moss Trim Lines (B16) |
| Water Marks (B1) | Oxidized Rhizospheres on Living Roots | | Dry-Season Water Table (C2) |
| Sediment Deposits (B2) | Presence of Reduced Iron (C4) | | Crayfish Burrows (C8) |
| Drift Deposits (B3) | Recent Iron Reduction in Tilled Soils (C6 | · | Saturation Visible on Aerial Imagery (C9) |
| Algal Mat or Crust (B4) Iron Deposits (B5) | Thin Muck Surface (C7) | | Geomorphic Position (D2) |
| Inundation Visible on Aerial Imagery (B7) | Other (Explain in Remarks) | | Shallow Aquitard (D3) FAC-Neutral Test (D5) |
| Water-Stained Leaves (B9) | | | Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: | | | |
| Surface Water Present? Yes N | No X Depth (inches): | | |
| | No X Depth (inches): | | |
| | No X Depth (inches): W | Vetland Hydro | blogy Present? Yes No X |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monit | toring well, aerial photos, previous inspectio | ons). if availab | le: |
| | , and prove proves, proven and prove | 01.0,, | |
| Remarks: | | | |
| | | | |
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VEGETATION (Five Strata) - Use scientific names of plants

| VEGETATION (Five Strata) - Use scienti | fic names | of plants. | | Sampling Point: 14-B |
|---|------------|-----------------|-----------|--|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: 3 (A) |
| 3 | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 5 (B) |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: 60.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. Li uidambar st raciflua | 40 | Yes | FAC | FACW species 30 x 2 = 60 |
| 2. | | | | FAC species 80 x 3 = 240 |
| 3. | | | | FACU species 10 $x 4 = 40$ |
| 4. | | | | UPL species 45 x 5 = 225 |
| 5. | | | | Column Totals: 165 (A) 565 (B) |
| 6. | | | | Prevalence Index = $B/A = 3.42$ |
| | 40 | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: 2 | | of total cover: | 8 | 1 - Rapid Test for Hydrophytic Vegetation |
| <u>Shrub Stratum</u> (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1. hus copallinum | 20 | Yes | UPL | $3 - Prevalence Index is \leq 3.0^{1}$ |
| 2. | | 100 | 012 | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4. | | | | |
| 4 5. | | | | |
| | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | Tatal Osuar | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| | 0 20% | of total cover: | 4 | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| Herb Stratum (Plot size: 30) | 05 | N/ | | (7.6 cm) or larger in diameter at breast height (DBH). |
| 1. Solidago uncea | 25 | Yes | UPL | |
| 2. cnanthemum tenuifolium | 25 | Yes | FACW | Sapling – Woody plants, excluding woody vines, |
| 3. ndropogon irginicus | 20 | Yes | FAC | approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. |
| 4. upatorium rotundifolium | 15 | No | FAC | |
| 5. <i>teridium a uilinum</i> | 10 | No | FACU | Shrub - Woody Plants, excluding woody vines, |
| 6. ubus argutus | 5 | No | FAC | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. Dichanthelium scoparium | 5 | No | FACW | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, and woody |
| 9 | | | | plants, except woody vines, less than approximately 3 $ft (4m)$ is backet |
| 10 | | | | ft (1 m) in height. |
| 11 | | | | Woody Vine - All woody vines, regardless of height. |
| | 105 | =Total Cover | | |
| 50% of total cover: 5 | 3 20% | of total cover: | 21 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2. | | | | |
| 3 | | | | |
| 4 | | | | |
| 4 5 | | | | |
| | | =Total Cover | | Hydrophytic |
| 50% of total cover: | | of total cover: | | Vegetation Present? Yes X No |
| | | or local cover. | | |
| Remarks: (If observed, list morphological adaptatio | ns below.) | | | |

| Depth | cription: (Describe Matrix | to the dept | | x Featur | | | ninini ule a | DSELICE OI | indicators.) | | | |
|-------------------------------------|-------------------------------|--------------|--------------------------|---------------------------------|-------------------|------------------|---|---------------------------------|---|-----|--|--|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Textur | е | Remarks | | | |
| 0-4 | 10VP 4/2 | 100 | | | | | Loomy/Cl | | | | | |
| 0-4 | 10YR 4/3 | 100 | | | | | Loamy/Cl | ayey | | | | |
| 4-20 | 10YR 5/3 | 95 | 10YR 4/6 | 5 | <u> </u> | <u>M</u> | Loamy/Cl | ayey | Distinct redox concentrations | | | |
| | | | | | | · | | | | | | |
| Type: C=C | oncentration, D=Depl | etion, RM= | Reduced Matrix, I | MS=Mas | ked Sand | d Grains. | ² Lc | cation: Pl | L=Pore Lining, M=Matrix. | | | |
| -lydric Soil | Indicators: (Applica | ble to all L | RRs, unless oth | erwise r | noted.) | | Inc | licators fo | or Problematic Hydric Soils ³ : | | | |
| Histosol | (A1) | Thin Dark S | urface (S | 69) (LRR | S, T, U) | | 1 cm Muck (A9) (LRR O) | | | | | |
| Histic Epipedon (A2) | | | Barrier Islar | Barrier Islands 1 cm Muck (S12) | | | | | 2 cm Muck (A10) (LRR S) | | | |
| Black Histic (A3) (MLRA 153B, 153D) | | | | , | | | Coast Pr | airie Redox (A16) | | | | |
| Hydroge | en Sulfide (A4) | | Loamy Muc | ky Miner | al (F1) (L | RR O) | | (outsic | le MLRA 150A) | | | |
| Stratifie | d Layers (A5) | | Loamy Gley | Loamy Gleyed Matrix (F2) | | | | | Reduced Vertic (F18) | | | |
| Organic | Bodies (A6) (LRR P, | T, U) | Depleted Ma | atrix (F3) | | | | (outsic | le MLRA 150A, 150B) | | | |
| 5 cm Mı | ucky Mineral (A7) (LR | R P, T, U) | Redox Dark | Surface | (F6) | | | Piedmon | t Floodplain Soils (F19) (LRR I | , т | | |
| Muck Pr | resence (A8) (LRR U) |) | Depleted Da | ark Surfa | ce (F7) | | | Anomalo | us Bright Floodplain Soils (F20 |) | | |
| 1 cm Mu | uck (A9) (LRR P, T) | | Redox Depr | essions | (F8) | | | (MLRA | (153B) | | | |
| Deplete | d Below Dark Surface | e (A11) | Marl (F10) (| LRR U) | | | | Red Pare | rent Material (F21) | | | |
| Thick Da | ark Surface (A12) | | Depleted Oc | chric (F1 | 1) (MLRA | A 151) | | Very Shallow Dark Surface (F22) | | | | |
| Coast P | rairie Redox (A16) (N | ILRA 150A |)Iron-Mangai | nese Ma | sses (F12 | 2) (LRR C | , P, T) (outside MLRA 138, 152A in FL, 154) | | | | | |
| Sandy N | /lucky Mineral (S1) (L | RR 0, S) | Umbric Surf | ace (F13 | 8) (LRR F | P, T, U) | Barrier Islands Low Chroma Matrix (TS7) | | | | | |
| | Eleyed Matrix (S4) | | Delta Ochrid | : (F17) (I | MLRA 15 | 1) | (MLRA 153B, 153D) | | | | | |
| | Redox (S5) | | Reduced Ve | | , , | | · | Other (Ex | xplain in Remarks) | | | |
| Stripped | I Matrix (S6) | | Piedmont F | oodplair | Soils (F | 19) (MLR | A 149A) | | | | | |
| | rface (S7) (LRR P, S | | Anomalous | - | | , | 0) | 0 | | | | |
| Polyvalue Below Surface (S8) | | | | (MLRA 149A, 153C, 153D) | | | | | ³ Indicators of hydrophytic vegetation and | | | |
| (LRR | S, T, U) | | Very Shallov (MLRA 13 | | ` | , | | | d hydrology must be present, disturbed or problematic. | | | |
| | Layer (if observed): | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Restrictive Type: | | | | | | | | | | | | |

| | | | Attachment 2.D.1 Page 111 of 230 | | | |
|---|---|-----------------------------------|--|--|--|--|
| U.S. Arm WETLAND DETERMINATION DATA See ERDC/EL TR-07-24; | | Gulf Coastal Plain Region | OMB Control #: 0710-xxxx, Exp: Pending | | | |
| Project/Site: TL 254/2201 Clubhouse - Lak | eview 230 kV Rebuild | City/County: Greensville | Sampling Date: 7/21/20 | | | |
| Applicant/Owner: Dominion Energy Virg | ginia | | State: VA Sampling Point: 15-A | | | |
| Investigator(s): S. Kupiec | | Section, Township, Range: | | | | |
| Landform (hillside, terrace, etc.): Slope | Loc | cal relief (concave, convex, nor | ne): <u>Convex</u> Slope (%): <u>4-6</u> | | | |
| Subregion (LRR or MLRA): LRR P, MLRA | 133A Lat: 36.647067 | Long: -77.0 | 607474 Datum: | | | |
| Soil Map Unit Name: Roanoke loam | | | NWI classification: N/A | | | |
| Are climatic / hydrologic conditions on the si | ite typical for this time of yea | ar? Yes <u>X</u> | No (If no, explain in Remarks.) | | | |
| Are Vegetation, Soil, or Hydr | ologysignificantly dis | sturbed? Are "Normal Circ | umstances" present? Yes X No | | | |
| Are Vegetation, Soil, or Hydr | | | in any answers in Remarks.) | | | |
| | | | ns, transects, important features, etc. | | | |
| | | | | | | |
| Hydrophytic Vegetation Present? | Yes No X | Is the Sampled Area | Vec No V | | | |
| Hydric Soil Present? Wetland Hydrology Present? | Yes <u>No X</u> Yes No X | within a Wetland? | Yes No_X | | | |
| Remarks: | | | | | | |
| Upland at Flag AK-4. | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| HYDROLOGY | | | | | | |
| Wetland Hydrology Indicators: | | S | econdary Indicators (minimum of two required) | | | |
| Primary Indicators (minimum of one is requ | uired; check all that apply) | <u></u> | Surface Soil Cracks (B6) | | | |
| Surface Water (A1) | Aquatic Fauna (B13) | | Sparsely Vegetated Concave Surface (B8) | | | |
| High Water Table (A2) | Marl Deposits (B15) (| - | Drainage Patterns (B10) | | | |
| Saturation (A3) | Hydrogen Sulfide Od | | Moss Trim Lines (B16) | | | |
| Water Marks (B1) Sediment Deposits (B2) | Oxidized Rhizosphere Presence of Reduced | es on Living Roots (C3) | Dry-Season Water Table (C2) Crayfish Burrows (C8) | | | |
| Drift Deposits (B3) | Recent Iron Reductio | . , | Saturation Visible on Aerial Imagery (C9) | | | |
| Algal Mat or Crust (B4) | Thin Muck Surface (C | | Geomorphic Position (D2) | | | |
| Iron Deposits (B5) | Other (Explain in Ren | narks) | Shallow Aquitard (D3) | | | |
| Inundation Visible on Aerial Imagery (E | 37) | _ | FAC-Neutral Test (D5) | | | |
| Water-Stained Leaves (B9) | | | Sphagnum Moss (D8) (LRR T, U) | | | |
| Field Observations: Surface Water Present? Yes | No X Depth (inche | <i>vc).</i> | | | | |
| Water Table Present? Yes | No X Depth (inche | · | | | | |
| Saturation Present? Yes | No X Depth (inche | | drology Present? Yes No X | | | |
| (includes capillary fringe) | | | | | | |
| Describe Recorded Data (stream gauge, m | ionitoring well, aerial photos | , previous inspections), if avail | lable: | | | |
| | | | | | | |
| Remarks: | | | | | | |
| | | | | | | |
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VEGETATION (Five Strata) - Use scientific names of plants

| VEGETATION (Five Strata) - Use scien | tific name | s of plants. | | Sampling Point:15-A |
|--|-------------|-------------------|-----------|---|
| | Absolute | | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | r Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: 1 (A) |
| 3 | | | | Total Number of Dominant |
| 4. | | | | Species Across All Strata: 7 (B) |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: 14.3% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20 | % of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. Li uidambar st raciflua | 15 | Yes | FAC | FACW species 30 x 2 = 60 |
| 2. | | | | FAC species 15 x 3 = 45 |
| 3. | · | | | FACU species 110 x 4 = 440 |
| 4. | | | | UPL species 5 x 5 = 25 |
| 5. | · | | | Column Totals: 160 (A) 570 (B) |
| 6. | | | | Prevalence Index = $B/A = 3.56$ |
| 0 | 15 | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | | % of total cover: | 3 | |
| | 0 20 | | | 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% |
| <u>Shrub Stratum</u> (Plot size: <u>30</u>) | - | Mar | FAOL | |
| 1. <u>S mphoricarpos orbiculatus</u> | 5 | Yes | FACU | 3 - Prevalence Index is $\leq 3.0^{1}$ |
| 2. | · | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4. | | | | |
| 5 | · | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | · | | | present, unless disturbed or problematic. |
| | 5 | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 3 20 | % of total cover: | 1 | Tree - Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). |
| 1. Solidago altissima | 60 | Yes | FACU | (7.6 cm) of larger in diameter at breast height (DBH). |
| 2. teridium a uilinum | 30 | Yes | FACU | Sapling – Woody plants, excluding woody vines, |
| 3. Saccharum giganteum | 20 | No | FACW | approximately 20 ft (6 m) or more in height and less |
| 4. estuca spp | 15 | No | | than 3 in. (7.6 cm) DBH. |
| 5. Dichanthelium scoparium | 10 | No | FACW | Shrub - Woody Plants, excluding woody vines, |
| 6. | | | | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. | | | | Herb – All herbaceous (non-woody) plants, including |
| 8. | | | | herbaceous vines, regardless of size, and woody |
| 9. | | | | plants, except woody vines, less than approximately 3 |
| 10. | | | | ft (1 m) in height. |
| 11. | · | | | Woody Vine – All woody vines, regardless of height. |
| ···· | 135 | =Total Cover | | |
| 50% of total cover: | | % of total cover: | 27 | |
| Woody Vine Stratum (Plot size: 30) | 00 20 | | 21 | |
| | 10 | Vaa | FACU | |
| 1. alactia olubilis | | Yes | FACU | |
| 2. arthenocissus uin uefolia | 5 | Yes | FACU | |
| 3. assiflora incarnata | 5 | Yes | UPL | |
| 4. | | | | |
| 5 | · | | | Hydrophytic |
| | 20 | =Total Cover | | Vegetation |
| 50% of total cover: | 10 20 | % of total cover: | 4 | Present? Yes No X |
| Remarks: (If observed, list morphological adaptati | ons below.) | | | |

Attachment 2.D.1 Page 113 of 230

SOIL Sampling Point: 15-A Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix Color (moist) % Color (moist) Loc² Texture Remarks (inches) % Type¹ 10YR 3/2 0-6 100 Loamy/Clayey 6-20 10YR 5/4 100 Loamy/Clayey ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:

| | Attachment 2.D.1 Page 114 of 230 | | | |
|--|--|--|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Reg See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending | | | |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greense | ville Sampling Date: 7/21/2020 | | | |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 15-B | | | |
| Investigator(s): S. Kupiec Section, Township, Range | e: | | | |
| Landform (hillside, terrace, etc.): Slope Local relief (concave, convex | x, none): Convex Slope (%): 2-4 | | | |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.647529 Long: | -77.607452 Datum: | | | |
| Soil Map Unit Name: Roanoke loam | NWI classification: N/A | | | |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes X | | | | |
| | Circumstances" present? Yes X No | | | |
| | explain any answers in Remarks.) | | | |
| | | | | |
| SUMMARY OF FINDINGS – Attach site map showing sampling point loca | tions, transects, important reatures, etc. | | | |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? Wetland Hydrology Present? Yes X No within a Wetland? | Yes <u>X</u> No | | | |
| Remarks: Wetland at Structure 254/46. | | | | |
| HYDROLOGY | | | | |
| | Or condens to disctore (minimum of two required) | | | |
| Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) | Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) | | | |
| Surface Water (A1) Aquatic Fauna (B13) | Sparsely Vegetated Concave Surface (B8) | | | |
| High Water Table (A2) Marl Deposits (B15) (LRR U) | Drainage Patterns (B10) | | | |
| Saturation (A3) Hydrogen Sulfide Odor (C1) | Moss Trim Lines (B16) | | | |
| Water Marks (B1) X Oxidized Rhizospheres on Living Roots (C3) | Dry-Season Water Table (C2) | | | |
| Sediment Deposits (B2) Presence of Reduced Iron (C4) | Crayfish Burrows (C8) | | | |
| Drift Deposits (B3) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) | Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) | | | |
| Iron Deposits (B5) Other (Explain in Remarks) | Shallow Aquitard (D3) | | | |
| Inundation Visible on Aerial Imagery (B7) | X FAC-Neutral Test (D5) | | | |
| Water-Stained Leaves (B9) | Sphagnum Moss (D8) (LRR T, U) | | | |
| Field Observations: | — | | | |
| Surface Water Present? Yes No X Depth (inches): | | | | |
| Water Table Present? Yes No X Depth (inches): | | | | |
| | d Hydrology Present? Yes X No | | | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if | availahla | | | |
| Describe Recorded Data (stream gauge, monitoring well, actual protos, providuo inopositoro), in | | | | |
| | | | | |
| Remarks: | | | | |
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Attachment 2.D.1 Page 115 of 230

VEGETATION (Five Strata) - Use scientific names of plants

| VEGETATION (Five Strata) - Use scient | ific names o | of plants. | | Sampling Point:15-B |
|---|--------------|-----------------|-----------|---|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: (A) |
| 3 | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 5 (B) |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: 80.0% (A/B) |
| | : | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. Li uidambar st raciflua | 15 | Yes | FAC | FACW species 85 x 2 = 170 |
| 2. Inus serrulata | 15 | Yes | FACW | FAC species <u>30</u> x 3 = <u>90</u> |
| 3 | | | | FACU species <u>15</u> x 4 = <u>60</u> |
| 4 | | | | UPL species 0 x 5 = 0 |
| 5 | | | | Column Totals: 130 (A) 320 (B) |
| 6. | | | | Prevalence Index = $B/A = 2.46$ |
| | 30 = | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | 15 20% | of total cover: | 6 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1. accinium stamineum | 15 | Yes | FACU | X 3 - Prevalence Index is $\leq 3.0^{1}$ |
| 2. | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | The direction of the data and the data data to see the |
| 6. | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| ··· | 15 = | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | | of total cover: | 3 | - |
| Herb Stratum (Plot size: 30) | 2070 | | | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| 1. h nchospora inexpansa | 35 | Yes | FACW | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. Dichanthelium scoparium | 30 | Yes | FACW | |
| | | | | Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less |
| | 15 | No | FAC | than 3 in. (7.6 cm) DBH. |
| 4. hexia mariana | 5 | No | FACW | |
| 5 | | | | Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. |
| 6 | | | | approximately 5 to 20 if (1 to 0 iii) in height. |
| 7 | | | | Herb - All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3 |
| 9 | | | | ft (1 m) in height. |
| 10 | | | | |
| 11 | | | | Woody Vine – All woody vines, regardless of height. |
| | 85 = | =Total Cover | | |
| 50% of total cover: | 43 20% | of total cover: | 17 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | | Total Cover | | Hydrophytic Vegetation |
| 50% of total cover: | | of total cover: | | Present? Yes X No |
| Remarks: (If observed, list morphological adaptatic | | | | · |
| | | | | |

SOIL Sampling Point: 15-B Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix **Redox Features** Color (moist) % Color (moist) Loc² Texture Remarks (inches) % Type¹ 10YR 3/2 0-2 100 Loamy/Clayey 2-8 10YR 4/2 85 10YR 4/6 10 Loamy/Clayey Prominent redox concentrations С Μ 10YR 3/6 С ΡL Prominent redox concentrations 5 8-20 10YR 5/2 80 10YR 5/8 20 С Μ Loamy/Clayey Prominent redox concentrations ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) X Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:

| | Attachment 2.D.1 |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 7/21/20 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 16-A |
| Investigator(s): S. Kupiec Section, Township, Range: | |
| Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none | e): Convex Slope (%): 2-4 |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.639716 Long: -77.6 | |
| Soil Map Unit Name: Fluvanna-Mattaponi complex | NWI classification: N/A |
| | No (If no, explain in Remarks.) |
| | Imstances" present? Yes X No |
| | n any answers in Remarks.) |
| | |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations | s, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes No X Is the Sampled Area Hydric Soil Present? Yes No X within a Wetland? Wetland Hydrology Present? Yes No X | Yes No X |
| Remarks: Upland above Flag AL-6. | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: Set Primary Indicators (minimum of one is required; check all that apply) | <u>condary Indicators (minimum of two required)</u> 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) Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: Surface Water Present? Yes No X Depth (inches): | trology Present? Yes No X |
| Remarks: | |

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VEGETATION (Five Strata) - Use scientific names of plants

| VEGETATION (Five Strata) - Use scienti | fic names of | f plants. | | Sampling Point: | 16-A |
|--|--------------|----------------|-----------|---|---------------------------|
| | Absolute | Dominant | Indicator | | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: | |
| 1. 2. | | | | Number of Dominant Species That Are OBL, FACW, or FAC: | 0 (A) |
| 3. | | | | Total Number of Dominant Species Across All Strata: | 2 (B) |
| 5. | | | | Percent of Dominant Species | (=/ |
| 6. | | | | That Are OBL, FACW, or FAC: | 0.0% (A/B) |
| | | Fotal Cover | | Prevalence Index worksheet: | |
| 50% of total cover: | 20% 0 | f total cover: | | | ultiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = | |
| 1 | | | | FACW species 0 x 2 = | |
| 2. | · | | | FAC species 0 x 3 = | |
| 3. | · | | | FACU species 65 x 4 = | 260 |
| 4. | · | | | UPL species $0 \times 5 =$ | 0 |
| 5 | | | | Column Totals: 65 (A) | 260 (B) |
| 6. | | | | Prevalence Index = B/A = | 4.00 |
| | | Fotal Cover | | Hydrophytic Vegetation Indicators: | |
| 50% of total cover: | 20% o | f total cover: | | 1 - Rapid Test for Hydrophytic Ve | getation |
| Shrub Stratum (Plot size: 30) | | | | 2 - Dominance Test is >50% | |
| 1 | | | | 3 - Prevalence Index is ≤3.0 ¹ | |
| 2 | | | | Problematic Hydrophytic Vegetati | on ¹ (Explain) |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland h | |
| 6 | | | | present, unless disturbed or problema | tic. |
| | | Fotal Cover | | Definitions of Five Vegetation Strat | a: |
| 50% of total cover: | 20% o | f total cover: | | Tree - Woody plants, excluding wood | |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in h (7.6 cm) or larger in diameter at breas | |
| 1. ol premum procumbens | 40 | Yes | FACU | (7.0 cm) of larger in diameter at breas | theight (DBH). |
| 2. rigeron annuus | 15 | Yes | FACU | Sapling - Woody plants, excluding w | |
| 3. upatorium capillifolium | 5 | No | FACU | approximately 20 ft (6 m) or more in h than 3 in. (7.6 cm) DBH. | eight and less |
| 4. araxacum officinale | 5 | No | FACU | | |
| 5 6 | | | | Shrub - Woody Plants, excluding woo approximately 3 to 20 ft (1 to 6 m) in h | |
| 7. | | | | Herb – All herbaceous (non-woody) p | lante including |
| 8. | | | | herbaceous vines, regardless of size, | |
| 9. | | | | plants, except woody vines, less than | |
| 10. | | | | ft (1 m) in height. | |
| 11. | | | | Woody Vine – All woody vines, regard | dless of height. |
| | 65 = | Fotal Cover | | | |
| 50% of total cover: 3 | | f total cover: | 13 | | |
| Woody Vine Stratum (Plot size: 30) | | | | | |
| | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| | | | | | |
| 5 | | Fotal Cover | | Hydrophytic | |
| 50% of total cover: | | f total cover: | | Vegetation Present? Yes No | x |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | | |

| Depth | Matrix | | Redo | x Featu | res | | | | | | | |
|--|--|------------|--|--|---------------------|-------------------------|--|--|----------------------------|---------------|--|--|
| inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Tex | ture | Rem | arks | | |
| 0-8 | 10YR 4/4 | 100 | | | | <u> </u> | Sai | ndy | | | | |
| | | · | | | | · | | | | | | |
| lydric Soil Histosol | | | RRs, unless othe | erwise r urface (\$ | noted.) S9) (LRR | S, T, U) | | Location: PL=Po ndicators for Pro1 cm Muck (A | oblematic Hy 9) (LRR O) | | | |
| Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) | | | | | 12) | 2 cm Muck (A10) (LRR S) | | | | | | |
| Black Histic (A3) (MLRA 153B, 153D) | | | | | | _ | Coast Prairie | Redox (A16) | | | | |
| Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) | | | | | RR O) | | (outside MI | _RA 150A) | | | | |
| Stratified | d Layers (A5) | | Loamy Gleyed Matrix (F2) | | | | Reduced Vertic (F18) | | | | | |
| Organic | Bodies (A6) (LRR P, | T, U) | Depleted Ma | atrix (F3) |) | | | (outside MI | _RA 150A, 15 | 0B) | | |
| 5 cm Mu | ucky Mineral (A7) (LR | R P, T, U) | Redox Dark | Surface | (F6) | | Piedmont Floodplain Soils (F19) (LRR P, T) | | | | | |
| Muck Pr | esence (A8) (LRR U) | | Depleted Da | ark Surfa | ace (F7) | | _ | Anomalous Bright Floodplain Soils (F20) | | | | |
| 1 cm Mu | ick (A9) (LRR P, T) | | Redox Depr | essions | (F8) | | _ | (MLRA 153 | .RA 153B) | | | |
| Depleted | d Below Dark Surface | (A11) | Marl (F10) (| LRR U) | | | | Red Parent M | | | | |
| | ark Surface (A12) | 、 , | Depleted Oc | | 1) (MLRA | A 151) | - | | Shallow Dark Surface (F22) | | | |
| | rairie Redox (A16) (M | LRA 150A | | | | | | | | | | |
| | lucky Mineral (S1) (L | | Umbric Surf | | | , . | Barrier Islands Low Chroma Matrix (TS7) | | | | | |
| | Bleyed Matrix (S4) | - , - , | Delta Ochric | | | | (MLRA 153B, 153D) | | | | | |
| | Redox (S5) | | Reduced Ve | | | | | | | | | |
| | Matrix (S6) | | Piedmont Fl | | , . | | - | | | | | |
| | rface (S7) (LRR P, S, | т ц) | Anomalous | | | | | | | | | |
| | ie Below Surface (S8) | | | - | | 00.00 (. 2 | | ³ Indicators of | hydrophytic ve | edetation and | | |
| | | | (MLRA 149A, 153C, 153D) Very Shallow Dark Surface (F22) | | | | | | - | | | |
| (| (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) | | | wetland hydrology must be present, unless disturbed or problematic. | | | | | | | | |
| Restrictive | Layer (if observed): | | | | | | | | • | | | |
| Type: | Compaction | | | | | | | | | | | |
| Depth (ii | nches): | 8 | | | | | Hydric | Soil Present? | Yes | No X | | |
| Remarks: | | | | | | I | | | | | | |

| | | Attachment 2.D.1 |
|---|---------------------------------|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coa See ERDC/EL TR-07-24; the proponent agency is CEC | - | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/ | County: Greensville | Sampling Date: 7/21/2020 |
| Applicant/Owner: Dominion Energy Virginia | | State: VA Sampling Point: 16-B |
| Investigator(s): S. Kupiec Section, 7 | Township, Range: | |
| Landform (hillside, terrace, etc.): Slope Local relief (| concave, convex, none | e): <u>Convex</u> Slope (%): <u>1-2</u> |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.63556 | Long: -77.6 | 10041 Datum: |
| Soil Map Unit Name: Woodington fine sandy loam | | NWI classification: N/A |
| Are climatic / hydrologic conditions on the site typical for this time of year? | Yes <u>X</u> | No (If no, explain in Remarks.) |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed? | Are "Normal Circu | mstances" present? Yes X No |
| Are Vegetation, Soil, or Hydrologynaturally problematic? | (If needed, explain | any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing samplin | ig point locations | s, transects, important features, etc. |
| | e Sampled Area in a Wetland? | YesNo_X |
| Remarks: Upland at Flag AP-4. | | |
| HYDROLOGY | | |
| Wetland Hydrology Indicators: | Sec | condary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | | _Surface Soil Cracks (B6) |
| Surface Water (A1) Aquatic Fauna (B13) High Water Table (A2) Marl Deposits (B15) (LRR U) | | Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) |
| High Water Table (A2) Saturation (A3) Marl Deposits (B15) (LRR U) Hydrogen Sulfide Odor (C1) | | _Drainage Patterns (B10) Moss Trim Lines (B16) |
| Water Marks (B1) Oxidized Rhizospheres on Livi | ing Roots (C3) | Dry-Season Water Table (C2) |
| Sediment Deposits (B2) Presence of Reduced Iron (C4 | | Crayfish Burrows (C8) |
| Drift Deposits (B3) | d Soils (C6) | Saturation Visible on Aerial Imagery (C9) |
| Algal Mat or Crust (B4) Thin Muck Surface (C7) | | Geomorphic Position (D2) |
| Iron Deposits (B5) Other (Explain in Remarks) | | Shallow Aquitard (D3) |
| Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) | | _FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: | <u> </u> | |
| Surface Water Present? Yes No X Depth (inches): | | |
| Water Table Present? Yes No X Depth (inches): | — | |
| Saturation Present? Yes No X Depth (inches): | Wetland Hyd | rology Present? Yes No X |
| (includes capillary fringe) | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous | s inspections), it availa | ıble: |
| | | |
| Remarks: | | |
| | | |
| | | |
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VEGETATION (Ei Strata) 114 . ntifi

| VEGETATION (Five Strata) – Use scient | tific names of plants. | Sampling Point:16-B |
|--|--|--|
| Tree Stratum (Plot size: 30) | Absolute Dominant Indicator % Cover Species? Status | Dominance Test worksheet: |
| 1. 2. | · | Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) |
| 3. 4. | · | Total Number of Dominant Species Across All Strata: 1 (B) |
| 5 6 | · | Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B) |
| | =Total Cover | Prevalence Index worksheet: |
| 50% of total cover: | 20% of total cover: | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | OBL species 0 x 1 = 0 |
| 1 | | FACW species 0 x 2 = 0 |
| 2. | | FAC species 0 x 3 = 0 |
| 3. | | FACU species $0 	 x 4 = 0$ |
| 4. | | UPL species 50 x 5 = 250 |
| 5. | | Column Totals: 50 (A) 250 (B) |
| 5 6. | | $\frac{1}{200}$ Prevalence Index = B/A = 5.00 |
| | =Total Cover | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | 20% of total cover: | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | 2 - Dominance Test is >50% |
| | | 3 - Prevalence Index is $\leq 3.0^{1}$ |
| 1. | | - |
| 2 | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | · · | - |
| 4. | · | _ |
| 5 | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | present, unless disturbed or problematic. |
| | =Total Cover | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% of total cover: | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. I cine max | 50 Yes UPL | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. | | Sapling – Woody plants, excluding woody vines, |
| 3. | | approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. |
| 5. | | Shrub - Woody Plants, excluding woody vines, |
| 6. | · | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7 | · | Herb – All herbaceous (non-woody) plants, including |
| 8 | · | herbaceous vines, regardless of size, and woody |
| 9 | · | plants, except woody vines, less than approximately 3 ft (1 m) in height. |
| 10 | · · | _ |
| 11 | · · | Woody Vine – All woody vines, regardless of height. |
| | 50 =Total Cover | |
| 50% of total cover: | 25 20% of total cover: 10 | _ |
| Woody Vine Stratum (Plot size: 30) | | |
| 1 | | _ |
| 2. | | |
| 3. | | - |
| 4. | | - |
| 5. | | - |
| | =Total Cover | - Hydrophytic |
| 50% of total cover: | 20% of total cover: | Vegetation Present? Yes No X |
| Remarks: (If observed, list morphological adaptation | ons below.) | |

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Inches) Color (moist) % Type Loc ² Texture Remarks 0-6 10YR 4/1 95 10YR 4/6 5 C PL Loamy/Clayey Prominent redox concentrations 6-20 2.5Y 6/3 95 10YR 4/6 5 C M Loamy/Clayey Prominent redox concentrations 6-20 2.5Y 6/3 95 10YR 4/6 5 C M Loamy/Clayey Prominent redox concentrations 10 | | | | | | | | | | | |
|---|------------------------|------------------------|---------------|------------------|------------|------------|------------|-----------|--------------------------|--------------------------|------------------------|
| Depth Matrix Redox Features nches) Color (moist) % Type Loc ² Texture Remarks 0-6 10YR 4/1 95 10YR 4/6 5 C PL Loamy/Clayey Prominent redox concentrations 6-20 2.5Y 5/3 95 10YR 4/6 5 C M Loamy/Clayey Prominent redox concentrations 6-20 2.5Y 5/3 95 10YR 4/6 5 C M Loamy/Clayey Prominent redox concentrations 7 Transpace | SOIL | | | | | | | | | Sampling Point: | 16-B |
| Inches) Color (moist) % Color (moist) % Type ¹ Loc ² Texture Remarks 0-6 10YR 4/1 95 10YR 4/6 5 C PL Loamy/Clayey Prominent redox concentrations 6-20 2.5Y 5/3 95 10YR 4/6 5 C M Loamy/Clayey Prominent redox concentrations 6-20 2.5Y 5/3 95 10YR 4/6 5 C M Loamy/Clayey Prominent redox concentrations 7/percencentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. * Location: PL=Pore Lining, M=Matrix. 7/price Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) 2 cm Muck (A10 (LRR O) Histosol (A2) Bartier Islands 1 cm Muck (S12) 2 cm Muck (A10 (LRR S) Coast Prain Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) (outside MLRA 150A) Organic Bodies (A6) (LR P, T, U) Redox Depreseions (F8) (MLRA 153B) Piedmont Floodpl | | cription: (Describe to | o the depth | | | | ator or co | onfirm th | ne absence o | of indicators.) | |
| 0-6 10YR 4/1 95 10YR 4/6 5 C PL Loamy/Clayey Prominent redox concentrations 6-20 2.5Y 5/3 95 10YR 4/6 5 C M Loamy/Clayey Prominent redox concentrations 6-20 2.5Y 5/3 95 10YR 4/6 5 C M Loamy/Clayey Prominent redox concentrations 6-20 2.5Y 5/3 95 10YR 4/6 5 C M Loamy/Clayey Prominent redox concentrations 6-20 2.5Y 5/3 95 10YR 4/6 5 C M Loamy/Clayey Prominent redox concentrations 7 10YE C C M Loamy/Clayey Prominent redox concentrations 7 2.5 M Loamy (Party A/6) Loam | Depth | | | | | , | . 2 | - | | - | - |
| 6-20 2.5Y 5/3 95 10YR 4/6 5 C M Loamy/Clayey Prominent redox concentrations Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Histic Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ² : Histic Eppedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A9) (LRR S) Coast Prairie Redox (A10) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) (LLR P, S) Stratified Layers (A5) Loamy Mucky Mineral (F1) Class Orgheyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Redox Depressions (F8) (MLRA 153B) Red Parent Material (F21) Muck Prisence (A8) (LRR P, T) Reduced Vertic (F13) (LRR P, T, U) Reduced Vertic (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Mucky Mineral (S1) (LRR O, S) | (inches) | Color (moist) | % | Color (moist) | % | Type | Loc | Te | exture | Remar | ٢S |
| Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. tydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histosol (A1) Matrix In Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 1538, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B) S cm Mucky Mineral (A7) (LRR P, T, U) Redox Depressions (F8) (MLRA 153B) Depleted Deleob Dark Surface (A11) Matrix (F10) (LRR P, T, U) Red Parent Material (F21) Depleted Deleob Dark Surface (A11) Matrix (F10) (LRR P, T, U) Red Parent Material (F21) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) Gutside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (MLRA 151) (MLRA 138, 152A) Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Sandrace (S7) (LRR P, S, T, U) Sandrace (F13) (MLRA 154A, 155CA), 150B) <td< td=""><td>0-6</td><td>10YR 4/1</td><td>95</td><td>10YR 4/6</td><td>5</td><td>С</td><td>PL</td><td>Loam</td><td>y/Clayey</td><td>Prominent redox c</td><td>oncentrations</td></td<> | 0-6 | 10YR 4/1 | 95 | 10YR 4/6 | 5 | С | PL | Loam | y/Clayey | Prominent redox c | oncentrations |
| tydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histo Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (S1) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) | 6-20 | 2.5Y 5/3 | 95 | 10YR 4/6 | 5 | С | М | Loam | y/Clayey | Prominent redox c | oncentrations |
| tydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histo Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (S1) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) | | | | | | | | | | | |
| tydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histo Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (S1) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) | | | | | | | | | | | |
| tydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histo Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (S1) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) | | | | | | | | | | | |
| tydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histo Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (S1) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) | | | | | | | | | | | |
| tydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histo Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (S1) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) | | | | | | | | | | | |
| tydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histo Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (S1) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) | | | | | | | | | | | |
| Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Depressions (F6) Piedmont Floodplain Soils (F19) (LRR P, T Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A) (MLRA 153B, 153D) Stripped Matrix (S6) Piedmont Floodplain Soils (F10) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F10) MLRA 153B, 153D) Other (Explain in | ¹ Type: C=C | oncentration, D=Deple | tion, RM=R | educed Matrix, N | MS=Mas | ked San | d Grains. | | ² Location: F | PL=Pore Lining, M=Ma | trix. |
| Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T Muck Presence (A8) (LRR P, T) Redox Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Mari (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F | Hydric Soil | Indicators: (Applicat | ble to all LR | Rs, unless othe | erwise n | noted.) | | | Indicators f | for Problematic Hydri | c Soils ³ : |
| Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) Muck Mineral (S1) (LRR P, S, T, U) Polyvalue Below Surface (S8) (MLRA 149 | Histosol | (A1) | | Thin Dark S | urface (S | 39) (LRR | : S, T, U) | | 1 cm M | uck (A9) (LRR O) | |
| Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) Other (Explain in Remarks) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or probl | Histic Ep | pipedon (A2) | - | Barrier Islan | ds 1 cm | Muck (S | 12) | | 2 cm M | uck (A10) (LRR S) | |
| Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) MucRA 154A, 155Z, 153D) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154) Restrictive Layer (If observed): Type: | Black Hi | stic (A3) | - | (MLRA 15 | 53B, 153 | SD) | | | Coast F | Prairie Redox (A16) | |
| Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) Other (Explain in Remarks) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154) Restrictive Layer (if observed): Type: | Hydroge | en Sulfide (A4) | | Loamy Mucł | ky Miner: | al (F1) (l | _RR O) | | (outs | ide MLRA 150A) | |
| Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T, Muck (A9) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) Other (Explain in Remarks) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154) Restrictive Layer (if observed): Type: | | | - | | - | | | | Reduce | ed Vertic (F18) | |
| Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) (LRR S, T, U) Very Shallow Dark Surface (F22) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: | | | T, U) | X Depleted Ma | atrix (F3) |) | | | (outs | ide MLRA 150A, 150B | 5) |
| Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) (LRR S, T, U) Very Shallow Dark Surface (F22) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: | 5 cm Mu | ucky Mineral (A7) (LRF | τ, τ, υ) – | Redox Dark | Surface | (F6) | | | Piedmo | ont Floodplain Soils (F1 | 9) (LRR P, T |
| Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F17) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Other (Explain in Remarks) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: | | | - | | | | | | | | |
| Thick Dark Surface (A12)Depleted Ochric (F11) (MLRA 151)Very Shallow Dark Surface (F22)Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR O, P, T)(outside MLRA 138, 152A in FL, 154)Sandy Mucky Mineral (S1) (LRR O, S)Umbric Surface (F13) (LRR P, T, U)Barrier Islands Low Chroma Matrix (TS7)Sandy Gleyed Matrix (S4)Delta Ochric (F17) (MLRA 151)(MLRA 153B, 153D)Sandy Redox (S5)Reduced Vertic (F18) (MLRA 150A, 150B)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F19) (MLRA 149A)Other (Explain of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154)3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.Restrictive Layer (if observed): Type:Type:Hydric Soil Present?Yes_X_No_ | 1 cm Mu | uck (A9) (LRR P, T) | - | Redox Depr | essions | (F8) | | | (MLR | A 153B) | |
| Thick Dark Surface (A12)Depleted Ochric (F11) (MLRA 151)Very Shallow Dark Surface (F22)Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR O, P, T)(outside MLRA 138, 152A in FL, 154)Sandy Mucky Mineral (S1) (LRR O, S)Umbric Surface (F13) (LRR P, T, U)Barrier Islands Low Chroma Matrix (TS7)Sandy Gleyed Matrix (S4)Delta Ochric (F17) (MLRA 151)(MLRA 153B, 153D)Sandy Redox (S5)Reduced Vertic (F18) (MLRA 150A, 150B)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F19) (MLRA 149A)Other (Explain in Remarks)Dark Surface (S7) (LRR P, S, T, U)Anomalous Bright Floodplain Soils (F20)3Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154)Restrictive Layer (if observed): Type:Type:Hydric Soil Present?Yes_X_No_ | | | (A11) - | Marl (F10) (| LRR U) | | | | Red Pa | rent Material (F21) | |
| Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR O, P, T)(outside MLRA 138, 152A in FL, 154)Sandy Mucky Mineral (S1) (LRR O, S)Umbric Surface (F13) (LRR P, T, U)Barrier Islands Low Chroma Matrix (TS7)Sandy Gleyed Matrix (S4)Delta Ochric (F17) (MLRA 151)(MLRA 153B, 153D)Sandy Redox (S5)Reduced Vertic (F18) (MLRA 150A, 150B)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F19) (MLRA 149A)Other (Explain in Remarks)Dark Surface (S7) (LRR P, S, T, U)Anomalous Bright Floodplain Soils (F20) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154)Restrictive Layer (if observed): Type: Depth (inches):Vers Shallow Dark Surface (F22) Hydric Soil Present?Yes X No | | | - | | | 1) (MLR | A 151) | | | | 22) |
| Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Other (Explain in Remarks) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) 3Indicators of hydrophytic vegetation and Very Shallow Dark Surface (F22) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: | Coast P | rairie Redox (A16) (MI | | | | | | D, P, T) | (outs | ide MLRA 138, 152A i | n FL, 154) |
| Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) Other (Explain in Remarks) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) ³ Indicators of hydrophytic vegetation and (LRR S, T, U) Very Shallow Dark Surface (F22) wetland hydrology must be present, (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No | | | - | | | | | | Barrier | Islands Low Chroma N | latrix (TS7) |
| Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) (LRR S, T, U) Very Shallow Dark Surface (F22) wetland hydrology must be present, (MLRA 138, 152A in FL, 154) Restrictive Layer (if observed): Type: | Sandy G | Bleyed Matrix (S4) | - | | | | | | | | · · · · |
| Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) (LRR S, T, U) Very Shallow Dark Surface (F22) wetland hydrology must be present, (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No | | | - | | | | | 50B) | | | |
| Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) (LRR S, T, U) Very Shallow Dark Surface (F22) Wetland hydrology must be present, (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): | Stripped | Matrix (S6) | - | Piedmont FI | oodplain | Soils (F | 19) (MLR | A 149A) | | | |
| Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) ³ Indicators of hydrophytic vegetation and Very Shallow Dark Surface (F22) wetland hydrology must be present, (MLRA 138, 152A in FL, 154) Restrictive Layer (if observed): Type: | | | T, U) | | | | | | | | |
| (LRR S, T, U) | | | - | | - | | | , | ³ Indicat | ors of hydrophytic vege | etation and |
| (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? | - | | | | | | | | | | |
| Type: | (| | - | | | ` | , | | | | |
| Depth (inches): | Restrictive | Layer (if observed): | | | | | | | | | |
| | Type: | | | | | | | | | | |
| Remarks: | Depth (i | nches): | | | | | | Hydri | c Soil Prese | ent? Yes X | No |
| | Remarks: | | | | | · | · | | | | |
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| | | | | chment 2.D.1 ge 123 of 230 |
|---|---|---------------------------------------|---|--|
| U.S. Army WETLAND DETERMINATION DATA See ERDC/EL TR-07-24; t | | 0 | OMB Control #: 0710- | xxxx, Exp: Pending I Symbol EXEMPT: |
| Project/Site: TL 254/2201 Clubhouse - Lak | eview 230 kV Rebuild | City/County: Greensvill | eSamp | bling Date: 7/21/2020 |
| Applicant/Owner: Dominion Energy Virg | jinia | - | State: VA Samp | bling Point: 16-C |
| Investigator(s): S. Kupiec | Se | ection, Township, Range: | | |
| Landform (hillside, terrace, etc.): Slope | Loca | I relief (concave, convex, | none): Convex | Slope (%): 1-2 |
| Subregion (LRR or MLRA): LRR P, MLRA | | | 7.610501 | Datum: |
| Soil Map Unit Name: Woodington fine sand | | | NWI classification: | J/A |
| Are climatic / hydrologic conditions on the si | - | ? Yes X | No (If no, explain | in Remarks.) |
| Are Vegetation, Soil, or Hydro | | | | Yes X No |
| Are Vegetation , Soil , or Hydro | | | blain any answers in Remarks | |
| SUMMARY OF FINDINGS – Attach | | | - | |
| | | | | |
| Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? | Yes X No Yes X No Yes X No | Is the Sampled Area within a Wetland? | Yes <u>X</u> No_ | |
| Remarks: Wetland at Flag AP-4. | | | | |
| L HYDROLOGY | | | | |
| Wetland Hydrology Indicators: | | | Secondary Indicators (minim | um of two required) |
| Primary Indicators (minimum of one is requ | uired: check all that apply) | | Surface Soil Cracks (B6) | |
| Surface Water (A1) | Aquatic Fauna (B13) | | Sparsely Vegetated Con | |
| High Water Table (A2) | Marl Deposits (B15) (L | | Drainage Patterns (B10) | |
| Saturation (A3) | Hydrogen Sulfide Odor | | Moss Trim Lines (B16) | , |
| Water Marks (B1) | Oxidized Rhizospheres | • • • • | Dry-Season Water Table | e (C2) |
| Sediment Deposits (B2) Drift Deposits (B3) | Presence of Reduced Recent Iron Reduction | | Crayfish Burrows (C8) Saturation Visible on Ae | rial Imagery (C9) |
| Algal Mat or Crust (B4) | Thin Muck Surface (C7 | | Geomorphic Position (D2 | |
| Iron Deposits (B5) | Other (Explain in Rema | | Shallow Aquitard (D3) | , |
| Inundation Visible on Aerial Imagery (B | 37) | | X FAC-Neutral Test (D5) | |
| X Water-Stained Leaves (B9) | | | Sphagnum Moss (D8) (L | .RR T, U) |
| Field Observations: | | | | |
| Surface Water Present? Yes | No X Depth (inches | · | | |
| Water Table Present? Yes Saturation Present? Yes | No X Depth (inches) No X Depth (inches) | | Hydrology Present? | Voc X No |
| Saturation Present? Yes (includes capillary fringe) | | | hydrology Present? | Yes X No |
| Describe Recorded Data (stream gauge, m | onitoring well, aerial photos, | previous inspections), if a | vailable: | |
| | | | | |
| Demorius | | | | |
| Remarks: | | | | |
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Attachment 2.D.1 Page 124 of 230

VEGETATION (Five Strata) – Use scientific names of plants

| VEGETATION (Five Strata) - Use scienti | fic names o | of plants. | | Sampling Point:16-C |
|--|-------------|-----------------|-----------|--|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: 5 (A) |
| 3 | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 5 (B) |
| 5 | | | | Percent of Dominant Species |
| 6. | | | | That Are OBL, FACW, or FAC: 100.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 20 x 1 = 20 |
| 1. etula nigra | 10 | Yes | FACW | FACW species 35 x 2 = 70 |
| 2. Li uidambar st raciflua | 5 | Yes | FAC | FAC species 40 x 3 = 120 |
| 3. ssa s 1 atica | 5 | Yes | FAC | FACU species $0 	 x 4 = 0$ |
| 4. | | | | UPL species $0 	 x 5 = 0$ |
| 5. | | | | Column Totals: 95 (A) 210 (B) |
| 6. | | | | Prevalence Index = $B/A = 2.21$ |
| 0 | 20 = | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 500/ of total approx | | of total cover: | 4 | 1 - Rapid Test for Hydrophytic Vegetation |
| | 0 20% | | 4 | |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | X_3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4. | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | : | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. Solidago rugosa | 30 | Yes | FAC | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. Juncus effusus | 15 | Yes | OBL | Sapling – Woody plants, excluding woody vines, |
| 3. Saccharum giganteum | 10 | No | FACW | approximately 20 ft (6 m) or more in height and less |
| 4. Dichanthelium scoparium | 10 | No | FACW | than 3 in. (7.6 cm) DBH. |
| 5. cnanthemum tenuifolium | 5 | No | FACW | Shrub - Woody Plants, excluding woody vines, |
| 6. Ludwigia palustris | 5 | No | OBL | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. | | | | Herb – All herbaceous (non-woody) plants, including |
| 8. | | | | herbaceous vines, regardless of size, and woody |
| 0 | | | | plants, except woody vines, less than approximately 3 |
| 10 | | | | ft (1 m) in height. |
| 11. | | | | Woody Vine – All woody vines, regardless of height. |
| | 75 = | =Total Cover | | , |
| 500% of total power: 2 | | of total cover: | 15 | |
| | 8 20% | or lotal cover. | 15 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | Hydrophytic |
| | : | =Total Cover | | Vegetation |
| 50% of total cover: | 20% | of total cover: | | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | |

Remarks

16-C

Sampling Point:

| 0-6 | 10YR 4/1 | 80 | 10YR 5/4 | 15 | С | Μ | Loamy/Clayey | | Distinct redox co | ncentrations |
|----------------------|--|---------------|-----------------|-------------|----------|----------|----------------------|--------------|---------------------------------------|-------------------------|
| | | | 10YR 4/4 | 5 | С | PL | | | Distinct redox co | ncentrations |
| 6-20 | 10YR 5/2 | 85 | 10YR 5/6 | 15 | С | M | Loamy/Clayey | Pr | ominent redox c | concentration |
| | | | | · | | | | | | |
| ype: C=C | oncentration, D=Dep | bletion, RM= | Reduced Matrix, | MS=Mask | ed San | Grains. | ² Locatio | n: PL=Po | ore Lining, M=Ma | atrix. |
| ydric Soil | Indicators: (Application | able to all L | RRs, unless oth | erwise n | oted.) | | Indicato | ors for Pro | oblematic Hydr | ic Soils ³ : |
| Histosol | (A1) | | Thin Dark S | Surface (S | 9) (LRR | S, T, U) | 1 cr | n Muck (A | .9) (LRR O) | |
| | pipedon (A2) | | Barrier Islar | nds 1 cm | Muck (S | 12) | 2 cr | n Muck (A | .10) (LRR S) | |
| | istic (A3) | | (MLRA 1 | | , | | | | Redox (A16) | |
| _ · · | en Sulfide (A4) | | Loamy Muc | - | | RR O) | | | LRA 150A) | |
| | d Layers (A5) | | Loamy Gley | | : (F2) | | | uced Vert | . , | - |
| _ | Bodies (A6) (LRR P | | X Depleted M | | | | | | LRA 150A, 150E | |
| | ucky Mineral (A7) (Lf resence (A8) (LRR L | | Redox Dark | | | | | | odplain Soils (F´ right Floodplain | |
| | uck (A9) (LRR P, T) | ,) | Redox Depi | | ` ' | | | 1LRA 153 | • | 50113 (1 20) |
| | d Below Dark Surfac | e (A11) | Marl (F10) (| ``` | 10) | | | | laterial (F21) | |
| | ark Surface (A12) | - () | Depleted O | |) (MLRA | A 151) | | | Dark Surface (F | 22) |
| Coast P | rairie Redox (A16) (N | MLRA 150A | | | | | | | LRA 138, 152A | , |
| Sandy M | /lucky Mineral (S1) (I | LRR O, S) | Umbric Sur | face (F13 |) (LRR F | P, T, U) | Bar | rier Islands | s Low Chroma N | /latrix (TS7) |
| Sandy G | Bleyed Matrix (S4) | | Delta Ochri | c (F17) (N | 1LRA 15 | 1) | (N | 1LRA 153 | B, 153D) | |
| Sandy R | Redox (S5) | | Reduced Ve | ertic (F18) |) (MLRA | 150A, 15 | 0B) Oth | er (Explair | n in Remarks) | |
| | I Matrix (S6) | | Piedmont F | | | | | | | |
| | rface (S7) (LRR P, S | | Anomalous | - | | | | | | |
| - | e Below Surface (St | 3) | (MLRA 1 | | | | | | hydrophytic veg | |
| (LRR | S, T, U) | | Very Shallo | | | | | - | drology must be | |
| | | | (MLRA 1 | 38, 152A | IN FL, I | 54) | u | niess disti | urbed or problen | natic. |
| | Layer (if observed) | | | | | | | | | |
| Type: | nches): | | | | | | Hydric Soil Pr | esent? | Yes X | No |
| Depth (ir | | | | | | | 5 | | | |
| Depth (ir emarks: | | | | | | | | | | |
| • • | | | | | | | | | | |
| • • | | | | | | | | | | |
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| | | | | | | | | | | |
| Depth (ir | | | | | | | | | | |

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

Color (moist)

Redox Features

%

Loc²

Texture

Type¹

SOIL

Depth

(inches)

Matrix

%

Color (moist)

| | Attachment 2.D.1 |
|---|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 7/21/2020 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 17-A |
| Investigator(s): S. Kupiec Section, Township, Range: | |
| Landform (hillside, terrace, etc.): Drainageway Local relief (concave, convex, non | ne): Concave Slope (%): 0-1 |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.633127 Long: -77.6 | 511171 Datum: |
| Soil Map Unit Name: Woodington fine sandy loam | NWI classification: N/A |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes X | No (If no, explain in Remarks.) |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal Circu | umstances" present? Yes X No |
| Are Vegetation, Soil, or Hydrologynaturally problematic? (If needed, explain | n any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing sampling point location | s, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? Wetland Hydrology Present? Yes X No No | Yes <u>X</u> No |
| Remarks: Wetland near Structure 254-45. | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: Se | econdary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | Surface Soil Cracks (B6) |
| Surface Water (A1) Aquatic Fauna (B13) | Sparsely Vegetated Concave Surface (B8) |
| High Water Table (A2) Marl Deposits (B15) (LRR U) Saturation (A3) Hydrogen Sulfide Odor (C1) | _ Drainage Patterns (B10) Moss Trim Lines (B16) |
| Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) | Dry-Season Water Table (C2) |
| Sediment Deposits (B2) Presence of Reduced Iron (C4) | Crayfish Burrows (C8) |
| Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) | Saturation Visible on Aerial Imagery (C9) |
| Algal Mat or Crust (B4) Thin Muck Surface (C7) | Geomorphic Position (D2) |
| Iron Deposits (B5) Other (Explain in Remarks) | Shallow Aquitard (D3) |
| Inundation Visible on Aerial Imagery (B7) X Water-Stained Leaves (B9) | <pre>_ FAC-Neutral Test (D5) _ Sphagnum Moss (D8) (LRR T, U)</pre> |
| Field Observations: | |
| Surface Water Present? Yes No X Depth (inches): | |
| Water Table Present? Yes No X Depth (inches): | |
| | drology Present? Yes X No |
| (includes capillary fringe) | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if availa | able: |
| | |
| Remarks: | |
| | |
| | |
| | |
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| | |

Attachment 2.D.1 Page 127 of 230

VEGETATION (Five Strata) – Use scientific names of plants

| VEGETATION (Five Strata) - Use scienti | fic names | of plants. | | Sampling Point: 17-A |
|--|------------|-----------------|-----------|--|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: 3 (A) |
| 3 | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 5 (B) |
| 5 | | | | Percent of Dominant Species |
| 6. | | | | That Are OBL, FACW, or FAC: 60.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 25 x 1 = 25 |
| 1. etula nigra | 35 | Yes | FACW | FACW species $45 \times 2 = 90$ |
| 2. Li uidambar st raciflua | 15 | Yes | FAC | FAC species 20 x 3 = 60 |
| 3. cer rubrum | 5 | No | FAC | FACU species $40 	 x4 = 160$ |
| 4. | | | | UPL species $0 	 x5 = 0$ |
| 5. | | | | Column Totals: 130 (A) 335 (B) |
| 6. | | | | $\frac{1}{2} \frac{1}{2} \frac{1}$ |
| 0 | 55 | =Total Cover | | Hydrophytic Vegetation Indicators: |
| E00/ of total appears | | | 11 | |
| | 8 20% | of total cover: | 11 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | X_3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. Solidago altissima | 35 | Yes | FACU | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. Juncus effusus | 25 | Yes | OBL | Sapling – Woody plants, excluding woody vines, |
| 3. noclea sensibilis | 10 | No | FACW | approximately 20 ft (6 m) or more in height and less |
| 4. | | | | than 3 in. (7.6 cm) DBH. |
| 5. | | | | Shrub - Woody Plants, excluding woody vines, |
| 6. | | | | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. | | | | |
| 8. | | | | Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody |
| 9. | | | | plants, except woody vines, less than approximately 3 |
| 10. | | | | ft (1 m) in height. |
| | | | | Woody Vine – All woody vines, regardless of height. |
| 11 | 70 | Total Course | | |
| 500/ - (1-1-1 | | =Total Cover | | |
| | 5 20% | of total cover: | 14 | |
| Woody Vine Stratum (Plot size: 30) | _ | | | |
| 1. Lonicera aponica | 5 | Yes | FACU | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | Hydrophytic |
| | 5 | =Total Cover | | Vegetation |
| 50% of total cover: | 3 20% | of total cover: | 1 | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | |

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| Audonment | ۷. |
|-----------------|----|
| Page 128 o | f |
| Sampling Point: | |

| epth nches) | | | Redo | x Featur | es | | | | | |
|----------------|-----------------------|------------|--------------------|------------|-------------------|------------------|----------|---------------------------|------------------------|------------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Te | exture | Remark | ٢S |
| 0-20 | 10YR 4/2 | 75 | 10YR 4/4 | 15 | С | М | Loam | y/Clayey | Distinct redox cor | ncentrations |
| | | · | 10YR 3/4 | 10 | C | | | | Distinct redox cor | ncentrations |
| | | · | | | | | | | | |
| Гуре: С=Сс | oncentration, D=Depl | etion, RM | =Reduced Matrix, N | /IS=Mas | ked Sand | d Grains. | | ² Location: PL | L=Pore Lining, M=Ma | trix. |
| lydric Soil I | ndicators: (Applica | ble to all | LRRs, unless othe | erwise n | noted.) | | | Indicators fo | or Problematic Hydri | c Soils ³ : |
| Histosol | (A1) | | Thin Dark St | urface (S | 89) (LRR | S, T, U) | | 1 cm Muo | ck (A9) (LRR O) | |
| Histic Ep | vipedon (A2) | | Barrier Islan | ds 1 cm | Muck (S | 12) | | 2 cm Muo | ck (A10) (LRR S) | |
| Black His | stic (A3) | | (MLRA 15 | 3B, 153 | D) | | | Coast Pra | airie Redox (A16) | |
| Hydrogei | n Sulfide (A4) | | Loamy Muck | ky Minera | al (F1) (L | RR O) | | (outsid | le MLRA 150A) | |
| Stratified | l Layers (A5) | | Loamy Gley | ed Matriz | x (F2) | | | Reduced | Vertic (F18) | |
| Organic I | Bodies (A6) (LRR P, | T, U) | X Depleted Ma | atrix (F3) | | | | (outsid | le MLRA 150A, 150B | ;) |
| 5 cm Mu | cky Mineral (A7) (LR | R P, T, U) | Redox Dark | Surface | (F6) | | | Piedmon | t Floodplain Soils (F1 | 9) (LRR P, T |
| Muck Pre | esence (A8) (LRR U) | | Depleted Da | rk Surfa | ce (F7) | | | Anomalo | us Bright Floodplain S | Soils (F20) |
| 1 cm Mu | ck (A9) (LRR P, T) | | Redox Depre | essions | (F8) | | | (MLRA | 153B) | |
| | Below Dark Surface | (A11) | Marl (F10) (I | | . , | | | Red Pare | ent Material (F21) | |
| | rk Surface (A12) | | Depleted Oc | | 1) (MLRA | A 151) | | | llow Dark Surface (F2 | 22) |
| Coast Pr | airie Redox (A16) (M | LRA 1504 | | | | | D, P, T) | | e MLRA 138, 152A i | |
| | lucky Mineral (S1) (L | | Umbric Surfa | | | | , | • | lands Low Chroma M | |
| | leyed Matrix (S4) | | Delta Ochric | | | | | | 153B, 153D) | () |
| - | edox (S5) | | Reduced Ve | | | | 50B) | | xplain in Remarks) | |
| - | Matrix (S6) | | Piedmont Fl | | , . | | - | | 1 | |
| | face (S7) (LRR P, S, | T. U) | Anomalous I | | | | | | | |
| | e Below Surface (S8) | | (MLRA 14 | - | | | - / | ³ Indicator | rs of hydrophytic vege | etation and |
| | S, T, U) | , | Very Shallov | | | | | | d hydrology must be | |
| (| | | (MLRA 13 | | | | | | disturbed or problem | |
| estrictive L | _ayer (if observed): | | | | | | | | | |
| Type: | | | | | | | | | | |
| Depth (in | nches): | | | | | | Hydri | c Soil Presen | t? Yes X | No |

| | Attachment 2.D.1 |
|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal See ERDC/EL TR-07-24; the proponent agency is CECW-C | OMB Control #: 0710-xxxx, Exp: Pending Plain Region Requirement Control Symbol EXEMPT: |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/Coun | ty: Greensville Sampling Date: 7/21/2020 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 17-B |
| Investigator(s): S. Kupiec Section, Towns | ship, Range: |
| Landform (hillside, terrace, etc.): Slope Local relief (conca | ave, convex, none): Convex Slope (%): 1-2 |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.633498 | Long: -77.610957 Datum: |
| Soil Map Unit Name: Woodington fine sandy loam | NWI classification: N/A |
| Are climatic / hydrologic conditions on the site typical for this time of year? | Yes X No (If no, explain in Remarks.) |
| | Are "Normal Circumstances" present? Yes X No |
| | If needed, explain any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing sampling per | |
| Hydric Soil Present? Yes X No within a V Wetland Hydrology Present? Yes No X | npled Area Vetland? Yes No_X |
| Remarks: Upland at Flag AQ-4. | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | Surface Soil Cracks (B6) |
| Surface Water (A1) Aquatic Fauna (B13) | Sparsely Vegetated Concave Surface (B8) |
| High Water Table (A2) Marl Deposits (B15) (LRR U) Saturation (A3) Hydrogen Sulfide Odor (C1) | Drainage Patterns (B10) Moss Trim Lines (B16) |
| Water Marks (B1) Oxidized Rhizospheres on Living R | |
| Sediment Deposits (B2) Presence of Reduced Iron (C4) | Crayfish Burrows (C8) |
| Drift Deposits (B3) Recent Iron Reduction in Tilled Soil | |
| Algal Mat or Crust (B4) Thin Muck Surface (C7) | Geomorphic Position (D2) |
| Iron Deposits (B5) Other (Explain in Remarks) | Shallow Aquitard (D3) |
| Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) | FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: | |
| Surface Water Present? Yes No X Depth (inches): | |
| Water Table Present? Yes No X Depth (inches): | |
| Saturation Present? Yes No X Depth (inches): | Wetland Hydrology Present? Yes No X |
| (includes capillary fringe) | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp | pections), if available: |
| | |
| Remarks: | |
| | |
| | |
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| | |

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VEGETATION (Five Strata) - Use scientific names of plants

| Image: Indicator Absolute Dominant Indicator 1. 3. Secies? Status Dominant Species? 3. Secies? That Are OBL, FACW, or FAC: 2 (A) 3. Secies? Total Number of Dominant Species Total Number of Dominant Species (A) 5. Secies Secies? Total Number of Dominant Species (A) 6. Secies Secies Secies Secies (A) 1. Li uidambar st raciflua 20 Yes FAC FAC Secies 0 x1 = 0 1. Li uidambar st raciflua 20 Yes FAC FAC FAC Species 0 x1 = 0 7. Secies Secies Secies Secies Secies Secies 0 x2 = 0 1. Li uidambar st raciflua 20 Yes FAC FAC FAC Species Secies Se |
|---|
| 1. |
| 2. |
| 3. |
| 4. |
| 5. |
| 6. |
| =Total Cover50% of total cover:Prevalence Index worksheet:50% of total cover:20% of total cover:Total % Cover of:Multiply by:Sapling Stratum (Plot size:30)0StratumOBL species0x 1 =01.Li uidambar st raciflua20YesFACFACW species0x 2 =02.2.20YesFACFACU species30x 3 =903.3.3.3.95x 4 =3804.3.3.3.3.0x 5 =05.3.3.3.3.3.3.3.6.3.3.3.3.3.3.3.6.3.3.3.3.3.3.3.6.3.3.3.3.3.3.3.7.3.3.3.3.3.3.3.7.3.3.3.3.3.3.3.7.3.3.3.3.3.3.3.7.3.3.3.3.3.3.3.7.3.3.3.3.3.3.3.7.3.3.3.3.3.3.3.7.3.3.3.3.3.3.3.7.3.3.3.3.3.3.3.7.3.3.3.3. </td |
| 50% of total cover: 20% of total cover: Total % Cover of: Multiply by: Sapling Stratum (Plot size: 30) 0 X 1 = 0 1. Li uidambar st raciflua 20 Yes FAC FACW species 0 X 2 = 0 2. 2. 6. 2. 7. FACU species 90 X 3 = 90 3. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 3. 2. |
| Sapling Stratum (Plot size: 30 0 1. Li uidambar st raciflua 20 Yes FAC FACW species 0 x 1 = 0 2. 1 20 Yes FAC FACW species 0 x 2 = 0 3. 1 |
| 1. Li uidambar st raciflua 20 Yes FAC FACW species 0 x 2 = 0 2. |
| 2. |
| 2. |
| 3. |
| 4. UPL species 0 x 5 = 0 5. Column Totals: 125 (A) 470 (B) 6. 20 =Total Cover Hydrophytic Vegetation Indicators: Hydrophytic Vegetation Indicators: |
| 5. Column Totals: 125 (A) 470 (B) 6. Prevalence Index = B/A = 3.76 20 =Total Cover Hydrophytic Vegetation Indicators: |
| 6. Prevalence Index = B/A = 3.76 20 =Total Cover Hydrophytic Vegetation Indicators: |
| 20 =Total Cover Hydrophytic Vegetation Indicators: |
| |
| |
| |
| Shrub Stratum (Plot size: 30) 2 - Dominance Test is >50% |
| 1 3 - Prevalence Index is ≤3.0 ¹ |
| 2 Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 |
| 4 |
| 5 ¹ Indicators of hydric soil and wetland hydrology must b |
| 6 present, unless disturbed or problematic. |
| =Total Cover Definitions of Five Vegetation Strata: |
| 50% of total cover: 20% of total cover: Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) approximately 20 ft (6 m) or more in height and 3 in. |
| 1. Solidago altissima 75 Yes FACU (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. Sapling – Woody plants, excluding woody vines, |
| 3. approximately 20 ft (6 m) or more in height and less |
| 4 than 3 in. (7.6 cm) DBH. |
| 5. Shrub - Woody Plants, excluding woody vines, |
| 6. approximately 3 to 20 ft (1 to 6 m) in height. |
| |
| 7 Herb – All herbaceous (non-woody) plants, including |
| 8. herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3 |
| 5 ft (1 m) in height. |
| |
| 11. Woody Vine – All woody vines, regardless of height. |
| 75 =Total Cover |
| 50% of total cover: 38 20% of total cover: 15 |
| Woody Vine Stratum (Plot size: 30) |
| 1. itis aesti alis 20 Yes FACU |
| 2. Campsis radicans 10 Yes FAC |
| 3 |
| 4. |
| 5. |
| 30 =Total Cover Hydrophytic Vegetation |
| 50% of total cover: 15 20% of total cover: 6 Present? Yes No X |
| Remarks: (If observed, list morphological adaptations below.) |

SOIL Sampling Point: 17-B Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix Color (moist) % Color (moist) Loc² Texture (inches) % Type¹ Remarks 0-20 2.5Y 4/2 5 Prominent redox concentrations 95 10YR 4/6 С Μ Loamy/Clayey ²Location: PL=Pore Lining, M=Matrix. ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:

| | | | Attachment 2.D.1 | | |
|---|---|---------------------------------------|---|--|--|
| U.S. Army WETLAND DETERMINATION DATA S See ERDC/EL TR-07-24; t | Page 132 of 230 OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) | | | | |
| Project/Site: TL 254/2201 Clubhouse - Lake | eview 230 kV Rebuild | City/County: Greensville | Sampling Date: 8/6/2020 | | |
| Applicant/Owner: Dominion Energy Virgi | | | State: VA Sampling Point: 18-A | | |
| | | ection, Township, Range: | | | |
| Landform (hillside, terrace, etc.): Drainagev | | I relief (concave, convex, none | | | |
| Subregion (LRR or MLRA): LRR P, MLRA 1 | | Long: -77.61 | | | |
| Soil Map Unit Name: Craven clay loam | | ~ | NWI classification: N/A | | |
| Are climatic / hydrologic conditions on the sit | e typical for this time of year | ? Yes X N | No (If no, explain in Remarks.) | | |
| Are Vegetation, Soil, or Hydro | | | mstances" present? Yes X No | | |
| Are Vegetation, Soil, or Hydro | | | any answers in Remarks.) | | |
| | | | s, transects, important features, etc. | | |
| | | | | | |
| Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? | Yes X No Yes No X Yes No X | Is the Sampled Area within a Wetland? | YesNo_X | | |
| Wetland Hydrology Present? Remarks: | Yes <u>NO X</u> | | | | |
| | | | | | |
| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | | Sec | condary Indicators (minimum of two required) | | |
| Primary Indicators (minimum of one is requi Surface Water (A1) | Aquatic Fauna (B13) | | Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) | | |
| High Water Table (A2) | Marl Deposits (B15) (L | .RR U) | Drainage Patterns (B10) | | |
| Saturation (A3) | Hydrogen Sulfide Odor | | Moss Trim Lines (B16) | | |
| Water Marks (B1) | Oxidized Rhizospheres | u | Dry-Season Water Table (C2) | | |
| Sediment Deposits (B2) | Presence of Reduced | | Crayfish Burrows (C8) | | |
| Drift Deposits (B3) | Recent Iron Reduction | | Saturation Visible on Aerial Imagery (C9) | | |
| Algal Mat or Crust (B4) Iron Deposits (B5) | Thin Muck Surface (C7 Other (Explain in Rema | | Geomorphic Position (D2) Shallow Aquitard (D3) | | |
| Inundation Visible on Aerial Imagery (B | FAC-Neutral Test (D5) | | | | |
| Water-Stained Leaves (B9) | , | | Sphagnum 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 |): Wetland Hydr | rology Present? Yes No X | | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, mo | onitoring well, aerial photos, | previous inspections), if availa | hle. | | |
| | , | | | | |
| Remarks: | | | | | |
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| VEGETATION (Five Strata) – Use scienti | fic names | of plants. | | Sampling Point: 18-A |
|---|---------------------|----------------------|---------------------|---|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1. | | | | Number of Dominant Species That Are OBL, FACW, or FAC:2 (A) |
| 3. 4. | | | | Total Number of Dominant Species Across All Strata: <u>3</u> (B) |
| 5. 6. | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1 | | | | FACW species 25 x 2 = 50 |
| 2. | | | | FAC species 75 x 3 = 225 |
| 3. | | | | FACU species 10 x 4 = 40 |
| 4. | | | | UPL species $0 \times 5 = 0$ |
| 5 | | | | Column Totals: 110 (A) 315 (B) |
| | | | | Prevalence Index = $B/A = 2.86$ |
| 6. | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | | of total cover: | | 1 - Rapid Test for Hydrophytic Vegetation |
| | 2070 | or total cover. | | X 2 - Dominance Test is >50% |
| Shrub Stratum (Plot size: 30) | | | | |
| 1 | | | | 3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4. | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. ubus argutus | 45 | Yes | FAC | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. Solidago rugosa | 30 | Yes | FAC | Sapling – Woody plants, excluding woody vines, |
| 3. cnanthemum tenuifolium | 15 | No | FACW | approximately 20 ft (6 m) or more in height and less |
| 4. Dichanthelium scoparium | 10 | No | FACW | than 3 in. (7.6 cm) DBH. |
| | 10 | 110 | TACT | Shrub - Woody Plants, excluding woody vines, |
| 6. | | | | approximately 3 to 20 ft (1 to 6 m) in height. |
| | | | | |
| 7 | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3 |
| 9 | | | | ft (1 m) in height. |
| 10 | | | | Woody Vinc. All woody vince, reportions of height |
| 11 | | | | Woody Vine – All woody vines, regardless of height. |
| | 100 | =Total Cover | | |
| 50% of total cover: 5 | 0 20% | of total cover: | 20 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. alactia olubilis | 10 | Yes | FACU | |
| 2 | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | 10 | =Total Cover | | Hydrophytic Vegetation |
| 50% of total cover: | | of total cover: | 2 | Present? Yes X No |
| Remarks: (If observed, list morphological adaptatio | | | | |
| i comanto. In obocivea, not morphological adaptatio | 10 001010.1 | | | |

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SOIL Sampling Point: 18-A Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix Color (moist) % Color (moist) Loc² Texture Remarks (inches) % Type¹ 10YR 4/3 0-4 100 Loamy/Clayey 4-20 10YR 4/4 100 Loamy/Clayey ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:

| | | | Attachment 2.D.1 Page 135 of 230 | | |
|---|---|---------------------------------------|--|--------|--|
| U.S. Army C WETLAND DETERMINATION DATA SH See ERDC/EL TR-07-24; the | | 0 | OMB Control #: 0710-xxxx, Exp: Pendir Requirement Control Symbol EXEMP (Authority: AR 335-15, paragraph 5-2a | T: | |
| Project/Site: TL 254/2201 Clubhouse - Lakevi | ew 230 kV Rebuild | City/County: Greensville | Sampling Date: 8/6/2 | 2020 | |
| Applicant/Owner: Dominion Energy Virginia | a | · | State: VA Sampling Point: 1 | 18-B | |
| Investigator(s): S. Kupiec | Sec | tion, Township, Range: | | | |
| Landform (hillside, terrace, etc.): Drainageway | y Local r | relief (concave, convex, nor | ne): Concave Slope (%): | 2-4 | |
| Subregion (LRR or MLRA): LRR P, MLRA 133 | | Long: -77.6 | | | |
| Soil Map Unit Name: Mattaponi sandy loam | | | NWI classification: N/A | | |
| Are climatic / hydrologic conditions on the site t | ypical for this time of year? | Yes X | No (If no, explain in Remarks.) | | |
| Are Vegetation, Soil, or Hydrolog | gysignificantly distur | bed? Are "Normal Circu | umstances" present? Yes X No | | |
| Are Vegetation, Soil, or Hydrolog | | | n any answers in Remarks.) | | |
| SUMMARY OF FINDINGS – Attach s | | | s, transects, important features, | , etc. | |
| Hydric Soil Present? Ye Wetland Hydrology Present? Ye | es X No es No X es No X | Is the Sampled Area within a Wetland? | YesNo_X | | |
| Remarks: Upland at Flag AU-5. | | | | | |
| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | | Se | econdary Indicators (minimum of two require | red) | |
| Primary Indicators (minimum of one is required | | | Surface Soil Cracks (B6) | | |
| Surface Water (A1) High Water Table (A2) | Aquatic Fauna (B13) Marl Deposits (B15) (LR | | Sparsely Vegetated Concave Surface (B Drainage Patterns (B10) | 38) | |
| Saturation (A3) | Hydrogen Sulfide Odor (| | Moss Trim Lines (B16) | | |
| Water Marks (B1) | Oxidized Rhizospheres of | | Dry-Season Water Table (C2) | | |
| Sediment Deposits (B2) | Presence of Reduced Irc | | Crayfish Burrows (C8) | | |
| Drift Deposits (B3) | Recent Iron Reduction in | n Tilled Soils (C6) | Saturation Visible on Aerial Imagery (C9 | 1) | |
| Algal Mat or Crust (B4) Iron Deposits (B5) | Thin Muck Surface (C7) Other (Explain in Remar | | Geomorphic Position (D2) Shallow Aquitard (D3) | | |
| Inundation Visible on Aerial Imagery (B7) | | - | FAC-Neutral Test (D5) | | |
| Water-Stained Leaves (B9) | | | Sphagnum Moss (D8) (LRR T, U) | | |
| Field Observations: | | | <u> </u> | | |
| | No X Depth (inches): | | | | |
| | No X Depth (inches): | | | | |
| | No X Depth (inches): | Wetland Hyd | Irology Present? Yes No | X | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, moni | itoring well, aerial photos, pr | revious inspections), if avail | able: | | |
| | | oviduo inopecticity, | | | |
| Remarks: | | | | | |
| Remarks. | | | | | |
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VEGETATION (Five Strata) - Use scientific names of plants.

| VEGETATION (FIVe Strata) – Use scientif | | of plants. | | Sampling Point: 18-B |
|--|---------------------|----------------------|---------------------|---|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1. 2. | | | | Number of Dominant Species That Are OBL, FACW, or FAC:5(A) |
| 3. 4. | | | | Total Number of Dominant Species Across All Strata: 5 (B) |
| 5 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. Li uidambar st raciflua | 30 | Yes | FAC | FACW species 40 x 2 = 80 |
| 2. | | | | FAC species 55 x 3 = 165 |
| 3. | | | | FACU species 0 x 4 = 0 |
| 4. | | | | UPL species $0 \times 5 = 0$ |
| 5. | | | | Column Totals: 95 (A) 245 (B) |
| 6. | | | | Prevalence Index = $B/A = 2.58$ |
| | 30 | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: 1 | | of total cover: | 6 | 1 - Rapid Test for Hydrophytic Vegetation |
| <u>Shrub Stratum</u> (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | $3 - Prevalence Index is \leq 3.0^{1}$ |
| | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| | | | | |
| 3. | | | | |
| 4. | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). |
| 1. cnanthemum tenuifolium | 25 | Yes | FACW | (7.0 cm) of larger in diameter at breast height (DDH). |
| 2. Dichanthelium dichotomum | 20 | Yes | FAC | Sapling – Woody plants, excluding woody vines, |
| 3. Dichanthelium scoparium | 15 | Yes | FACW | approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. |
| 4 | | | | Shrub Weedy Plente evaluding weedy vince |
| 5 | | | | Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. |
| 6. | | | | |
| 7 | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 |
| 9 | | | | ft (1 m) in height. |
| 10 | | | | Woody Vine – All woody vines, regardless of height. |
| 11 | | | | Woody whice Air woody whice, regardless of height. |
| | | =Total Cover | | |
| 50% of total cover: 3 | 0 20% | of total cover: | 12 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. Campsis radicans | 5 | Yes | FAC | |
| 2 | | | | |
| 3. | | | | |
| 4. | | | | |
| 5 | | | | Hydrophytic |
| | 5 | =Total Cover | | Vegetation |
| 50% of total cover: 3 | 20% | of total cover: | 1 | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | |

SOIL Sampling Point: 18-B 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) Loc² Texture Remarks % Type¹ 10YR 4/4 0-1 100 Loamy/Clayey 1-20 10YR 5/4 85 5YR 5/6 Loamy/Clayey Prominent redox concentrations 15 С Μ ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:

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|---|--|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Reg See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending | | |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensvi | ille Sampling Date: 8/6/2020 | | |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 19-A | | |
| Investigator(s): S. Kupiec Section, Township, Range: | | | |
| Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, | , none): <u>Convex</u> Slope (%): <u>2-4</u> | | |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.619646 Long: | -77.614610 Datum: | | |
| Soil Map Unit Name: Appling-Mattaponi complex | NWI classification: N/A | | |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes X | No (If no, explain in Remarks.) | | |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal of the second secon | Circumstances" present? Yes X No | | |
| | xplain any answers in Remarks.) | | |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locat | ions, transects, important features, etc. | | |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X | YesNo_X | | |
| Remarks: Upland at Flag AY-7. | | | |
| HYDROLOGY | | | |
| Wetland Hydrology Indicators: | Secondary Indicators (minimum of two required) | | |
| Primary Indicators (minimum of one is required; check all that apply) | Surface Soil Cracks (B6) | | |
| Surface Water (A1) Aquatic Fauna (B13) High Water Table (A2) Marl Deposits (B15) (LRR U) | Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) | | |
| Saturation (A3) Hydrogen Sulfide Odor (C1) | Moss Trim Lines (B16) | | |
| Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) | Dry-Season Water Table (C2) | | |
| Sediment Deposits (B2) Presence of Reduced Iron (C4) | Crayfish Burrows (C8) | | |
| Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) | Saturation Visible on Aerial Imagery (C9) | | |
| Algal Mat or Crust (B4) Thin Muck Surface (C7) | Geomorphic Position (D2) | | |
| Iron Deposits (B5) Other (Explain in Remarks) Inundation Visible on Aerial Imagery (B7) | Shallow Aquitard (D3) X FAC-Neutral Test (D5) | | |
| Water-Stained Leaves (B9) | Sphagnum Moss (D8) (LRR T, U) | | |
| Field Observations: | | | |
| Surface Water Present? Yes No X Depth (inches): | | | |
| Water Table Present? Yes No X Depth (inches): | | | |
| | Hydrology Present? Yes No X | | |
| (includes capillary fringe) | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if a | avalladie: | | |
| Description | | | |
| Remarks: | | | |
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VEGETATION (Five Strata) - Use scientific names of plants.

| vegeration (Five Strata) – Use scientif | lic names | or plants. | | Sampling Point: 19-A |
|--|---------------------|----------------------|---------------------|--|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1 | | 000003: | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: (A) |
| 4. | | | | Total Number of Dominant Species Across All Strata: <u>5</u> (B) |
| 5 6 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 10 x 1 = 10 |
| 1. uercus rubra | 5 | Yes | FACU | FACW species 70 x 2 = 140 |
| 2 | | | | FAC species 30 x 3 = 90 |
| 3. | | | | FACU species <u>5</u> x 4 = <u>20</u> |
| 4 | | | | UPL species 0 x 5 = 0 |
| 5. | | | | Column Totals: 115 (A) 260 (B) |
| 6. | | | | Prevalence Index = B/A = 2.26 |
| | 5 | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: 3 | 3 20% | of total cover: | 1 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | 3 - Prevalence Index is ≤3.0 ¹ |
| 2. | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. | | | | |
| 4 | | | | |
| 5 | | | | |
| 6. | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | | of total cover: | | - |
| Herb Stratum (Plot size: 30) | | | | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| 1. Dichanthelium scoparium | 45 | Yes | FACW | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. Solidago rugosa | 25 | Yes | FAC | Sapling – Woody plants, excluding woody vines, |
| 3. upatorium perfoliatum | 15 | No | FACW | approximately 20 ft (6 m) or more in height and less |
| 4. cnanthemum tenuifolium | 10 | No | FACW | than 3 in. (7.6 cm) DBH. |
| 5. Ludwigia palustris | 5 | No | OBL | Shrub - Woody Plants, excluding woody vines, |
| 6. | | | | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. | | | | Herb – All herbaceous (non-woody) plants, including |
| 8. | | | | herbaceous vines, regardless of size, and woody |
| 9 | | | | plants, except woody vines, less than approximately 3 |
| 10. | | | | ft (1 m) in height. |
| 11. | | | | Woody Vine – All woody vines, regardless of height. |
| | 100 | =Total Cover | | |
| 50% of total cover: 50 | | of total cover: | 20 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. elsemium semper irens | 5 | Yes | FAC | |
| 2. ersicaria sagittata | 5 | Yes | OBL | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | 10 | =Total Cover | | Hydrophytic |
| 50% of total cover: 5 | | of total cover: | 2 | Vegetation Present? Yes X No |
| | | | | |
| Remarks: (If observed, list morphological adaptation | is neiow.) | | | |

Attachment 2.D.1 Page 140 of 230

SOIL Sampling Point: 19-A Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix Color (moist) % Color (moist) Loc² Texture Remarks (inches) % Type¹ 10YR 4/3 0-4 100 Loamy/Clayey 4-20 10YR 5/4 100 Loamy/Clayey ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:

| | | | | nent 2.D.1 41 of 230 | |
|--|--|---------------------------------------|--|---------------------------------|--|
| U.S. Army WETLAND DETERMINATION DATA SI See ERDC/EL TR-07-24; th | | 0 | OMB Control #: 0710-xxx> | k, Exp: Pending mbol EXEMPT: | |
| Project/Site: TL 254/2201 Clubhouse - Lakev | iew 230 kV Rebuild | City/County: Greensville | eSampling | Date: 8/6/20 | |
| Applicant/Owner: Dominion Energy Virgin | ia | | State: VA Sampling | Point: 19-B | |
| Investigator(s): S. Kupiec | Se | ction, Township, Range: | | | |
| Landform (hillside, terrace, etc.): Drainagewa | ayLocal | relief (concave, convex, r | none): Concave Slop | be (%):2-4 | |
| Subregion (LRR or MLRA): LRR P, MLRA 13 | 3A Lat: 36.619892 | Long: _7 | 7.614496 Da | itum: | |
| Soil Map Unit Name: Roanoke loam | | | NWI classification: N/A | | |
| Are climatic / hydrologic conditions on the site | typical for this time of year? | Yes X | No (If no, explain in R | Remarks.) | |
| Are Vegetation, Soil, or Hydrold | ogy significantly distu | rbed? Are "Normal Ci | | s_X_No | |
| Are Vegetation, Soil, or Hydrold | | | lain any answers in Remarks.) | | |
| SUMMARY OF FINDINGS – Attach | | | ons, transects, important | features, etc. | |
| Hydric Soil Present? Wetland Hydrology Present? | Yes X No Yes X No Yes X No | Is the Sampled Area within a Wetland? | Yes <u>X</u> No | - | |
| Remarks: Wetland at Flag AY-2. | | | | | |
| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | | | Secondary Indicators (minimum | of two required) | |
| Primary Indicators (minimum of one is require | | | Surface Soil Cracks (B6) | | |
| Surface Water (A1) High Water Table (A2) | Aquatic Fauna (B13) Marl Deposits (B15) (LF | RB []) | Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) | | |
| Saturation (A3) | Hydrogen Sulfide Odor | | Moss Trim Lines (B16) | | |
| Water Marks (B1) | X Oxidized Rhizospheres | | Dry-Season Water Table (C2) | | |
| Sediment Deposits (B2) | Presence of Reduced I | . , | Crayfish Burrows (C8) | | |
| Drift Deposits (B3) | Recent Iron Reduction | · , | Saturation Visible on Aerial I | magery (C9) | |
| Algal Mat or Crust (B4) Iron Deposits (B5) | Thin Muck Surface (C7) Other (Explain in Rema | , | X Geomorphic Position (D2) Shallow Aquitard (D3) | | |
| Inundation Visible on Aerial Imagery (B7) | | IKS | X FAC-Neutral Test (D5) | | |
| Water-Stained Leaves (B9) | | | Sphagnum Moss (D8) (LRR | T, U) | |
| Field Observations: | | · | | | |
| Surface Water Present? Yes | No X Depth (inches) | : | | | |
| Water Table Present? Yes | No X Depth (inches) | | | | |
| Saturation Present? Yes | No X Depth (inches) | : Wetland H | Hydrology Present? Yes | s X No | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, mor | nitoring well, aerial photos, r | previous inspections), if a | ailahle: | | |
| | nonng won, dona. priotor, r | 100000 mopoure | | | |
| Remarks: | | | | | |
| Remarks. | | | | | |
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Attachment 2.D.1 Page 142 of 230

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

| VEGETATION (FIVe Strata) – Use scientif | | of plants. | | Sampling Point:19-B |
|---|---------------------|----------------------|---------------------|---|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1. 2. | | | | Number of Dominant Species That Are OBL, FACW, or FAC: (A) |
| 3 | | | | Total Number of Dominant Species Across All Strata: <u>3</u> (B) |
| 5 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC:66.7% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 35 x 1 = 35 |
| 1 | | | | FACW species $40 \times 2 = 80$ |
| 2. | | | | FAC species 10 x 3 = 30 |
| 3. | | | | FACU species 30 x 4 = 120 |
| 4 | | | | UPL species $0 	 x 5 = 0$ |
| 5. | | | | Column Totals: 115 (A) 265 (B) |
| 6. | | | | Prevalence Index = $B/A = 2.30$ |
| 0 | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | | of total cover: | | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | $\frac{1}{X}$ 3 - Prevalence Index is $\leq 3.0^{1}$ |
| | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| | | | | |
| | | | | |
| 4. | | | | |
| 5. | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| <u>Herb Stratum</u> (Plot size: <u>30</u>) 1. <i>Solidago altissima</i> | 30 | Yes | FACU | approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. Dichanthelium scoparium | 30 | Yes | FACW | Sapling – Woody plants, excluding woody vines, |
| 3. hel pteris palustris | 25 | Yes | OBL | approximately 20 ft (6 m) or more in height and less |
| 4. I mus irginicus | 10 | No | FAC | than 3 in. (7.6 cm) DBH. |
| 5. noclea sensibilis | 5 | No | FACW | Shrub - Woody Plants, excluding woody vines, |
| 6. ernonia no eboracensis | 5 | No | FACW | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. Dulichium arundinaceum | 5 | No | OBL | Herb – All herbaceous (non-woody) plants, including |
| 8. Juncus effusus | 5 | No | OBL | herbaceous vines, regardless of size, and woody |
| 9. | | | | plants, except woody vines, less than approximately 3 |
| 10. | | | | ft (1 m) in height. |
| 11. | | | | Woody Vine – All woody vines, regardless of height. |
| | 115 | =Total Cover | | |
| 50% of total cover: 56 | | of total cover: | 23 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| | | | | |
| 4. | | | | |
| 5 | | Tatal C | | Hydrophytic |
| 500 / (+++ | | =Total Cover | | Vegetation |
| 50% of total cover: | | of total cover: | | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | |

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SOIL Sampling Point: 19-B Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix Loc² Color (moist) % Color (moist) % Texture (inches) Type¹ Remarks 10YR 4/2 С ΡL Distinct redox concentrations 0-4 90 7.5YR 3/4 10 Loamy/Clayey 4-20 10YR 6/2 65 10YR 5/6 20 С Μ Loamy/Clayey Prominent redox concentrations 7.5YR 4/6 С Prominent redox concentrations 10 Μ 10YR 4/2 5 D Μ ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:

| | Attachment 2.D.1 | | |
|--|--|----|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) | | |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 8/7/2020 |) | |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 20-A | | |
| Investigator(s): S. Kupiec Section, Township, Range: | _ | | |
| Landform (hillside, terrace, etc.): Drainageway Local relief (concave, convex, none | e): Concave Slope (%): 1-2 | | |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.614303 Long: -77.61 | 15885 Datum: | | |
| Soil Map Unit Name: Appling-Mattaponi complex | NWI classification: N/A | | |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes X N | No (If no, explain in Remarks.) | | |
| | mstances" present? Yes X No | _ | |
| | any answers in Remarks.) | | |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations | s, transects, important features, et | C. | |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? Wetland Hydrology Present? Yes X No | Yes X No | | |
| Remarks: Wetland at Line BB. | | | |
| HYDROLOGY | | | |
| Wetland Hydrology Indicators: Sec | condary Indicators (minimum of two required) | | |
| Primary Indicators (minimum of one is required; check all that apply) | _Surface Soil Cracks (B6) | | |
| Surface Water (A1) Aquatic Fauna (B13) High Water Table (A2) Marl Deposits (B15) (LRR U) | Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) | | |
| X Saturation (A3) Hydrogen Sulfide Odor (C1) | Moss Trim Lines (B16) | | |
| Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) | Dry-Season Water Table (C2) | | |
| Sediment Deposits (B2) Presence of Reduced Iron (C4) | Crayfish Burrows (C8) | | |
| Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) | Saturation Visible on Aerial Imagery (C9) | | |
| | Geomorphic Position (D2) | | |
| Iron Deposits (B5) Other (Explain in Remarks) Inundation Visible on Aerial Imagery (B7) X | Shallow Aquitard (D3) FAC-Neutral Test (D5) | | |
| Water-Stained Leaves (B9) | Sphagnum Moss (D8) (LRR T, U) | | |
| Field Observations: | | | |
| Surface Water Present? Yes No X Depth (inches): | | | |
| Water Table Present? Yes No X Depth (inches): | | | |
| | rology Present? Yes X No | | |
| (includes capillary fringe) | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if availa | .ble: | | |
| | | | |
| Remarks: | | | |
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| VEGETATION (Five Strata) - Use scienti | fic names | of plants. | | Sampling Point:20-A |
|---|------------|-----------------|-----------|---|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: (A) |
| 3 | | | | Total Number of Dominant |
| 4. | | | | Species Across All Strata: 4 (B) |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: 100.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 50 x 1 = 50 |
| 1. Li uidambar st raciflua | 15 | Yes | FAC | FACW species 55 $x 2 = 110$ |
| 2. | | | | FAC species 30 x 3 = 90 |
| 3 | | | | FACU species $0 	 x4 = 0$ |
| 4 | | | | UPL species $0 \times 5 = 0$ |
| 5. | | | | Column Totals: 135 (A) 250 (B) |
| | | | | |
| 6 | 45 | Tatal Causer | | |
| | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| | 8 20% | of total cover: | 3 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | X 3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. Juncus effusus | 30 | Yes | OBL | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. h nchospora inexpansa | 20 | Yes | FACW | Sapling – Woody plants, excluding woody vines, |
| 3. oodwardia areolata | 20 | Yes | OBL | approximately 20 ft (6 m) or more in height and less |
| 4. ubus argutus | 15 | No | FAC | than 3 in. (7.6 cm) DBH. |
| 5. upatorium perfoliatum | 15 | No | FACW | Shrub - Woody Plants, excluding woody vines, |
| 6. Dichanthelium scoparium | 10 | No | FACW | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. hexia mariana | 5 | No | FACW | |
| 8. cnanthemum tenuifolium | 5 | No | FACW | Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody |
| 0 | | | 171011 | plants, except woody vines, less than approximately 3 |
| 10 | | | | ft (1 m) in height. |
| | | | | Woody Vine – All woody vines, regardless of height. |
| 11 | 400 | Tatal Causer | | |
| | | =Total Cover | | |
| | 60 20% | of total cover: | 24 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | Hydrophytic |
| | | =Total Cover | | Vegetation |
| 50% of total cover: | 20% | of total cover: | | Present? Yes X No |
| Remarks: (If observed, list morphological adaptatio | ns below.) | | | · |

SOIL Sampling Point: 20-A Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix **Redox Features** Color (moist) % Color (moist) Loc² Texture Remarks (inches) % Type¹ 10YR 3/1 0-3 100 Loamy/Clayey 3-8 10YR 4/1 90 10YR 5/8 10 Loamy/Clayey Prominent redox concentrations С Μ 8-20 2.5Y 4/1 90 10YR 4/6 С Loamy/Clayey Prominent redox concentrations 10 Μ ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) X Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:

| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | | | |
|--|-----------------------|--|--|
| dee ENDO/EE The of 24, the proponent agency is deow do the | | | |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville Sampling Date: 8/7/202 | 20 | | |
| Applicant/Owner: Dominion Energy Virginia State: VA Sampling Point: 20-I | B | | |
| Investigator(s): S. Kupiec Section, Township, Range: | | | |
| Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none): Convex Slope (%): 4-6 | 3 | | |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.613786 Long: -77.615986 Datum: | | | |
| Soil Map Unit Name: Appling-Mattaponi complex NWI classification: N/A | | | |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.) | | | |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal Circumstances" present? Yes _X No | | | |
| Are Vegetation, Soil, or Hydrologynaturally problematic? (If needed, explain any answers in Remarks.) | | | |
| | +~ | | |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, e | tc. | | |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes No X within a Wetland? Yes No X Wetland Hydrology Present? Yes No X Ves No X | | | |
| Remarks: | | | |
| Upland above Flag BB-4. | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| HYDROLOGY | | | |
| Wetland Hydrology Indicators: Secondary Indicators (minimum of two required Primary Indicators (minimum of one is required; shock all that apply) Surface Soil Cracks (R6) | <u>1)</u> | | |
| Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Aquatic Fauna (B13) Sparsely Vegetated Concave Surface (B8) | | | |
| High Water Table (A2) Marl Deposits (B15) (LRR U) Drainage Patterns (B10) | | | |
| Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16) | | | |
| Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2) | | | |
| Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8) | | | |
| Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) | | | |
| Algal Mat or Crust (B4) Thin Muck Surface (C7) Geomorphic Position (D2) | Shallow Aquitard (D3) | | |
| Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) FAC-Neutral Test (D5) | | | |
| Water-Stained Leaves (B9) Sphagnum Moss (D8) (LRR T, U) | | | |
| | | | |
| | | | |
| Field Observations: | | | |
| Field Observations: | | | |
| Field Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Depth (inches): | X | | |
| Field Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Wetland Hydrology Present? Yes No | <u>×</u> | | |
| Field Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Depth (inches): | <u>×</u> | | |
| Field Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Wetland Hydrology Present? Yes No | <u>×</u> | | |
| Field Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Wetland Hydrology Present? Yes No | <u>×</u> | | |
| Field Observations: Surface Water Present? Yes No X Depth (inches): | <u>×</u> | | |
| Field Observations: Surface Water Present? Yes No X Depth (inches): | <u>×</u> | | |
| Field Observations: Surface Water Present? Yes No X Depth (inches): | <u>×</u> | | |
| Field Observations: Surface Water Present? Yes No X Depth (inches): | <u>×</u> | | |
| Field Observations: Surface Water Present? Yes No X Depth (inches): | <u>×</u> | | |
| Field Observations: Surface Water Present? Yes No X Depth (inches): | <u>×</u> | | |

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| VEGETATION (Five Strata) - Use scienti | fic names | of plants. | | Sampling Point: 20-B |
|--|------------|-----------------|-----------|---|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC:3 (A) |
| 3 | | | | Total Number of Dominant |
| 4. | | | | Species Across All Strata: 4 (B) |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: 75.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1 | | | | FACW species $20 \times 2 = 40$ |
| 2. | | | | FAC species 65 x 3 = 195 |
| 3. | | | | FACU species $40 	 x 4 = 160$ |
| 4 | | | | UPL species $0 \times 5 = 0$ |
| | | | | Column Totals: 125 (A) 395 (B) |
| 5 | | | | Prevalence Index = $B/A = 3.16$ |
| 0. | | | | |
| | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | 20% | of total cover: | | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | 3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4. | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. ndropogon irginicus | 35 | Yes | FAC | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. ac era tomentosa | 25 | Yes | FACU | Sapling – Woody plants, excluding woody vines, |
| 3. cnanthemum tenuifolium | 20 | Yes | FACW | approximately 20 ft (6 m) or more in height and less |
| 4. Lespede a cuneata | 15 | No | FACU | than 3 in. (7.6 cm) DBH. |
| 5. | | | | Shrub - Woody Plants, excluding woody vines, |
| 6. | | | | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. | | | | |
| | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3 |
| 9 | | | | ft (1 m) in height. |
| 10 | | | | Woody Vine – All woody vines, regardless of height. |
| 11 | | | | woody whe - Air woody whes, regardless of height. |
| | | =Total Cover | | |
| 50% of total cover: 4 | 8 20% | of total cover: | 19 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. elsemium semper irens | 30 | Yes | FAC | |
| 2 | | | | |
| 3 | | | | |
| 4. | | | | |
| 5. | | | | Hydrophytic |
| | 30 | =Total Cover | | Hydrophytic Vegetation |
| 50% of total cover: 1 | 5 20% | of total cover: | 6 | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | · |

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| Depth | Matrix | I | | x Featu | | | onfirm the absence of | · · · · · · , | |
|---|---------------------------------|--|---|--|--|---|---|--|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Rema | rks |
| 0-2 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | | |
| | | | | | | | | | |
| 2-10 | 10YR 4/3 | 100 | | | | · | Sandy | | |
| 10-20 | 2.5Y 5/4 | 100 | | | | : | Sandy | | |
| | | | | | | · | | | |
| Type: C=Co | oncentration, D=Dep | letion, RM= | Reduced Matrix, N | /IS=Mas | ked Sand | d Grains. | ² Location: F | PL=Pore Lining, M=Ma | atrix. |
| Histosol Histic Ep Black His Hydroge Stratified Organic 5 cm Mu Muck Pro 1 cm Mu Depleted Thick Da Coast Pr Sandy M Sandy R Sandy R | pipedon (A2) | T, U) R P, T, U)) ♦ (A11) ILRA 150A RR O, S) | Thin Dark Se Barrier Islan (MLRA 15 Loamy Muck Loamy Gley Depleted Ma Redox Dark Depleted Da Redox Depre Marl (F10) (I Depleted Oc | urface (\$ ds 1 cm 3B, 153 dy Miner ed Matri trix (F3) Surface rk Surfa essions _RR U) thric (F1 esse Ma ace (F12 (F17) ([rtic (F18 oodplair | S9) (LRR Muck (S 3D) al (F1) (L x (F2)) (F6) (F8) 1) (MLRA Sses (F1) 3) (LRR F MLRA 15 3) (MLRA 1 Soils (F | 12) .RR O) 2) (LRR C 2) (LRR C 2, T, U) 1) 150A, 15 19) (MLR | 1 cm M 2 cm M Coast F (outs Reduce (outs Piedmo Anomal (MLR Red Pa Very Sh (outs MLR (MLR (MLR (MLR (MLR (MLR (MLR (MLR (MLR) (M | for Problematic Hydr uck (A9) (LRR O) uck (A10) (LRR S) Prairie Redox (A16) ide MLRA 150A) d Vertic (F18) ide MLRA 150A, 150I nt Floodplain Soils (F ous Bright Floodplain A 153B) rent Material (F21) nallow Dark Surface (F ide MLRA 138, 152A Islands Low Chroma N A 153B, 153D) Explain in Remarks) | B) 19) (LRR P, T Soils (F20) F22) in FL, 154) |
| | e Below Surface (S8 S, T, U) |) | (MLRA 149A, 153C, 153D) ³ Indicators of hydrophytic v Very Shallow Dark Surface (F22) wetland hydrology must l (MLRA 138, 152A in FL, 154) unless disturbed or probl | | | | nd hydrology must be | present, | |
| Restrictive I Type: | Layer (if observed): | | | , | _, . | | | | |
| Depth (ir | nches). | | | | | | Hydric Soil Prese | nt? Yes | No X |

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|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 8/7/2020 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 21-A |
| Investigator(s): S. Kupiec Section, Township, Range: | |
| Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none | e): <u>Convex</u> Slope (%): <u>2-4</u> |
| Subregion (LRR or MLRA): <u>LRR P, MLRA 133A</u> Lat: <u>36.608905</u> Long: <u>-77.67</u> | 17281 Datum: |
| Soil Map Unit Name: Craven clay loam | NWI classification: N/A |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes X | No (If no, explain in Remarks.) |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal Circur | mstances" present? Yes X No |
| Are Vegetation, Soil, or Hydrologynaturally problematic? (If needed, explain | any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations | s, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? Wetland Hydrology Present? Yes X No within a Wetland? | Yes X No |
| Remarks: Wetland at Flag BB-10. | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: Sec | condary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | Surface Soil Cracks (B6) |
| Surface Water (A1) Aquatic Fauna (B13) | Sparsely Vegetated Concave Surface (B8) |
| High Water Table (A2) Marl Deposits (B15) (LRR U) X Saturation (A3) Hydrogen Sulfide Odor (C1) | Drainage Patterns (B10) Moss Trim Lines (B16) |
| Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) | Dry-Season Water Table (C2) |
| Sediment Deposits (B2) Presence of Reduced Iron (C4) | Crayfish Burrows (C8) |
| Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) | Saturation Visible on Aerial Imagery (C9) |
| Algal Mat or Crust (B4) Thin Muck Surface (C7) | Geomorphic Position (D2) |
| Iron Deposits (B5) Inundation Visible on Aerial Imagen (R7) | Shallow Aquitard (D3) |
| Inundation Visible on Aerial Imagery (B7) X Water-Stained Leaves (B9) | FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: | - |
| Surface Water Present? Yes No X Depth (inches): | |
| Water Table Present? Yes No X Depth (inches): | |
| | rology Present? Yes X No |
| (includes capillary fringe) | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if availa | ιble: |
| | |
| Remarks: | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

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| VEGETATION (Five Strata) - Use scien | tific names o | of plants. | | Sampling Point: | 21-A |
|---|---------------|-----------------|-----------|---|------------------|
| | Absolute | Dominant | Indicator | | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: | |
| 1 | | | | Number of Dominant Species | |
| 2. | | | | That Are OBL, FACW, or FAC: | 5 (A) |
| 3 | | | | Total Number of Dominant | |
| 4 | | | | Species Across All Strata: | 5 (B) |
| 5 | | | | Percent of Dominant Species | |
| 6. | | | | - | 00.0% (A/B) |
| | = | Total Cover | | Prevalence Index worksheet: | |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Mu | Itiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 5 x 1 = | 5 |
| 1. inus taeda | 15 | Yes | FAC | FACW species 65 x 2 = | 130 |
| 2. | | | | FAC species 20 x 3 = | 60 |
| 3. | | | | FACU species 0 x 4 = | 0 |
| 4. | | | | UPL species 0 x 5 = | 0 |
| 5. | | | | Column Totals: 90 (A) | 195 (B) |
| 6. | | | | Prevalence Index = B/A = | 2.17 |
| | 15 = | Total Cover | | Hydrophytic Vegetation Indicators: | 2.11 |
| 50% of total cover: | | | 2 | 5 . 5 6 | rototion |
| | 8 20% | of total cover: | 3 | 1 - Rapid Test for Hydrophytic Veg | jetation |
| Shrub Stratum (Plot size: 30) | _ | | | X 2 - Dominance Test is >50% | |
| 1. lex opaca | 5 | Yes | FAC | X 3 - Prevalence Index is $\leq 3.0^1$ | 1 |
| 2 | | | | Problematic Hydrophytic Vegetatic | on' (Explain) |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland h | vdroloav must be |
| 6. | | | | present, unless disturbed or problemat | |
| | 5 = | Total Cover | | Definitions of Five Vegetation Strata | a: |
| 50% of total cover: | 3 20% | of total cover: | 1 | Tree – Woody plants, excluding woody | vines. |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in he | eight and 3 in. |
| 1. h nchospora inexpansa | 25 | Yes | FACW | (7.6 cm) or larger in diameter at breast | : height (DBH). |
| 2. Dichanthelium scoparium | 25 | Yes | FACW | Sapling – Woody plants, excluding wo | ody vines |
| 3. upatorium perfoliatum | 15 | Yes | FACW | approximately 20 ft (6 m) or more in he | |
| 4. Ludwigia alternifolia | 5 | No | OBL | than 3 in. (7.6 cm) DBH. | |
| 5. | | NO | | Shrub - Woody Plants, excluding wood | duvinos |
| | | | | approximately 3 to 20 ft (1 to 6 m) in he | |
| 6 | | | | | o.g |
| 7 | | | | Herb – All herbaceous (non-woody) pla | , |
| 8 | | | | herbaceous vines, regardless of size, a plants, except woody vines, less than a | |
| 9 | | | | ft (1 m) in height. | approximately 5 |
| 10 | | | | | |
| 11 | | | | Woody Vine – All woody vines, regard | lless of height. |
| | 70 = | Total Cover | | | |
| 50% of total cover: | 35 20% | of total cover: | 14 | | |
| Woody Vine Stratum (Plot size: 30) | | | | | |
| 1. | | | | | |
| 2. | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5. | | | | | |
| U | | Total Cauran | | Hydrophytic | |
| | | Total Cover | | Vegetation | |
| 50% of total cover: | | of total cover: | | Present? Yes X No | |
| Remarks: (If observed, list morphological adaptat | ions below.) | | | | |

| 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 4/2 95 10YR 5/8 5 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey | SOIL | | | | | | | | | Sam | pling Point: | 21-A |
|---|-----------|-------------------------|---------------|-----------------|------------|------------|------------------|------------------------------------|----------------------------|-------------|---------------|--------------|
| Depth Matrix Redox Features (inches) Color (moist) % Type ¹ Loc ² Texture Remarks 0-10 10YR 4/2 95 10YR 5/8 5 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10 10 10 Tom Muck (A10 Indicators | | cription: (Describe t | the dept | h needed to doc | ument t | he indic | ator or c | onfirm tł | ne absence | | | |
| Color (moist) % Color (moist) % Type Loc ² Texture Remarks 0-10 10YR 4/2 95 10YR 5/8 5 C M Leamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Leamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Leamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Leamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Leamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Leamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Leamy/Clayey Prominent redox concentrations 11 10 Muck 10 Leamy/Clayey Indicators (Applicable to all LRR, Number Alleade (Alleadede (Alleaded (Alleadeedededededed)) | | • | 0 | | | | uter : | | | | 510.7 | |
| 0-10 10YR 4/2 95 10YR 5/8 5 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 7.5 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations 10-20 10YR 5/3 10 10 10 10 10 10 10 10 10 10 10 <td< td=""><td>(inches)</td><td></td><td>%</td><td></td><td></td><td></td><td>Loc²</td><td>Τe</td><td>exture</td><td></td><td>Remark</td><td>s</td></td<> | (inches) | | % | | | | Loc ² | Τe | exture | | Remark | s |
| 10-20 10YR 5/3 75 7.5YR 5/6 25 C M Loamy/Clayey Prominent redox concentrations "Type: C-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. *Location: PL=Pore Lining, M=Matrix. Hydric Solil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Solis ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A0) (LRR Q) Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F2) Reduced Vertic (F18) Muck Presence (A8) (LRR P, T) Redox Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T, U) Depleted Dark Surface (F12) (LRR O, T) Mard (F10) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR P, S) Umbric Surface (F13) (LRR P, T, U) Red Parent Material (F21) Coast Prairie Redox (A16) Umbric Surface (F13) (LRR P, T, U) Gutside MLRA 153B, 152A) Other (Explain in Remarks) Stripped Matrix (S4) Delted Ochric (F18) (MLRA 150A, 150B) | 0-10 | | | 10YR 5/8 | | | М | Loam | v/Clayey | Promi | nent redox co | ncentrations |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Solls ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histosol (A1) Matrix Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR O) S om Mucky Mineral (A7) (LRR P, T, U) X Depleted Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Dark Surface (F11) Marl (F10) (LRR V, T) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) Unbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F11) (MLRA 150A, 150B) <td></td> | | | | | | | | | | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F10) (MLRA 149A) | 10-20 | 10YK 5/3 | /5 | 1.5YK 5/0 | 25 | | IVI | Loam | y/Clayey | Promi | nent redox co | ncentrations |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F10) (MLRA 149A) | | | | | | | | | | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F10) (MLRA 149A) | | | | | | | | | | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F10) (MLRA 149A) | | | | | · | | | | | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F10) (MLRA 149A) | | | | | | | | | | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F10) (MLRA 149A) | | | | | | | | | | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F10) (MLRA 149A) | | | | | | | | | | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F10) (MLRA 149A) | 1 | | | | | | | | 2 | | | |
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| Histic Epipedon (A2)Barrier Islands 1 cm Muck (S12)2 cm Muck (A10) (LRR S)Black Histic (A3)(MLRA 153B, 153D)Coast Prairie Redox (A16)Hydrogen Sulfide (A4)Loamy Mucky Mineral (F1) (LRR O)(outside MLRA 150A)Stratified Layers (A5)Loamy Gleyed Matrix (F2)Reduced Vertic (F18)Organic Bodies (A6) (LRR P, T, U)X Depleted Matrix (F3)(outside MLRA 150A, 150B)5 cm Mucky Mineral (A7) (LRR P, T, U)Redox Dark Surface (F6)Piedmont Floodplain Soils (F19) (LRR P, T)Muck Presence (A8) (LRR U)Depleted Dark Surface (F7)Anomalous Bright Floodplain Soils (F20)1 cm Muck (A9) (LRR P, T)Redox Depressions (F8)(MLRA 153B)Depleted Below Dark Surface (A11)Marl (F10) (LRR U)Red Parent Material (F21)Thick Dark Surface (A12)Depleted Ochric (F11) (MLRA 151)Very Shallow Dark Surface (F22)Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR O, P, T)(outside MLRA 138, 152A in FL, 154)Sandy Mucky Mineral (S1) (LRR O, S)Umbric Surface (F13) (LRR P, T, U)Barrier Islands Low Chroma Matrix (TS7)Sandy Redox (S5)Reduced Vertic (F18) (MLRA 150A, 150B)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F20)Other (Explain in Remarks)Stripped Matrix (S6)(MLRA 149A, 153C, 153D)3 ¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.Restrictive Layer (if observed):Very Shallow Dark Surface (F22)wetland hydrology must be present, unless disturbed or problematic. | - | | ole to all ∟i | | | | | | | | 5 | ; Solis": |
| Black Histic (A3)(MLRA 153B, 153D)Coast Prairie Redox (A16)Hydrogen Sulfide (A4)Loamy Mucky Mineral (F1) (LRR O)(outside MLRA 150A)Stratified Layers (A5)Loamy Gleyed Matrix (F2)Reduced Vertic (F18)Organic Bodies (A6) (LRR P, T, U)XDepleted Matrix (F3)(outside MLRA 150A, 150B)5 cm Mucky Mineral (A7) (LRR P, T, U)Redox Dark Surface (F6)Piedmont Floodplain Soils (F19) (LRR P, T)Muck Presence (A8) (LRR U)Depleted Dark Surface (F7)Anomalous Bright Floodplain Soils (F20)1 cm Muck (A9) (LRR P, T)Redox Depressions (F8)(MLRA 153B)Depleted Below Dark Surface (A11)Marl (F10) (LRR U)Red Parent Material (F21)Thick Dark Surface (A12)Depleted Ochric (F11) (MLRA 151)Very Shallow Dark Surface (F22)Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR O, P, T)(outside MLRA 138, 152A in FL, 154)Sandy Mucky Mineral (S1) (LRR O, S)Umbric Surface (F13) (LRR P, T, U)Barrier Islands Low Chroma Matrix (TS7)Sandy Redox (S5)Reduced Vertic (F18) (MLRA 150A, 150B)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F19) (MLRA 149A)3Dark Surface (S7) (LRR P, S, T, U)Anomalous Bright Floodplain Soils (F20)3Polyvalue Below Surface (S8)(MLRA 138, 152A in FL, 154)3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.Restrictive Layer (if observed):Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154)3 | | | | | | , . | - | | | | | |
| Hydrogen Sulfide (A4)Loamy Mucky Mineral (F1) (LRR O)(outside MLRA 150A)Stratified Layers (A5)Loamy Gleyed Matrix (F2)Reduced Vertic (F18)Organic Bodies (A6) (LRR P, T, U)XDepleted Matrix (F3)(outside MLRA 150A, 150B)5 cm Mucky Mineral (A7) (LRR P, T, U)Redox Dark Surface (F6)Piedmont Floodplain Soils (F19) (LRR P, T)Muck Presence (A8) (LRR U)Depleted Dark Surface (F7)Anomalous Bright Floodplain Soils (F20)1 cm Muck (A9) (LRR P, T)Redox Depressions (F8)(MLRA 153B)Depleted Below Dark Surface (A11)Marl (F10) (LRR U)Red Parent Material (F21)Thick Dark Surface (A12)Depleted Ochric (F11) (MLRA 151)Very Shallow Dark Surface (F22)Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR O, P, T)(outside MLRA 138, 152A in FL, 154)Sandy Mucky Mineral (S1) (LRR O, S)Umbric Surface (F13) (LRR P, T, U)Barrier Islands Low Chroma Matrix (TS7)Sandy Gleyed Matrix (S4)Delta Ochric (F17) (MLRA 150A, 150B)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F19) (MLRA 149A)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F20)3Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154)3Indicators of problematic.Restrictive Layer (if observed):Kestrictive Layer (if observed):Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154)anomalous Bright Floodplain Soils (F20) | | | | | | | 12) | | | . , | | |
| Stratified Layers (A5)Loamy Gleyed Matrix (F2)Reduced Vertic (F18) (outside MLRA 150A, 150B)Organic Bodies (A6) (LRR P, T, U)XDepleted Matrix (F3)(outside MLRA 150A, 150B)5 cm Mucky Mineral (A7) (LRR P, T, U)Redox Dark Surface (F6)Piedmont Floodplain Soils (F19) (LRR P, T)Muck Presence (A8) (LRR U)Depleted Dark Surface (F7)Anomalous Bright Floodplain Soils (F20)1 cm Muck (A9) (LRR P, T)Redox Depressions (F8)(MLRA 153B)Depleted Below Dark Surface (A11)Marl (F10) (LRR U)Red Parent Material (F21)Thick Dark Surface (A12)Depleted Ochric (F11) (MLRA 151)Very Shallow Dark Surface (F22)Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR O, P, T)(outside MLRA 138, 152A in FL, 154)Sandy Mucky Mineral (S1) (LRR O, S)Umbric Surface (F13) (LRR P, T, U)Barrier Islands Low Chroma Matrix (TS7)Sandy Gleyed Matrix (S4)Delta Ochric (F17) (MLRA 150A, 150B)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F19) (MLRA 149A)Other (Explain in Remarks)Dark Surface (S7) (LRR P, S, T, U)Anomalous Bright Floodplain Soils (F20) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154)Restrictive Layer (If observed):Kestrictive Layer (If observed):Stripped (I opserved): | | () | | | | | RR () | | | | | |
| Organic Bodies (A6) (LRR P, T, U)XDepleted Matrix (F3)(outside MLRA 150A, 150B)5 cm Mucky Mineral (A7) (LRR P, T, U)Redox Dark Surface (F6)Piedmont Floodplain Soils (F19) (LRR P, T)Muck Presence (A8) (LRR U)Depleted Dark Surface (F7)Anomalous Bright Floodplain Soils (F20)1 cm Muck (A9) (LRR P, T)Redox Depressions (F8)(MLRA 153B)Depleted Below Dark Surface (A11)Marl (F10) (LRR U)Red Parent Material (F21)Thick Dark Surface (A12)Depleted Ochric (F11) (MLRA 151)Very Shallow Dark Surface (F22)Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR O, P, T)Barrier Islands Low Chroma Matrix (TS7)Sandy Mucky Mineral (S1) (LRR O, S)Umbric Surface (F13) (LRR P, T, U)Barrier Islands Low Chroma Matrix (TS7)Sandy Redox (S5)Reduced Vertic (F18) (MLRA 150A, 150B)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F19) (MLRA 149A)Other (Explain in Remarks)Dark Surface (S7) (LRR P, S, T, U)Anomalous Bright Floodplain Soils (F20) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154)Restrictive Layer (if observed):Kestrictive Layer (if observed):Stripped Matrix (F3)Stripped Matrix (F3) | | | | | - | | | | | | , | |
| 5 cm Mucky Mineral (A7) (LRR P, T, U)Redox Dark Surface (F6)Piedmont Floodplain Soils (F19) (LRR P, T)Muck Presence (A8) (LRR U)Depleted Dark Surface (F7)Anomalous Bright Floodplain Soils (F20)1 cm Muck (A9) (LRR P, T)Redox Depressions (F8)(MLRA 153B)Depleted Below Dark Surface (A11)Marl (F10) (LRR U)Red Parent Material (F21)Thick Dark Surface (A12)Depleted Ochric (F11) (MLRA 151)Very Shallow Dark Surface (F22)Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR O, P, T)(outside MLRA 138, 152A in FL, 154)Sandy Mucky Mineral (S1) (LRR O, S)Umbric Surface (F13) (LRR P, T, U)Barrier Islands Low Chroma Matrix (TS7)Sandy Gleyed Matrix (S4)Delta Ochric (F17) (MLRA 150A, 150B)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F19) (MLRA 149A)Dark Surface (S7) (LRR P, S, T, U)Anomalous Bright Floodplain Soils (F20)3Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154)Restrictive Layer (if observed):Kestrictive Layer (if observed):Kestrictive Layer (if observed): | | | т. (J) | | | | | | | | | |
| Muck Presence (A8) (LRR U)Depleted Dark Surface (F7)Anomalous Bright Floodplain Soils (F20)1 cm Muck (A9) (LRR P, T)Redox Depressions (F8)(MLRA 153B)Depleted Below Dark Surface (A11)Marl (F10) (LRR U)Red Parent Material (F21)Thick Dark Surface (A12)Depleted Ochric (F11) (MLRA 151)Very Shallow Dark Surface (F22)Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR O, P, T)(outside MLRA 138, 152A in FL, 154)Sandy Mucky Mineral (S1) (LRR O, S)Umbric Surface (F13) (LRR P, T, U)Barrier Islands Low Chroma Matrix (TS7)Sandy Gleyed Matrix (S4)Delta Ochric (F17) (MLRA 151)(MLRA 153B, 153D)Sandy Redox (S5)Reduced Vertic (F18) (MLRA 150A, 150B)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F19) (MLRA 149A)Other (Explain in Remarks)Dark Surface (S7) (LRR P, S, T, U)Anomalous Bright Floodplain Soils (F20) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.Restrictive Layer (if observed):KerterleitKerterleit | | | | | | | | | | | | |
| 1 cm Muck (A9) (LRR P, T)Redox Depressions (F8)(MLRA 153B)Depleted Below Dark Surface (A11)Marl (F10) (LRR U)Red Parent Material (F21)Thick Dark Surface (A12)Depleted Ochric (F11) (MLRA 151)Very Shallow Dark Surface (F22)Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR O, P, T)(outside MLRA 138, 152A in FL, 154)Sandy Mucky Mineral (S1) (LRR O, S)Umbric Surface (F13) (LRR P, T, U)Barrier Islands Low Chroma Matrix (TS7)Sandy Gleyed Matrix (S4)Delta Ochric (F17) (MLRA 151)(MLRA 153B, 153D)Sandy Redox (S5)Reduced Vertic (F18) (MLRA 150A, 150B)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F19) (MLRA 149A)Other (Explain in Remarks)Dark Surface (S7) (LRR P, S, T, U)Anomalous Bright Floodplain Soils (F20)3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.Restrictive Layer (if observed):Restrictive Layer (if observed):Ito Descrete): | | | | | | | | | | | | |
| Depleted Below Dark Surface (A11)Marl (F10) (LRR U)Red Parent Material (F21)Thick Dark Surface (A12)Depleted Ochric (F11) (MLRA 151)Very Shallow Dark Surface (F22)Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR O, P, T)(outside MLRA 138, 152A in FL, 154)Sandy Mucky Mineral (S1) (LRR O, S)Umbric Surface (F13) (LRR P, T, U)Barrier Islands Low Chroma Matrix (TS7)Sandy Gleyed Matrix (S4)Delta Ochric (F17) (MLRA 151)(MLRA 153B, 153D)Sandy Redox (S5)Reduced Vertic (F18) (MLRA 150A, 150B)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F19) (MLRA 149A)Other (Explain in Remarks)Dark Surface (S7) (LRR P, S, T, U)Anomalous Bright Floodplain Soils (F20) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154)Restrictive Layer (if observed):Kertic (if observed):Very Shallow Dark Surface (F22) | | | | | | | | | | | | |
| Thick Dark Surface (A12)Depleted Ochric (F11) (MLRA 151)Very Shallow Dark Surface (F22)Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR O, P, T)(outside MLRA 138, 152A in FL, 154)Sandy Mucky Mineral (S1) (LRR O, S)Umbric Surface (F13) (LRR P, T, U)Barrier Islands Low Chroma Matrix (TS7)Sandy Gleyed Matrix (S4)Delta Ochric (F17) (MLRA 151)(MLRA 153B, 153D)Sandy Redox (S5)Reduced Vertic (F18) (MLRA 150A, 150B)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F19) (MLRA 149A)Other (Explain in Remarks)Dark Surface (S7) (LRR P, S, T, U)Anomalous Bright Floodplain Soils (F20) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154)Restrictive Layer (if observed):Kerter (if observed):Kerter (Kerter (Kerte | | | ; (A11) | | | () | | Red Parent Material (F21) | | | | |
| Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR O, P, T)(outside MLRA 138, 152A in FL, 154)Sandy Mucky Mineral (S1) (LRR O, S)Umbric Surface (F13) (LRR P, T, U)Barrier Islands Low Chroma Matrix (TS7)Sandy Gleyed Matrix (S4)Delta Ochric (F17) (MLRA 151)(MLRA 153B, 153D)Sandy Redox (S5)Reduced Vertic (F18) (MLRA 150A, 150B)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F19) (MLRA 149A)Other (Explain in Remarks)Dark Surface (S7) (LRR P, S, T, U)Anomalous Bright Floodplain Soils (F20) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.Restrictive Layer (if observed):Kerved):KervedKerved | | | | | | 1) (MLR | A 151) | | | | | 2) |
| Sandy Mucky Mineral (S1) (LRR O, S)Umbric Surface (F13) (LRR P, T, U)Barrier Islands Low Chroma Matrix (TS7)Sandy Gleyed Matrix (S4)Delta Ochric (F17) (MLRA 151)(MLRA 153B, 153D)Sandy Redox (S5)Reduced Vertic (F18) (MLRA 150A, 150B)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F19) (MLRA 149A)Other (Explain in Remarks)Dark Surface (S7) (LRR P, S, T, U)Anomalous Bright Floodplain Soils (F20)3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.Restrictive Layer (if observed):Kestrictive Layer (if observed):Stripped Matrix (IS observed): | Coast P | rairie Redox (A16) (M | LRA 150A) | | | | | Э, Р, Т) | (outs | ide MLRA | 138, 152A in | ı FL, 154) |
| Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) (LRR S, T, U) Very Shallow Dark Surface (F22) wetland hydrology must be present, (MLRA 138, 152A in FL, 154) unless disturbed or problematic. | Sandy M | /lucky Mineral (S1) (Lf | RR O, S) | | | | | | Barrier | Islands Lo | w Chroma Ma | atrix (TS7) |
| Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) (LRR S, T, U) Very Shallow Dark Surface (F22) Wetland hydrology must be present, (MLRA 138, 152A in FL, 154) unless disturbed or problematic. | Sandy G | eyed Matrix (S4) | | Delta Ochric | c (F17) (M | VLRA 15 | 51) | | (MLR | A 153B, 1 | 53D) | |
| Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. | Sandy R | (S5) | | Reduced Ve | ∍rtic (F18 | 3) (MLRA | 4 150A, 1! | 50B) | Other (Explain in Remarks) | | | |
| Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) Wetland hydrology must be present, unless disturbed or problematic. | Stripped | Matrix (S6) | | Piedmont Fl | loodplain | ı Soils (F | 19) (MLF | RA 149A) | _ | | | |
| (LRR S, T, U) Very Shallow Dark Surface (F22) wetland hydrology must be present, unless disturbed or problematic. (MLRA 138, 152A in FL, 154) unless disturbed or problematic. | Dark Su | rface (S7) (LRR P, S, | T, U) | Anomalous | Bright Fl | oodplain | Soils (F2 | 20) | - | | | |
| (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): | | | 1 | | | | | | | • | | |
| Restrictive Layer (if observed): | (LRR | S, T, U) | | | | | | wetland hydrology must be present, | | | | |
| | | | | (MLRA 13 | 38, 152A | . in FL, 1 | 54) | | unles | ss disturbe | d or problema | atic. |
| | | Layer (if observed): | | | | | | Γ | | | | |
| | Type: | | | | | | | | | | | |
| Depth (inches): | Depth (ir | nches): | | | | | | Hydri | c Soil Prese | ent? | Yes X | No |
| Remarks: | Remarks: | | | | | | | | | | | |
| | | | | | | | | | | | | |
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| | | | Attachment 2.D.1 |
|---|--|---------------------------------------|--|
| U.S. Arm WETLAND DETERMINATION DATA See ERDC/EL TR-07-24; | | 0 | OMB Control #: 0710-xxxx, Exp: Pending |
| Project/Site: TL 254/2201 Clubhouse - Lak | eview 230 kV Rebuild | City/County: Greensvill | le Sampling Date: 8/7/20 |
| Applicant/Owner: Dominion Energy Virg | jinia | | State: VA Sampling Point: 21-B |
| Investigator(s): S. Kupiec | S | ection, Township, Range: | |
| Landform (hillside, terrace, etc.): Slope | | I relief (concave, convex, | none): Convex Slope (%): 2-4 |
| Subregion (LRR or MLRA): LRR P, MLRA | | | 77.617337 Datum: |
| Soil Map Unit Name: Craven clay loam | <u></u> | 20g. | NWI classification: N/A |
| Are climatic / hydrologic conditions on the si | te typical for this time of year | ? Yes X | No (If no, explain in Remarks.) |
| Are Vegetation, Soil, or Hydro | | | circumstances" present? Yes X No |
| Are Vegetation, Soil, or Hydro | ology naturally probler | natic? (If needed, exp | plain any answers in Remarks.) |
| | | | ons, transects, important features, etc. |
| Libertranke tie Menodation Descent? | Vee V Ne | la the Complete Area | |
| Hydrophytic Vegetation Present? Hydric Soil Present? | Yes X No Yes No X | Is the Sampled Area within a Wetland? | Yes No X |
| Wetland Hydrology Present? | Yes No X | | |
| Remarks: | | | |
| Upland at Flag BE-2. | | | |
| | | | |
| | | | |
| | | | |
| HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is requ | ired; check all that apply) | | Surface Soil Cracks (B6) |
| Surface Water (A1) | Aquatic Fauna (B13) | | Sparsely Vegetated Concave Surface (B8) |
| High Water Table (A2) | Marl Deposits (B15) (L | | Drainage Patterns (B10) |
| Saturation (A3) | Hydrogen Sulfide Odo | | Moss Trim Lines (B16) |
| Water Marks (B1) | Oxidized Rhizospheres | • • • • | Dry-Season Water Table (C2) |
| Sediment Deposits (B2) Drift Deposits (B3) | Presence of Reduced Recent Iron Reduction | | Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) |
| Algal Mat or Crust (B4) | Thin Muck Surface (C | | Geomorphic Position (D2) |
| Iron Deposits (B5) | Other (Explain in Rem | , | Shallow Aquitard (D3) |
| Inundation Visible on Aerial Imagery (E | 37) | | FAC-Neutral Test (D5) |
| Water-Stained Leaves (B9) | | | Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: | | | |
| Surface Water Present? Yes | No X Depth (inches | · | |
| Water Table Present? Yes | No X Depth (inches | | |
| Saturation Present? Yes (includes capillary fringe) | No X Depth (inches |): Wetland | Hydrology Present? Yes No X |
| Describe Recorded Data (stream gauge, m | onitoring well aerial photos | previous inspections) if a | vailable |
| | ionitorinig tron, aona priotoo, | p. e e | |
| | | | |
| Remarks: | | | |
| | | | |
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Attachment 2.D.1 Page 154 of 230

| VEGETATION (Five Strata) - Use scienti | fic names of pl | ants. | | Sampling Point: 21-B |
|---|-----------------|------------|-----------|--|
| | Absolute Do | minant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover Sp | ecies? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2. | | | | That Are OBL, FACW, or FAC: 3 (A) |
| 3 | | | | Total Number of Dominant |
| 4. | | | | Species Across All Strata: 4 (B) |
| 5. | | | | Percent of Dominant Species |
| 6. | | | | That Are OBL, FACW, or FAC: 75.0% (A/B) |
| | =Tota | al Cover | | Prevalence Index worksheet: |
| 50% of total cover: | | tal cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | $\frac{1}{\text{OBL species}} 0 \qquad \frac{1}{\text{x 1} = 0}$ |
| 1. inus taeda | 15 | Yes | FAC | FACW species $15 \times 2 = 30$ |
| 2. | 10 | 103 | TAO | |
| 3. | | | | |
| - | | | | FACU species 15 $x 4 = 60$ |
| 4 | | | | UPL species $0 \times 5 = 0$ |
| 5 | | | | Column Totals: 75 (A) 225 (B) |
| 6 | | | | Prevalence Index = B/A =3.00 |
| | <u>15</u> =Tota | al Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | 8 20% of to | tal cover: | 3 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | 3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. | | | | |
| 4. | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6. | | | | present, unless disturbed or problematic. |
| | =Tota | al Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | | tal cover: | | - |
| Herb Stratum (Plot size: 30) | 20/0 01 10 | | | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| | 22 | | 540 | (7.6 cm) or larger in diameter at breast height (DBH). |
| 1. <u>ndropogon irginicus</u> | | Yes | FAC | |
| 2. upatorium perfoliatum | | Yes | FACW | Sapling – Woody plants, excluding woody vines, |
| 3. ac era tomentosa | 15 | Yes | FACU | approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. |
| 4 | | | | |
| 5 | | | | Shrub - Woody Plants, excluding woody vines, |
| 6 | | | | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7 | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, and woody |
| 9. | | | | plants, except woody vines, less than approximately 3 |
| 10. | | | | ft (1 m) in height. |
| 11. | | | | Woody Vine - All woody vines, regardless of height. |
| | 60 =Tota | al Cover | | |
| 50% of total cover: 3 | | tal cover: | 12 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| | | | | |
| 1 2. | | | | |
| | | | | |
| 3. | | | | |
| 4 | | | | |
| 5 | | | | Hydrophytic |
| | | al Cover | | Vegetation |
| 50% of total cover: | 20% of to | tal cover: | | Present? Yes X No |
| Remarks: (If observed, list morphological adaptatio | ns below.) | | | |

SOIL Sampling Point: 21-B 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) Loc² Texture Remarks % Type¹ 10YR 4/2 0-2 100 Loamy/Clayey 2-20 2.5Y 5/4 90 10YR 4/2 5 D Loamy/Clayey Μ 10YR 4/6 5 С Distinct redox concentrations Μ ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:

| | | | Attachment 2.D.1 |
|--|--|------------------------|---|
| WETLAND DETERMINATION DATA | y Corps of Engineers SHEET – Atlantic and Gulf Coasta the proponent agency is CECW- | 0 | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
| Project/Site: TL 254/2201 Clubhouse - Lak | eview 230 kV Rebuild City/Cou | nty: Greensville | Sampling Date: 8/7/2020 |
| Applicant/Owner: Dominion Energy Virg | jinia | | State: VA Sampling Point: 21-C |
| Investigator(s): S. Kupiec | Section, Tow | nship, Range: | |
| Landform (hillside, terrace, etc.): Slope | | cave, convex, non | e): Convex Slope (%): 2-4 |
| Subregion (LRR or MLRA): LRR P, MLRA | | Long: -77.6 | , <u> </u> |
| Soil Map Unit Name: Dothan loamy sand | | | NWI classification: N/A |
| Are climatic / hydrologic conditions on the si | te typical for this time of year? | Yes X I | No (If no, explain in Remarks.) |
| | | | |
| Are Vegetation, Soil, or Hydro | | | |
| Are Vegetation, Soil, or Hydro | | | any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attack | n site map showing sampling p | point locations | s, transects, important features, etc. |
| Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? | | mpled Area Wetland? | Yes No X |
| Remarks: Upland at Flag BG-27. | | | |
| L HYDROLOGY | | | |
| Wetland Hydrology Indicators: Primary Indicators (minimum of one is requestion of the second stream of the second | Aquatic Fauna (B13) Marl Deposits (B15) (LRR U) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks) | Roots (C3) | condary 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) Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Yes | No X Depth (inches): No X Depth (inches): No X Depth (inches): | Wetland Hyd | rology Present? Yes <u>No X</u> |
| Describe Recorded Data (stream gauge, m | onitoring well, aerial photos, previous in | spections), if availa | able: |
| Remarks: | | | |

Attachment 2.D.1 Page 157 of 230

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

| vegeration (Five Strata) – Use scientif | ic names | of plants. | | Sampling Point: 21-C |
|--|------------|-----------------|-------------|--|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2. | | | | That Are OBL, FACW, or FAC: 4 (A) |
| 3 | | | | |
| 1 | | | | Total Number of Dominant Species Across All Strata: 6 (B) |
| | | | | |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. uercus nigra | 5 | Yes | FAC | FACW species 20 $x 2 = 40$ |
| 2. Li uidambar st raciflua | 5 | Yes | FAC | FAC species $25 \times 3 = 75$ |
| | | | | |
| 3. inus taeda | 5 | Yes | FAC | FACU species <u>5</u> x 4 = <u>20</u> |
| 4. uercus rubra | 5 | Yes | FACU | UPL species 0 x 5 = 0 |
| 5 | | | | Column Totals: 50 (A) 135 (B) |
| 6. | | | | Prevalence Index = $B/A = 2.70$ |
| | 20 | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: 10 | | of total cover: | 4 | 1 - Rapid Test for Hydrophytic Vegetation |
| | <u> </u> | | - 4 | |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | 3 - Prevalence Index is ≤3.0 ¹ |
| 2. | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | 1 |
| | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. upatorium perfoliatum | 20 | Yes | FACW | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. upatorium spp | 15 | Yes | | Continue. We charte and discussed a factor |
| , ,, | | | F AO | Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less |
| 3. ubus argutus | 10 | No | FAC | than 3 in. (7.6 cm) DBH. |
| 4. S mph otrichum spp | 10 | No | | |
| 5. estuca spp | 10 | No | | Shrub - Woody Plants, excluding woody vines, |
| 6. | | _ | _ | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. | | | | Herb – All herbaceous (non-woody) plants, including |
| 8. | | | | herbaceous vines, regardless of size, and woody |
| | | | | plants, except woody vines, less than approximately 3 |
| 9 | | | | ft (1 m) in height. |
| 10 | | | | |
| 11 | | | | Woody Vine – All woody vines, regardless of height. |
| | 65 | =Total Cover | | |
| 50% of total cover: 33 | 3 20% | of total cover: | 13 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4. | | | | |
| 5. | | | | |
| · · · · · · · · · · · · · · · · · · · | | -Total Cavar | | Hydrophytic |
| | | =Total Cover | | Vegetation |
| 50% of total cover: | 20% | of total cover: | | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | |

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SOIL Sampling Point: 21-C Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix Color (moist) % Color (moist) Loc² Texture Remarks (inches) % Type¹ 10YR 3/2 0-4 100 Loamy/Clayey 4-20 10YR 5/4 100 Loamy/Clayey ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:

| | Attachment 2.D.1 |
|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 9/22/20 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 22-A |
| Investigator(s): S. Kupiec Section, Township, Range: | |
| Landform (hillside, terrace, etc.): Drainageway Local relief (concave, convex, none | e): Concave Slope (%): 1-2 |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.601876 Long: -77.61 | |
| Soil Map Unit Name: Woodington fine sandy loam | NWI classification: N/A |
| | No (If no, explain in Remarks.) |
| | mstances" present? Yes X No |
| | any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations | - |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? Wetland Hydrology Present? Yes X No No Remarks: Kemarks Kemarks Kemarks | Yes <u>X</u> No |
| Wetland at Flag BJ-2. | |
| HYDROLOGY | |
| · · · · · · · · · · · · · · · · · · · | condary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | Surface Soil Cracks (B6) |
| Surface Water (A1) Aquatic Fauna (B13) X High Water Table (A2) Marl Deposits (B15) (LRR U) | Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) |
| X Ingli Victor (able (12)) X Saturation (A3) Hydrogen Sulfide Odor (C1) | Moss Trim Lines (B16) |
| Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) | Dry-Season Water Table (C2) |
| Sediment Deposits (B2) Presence of Reduced Iron (C4) | Crayfish Burrows (C8) |
| Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) | Saturation Visible on Aerial Imagery (C9) |
| | Geomorphic Position (D2) Shallow Aquitard (D3) |
| | FAC-Neutral Test (D5) |
| Water-Stained Leaves (B9) | Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: | |
| Surface Water Present? Yes No X Depth (inches): | |
| Water Table Present? Yes X No Depth (inches): 0 | |
| | rology Present? Yes X No |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if availa | blo |
| Describe Recorded Data (Stream gauge, monitoring well, aerial photos, previous inspections), il avalia | DIG. |
| | |
| Remarks: | |
| | |
| | |
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| | |
| | |
| | |

Attachment 2.D.1 Page 160 of 230

| VEGETATION (Five Strata) - Use scient | ific names c | of plants. | | Sampling Point: 22-A |
|---|--------------|-----------------|-----------|---|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: 2 (A) |
| 3 | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 2 (B) |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: 100.0% (A/B) |
| | = | Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% (| of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 10 x 1 = 10 |
| 1. Li uidambar st raciflua | 15 | Yes | FAC | FACW species 10 $x 2 = 20$ |
| 2. | | | | FAC species 75 x 3 = 225 |
| 3. | | | | FACU species $0 	 x4 = 0$ |
| 4. | | | | UPL species $0 \times 5 = 0$ |
| 5. | | | | Column Totals: 95 (A) 255 (B) |
| | | | | () |
| 6 | | Tatal Osuar | | |
| 500/ // / | | Total Cover | | Hydrophytic Vegetation Indicators: |
| | 8 20% (| of total cover: | 3 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | X 3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6. | | | | present, unless disturbed or problematic. |
| | = | Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% (| of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. anicum irgatum | 60 | Yes | FAC | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. Scirpus c perinus | 10 | No | OBL | Sapling – Woody plants, excluding woody vines, |
| 3. Carex crinita | 5 | No | FACW | approximately 20 ft (6 m) or more in height and less |
| 4. hexia mariana | 5 | No | FACW | than 3 in. (7.6 cm) DBH. |
| 5. | | | 171011 | Shrub - Woody Plants, excluding woody vines, |
| 6. | | | | approximately 3 to 20 ft (1 to 6 m) in height. |
| | | | | |
| 7. | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 |
| 9 | | | | ft (1 m) in height. |
| 10 | | | | (), Ü |
| 11 | | | | Woody Vine – All woody vines, regardless of height. |
| | 80 = | Total Cover | | |
| 50% of total cover: | 40 20% (| of total cover: | 16 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | | Total Cover | | Hydrophytic |
| 50% of total cover: | | of total cover: | | Vegetation Present? Yes X No |
| Remarks: (If observed, list morphological adaptatic | | | | |
| remaine. In observed, list morphological adaptatic | , wubu u u u | | | |

| 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! Loc? Texture Remarks 0-18 10YR 5/1 95 10YR 5/8 5 C M Loamy/Clayey Prominent redox concentratic 18-20 10YR 5/1 95 10YR 5/8 5 C M Loamy/Clayey Prominent redox concentratic 18-20 10YR 5/1 95 10YR 5/8 5 C M Loamy/Clayey Prominent redox concentratic 18-20 10YR 5/1 95 10YR 5/8 5 C M Loamy/Clayey Prominent redox concentratic 19 10YR 5/1 95 10YR 5/8 5 C M Loamy/Clayey Prominent redox concentratic 19 10YR 5/1 95 10YR 5/8 5 C M Loamy/Clayey Prominent redox concentratic 19 10YR 5/1 95 10YR 5/8 5 C M Loamy/Clayed Loamy/Clayed | Profile Des | cription: (Describe to | the dent | n needed to do | rument t | he indic: | ator or co | onfirm th | e absence | Sampling Po | | 22-A |
|--|-------------|--|---------------|----------------|-------------|------------|------------------|-----------|---------------------|-----------------------------------|----------|-------------|
| Color (moist) % Type* Loc ² Texture Remarks 0-18 10YR 3/1 95 10YR 4/6 5 C PL Leamy/Clayey Prominent redox concentratic 18-20 10YR 5/1 95 10YR 5/8 5 C M Leamy/Clayey Prominent redox concentratic 18-20 10YR 5/1 95 10YR 5/8 5 C M Leamy/Clayey Prominent redox concentratic 19-20 10YR 5/1 95 10YR 5/8 5 C M Leamy/Clayey Prominent redox concentratic 19-20 10YR 5/1 95 10YR 5/8 5 C M Leamy/Clayey Prominent redox concentratic 19-20 10YR 5/1 95 10YR 5/8 5 C M Leamy/Clayey Prominent redox concentratic 19-20 10YR 5/1 95 C M Leamy/Clayey Prominent redox concentratic 19-20 10YR 5/8 50 Cast 7/antic 1/anticators for Problematic Hydric Solls? Loamy/Clayey M | | - | | | | | | | | , or maleators.) | | |
| 18-20 10YR 5/1 95 10YR 5/8 5 C M Loamy/Clayey Prominent redox concentration ** Type: C—Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ** Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Indicators for Problematic Hydric Soils*: Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A40) (LRR S) Indicators for Problematic Hydric Soils*: Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Outside MLRA 150A) Back Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Outside MLRA 150A) Stratified Layers (A5) Loamy Wucky Mineral (F1) (LRR O) Outside MLRA 150A, 150B) Feduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Redox Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) Muck Presence (A8) (LRR N) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) Muck Presence (F22) Coust ded LRA 138, 152A in FL, 154) Depleted Below Dark Surface (S5) Reduced Vertic (F13) (LRR P, T, U) Berdiered Vertic (F13) (LRR P, T, U) Brad | • | | % | | | 4 | Loc ² | Te | exture | Re | marks | |
| 'Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Black Histic (A2) Barier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P) Muck Presence (A8) (LRR P, T) Redox Depressions (F8) Redox Parent Material (F21) Depleted Bolow Dark Surface (A12) Depleted Ochric (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (MLRA 151) Very Shallow Dark Surface (F22) Other (Explain in Remarks) Stripped Matrix (S6) Deleted Ochric (F13) (MLRA 150A, 150B) Other (Explain in Remarks) Shripped Matrix (S6) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) MLRA 153A, 153D) Other (Explain in Remarks) Stripped Matrix (S6) Piedm | 0-18 | 10YR 3/1 | 95 | 10YR 4/6 | 5 | С | PL | Loam | y/Clayey | Prominent red | lox conc | centrations |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) X Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, Muck Presence (A8) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Poeleted Dark Surface (F2) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) Gutside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 150) (MLRA 153B, 153D) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) </td <td>18-20</td> <td>10YR 5/1</td> <td>95</td> <td>10YR 5/8</td> <td>5</td> <td>С</td> <td>М</td> <td>Loam</td> <td>y/Clayey</td> <td>Prominent red</td> <td>lox conc</td> <td>entrations</td> | 18-20 | 10YR 5/1 | 95 | 10YR 5/8 | 5 | С | М | Loam | y/Clayey | Prominent red | lox conc | entrations |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) X Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Mari (F10) (LRR U) Red Parent Material (F21) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 150A, 150B) Other (Explain in Remarks) | | · | | | · | | | | | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) X Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Mari (F10) (LRR U) Red Parent Material (F21) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 150A, 150B) Other (Explain in Remarks) | 17 0 0 | | | | | | | | 2 | | | |
| Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Muck (A9) (LRR P, T, U) X Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, Muck Presence (A8) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) Goutside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR O, P, T) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) MLRA 153B, 153D) | | | | | | | d Grains. | | | | | |
| Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Muck Vineral (A7) (LRR P, T, U) X Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, Muck Presence (A8) (LRR P, T, U) Redox Depressions (F6) Mick L753B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Redox Depressions (F12) (LRR O, P, T) Redox Nucky Mineral (S1) (LRR O, S) Umbric Surface (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) Muck Auface (S7) (LRR P, S, T, U) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) <t< td=""><td>-</td><td></td><td>ole to all Li</td><td></td><td></td><td></td><td>0 T IN</td><td></td><td></td><td></td><td>lydric S</td><td>olls":</td></t<> | - | | ole to all Li | | | | 0 T IN | | | | lydric S | olls": |
| Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) X Redox Dark Surface (F7) Anomalous Bright Floodplain Soils (F19) (LRR P. Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) MucRA 153B, 153D) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if o | | . , | | | | , . | - | | | | | |
| Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) X Reduce Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Red Parent Material (F21) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) (MLRA 153B, 153D) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 138, 152A in FL, 154) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) ³ Indicators of hydrophytic v | | | | | | | 12) | | | | | |
| Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) X Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Other (Explain in Remarks) Muck RS , T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 138, 152A in FL, 154) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154) Restrictive Layer (if observed): Type: | | | | | | | | | | |) | |
| Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) X Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, Muck A9) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 153, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) Other (Explain in Remarks) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154) Restrictive Layer (if observed): Type: | | | | | • | . , . | .RR 0) | | | | | |
| 5 cm Mucky Mineral (A7) (LRR P, T, U) X Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, Muck Presence (A8) (LRR U) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) Other (Explain in Remarks) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) 3 ¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154) Restrictive Layer (if observed): Type: | | | | | | | | | | | | |
| Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Other (Explain in Remarks) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154) Restrictive Layer (if observed): Type: | | Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) | | | | | | | | | | |
| 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Other (Explain in Remarks) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154) Restrictive Layer (if observed): Type: | | | R Ρ, Τ, U) | | | | | | | | | |
| Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Redox (S5) Reduced Vertic (F17) (MLRA 151) (MLRA 153B, 153D) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) Other (Explain in Remarks) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154) Restrictive Layer (if observed): Type: | | | | | | | | | | | | ls (F20) |
| Thick Dark Surface (A12)Depleted Ochric (F11) (MLRA 151)Very Shallow Dark Surface (F22)Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR O, P, T)(outside MLRA 138, 152A in FL, 154)Sandy Mucky Mineral (S1) (LRR O, S)Umbric Surface (F13) (LRR P, T, U)Barrier Islands Low Chroma Matrix (TS7)Sandy Gleyed Matrix (S4)Delta Ochric (F17) (MLRA 151)(MLRA 153B, 153D)Sandy Redox (S5)Reduced Vertic (F18) (MLRA 150A, 150B)Other (Explain in Remarks)Stripped Matrix (S6)Piedmont Floodplain Soils (F19) (MLRA 149A)Other (Explain in Remarks)Dark Surface (S7) (LRR P, S, T, U)Anomalous Bright Floodplain Soils (F20) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154)Restrictive Layer (if observed): Type: Depth (inches):(MLRA 138, 152A in FL, 154)Hydric Soil Present?Yes X | | | | | | (F8) | | | | | | |
| Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Other (Explain in Remarks) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, (MLRA 138, 152A in FL, 154) Restrictive Layer (if observed): Type: | | | (A11) | | | | | | | | | |
| Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) (LRR S, T, U) Very Shallow Dark Surface (F22) wetland hydrology must be present, (MLRA 138, 152A in FL, 154) Restrictive Layer (if observed): Type: | | () | | | | | | | | | | |
| Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) (LRR S, T, U) Very Shallow Dark Surface (F22) wetland hydrology must be present, (MLRA 138, 152A in FL, 154) Restrictive Layer (if observed): Type: | Coast F | rairie Redox (A16) (MI | _RA 150A) | Iron-Manga | | | | | | | | |
| Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Other (Explain in Remarks) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) Indicators of hydrophytic vegetation and (LRR S, T, U) Very Shallow Dark Surface (F22) wetland hydrology must be present, (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No | Sandy I | /lucky Mineral (S1) (LR | R 0, S) | Umbric Sur | | | | | | Barrier Islands Low Chroma Matrix | | |
| Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) (LRR S, T, U) Very Shallow Dark Surface (F22) Wetland hydrology must be present, (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? | Sandy (| Gleyed Matrix (S4) | | Delta Ochri | ic (F17) (I | MLRA 15 | 51) | | | | | |
| Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) (LRR S, T, U) Very Shallow Dark Surface (F22) Wetland hydrology must be present, (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? | Sandy F | Redox (S5) | | Reduced V | ertic (F18 | B) (MLRA | 150A, 1 | 50B) | Other | (Explain in Remark | s) | |
| Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) ³ Indicators of hydrophytic vegetation and Very Shallow Dark Surface (F22) (LRR S, T, U) Very Shallow Dark Surface (F22) wetland hydrology must be present, UMLRA 138, 152A in FL, 154) Restrictive Layer (if observed): Type: | Stripped | d Matrix (S6) | | Piedmont F | loodplair | n Soils (F | 19) (MLR | RA 149A) | | | | |
| (LRR S, T, U) | Dark Su | Irface (S7) (LRR P, S, | T, U) | Anomalous | Bright Fl | loodplain | Soils (F2 | 20) | | | | |
| (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No | Polyvalı | ue Below Surface (S8) | | (MLRA 1 | 49A, 153 | C, 153D) |) | | ³ Indica | ators of hydrophytic | vegetat | ion and |
| Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? | (LRR | S, T, U) | | Very Shallo | w Dark S | Surface (F | -22) | | wet | land hydrology mus | t be pre | sent, |
| Type: | | | | (MLRA 1 | 38, 152A | in FL, 1 | 54) | | unle | ess disturbed or pro | blemati | с. |
| Depth (inches): Hydric Soil Present? Yes X No | Restrictive | Layer (if observed): | | | | | | | | | | |
| Depth (inches): Hydric Soil Present? Yes X No | Type: | | | | | | | | | | | |
| | | nches). | | | | | | Hydri | c Soil Pres | ent? Yes | XN | lo |
| Remarks: | | | | | | | | Hyan | 0000000 | | | |
| | Remarks: | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| | | | Attachment 2.D.1 | | |
|---|---------------------------------|--------------------------------|--|--|--|
| U.S. Arr WETLAND DETERMINATION DAT See ERDC/EL TR-07-24 | | Gulf Coastal Plain Regio | OMB Control #: 0710-xxxx, Exp: Pending | | |
| Project/Site: TL 254/2201 Clubhouse - L | akeview 230 kV Rebuild | City/County: Greensville | Sampling Date: 9/22/20 | | |
| Applicant/Owner: Dominion Energy V | irginia | | State: VA Sampling Point: 22-B | | |
| Investigator(s): S. Kupiec | | Section, Township, Range: | | | |
| Landform (hillside, terrace, etc.): Slope | | al relief (concave, convex, no | one): Convex Slope (%): 2-3 | | |
| Subregion (LRR or MLRA): LRR P, MLR | | Long: -77 | | | |
| Soil Map Unit Name: Mattaponi sandy loa | | Long | NWI classification: N/A | | |
| | | ır? Yes X | | | |
| Are climatic / hydrologic conditions on the | | | No (If no, explain in Remarks.) | | |
| Are Vegetation, Soil, or Hy | | | cumstances" present? Yes X No | | |
| Are Vegetation, Soil, or Hy | | | ain any answers in Remarks.) | | |
| SUMMARY OF FINDINGS – Atta | ch site map showing s | ampling point locatio | ns, transects, important features, etc. | | |
| Hydrophytic Vegetation Present? | Yes X No | Is the Sampled Area | | | |
| Hydric Soil Present? | Yes No X | within a Wetland? | Yes No X | | |
| Wetland Hydrology Present? | Yes No X | | | | |
| Remarks: Upland near Flag BJ-2. | | | | | |
| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | | <u>,</u> | Secondary Indicators (minimum of two required) | | |
| Primary Indicators (minimum of one is re | quired; check all that apply) | | Surface Soil Cracks (B6) | | |
| Surface Water (A1) | Aquatic Fauna (B13) | - | Sparsely Vegetated Concave Surface (B8) | | |
| High Water Table (A2) | Marl Deposits (B15) (| - | Drainage Patterns (B10) | | |
| Saturation (A3) Water Marks (B1) | Hydrogen Sulfide Odd | | Moss Trim Lines (B16) Dry-Season Water Table (C2) | | |
| Sediment Deposits (B2) | Presence of Reduced | es on Living Roots (C3) | Crayfish Burrows (C8) | | |
| Drift Deposits (B3) | Recent Iron Reduction | - | | | |
| Algal Mat or Crust (B4) | Thin Muck Surface (C | | Geomorphic Position (D2) | | |
| Iron Deposits (B5) | Other (Explain in Ren | narks) | Shallow Aquitard (D3) | | |
| Inundation Visible on Aerial Imagery | (B7) | _ | FAC-Neutral Test (D5) | | |
| Water-Stained Leaves (B9) | | _ | Sphagnum Moss (D8) (LRR T, U) | | |
| Field Observations: | | | | | |
| Surface Water Present? Yes | No X Depth (inche | | | | |
| Water Table Present? Yes | No X Depth (inche | | | | |
| Saturation Present? Yes (includes capillary fringe) | No X Depth (inche | s): wettand H | ydrology Present? Yes No X | | |
| Describe Recorded Data (stream gauge, | monitoring well, aerial photos. | previous inspections), if ava | ailable: | | |
| | | , p , , , , , , | | | |
| Deventer | | | | | |
| Remarks: | | | | | |
| | | | | | |
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| | | | | | |
| | | | | | |
| | | | | | |

Attachment 2.D.1 Page 163 of 230

| VEGETATION (Five Strata) - Use scientif | ic names | of plants. | | Sampling Point: 22-B |
|--|------------|-----------------|-----------|---|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC:3 (A) |
| 3 | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 4 (B) |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: 75.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. Li uidambar st raciflua | 10 | Yes | FAC | FACW species 10 $x 2 = 20$ |
| 2 | | | | FAC species 70 x 3 = 210 |
| 2 | | | | FACU species 10 $x 4 = 40$ |
| | | | | $\frac{1}{10} x = \frac{1}{10}$ $\frac{1}{10} x = \frac{1}{10}$ $\frac{1}{10} x = \frac{1}{10}$ $\frac{1}{10} x = \frac{1}{10}$ |
| 4. 5. | | | | Column Totals: 90 (A) 270 (B) |
| | | | | (' /(' / |
| 6 | | | | Prevalence Index = B/A = 3.00 |
| | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: 5 | 20% | of total cover: | 2 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | 3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6. | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. anicum irgatum | 35 | Yes | FAC | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. Solidago rugosa | 25 | Yes | FAC | Sapling – Woody plants, excluding woody vines, |
| 3. galinis purpurea | 10 | No | FACW | approximately 20 ft (6 m) or more in height and less |
| 4. Desmodium paniculatum | 5 | No | FACU | than 3 in. (7.6 cm) DBH. |
| 5. | | | | Shrub - Woody Plants, excluding woody vines, |
| 6. | | | | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. | | | | |
| | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 |
| 9 | | | | ft (1 m) in height. |
| 10 | | | | Woody Vine – All woody vines, regardless of height. |
| 11 | | | | woody whe - All woody whes, regardless of height. |
| | | =Total Cover | | |
| 50% of total cover: 3 | 8 20% | of total cover: | 15 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. Lonicera aponica | 5 | Yes | FACU | |
| 2 | | | | |
| 3 | | | | |
| 4. | | | | |
| 5. | | | | Ludrophytic |
| | 5 | =Total Cover | | Hydrophytic Vegetation |
| 50% of total cover: 3 | 20% | of total cover: | 1 | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | · |

| Depth | Matrix | | | x Featur | | | onfirm the absence o | | | |
|---------------|------------------------|-------------------|--------------------------|------------|-------------------|-----------------------|--------------------------|--|--|--|
| inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks | | |
| 0-2 | 10YR 4/3 | 100 | | | | | Loamy/Clayey | | | |
| | | | | | | | | | | |
| 2-20 | 10YR 5/4 | 95 | 10YR 4/6 | 5 | C | <u>M</u> | Loamy/Clayey | Distinct redox concentrations | | |
| | | | | | | · | | | | |
| | | | | | _ | | | | | |
| | | | | | | | | | | |
| Type: C=C | oncentration, D=Depl | etion, RM= | Reduced Matrix, N | //S=Mas | ked Sand | Grains. | ² Location: P | L=Pore Lining, M=Matrix. | | |
| | Indicators: (Applica | | | | | | | or Problematic Hydric Soils ³ : | | |
| Histosol | (A1) | | Thin Dark S | urface (S | 59) (LRR | S, T, U) | 1 cm Mu | ick (A9) (LRR O) | | |
| Histic E | pipedon (A2) | | Barrier Islan | ds 1 cm | Muck (S | 12) | 2 cm Mu | ick (A10) (LRR S) | | |
| Black H | istic (A3) | (MLRA 153B, 153D) | | | | | Coast Pr | Coast Prairie Redox (A16) | | |
| Hydroge | en Sulfide (A4) | Loamy Mucl | ky Miner | al (F1) (L | RR O) |) (outside MLRA 150A) | | | | |
| Stratifie | d Layers (A5) | | Loamy Gley | ed Matri | x (F2) | | Reduced Vertic (F18) | | | |
| Organic | Bodies (A6) (LRR P, | T, U) | Depleted Ma | atrix (F3) |) | | (outsid | de MLRA 150A, 150B) | | |
| 5 cm Mi | ucky Mineral (A7) (LR | R P, T, U) | Redox Dark | Surface | (F6) | | Piedmor | nt Floodplain Soils (F19) (LRR P, T | | |
| Muck P | resence (A8) (LRR U) | | Depleted Da | ark Surfa | ice (F7) | | Anomalo | ous Bright Floodplain Soils (F20) | | |
| 1 cm Mu | uck (A9) (LRR P, T) | | Redox Depr | essions | (F8) | | (MLRA | A 153B) | | |
| Deplete | d Below Dark Surface | e (A11) | Marl (F10) (| LRR U) | | | Red Pare | ent Material (F21) | | |
| Thick D | ark Surface (A12) | | Depleted Oc | hric (F1 | 1) (MLRA | A 151) | Very Sha | allow Dark Surface (F22) | | |
| Coast P | rairie Redox (A16) (N | ILRA 150A |)Iron-Mangar | nese Ma | sses (F12 | 2) (LRR C |), P, T) (outsid | de MLRA 138, 152A in FL, 154) | | |
| Sandy N | /lucky Mineral (S1) (L | RR 0, S) | Umbric Surf | ace (F13 | B) (LRR F | P, T, U) | Barrier Is | slands Low Chroma Matrix (TS7) | | |
| Sandy C | Gleyed Matrix (S4) | | Delta Ochric | : (F17) (ľ | MLRA 15 | 1) | (MLRA | A 153B, 153D) | | |
| Sandy F | Redox (S5) | | Reduced Ve | ertic (F18 | B) (MLRA | 150A, 15 | 0B) Other (E | xplain in Remarks) | | |
| Stripped | I Matrix (S6) | | Piedmont Fl | oodplain | n Soils (F | 19) (MLR. | A 149A) | | | |
| Dark Su | rface (S7) (LRR P, S | , T, U) | Anomalous | Bright Fl | loodplain | Soils (F2 | 0) | | | |
| Polyvalu | e Below Surface (S8 |) | (MLRA 14 | 9A, 153 | C, 153D) | | ³ Indicato | rs of hydrophytic vegetation and | | |
| (LRR | S, T, U) | | Very Shallov (MLRA 13 | | | | | nd hydrology must be present, s disturbed or problematic. | | |
| Restrictive | Layer (if observed): | | | | | | | | | |
| Type: | | | | | | | | | | |
| | | | | | | | | | | |

| | | | | Attachment 2.D.1 | | |
|---|---|---|--|--|--|--|
| U.S. Army Corps WETLAND DETERMINATION DATA SHEET - See ERDC/EL TR-07-24; the prop | – Atlantic and Gulf (| 0 | OMB Control #: 07 Requirement Cor | 710-xxxx, Exp: Pending htrol Symbol EXEMPT: 35-15, paragraph 5-2a) | | |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 |) kV Rebuild C | City/County: Greensville | S; | ampling Date: 9/22/20 | | |
| Applicant/Owner: Dominion Energy Virginia | | | State: VA Sa | ampling Point: 22-C | | |
| Investigator(s): S. Kupiec | Sectio | on, Township, Range: | | | | |
| Landform (hillside, terrace, etc.): Slope | Local reli | ief (concave, convex, none | e): Convex | Slope (%): 1-2 | | |
| Subregion (LRR or MLRA): LRR P, MLRA 133A La | t: 36.599844 | Long: -77.6 | 19477 | Datum: | | |
| Soil Map Unit Name: Mattaponi sandy loam | | | NWI classification | n: N/A | | |
| Are climatic / hydrologic conditions on the site typical f | for this time of year? | Yes X | No (If no, expl | lain in Remarks.) | | |
| Are Vegetation, Soil, or Hydrology | significantly disturbe | d? Are "Normal Circu | imstances" present? | Yes X No | | |
| Are Vegetation, Soil, or Hydrology | naturally problematic | :? (If needed, explain | n any answers in Rema | arks.) | | |
| SUMMARY OF FINDINGS – Attach site m | ap showing samp | ling point locations | s, transects, impo | ortant features, etc. | | |
| Hydrophytic Vegetation Present?YesHydric Soil Present?YesWetland Hydrology Present?Yes | | s the Sampled Area vithin a Wetland? | Yes N | lo <u>X</u> | | |
| Remarks: Upland at BL-7. | | | | | | |
| HYDROLOGY | | | | | | |
| Wetland Hydrology Indicators: | | Se | condary Indicators (mi | nimum of two required) | | |
| Primary Indicators (minimum of one is required; chec | | | _Surface Soil Cracks (| . , | | |
| | uatic Fauna (B13) rl Deposits (B15) (LRR I | | Sparsely Vegetated (Drainage Patterns (B | Concave Surface (B8) | | |
| | drogen Sulfide Odor (C1 | | Moss Trim Lines (B1 | | | |
| | dized Rhizospheres on | | | | | |
| | esence of Reduced Iron | . , | Crayfish Burrows (C8) | | | |
| | cent Iron Reduction in T | illed Soils (C6) | | | | |
| | n Muck Surface (C7) | 、 | _ Geomorphic Position | | | |
| | ner (Explain in Remarks) |) | Shallow Aquitard (D3 | | | |
| Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) | | | _FAC-Neutral Test (D Sphagnum Moss (D8 | | | |
| Field Observations: | | <u> </u> | | | | |
| Surface Water Present? Yes No X | Depth (inches): | | | | | |
| Water Table Present? Yes No X | | <u> </u> | | | | |
| Saturation Present? Yes No X | Depth (inches): | Wetland Hyd | Irology Present? | Yes No X | | |
| (includes capillary fringe) | 9 - 1-1-1- and a man | the section of the section | | | | |
| Describe Recorded Data (stream gauge, monitoring v | vell, aeriai photos, prev | ious inspections), it availa | able: | | | |
| | | | | | | |
| Remarks: | | | | | | |
| | | | | | | |
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C1. tifi/ . .

| VEGETATION (Five Strata) - Use scient | ific names of plants. | Sampling Point: 22-C |
|---|-----------------------------|--|
| | Absolute Dominant Indicator | |
| Tree Stratum (Plot size: 30) | % Cover Species? Status | Dominance Test worksheet: |
| 1 | | Number of Dominant Species |
| 2. | | That Are OBL, FACW, or FAC: 1 (A) |
| 3 | | Total Number of Dominant |
| 4. | | Total Number of Dominant Species Across All Strata: 2 (B) |
| 5 | | - · · · · · · · · · · · · · · · · · · |
| | | Percent of Dominant Species |
| 6 | | That Are OBL, FACW, or FAC: 50.0% (A/B) |
| | =Total Cover | Prevalence Index worksheet: |
| 50% of total cover: | 20% of total cover: | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | OBL species 0 x 1 = 0 |
| 1 | | FACW species 0 x 2 = 0 |
| 2. | | FAC species 5 x 3 = 15 |
| 3. | | FACU species 80 x 4 = 320 |
| 4. | | UPL species 0 x 5 = 0 |
| | | Column Totals: 85 (A) 335 (B) |
| 5 6. | | $\frac{1}{2} = \frac{1}{2} = \frac{1}$ |
| · · · · · · · · · · · · · · · · · · · | Total Causa | |
| | =Total Cover | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | 20% of total cover: | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | 2 - Dominance Test is >50% |
| 1 | | 3 - Prevalence Index is ≤3.0 ¹ |
| 2. | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | |
| 4. | | - |
| 5 | | = 1 Indicators of hudric coll and water displayed and second to be |
| 6. | | ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| | =Total Cover | |
| 500 (of total array | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% of total cover: | _ Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). |
| 1. Digitaria sanguinalis | 80 Yes FACU | - |
| 2 | | Sapling – Woody plants, excluding woody vines, |
| 3. | | approximately 20 ft (6 m) or more in height and less |
| 4. | | than 3 in. (7.6 cm) DBH. |
| 5. | | Shrub - Woody Plants, excluding woody vines, |
| 6. | | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. | | - |
| 8. | | Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody |
| | | plants, except woody vines, less than approximately 3 |
| 9 | | ft (1 m) in height. |
| 10 | | Woody Vine – All woody vines, regardless of height. |
| 11 | | - Woody vine - All woody vines, regardless of height. |
| | 80 =Total Cover | |
| 50% of total cover: | 40 20% of total cover: 16 | _ |
| Woody Vine Stratum (Plot size: 30) | | |
| 1. Campsis radicans | 5 Yes FAC | |
| 2. | | - |
| 3. | | - |
| 4 | | - |
| | | - |
| 5 | | - Hydrophytic |
| | 5 =Total Cover | Vegetation |
| | 3 20% of total cover: 1 | Present? Yes No X |
| Remarks: (If observed, list morphological adaptatic | ons below.) | |

| Depth | cription: (Describe Matrix | | | x Featu | | | | | | | |
|---|-------------------------------|-----------|--|---|-------------------|------------------|--|---|--|--|--|
| inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Тех | ture | Remarks | | |
| 0-4 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | | | | |
| 4-20 | 2.5Y 5/4 | 95 | 10YR 5/6 | 5 | С | М | Loamy | /Clayey | Distinct redox concentrations | | |
| | | · | | | | | | | | | |
| | oncentration, D=Dep | | | | | d Grains. | | | PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ : | | |
| Histosol | | | Thin Dark S | | | S, T, U) | | | uck (A9) (LRR O) | | |
| Histic Ep | pipedon (A2) | | Barrier Islan | ids 1 cm | Muck (S | 12) | - | 2 cm M | uck (A10) (LRR S) | | |
| Black Hi | stic (A3) | | (MLRA 15 | 53B, 153 | D) | | | Coast Prairie Redox (A16) | | | |
| Hydroge | en Sulfide (A4) | | Loamy Muc | ky Miner | al (F1) (L | .RR O) | _ | (outside MLRA 150A) | | | |
| Stratified Layers (A5) Loamy Gleyed Matrix (F2) | | | | | | _ | Reduce | d Vertic (F18) | | | |
| Organic | Bodies (A6) (LRR P, | T, U) | Depleted Ma | atrix (F3) |) | | | (outsi | de MLRA 150A, 150B) | | |
| 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) | | | | | _ | Piedmo | nt Floodplain Soils (F19) (LRR P, ⁻ | | | | |
| Muck Pr | esence (A8) (LRR U) |) | Depleted Da | ark Surfa | ice (F7) | | Anomalous Bright Floodplain Soils (F20) | | | | |
| 1 cm Mu | ıck (A9) (LRR P, T) | | Redox Depr | essions | (F8) | | (MLRA 153B) | | | | |
| Depleted | d Below Dark Surface | e (A11) | Marl (F10) (| LRR U) | | | Red Parent Material (F21) | | | | |
| | ark Surface (A12) | | Depleted Oc | | | | - | allow Dark Surface (F22) | | | |
| | rairie Redox (A16) (N | | | Iron-Manganese Masses (F12) (LRR O, P, T) | | | | | | | |
| | lucky Mineral (S1) (L | .RR 0, S) | Umbric Surf | | | | - | Barrier Islands Low Chroma Matrix (TS7) | | | |
| | Gleyed Matrix (S4) | | Delta Ochric | . , . | | , | | • | A 153B, 153D) | | |
| | Redox (S5) | | Reduced Ve | | , , | | · - | Other (E | Explain in Remarks) | | |
| | Matrix (S6) | | Piedmont Fl | | | | | | | | |
| | rface (S7) (LRR P, S | | Anomalous | - | | | 20) | 3 | | | |
| | e Below Surface (S8 |) | (MLRA 14 | | | | | | ors of hydrophytic vegetation and | | |
| (LRR) | S, T, U) | | Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) | | | , | wetland hydrology must be preser unless disturbed or problematic. | | | | |
| Restrictive I | Layer (if observed): | | (| | | / | | | | | |
| Type: | | | | | | | | | | | |
| Depth (ir | nches): | | | | | | Hydric | Soil Prese | nt? Yes No X | | |
| | | | | | | | | | | | |

| | Attachment 2.D.1 |
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| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 9/22/20 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 23-A |
| Investigator(s): S. Kupiec Section, Township, Range: | |
| Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, non | ne): None Slope (%): 1-2 |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.596266 Long: -77.6 | 521261 Datum: |
| Soil Map Unit Name: Roanoke loam | NWI classification: PEM1A |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes X | No (If no, explain in Remarks.) |
| ——— | umstances" present? Yes X No |
| | n any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing sampling point location | s, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? Wetland Hydrology Present? Yes X No within a Wetland? Remarks: Kemarks: Kemarks: Kemarks: Kemarks: | Yes <u>X</u> No |
| Wetland at Flag BO-3. | |
| HYDROLOGY | |
| | econdary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | Surface Soil Cracks (B6) |
| Surface Water (A1) Aquatic Fauna (B13) High Water Table (A2) Marl Deposits (B15) (LRR U) | Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) |
| X Saturation (A3) | Moss Trim Lines (B16) |
| Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) | Dry-Season Water Table (C2) |
| Sediment Deposits (B2)Presence of Reduced Iron (C4) | Crayfish Burrows (C8) |
| Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Algal Mat or Crust (B4) Thin Muck Surface (C7) | Saturation Visible on Aerial Imagery (C9) |
| Iron Deposits (B5) Other (Explain in Remarks) | Shallow Aquitard (D3) |
| | FAC-Neutral Test (D5) |
| Water-Stained Leaves (B9) | Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: | |
| Surface Water Present? Yes No X Depth (inches): | |
| Water Table Present? Yes No X Depth (inches): Saturation Present? Yes X No Depth (inches): 4 Wetland Hyc | drology Present? Yes X No |
| (includes capillary fringe) | drology Present? Yes X No |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if availa | able: |
| | |
| Remarks: | |
| | |
| | |
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| VEGETATION (Five Strata) - Use scienti | fic names | of plants. | | Sampling Point: 23-A |
|--|------------|-----------------|-----------|---|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: (A) |
| 3 | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 4 (B) |
| 5 | | | | Percent of Dominant Species |
| 6. | | | | That Are OBL, FACW, or FAC: 100.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. Li uidambar st raciflua | 5 | Yes | FAC | FACW species 80 x 2 = 160 |
| 2. | | | | FAC species $20 \times 3 = 60$ |
| 2 | | | | FACU species $0 	 x 4 = 0$ |
| | | | | $\frac{1}{\text{UPL species}} = 0 \qquad \text{x f = } 0$ |
| 4 5 | | | | Column Totals: 100 (A) 220 (B) |
| | | | | Prevalence Index = $B/A = 2.20$ (B) |
| 6 | | Tatal Causer | | |
| | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| | 3 20% | of total cover: | 1 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | X_3 - Prevalence Index is ≤3.0 ¹ |
| 2. | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4. | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. Dichanthelium scoparium | 45 | Yes | FACW | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. upatorium perfoliatum | 20 | Yes | FACW | Sapling – Woody plants, excluding woody vines, |
| 3. Solidago rugosa | 10 | No | FAC | approximately 20 ft (6 m) or more in height and less |
| 4. Chasmanthium laxum | 10 | No | FACW | than 3 in. (7.6 cm) DBH. |
| 5. anicum errucosum | 5 | No | FACW | Shrub - Woody Plants, excluding woody vines, |
| 6. h nchospora spp | 5 | No | | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. | | | | |
| 8. | | | | Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody |
| 9 | | | | plants, except woody vines, less than approximately 3 |
| 10. | | | | ft (1 m) in height. |
| | | | | Woody Vine – All woody vines, regardless of height. |
| 11 | | Tatal Osuar | | |
| | | =Total Cover | 40 | |
| 50% of total cover: 4 | 8 20% | of total cover: | 19 | |
| Woody Vine Stratum (Plot size: 30) | _ | | | |
| 1. Smilax rotundifolia | 5 | Yes | FAC | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | Hydrophytic |
| | 5 | =Total Cover | | Vegetation |
| 50% of total cover: | 3 20% | of total cover: | 1 | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | |

| Depth | Matrix | | | x Featur | | | onfirm the absence of indicators.) | | | | |
|---|---|--|---------------|-------------------|-------------------|------------------|--|--------|--|--|--|
| inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture Remarks | | | | |
| 0-6 | 10YR 5/2 | 95 | 10YR 4/6 | 5 | С | М | Loamy/Clayey Prominent redox concentr | ations | | | |
| | | | | | | | | | | | |
| 6-20 | 2.5Y 6/3 | 90 | 10YR 5/6 | | | | Loamy/Clayey Prominent redox concentr | allons | | | |
| <i></i> | oncentration, D=Depl | - | | | | Grains. | ² Location: PL=Pore Lining, M=Matrix. | 3 | | | |
| | Indicators: (Applica | ble to all | | | | C T II) | Indicators for Problematic Hydric Soils | | | | |
| Histosol | · · · · · · · · · · · · · · · · · · · | | | | | | 1 cm Muck (A9) (LRR O) | | | | |
| | pipedon (A2) | | | | | 12) | 2 cm Muck (A10) (LRR S) | | | | |
| | Black Histic (A3)(MLRA 153B, 153D)Hydrogen Sulfide (A4)Loamy Mucky Mineral (F1) (LRR O) | | | | | | Coast Prairie Redox (A16) | | | | |
| | | | | - | | RR U) | (outside MLRA 150A) | | | | |
| Stratified Layers (A5) Loamy Gleyed Matrix (F2) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) | | | | | | | Reduced Vertic (F18) | | | | |
| | | - | | | | | (outside MLRA 150A, 150B) | | | | |
| 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) | | | | | | | Piedmont Floodplain Soils (F19) (LRF | | | | |
| Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) | | | | | | | Anomalous Bright Floodplain Soils (F | 20) | | | |
| 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) | | | | | | | (MLRA 153B) | | | | |
| | Depleted Below Dark Surface (A11) Marl (F10) (LRR U) | | | | | | Red Parent Material (F21) | | | | |
| Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) | | | | | | | Very Shallow Dark Surface (F22) | | | | |
| Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O | | | | | | | | | | | |
| Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) | | | | | | | Barrier Islands Low Chroma Matrix (TS7) | | | | |
| - | Bleyed Matrix (S4) | | | (MLRA 153B, 153D) | | | | | | | |
| Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | | | | | | | |
| | Matrix (S6) | | | | | | | | | | |
| | rface (S7) (LRR P, S | | Anomalous | - | • | 5011S (F2 | , | | | | |
| | e Below Surface (S8) |) | (MLRA 14 | | | .00) | ³ Indicators of hydrophytic vegetation and | | | | |
| (LKK | S, T, U) | Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) | | | | | wetland hydrology must be present, unless disturbed or problematic. | | | | |
| Postrictivo | Layer (if observed): | | | | | | | | | | |
| Concinctive | | | | | | | | | | | |
| Туре: | | | | | | | | | | | |

| | | Attachment 2.D.1 |
|--|--|--|
| U.S. Army Corp WETLAND DETERMINATION DATA SHEET See ERDC/EL TR-07-24; the pro | Γ – Atlantic and Gulf Coastal Plain Re | OMB Control #: 0710-xxxx, Exp: Pending |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 2 | 30 kV Rebuild City/County: Greens | sville Sampling Date: 9/22/20 |
| Applicant/Owner: Dominion Energy Virginia | | State: VA Sampling Point: 23-B |
| Investigator(s): S. Kupiec | Section, Township, Rang | ge: |
| Landform (hillside, terrace, etc.): Slope | Local relief (concave, conve | ex, none): Convex Slope (%): 4-6 |
| Subregion (LRR or MLRA): LRR P, MLRA 133A | _at: <u>35.596562</u> Long | g: -77.621080 Datum: |
| Soil Map Unit Name: Mattaponi sandy loam | | NWI classification: N/A |
| Are climatic / hydrologic conditions on the site typica | al for this time of year? Yes X | No (If no, explain in Remarks.) |
| Are Vegetation, Soil, or Hydrology | significantly disturbed? Are "Norma | al Circumstances" present? Yes X No |
| Are Vegetation, Soil, or Hydrology | naturally problematic? (If needed, | explain any answers in Remarks.) |
| | | ations, transects, important features, etc. |
| Hydrophytic Vegetation Present?YesHydric Soil Present?YesWetland Hydrology Present?Yes | X No Is the Sampled Are No X within a Wetland? | |
| Remarks: Upland at Flag BO-3. | i | |
| HYDROLOGY | | |
| Wetland Hydrology Indicators: | | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; ch | | Surface Soil Cracks (B6) |
| | Aquatic Fauna (B13) | Sparsely Vegetated Concave Surface (B8) |
| | /larl Deposits (B15) (LRR U) Iydrogen Sulfide Odor (C1) | Drainage Patterns (B10) Moss Trim Lines (B16) |
| · · · | Dxidized Rhizospheres on Living Roots (C3) | |
| | Presence of Reduced Iron (C4) | Crayfish Burrows (C8) |
| | Recent Iron Reduction in Tilled Soils (C6) | Saturation Visible on Aerial Imagery (C9) |
| | hin Muck Surface (C7) | Geomorphic Position (D2) |
| | Other (Explain in Remarks) | Shallow Aquitard (D3) |
| Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) | | FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: | | |
| | X Depth (inches): | |
| | X Depth (inches): | |
| Saturation Present? Yes No | X Depth (inches): Wetlar | nd Hydrology Present? Yes No X |
| (includes capillary fringe) | | |
| Describe Recorded Data (stream gauge, monitoring | g well, aerial photos, previous inspections), | if available: |
| | | |
| Remarks: | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Attachment 2.D.1 Page 172 of 230

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

| VEGETATION (FIVE Strata) – Use scientif | ic names | or plants. | | Sampling Point: 23-B |
|--|---------------------|----------------------|---------------------|--|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1. 2. | | | | Number of Dominant Species That Are OBL, FACW, or FAC:3(A) |
| 3 | | | | Total Number of Dominant Species Across All Strata:4(B) |
| 5 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC:75.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1 | | | | FACW species 45 x 2 = 90 |
| 2. | | | | FAC species 55 x 3 = 165 |
| 3. | | | | FACU species 10 x 4 = 40 |
| 4. | | | | UPL species 30 x 5 = 150 |
| 5. | | | | Column Totals: 140 (A) 445 (B) |
| 6. | | | | Prevalence Index = $B/A = 3.18$ |
| | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | 20% | of total cover: | | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1. hus copallinum | 15 | Yes | UPL | 3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | (()) ()(.) ()(.) |
| 4 | | | | |
| 5 | | | | 1 |
| 6. | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| | 15 | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: 8 | | of total cover: | 3 | - |
| Herb Stratum (Plot size: 30) | 2070 | | | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| 1. Dichanthelium scoparium | 45 | Yes | FACW | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. ndropogon irginicus | 30 | Yes | FAC | |
| 3. Solidago rugosa | 25 | Yes | FAC | Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less |
| 4. Chr sopsis mariana | 15 | No | UPL | than 3 in. (7.6 cm) DBH. |
| 5. Chamaecrista fasciculata | 10 | No | FACU | Shrub - Woody Plants, excluding woody vines, |
| 6. | 10 | NO | TACO | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. | | | | |
| 8. | | | | Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody |
| 9. | | | | plants, except woody vines, less than approximately 3 |
| | | | | ft (1 m) in height. |
| 10 11. | | | | Woody Vine – All woody vines, regardless of height. |
| ···· | 125 | =Total Cover | | |
| 50% of total cover: 63 | | of total cover: | 25 | |
| | 5 20% | or total cover. | 25 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2. | | | | |
| 3. | | | | |
| 4 | | | | |
| 5 | | | | Hydrophytic |
| | | =Total Cover | | Vegetation |
| 50% of total cover: | | of total cover: | | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | |

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| Depth | Matrix | | | x Featu | | | onfirm the absence of | · · · · · · , | |
|--|--|---|---|---|---|---|---|----------------------------|--------|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Rema | emarks |
| 0-2 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | | |
| | | | | | | | | | |
| 2-8 | 10YR 4/3 | 100 | | | | | Loamy/Clayey | | |
| 8-20 | 10YR 5/3 | 100 | | _ | | | Loamy/Clayey | | |
| | | | | | | | | | |
| Type: C=C | oncentration, D=Depl | etion, RM= | Reduced Matrix, N | /IS=Mas | ked Sand | d Grains. | ² Location: P | L=Pore Lining, M=M | atrix. |
| Histosol Histic Ep Black Hi Hydroge Stratified Organic 5 cm Mu Muck Pr 1 cm Mu Depleted Thick Da Coast Pl Sandy M Sandy R Sandy R Stripped Dark Su | bipedon (A2) stic (A3) in Sulfide (A4) d Layers (A5) Bodies (A6) (LRR P, icky Mineral (A7) (LR esence (A8) (LRR U) ick (A9) (LRR P, T) d Below Dark Surface ark Surface (A12) rairie Redox (A16) (M fucky Mineral (S1) (L Gleyed Matrix (S4) edox (S5) Matrix (S6) rface (S7) (LRR P, S | T, U) R P, T, U) (A11) ILRA 150A RR O, S) | Thin Dark So Barrier Islan (MLRA 15 Loamy Muck Loamy Gleye Depleted Ma Redox Dark Depleted Da Redox Depro Marl (F10) (I Depleted Oc Marl (F10) (I Depleted Oc Narl (F10) (I Depleted Oc | urface (\$ ds 1 cm (3B, 153 (y Miner ed Matri atrix (F3) Surface rk Surface (F13) (F1 (F17) (I rtic (F18) oodplair Bright F1 | S9) (LRR Muck (S BD) al (F1) (L x (F2)) (F6) ace (F7) (F8) 1) (MLRA sses (F1) 3) (LRR F MLRA 15 3) (MLRA n Soils (F loodplain | 12) .RR O) 2) (LRR O 2, T, U) 51) (150A, 15 19) (MLR Soils (F2 | Indicators for Problematic Hydric Soils ³ : 1 cm Muck (A9) (LRR O) 2 cm Muck (A10) (LRR S) Coast Prairie Redox (A16) (outside MLRA 150A) Reduced Vertic (F18) (outside MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (LRR P, T Anomalous Bright Floodplain Soils (F20) (MLRA 153B) Red Parent Material (F21) Very Shallow Dark Surface (F22) (MLRA 153B, 152A in FL, 154) Barrier Islands Low Chroma Matrix (TS7) (MLRA 153B, 153D) 50B) Other (Explain in Remarks) RA 149A) | | |
| | e Below Surface (S8 S, T, U) | Surface (S8) (MLRA 149A, 153C, 153D) U J) Very Shallow Dark Surface (F22) Very Shallow Dark Surface (F22) | | | | | | getation and e present, | |
| | | | (MLRA 13 | 8, 152A | in FL, 1 | 54) | unless | disturbed or proble | matic. |
| _ | Layer (if observed): | | | | | | | | |
| Type: Depth (ii | | | | | | | Hydric Soil Presen | | |

| Bage 174 of 230 WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville Sampling Date: 9/22/20 Applicant/Owner: Dominion Energy Virginia State: VA Sampling Date: 9/22/20 Investigator(s): S. Kupiec Section, Township, Range: |
|--|
| Applicant/Owner: Dominion Energy Virginia State: VA Sampling Point: 23-C Investigator(s): S. Kupiec |
| Investigator(s): S. Kupiec Section, Township, Range: Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none): Convex Slope (%): 2-3 Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.592653 Long: -77.622984 Datum: Soil Map Unit Name: Roanoke Loam NWI classification: N/A Are climatic / hydrologic conditions on the site typical for this time of year? Yes_X No (If no, explain in Remarks.) Are Vegetation , Soil , or Hydrology |
| Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none): Convex Slope (%): 2-3 Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.592653 Long: -77.622984 Datum: Soil Map Unit Name: Roanoke Loam NWI classification: N/A Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.) Are Vegetation _, Soil _, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No |
| Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none): Convex Slope (%): 2-3 Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.592653 Long: -77.622984 Datum: Soil Map Unit Name: Roanoke Loam NWI classification: N/A Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.) Are Vegetation _, Soil _, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.592653 Long: -77.622984 Datum: Soil Map Unit Name: Roanoke Loam NWI classification: N/A Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.) Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? Yes No X Wetland Hydrology Present? Yes No X X X Remarks: Yes No X X X X |
| Soil Map Unit Name: Roanoke Loam NWI classification: N/A Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation, Soil, or Hydrologynaturally 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 X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes Yes No Remarks: Is the Sampled Area |
| 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 X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? Yes No X Remarks: Ketand Hydrology Present? Yes No X < |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No Is the Sampled Area within a Wetland? Yes No X Wetland Hydrology Present? Yes X No X X Yes No X Remarks: X |
| Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes No X Remarks: Is the Sampled Area No X |
| Hydric Soil Present? Yes X No within a Wetland? Yes No X Wetland Hydrology Present? Yes No X Ves No X |
| |
| |
| HYDROLOGY |
| Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) |
| Surface Water (A1) Aquatic Fauna (B13) Sparsely Vegetated Concave Surface (B8) |
| High Water Table (A2) Marl Deposits (B15) (LRR U) Drainage Patterns (B10) |
| Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16) |
| Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2) Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8) |
| Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) |
| Algal Mat or Crust (B4) Thin Muck Surface (C7) Geomorphic Position (D2) |
| Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3) |
| Inundation Visible on Aerial Imagery (B7) X FAC-Neutral Test (D5) |
| Water-Stained Leaves (B9) Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: |
| Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): |
| Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X |
| (includes capillary fringe) |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: |
| |
| |
| Remarks: |
| Nondris. |
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~ . . . 1:4: . 、 .

| VEGETATION (FIVe Strata) – Use scientif | ic names | or plants. | | Sampling Point: 23-C |
|--|---------------------|---------------------------------------|---------------------|--|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1. 2. | | | | Number of Dominant Species That Are OBL, FACW, or FAC:6(A) |
| 3 | | | | Total Number of Dominant Species Across All Strata: 7 (B) |
| 5. 6. | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. Li uidambar st raciflua | 35 | Yes | FAC | FACW species 30 x 2 = 60 |
| 2. Liriodendron tulipifera | 5 | No | FACU | FAC species 125 x 3 = 375 |
| 3. | | | | FACU species 20 x 4 = 80 |
| 4. | | | | UPL species $0 	 x 5 = 0$ |
| 5. | | | | Column Totals: 175 (A) 515 (B) |
| 6 | | | | Prevalence Index = $B/A = 2.94$ |
| | 40 | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: 20 | | of total cover: | 8 | 1 - Rapid Test for Hydrophytic Vegetation |
| <u>Shrub Stratum</u> (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1. Sambucus nigra | 5 | Yes | FACW | $3 - \text{Prevalence Index is } \leq 3.0^1$ |
| | 5 | Tes | FACW | |
| | | · · · · · · · · · · · · · · · · · · · | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. | | · · · · · · · · · · · · · · · · · · · | | |
| 4. | | | | |
| 5. | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | Tatal Causar | | present, unless disturbed or problematic. |
| 50% (1) (1) (1) | 5 | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: <u>3</u> | 20% | of total cover: | 1 | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| Herb Stratum (Plot size: <u>30</u>) 1. <i>ubus arqutus</i> | 25 | Yes | FAC | (7.6 cm) or larger in diameter at breast height (DBH). |
| ubus argutus anicum errucosum | 20 | Yes | FAC | |
| | | | | Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less |
| 3. arathel pteris no eboracensis | 20 | Yes | FAC | than 3 in. (7.6 cm) DBH. |
| 4. Dichanthelium dichotomum | 15 | No | FAC | |
| Solidago rugosa Dichanthelium scoparium | 10 5 | No | FAC | Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. |
| 7 | 5 | No | FACW | |
| 7. | | · · | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | · | | herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3 |
| 9 | | | | ft (1 m) in height. |
| 10 | | | | Woody Vine – All woody vines, regardless of height. |
| 11 | | | | woody vine – All woody vines, legaldless of height. |
| | 95 | =Total Cover | | |
| 50% of total cover: 48 | 3 20% | of total cover: | 19 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. itis rotundifolia | 20 | Yes | FAC | |
| 2. Lonicera aponica | 10 | Yes | FACU | |
| 3. arthenocissus uin uefolia | 5 | No | FACU | |
| 4 | | | | |
| 5. | | · | | Hydrophytic |
| | 35 | =Total Cover | | Vegetation |
| 50% of total cover: 18 | 3 20% | of total cover: | 7 | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | s below.) | | | |

SOIL Sampling Point: 23-C Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix Loc² Color (moist) % Color (moist) Texture (inches) % Type¹ Remarks 10YR 4/1 С 0-8 90 10YR 4/6 10 Μ Loamy/Clayey Prominent redox concentrations 8-20 10YR 4/2 85 10YR 4/4 15 С Loamy/Clayey Distinct redox concentrations Μ ²Location: PL=Pore Lining, M=Matrix. ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:

| | | | Attachment 2.D.1 |
|---|--|------------------------|--|
| WETLAND DETERMINATION DATA SH | Corps of Engineers HEET – Atlantic and Gulf Coasta e proponent agency is CECW-C | 0 | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
| Project/Site: TL 254/2201 Clubhouse - Lakevi | ew 230 kV Rebuild City/Cour | nty: Greensville | Sampling Date: 9/23/20 |
| Applicant/Owner: Dominion Energy Virginia | a | | State: VA Sampling Point: 24-A |
| Investigator(s): S. Kupiec | Section, Town | iship, Range: | |
| Landform (hillside, terrace, etc.): Slope | Local relief (conc | cave, convex, none | e): <u>Convex</u> Slope (%): <u>4-6</u> |
| Subregion (LRR or MLRA): LRR P, MLRA 133 | 3A Lat: <u>36.586800</u> | Long: -77.62 | 25917 Datum: |
| Soil Map Unit Name: Appling-Mattaponi compl | lex | | NWI classification: N/A |
| Are climatic / hydrologic conditions on the site t | typical for this time of year? | Yes X | No (If no, explain in Remarks.) |
| Are Vegetation, Soil, or Hydrolog | gysignificantly disturbed? | Are "Normal Circur | mstances" present? Yes X No |
| Are Vegetation, Soil, or Hydrolog | gy naturally problematic? (| If needed, explain | any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach s | site map showing sampling p | oint locations | s, transects, important features, etc |
| Hydric Soil Present? Y | Yes X No Is the Saturation of the set of th | mpled Area Wetland? | YesNo_X |
| Remarks: Upland at Flag BT-2. | | | |
| HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | Sec | condary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required | | | Surface Soil Cracks (B6) |
| Surface Water (A1) High Water Table (A2) | Aquatic Fauna (B13) Marl Deposits (B15) (LRR U) | | Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) |
| Saturation (A3) | Hydrogen Sulfide Odor (C1) | | Moss Trim Lines (B16) |
| Water Marks (B1) | Oxidized Rhizospheres on Living R | Roots (C3) | Dry-Season Water Table (C2) |
| Sediment Deposits (B2) | Presence of Reduced Iron (C4) | | Crayfish Burrows (C8) |
| Drift Deposits (B3) | Recent Iron Reduction in Tilled Soi | ils (C6) | Saturation Visible on Aerial Imagery (C9) |
| Algal Mat or Crust (B4) | Thin Muck Surface (C7) | | Geomorphic Position (D2) |
| Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) | Other (Explain in Remarks) | | Shallow Aquitard (D3) FAC-Neutral Test (D5) |
| Water-Stained Leaves (B9) | | | Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: | | | |
| Water Table Present? Yes | No X Depth (inches): No X Depth (inches): No X Depth (inches): | Wetland Hyd | rology Present? Yes <u>No X</u> |
| Describe Recorded Data (stream gauge, moni | itoring well, aerial photos, previous ins | pections), if availa | able: |
| | 3 • ; • • • • • • • • • • | | |
| Remarks: | | | |
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Attachment 2.D.1 Page 178 of 230

| VEGETATION (Five Strata) - Use scient | ific names | of plants. | | Sampling Point: 24-A |
|--|-------------|-----------------|-----------|--|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: (A) |
| 3 | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 5 (B) |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: 80.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. Li uidambar st raciflua | 5 | Yes | FAC | FACW species 25 x 2 = 50 |
| 2. | | | | FAC species 70 x 3 = 210 |
| 3. | | | | FACU species $0 	 x 4 = 0$ |
| 4. | | | | UPL species 10 $x 5 = 50$ |
| 5. | | | | Column Totals: 105 (A) 310 (B) |
| 6. | | | | Prevalence Index = $B/A = 2.95$ |
| · | 5 | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 500/ - () - () | | | | 5 . 5 . 5 |
| 50% of total cover: | 3 20% | of total cover: | 1 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1. hus copallinum | 5 | Yes | UPL | 3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6. | | | | present, unless disturbed or problematic. |
| | 5 | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 3 20% | of total cover: | 1 | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. ndropogon irginicus | 40 | Yes | FAC | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. upatorium perfoliatum | 25 | Yes | FACW | Sapling Woody plants, evaluding woody vince |
| 3. ubus argutus | 15 | No | FAC | Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less |
| | 5 | No | UPL | than 3 in. (7.6 cm) DBH. |
| 4. Chr sopsis mariana | 5 | INO | UPL | |
| 5 | | | | Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. |
| 6. | | | | |
| 7 | | | | Herb - All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, and woody |
| 9 | | | | plants, except woody vines, less than approximately 3 ft (1 m) in height. |
| 10 | | | | () U |
| 11 | | | | Woody Vine – All woody vines, regardless of height. |
| | 85 | =Total Cover | | |
| 50% of total cover: | 43 20% | of total cover: | 17 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. Campsis radicans | 10 | Yes | FAC | |
| 2. | | | | |
| 3 | | | | |
| 4. | | | | |
| | | | | |
| 5 | | Tatal Cause | | Hydrophytic |
| | | =Total Cover | 0 | Vegetation |
| 50% of total cover: | | of total cover: | 2 | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | ons below.) | | | |

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SOIL Sampling Point: 24-A Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix (inches) Color (moist) % Color (moist) Loc² Texture Remarks % Type¹ 10YR 3/3 0-1 100 Loamy/Clayey 1-5 10YR 5/4 100 Loamy/Clayey ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Gravel compaction Depth (inches): 5 Hydric Soil Present? Yes No X Remarks:

| | Attachment 2.D.1 Page 180 of 230 |
|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 9/23/20 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 25-A |
| Investigator(s): S. Kupiec Section, Township, Range: | |
| Landform (hillside, terrace, etc.): Drainageway Local relief (concave, convex, none | e): <u>Concave</u> Slope (%): 0-1 |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.579436 Long: -77.62 | 29566 Datum: |
| Soil Map Unit Name: Roanoke Loam | NWI classification: N/A |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes X | No (If no, explain in Remarks.) |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal Circur | mstances" present? Yes X No |
| | any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations | s, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? Wetland Hydrology Present? Yes X No | Yes <u>X</u> No |
| Remarks: Wetland at Flag BV-4. | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: Sec | condary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | _Surface Soil Cracks (B6) |
| Surface Water (A1) Aquatic Fauna (B13) High Water Table (A2) Marl Deposits (B15) (LRR U) | Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) |
| X Saturation (A3) Hydrogen Sulfide Odor (C1) | Moss Trim Lines (B16) |
| Water Marks (B1) X Oxidized Rhizospheres on Living Roots (C3) | Dry-Season Water Table (C2) |
| Sediment Deposits (B2) Presence of Reduced Iron (C4) | Crayfish Burrows (C8) |
| Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) This Muck Surface (C7) | Saturation Visible on Aerial Imagery (C9) |
| Algal Mat or Crust (B4) Thin Muck Surface (C7) X Iron Deposits (B5) Other (Explain in Remarks) | Geomorphic Position (D2) Shallow Aquitard (D3) |
| | FAC-Neutral Test (D5) |
| Water-Stained Leaves (B9) | Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: | - |
| Surface Water Present? Yes No X Depth (inches): | |
| Water Table Present? Yes X No Depth (inches): 18 Octavation Dependence Yes X No Depth (inches): 18 | |
| Saturation Present? Yes X No Depth (inches): 10 Wetland Hydr (includes capillary fringe) | rology Present? Yes X No |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if availa | able: |
| | |
| Remarks: | |
| | |
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| VEGETATION (Five Strata) - Use scientif | ic names | of plants. | | Sampling Point: 25-A |
|--|------------|-----------------|-----------|--|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: 5 (A) |
| 3 | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 5 (B) |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: 100.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 10 x 1 = 10 |
| 1. Imus americana | 10 | Yes | FAC | FACW species 30 x 2 = 60 |
| 2. | | | | FAC species 105 x 3 = 315 |
| 3. | | | | FACU species 0 x 4 = 0 |
| 4. | | | | UPL species 0 x 5 = 0 |
| 5. | | | | Column Totals: 145 (A) 385 (B) |
| 6. | | | | Prevalence Index = $B/A = 2.66$ |
| | 10 | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: 5 | | of total cover: | 2 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | X 3 - Prevalence Index is $\leq 3.0^{1}$ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4. | | | | |
| 4 5. | | | | 1 |
| | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | Total Cavar | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. |
| Herb Stratum (Plot size: 30) | 10 | | | (7.6 cm) or larger in diameter at breast height (DBH). |
| 1. Solidago rugosa | 40 | Yes | FAC | |
| 2. icrostegium imineum | 25 | Yes | FAC | Sapling – Woody plants, excluding woody vines, |
| 3. arathel pteris no eboracensis | 20 | Yes | FAC | approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. |
| 4. ernonia no eboracensis | 15 | No | FACW | |
| 5. oehmeria c lindrica | 10 | No | FACW | Shrub - Woody Plants, excluding woody vines, |
| 6. oodwardia areolata | 5 | No | OBL | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. Commelina communis | 5 | No | FAC | Herb – All herbaceous (non-woody) plants, including |
| 8. ersicaria sagittata | 5 | No | OBL | herbaceous vines, regardless of size, and woody |
| 9. mpatiens capensis | 5 | No | FACW | plants, except woody vines, less than approximately 3 ft (1 m) in height. |
| 10 | | | | (), Ü |
| 11 | | | | Woody Vine – All woody vines, regardless of height. |
| | 130 | =Total Cover | | |
| 50% of total cover: 6 | 5 20% | of total cover: | 26 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. itis rotundifolia | 5 | Yes | FAC | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| · | 5 | =Total Cover | | Hydrophytic |
| 50% of total cover: | | of total cover: | 1 | Vegetation Present? Yes X No |
| | | or total covel. | | |
| Remarks: (If observed, list morphological adaptation | is below.) | | | |

| Depth | Matrix | | | x Featur | | | | absence | of indicators.) | | |
|------------|--|--------------|---|------------|-------------------|---------------------------|---|---|--|--|--|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Text | ure | Remarks | | |
| 0-6 | 10YR 4/2 | 85 | 7.5YR 4/4 | 5 | С | PL | Loamy/ | Clayey | Distinct redox concentrations | | |
| | | | 10YR 5/6 | 10 | С | M | | | Prominent redox concentration | | |
| 6-20 | 10YR 4/1 | 90 | 10YR 4/4 | 10 | С | PL | Loamy/ | Clayey | Distinct redox concentrations | | |
| | | | | | | | | | | | |
| Type: C=Co | ncentration, D=Depl | etion, RM= | Reduced Matrix, N | MS=Mas | ked Sand | d Grains. | 2 | Location: I | PL=Pore Lining, M=Matrix. | | |
| - | ndicators: (Applica | ble to all I | | | | | lı | | for Problematic Hydric Soils ³ : | | |
| Histosol (| ipedon (A2) | | Thin Dark Surface (S9) (LRR S, T, U) Barrier Islands 1 cm Muck (S12) | | | _ | 1 cm Muck (A9) (LRR O) 2 cm Muck (A10) (LRR S) | | | | |
| Black His | | | (MLRA 153B, 153D) | | _ | Coast Prairie Redox (A16) | | | | | |
| | n Sulfide (A4) | | Loamy Mucl | | , | RR O) | | (outside MLRA 150A) | | | |
| | Layers (A5) | | Loamy Gley | - | | | | Reduce | d Vertic (F18) | | |
| Organic E | Bodies (A6) (LRR P, | T, U) | X Depleted Ma | atrix (F3) | | | | (outs | (outside MLRA 150A, 150B) | | |
| 5 cm Muc | cky Mineral (A7) (LR | R P, T, U) | Redox Dark | Surface | (F6) | | | Piedmo | nt Floodplain Soils (F19) (LRR P, | | |
| Muck Pre | esence (A8) (LRR U) | | Depleted Da | ark Surfa | ce (F7) | | | Anomal | ous Bright Floodplain Soils (F20) | | |
| 1 cm Muc | ck (A9) (LRR P, T) | | Redox Depr | essions | (F8) | | | (MLR | A 153B) | | |
| Depleted | Below Dark Surface | e (A11) | Marl (F10) (| LRR U) | | | | Red Parent Material (F21) | | | |
| Thick Dar | rk Surface (A12) | | Depleted Oc | chric (F1 | 1) (MLRA | A 151) | _ | Very Shallow Dark Surface (F22) | | | |
| Coast Pra | airie Redox (A16) (M | LRA 150A |) Iron-Mangar | nese Ma | sses (F12 | 2) (LRR (| D, P, T) | , P, T) (outside MLRA 138, 152A in FL, 154) | | | |
| | ucky Mineral (S1) (L | RR 0, S) | Umbric Surf | ` | <i>,</i> . | | | Barrier Islands Low Chroma Matrix (TS7) | | | |
| | ndy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) | | | | (MLRA 153B, 153D) | | | | | | |
| Sandy Re | () | | Reduced Ve | | | | | Other (I | Explain in Remarks) | | |
| | Matrix (S6) | | Piedmont Fl | | | | | | | | |
| | face (S7) (LRR P, S | | Anomalous | 0 | • | Soils (F2 | 20) | 3 | | | |
| | e Below Surface (S8) |) | (MLRA 14 | | - | | | | ors of hydrophytic vegetation and | | |
| (LRR S | s, I, U) | | Very Shallov (MLRA 13 | | ` | , | | | and hydrology must be present, ss disturbed or problematic. | | |
| | ayer (if observed): | | | | | | | | | | |
| Туре: | | | | | | | | | | | |
| .) 0. | ches): | | | | | | | Soil Prese | nt? Yes X No | | |

| | | | Attachment 2.D.1 |
|---|--|-------------------------------|---|
| U.S. Arm WETLAND DETERMINATION DATA See ERDC/EL TR-07-24; | | 0 | OMB Control #: 0710-xxxx, Exp: Pending |
| Project/Site: TL 254/2201 Clubhouse - Lak | eview 230 kV Rebuild | City/County: Greensville | Sampling Date: 9/23/20 |
| Applicant/Owner: Dominion Energy Virg | | | State: VA Sampling Point: 25-B |
| Investigator(s): S. Kupiec | | tion, Township, Range: | |
| Landform (hillside, terrace, etc.): Slope | | elief (concave, convex, non | ne): Convex Slope (%): 2-4 |
| Subregion (LRR or MLRA): LRR P, MLRA | | Long: -77.6 | |
| Soil Map Unit Name: Fluvanna-Mattaponi d | | 2011g | NWI classification: N/A |
| | | Voo V | |
| Are climatic / hydrologic conditions on the s | | | No (If no, explain in Remarks.) |
| Are Vegetation, Soil, or Hydr | | | umstances" present? Yes X No |
| Are Vegetation, Soil, or Hydr | ology naturally problema | tic? (If needed, explain | n any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attac | n site map showing sam | pling point location | s, transects, important features, etc. |
| Hydrophytic Vegetation Present? | Yes X No | Is the Sampled Area | |
| Hydric Soil Present? | | within a Wetland? | Yes No X |
| Wetland Hydrology Present? | Yes No X | | |
| Remarks: | | | |
| Upland above Flag BV-4. | | | |
| | | | |
| | | | |
| | | | |
| L HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | Se | econdary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is requ | uired: check all that apply) | <u></u> | Surface Soil Cracks (B6) |
| Surface Water (A1) | Aquatic Fauna (B13) | | Sparsely Vegetated Concave Surface (B8) |
| High Water Table (A2) | Marl Deposits (B15) (LRI | R U) | Drainage Patterns (B10) |
| Saturation (A3) | Hydrogen Sulfide Odor (| C1) | Moss Trim Lines (B16) |
| Water Marks (B1) | Oxidized Rhizospheres o | | Dry-Season Water Table (C2) |
| Sediment Deposits (B2) | Presence of Reduced Iro | | Crayfish Burrows (C8) |
| Drift Deposits (B3) | Recent Iron Reduction in | Tilled Soils (C6) | Saturation Visible on Aerial Imagery (C9) |
| Algal Mat or Crust (B4) Iron Deposits (B5) | Thin Muck Surface (C7) Other (Explain in Remark | (c) | Geomorphic Position (D2) Shallow Aquitard (D3) |
| Inundation Visible on Aerial Imagery (E | | | FAC-Neutral Test (D5) |
| Water-Stained Leaves (B9) | , | | Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: | | | |
| Surface Water Present? Yes | No X Depth (inches): | | |
| Water Table Present? Yes | No X Depth (inches): | | |
| Saturation Present? Yes | No X Depth (inches): | Wetland Hyd | trology Present? Yes No X |
| (includes capillary fringe) | | | |
| Describe Recorded Data (stream gauge, m | ionitoring well, aerial photos, pre | evious inspections), if avail | able: |
| | | | |
| Remarks: | | | |
| | | | |
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| VEGETATION (Five Strata) - Use scient | ific names | of plants. | | Sampling Point: 25-B |
|---|------------|-----------------|-----------|---|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC:3 (A) |
| 3 | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 5 (B) |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: 60.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. Li uidambar st raciflua | 10 | Yes | FAC | FACW species 0 x 2 = 0 |
| 2. | | | | FAC species 65 x 3 = 195 |
| 3. | | | | FACU species $40 	 x 4 = 160$ |
| 4. | | | | UPL species 5 $x 5 = 25$ |
| 5. | | | | Column Totals: 110 (A) 380 (B) |
| 6. | | | | Prevalence Index = $B/A = 3.45$ |
| 0 | 10 | Total Cover | | |
| 500/ - () - () | | =Total Cover | 0 | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | 5 20% | of total cover: | 2 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1. hus copallinum | 5 | Yes | UPL | 3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6. | | | | present, unless disturbed or problematic. |
| | 5 | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 3 20% | of total cover: | 1 | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. ndropogon irginicus | 30 | Yes | FAC | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. Solidago rugosa | 20 | Yes | FAC | Sapling – Woody plants, excluding woody vines, |
| 3. ridens fla us | 10 | No | FACU | approximately 20 ft (6 m) or more in height and less |
| 4. Lespede a cuneata | 10 | No | FACU | than 3 in. (7.6 cm) DBH. |
| 5. ubus argutus | 5 | No | FAC | Shrub - Woody Plants, excluding woody vines, |
| 6. Desmodium paniculatum | 5 | No | FACU | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7 | | 110 | 17.00 | |
| | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3 |
| 9 | | | | ft (1 m) in height. |
| 10 | | | | Woody Vine – All woody vines, regardless of height. |
| 11 | | | | woody vine – All woody vines, regardless of height. |
| | | =Total Cover | | |
| 50% of total cover: | 40 20% | of total cover: | 16 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. Lonicera aponica | 15 | Yes | FACU | |
| 2 | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| | 15 | =Total Cover | | Hydrophytic Vegetation |
| 50% of total cover: | | of total cover: | 3 | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | | | | · |
| internative. In observed, list morphological adaptation | | | | |

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SOIL Sampling Point: 25-B Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix (inches) Color (moist) % Color (moist) Loc² Texture Remarks % Type¹ 10YR 3/2 0-1 100 Loamy/Clayey 1-5 10YR 5/4 100 Loamy/Clayey ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Gravel compaction Depth (inches): 5 Hydric Soil Present? Yes No X Remarks:

| | Attachment 2.D.1 Page 186 of 230 |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 9/23/20 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 26-A |
| Investigator(s): S. Kupiec Section, Township, Range: | |
| Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, non | ne): <u>Convex</u> Slope (%): <u>2-4</u> |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.576903 Long: -77.6 | |
| Soil Map Unit Name: Roanoke loam | NWI classification: N/A |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes X | No (If no, explain in Remarks.) |
| ——— | umstances" present? Yes X No |
| | n any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing sampling point location | |
| | |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area | |
| Hydric Soil Present? Yes No X within a Wetland? Wetland Hydrology Present? Yes No X | Yes NoX |
| Wetland Hydrology Present? Yes No X Remarks: | |
| Upland near Flag BY-5. | |
| | |
| | |
| | |
| | |
| HYDROLOGY | |
| Wetland Hydrology Indicators: Se Primary Indicators (minimum of one is required; check all that apply) Se | econdary Indicators (minimum of two required) |
| Surface Water (A1) Aquatic Fauna (B13) | Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) |
| High Water Table (A2) Marl Deposits (B15) (LRR U) | Drainage Patterns (B10) |
| Saturation (A3) Hydrogen Sulfide Odor (C1) | Moss Trim Lines (B16) |
| Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) | Dry-Season Water Table (C2) |
| Sediment Deposits (B2)Presence of Reduced Iron (C4) | Crayfish Burrows (C8) |
| Drift Deposits (B3) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) | Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) |
| Iron Deposits (B5) Other (Explain in Remarks) | Shallow Aquitard (D3) |
| | FAC-Neutral Test (D5) |
| Water-Stained Leaves (B9) | Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: | |
| Surface Water Present? Yes No X Depth (inches): | |
| Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): | drology Present? Yes No X |
| Saturation Present? Yes <u>No X</u> Depth (inches): Wetland Hyd (includes capillary fringe) | drology Present? Yes No X |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if availa | able: |
| | |
| Describe | |
| Remarks: | |
| | |
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| | |

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| VEGETATION (Five Strata) - Use scienti | fic names | of plants. | | Sampling Point:26-A |
|--|------------|-----------------|-----------|---|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: (A) |
| 3 | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 5 (B) |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: 80.0% (A/B) |
| | : | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. etula nigra | 5 | Yes | FACW | FACW species 65 x 2 = 130 |
| 2. | | | | FAC species 55 x 3 = 165 |
| 3. | | | | FACU species 25 x 4 = 100 |
| 4. | | | | UPL species $0 \times 5 = 0$ |
| 5. | | | | Column Totals: 145 (A) 395 (B) |
| 6. | | | | Prevalence Index = $B/A = 2.72$ |
| | 5 | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | | of total cover: | 1 | 1 - Rapid Test for Hydrophytic Vegetation |
| <u>Shrub Stratum</u> (Plot size: 30) | 20% | | · · | X 2 - Dominance Test is >50% |
| 1 | | | | $3 - Prevalence Index is \leq 3.0^{1}$ |
| 2 | | | | |
| | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). |
| 1. cnanthemum tenuifolium | 50 | Yes | FACW | |
| 2. ndropogon irginicus | 25 | Yes | FAC | Sapling – Woody plants, excluding woody vines, |
| 3. ridens fla us | 25 | Yes | FACU | approximately 20 ft (6 m) or more in height and less |
| 4. ubus argutus | 20 | No | FAC | than 3 in. (7.6 cm) DBH. |
| 5. upatorium perfoliatum | 10 | No | FACW | Shrub - Woody Plants, excluding woody vines, |
| 6 | | | | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7 | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, and woody |
| 9 | | | | plants, except woody vines, less than approximately 3 |
| 10. | | | | ft (1 m) in height. |
| 11. | | | | Woody Vine - All woody vines, regardless of height. |
| | 130 | =Total Cover | | |
| 50% of total cover: 6 | 5 20% | of total cover: | 26 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. Campsis radicans | 10 | Yes | FAC | |
| 2. | | | | |
| 3. | | | | |
| | | | | |
| 5. | | | | |
| J | 10 | =Total Cover | | Hydrophytic |
| 50% of total cover: | | of total cover: | 2 | Vegetation Present? Yes X No |
| | | | <u> </u> | |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | |

SOIL Sampling Point: 26-A 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) Loc² Texture Remarks % Type¹ 10YR 3/1 0-1 100 Loamy/Clayey 1-20 10YR 4/4 55 5YR 4/6 45 Loamy/Clayey Prominent redox concentrations С Μ ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:

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|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 9/23/20 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 27-A |
| Investigator(s): S. Kupiec Section, Township, Range: | |
| Landform (hillside, terrace, etc.): Drainageway Local relief (concave, convex, non | ne): <u>Concave</u> Slope (%): <u>2-4</u> |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.571748 Long: -77.6 | 633522 Datum: |
| Soil Map Unit Name: Roanoke loam | NWI classification: N/A |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal Circu | No (If no, explain in Remarks.) umstances" present? Yes X No n any answers in Remarks.) s, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes No X Is the Sampled Area Hydric Soil Present? Yes No X within a Wetland? Wetland Hydrology Present? Yes No X | YesNo_X |
| Remarks: Upland near Structure 254/96. | |
| HYDROLOGY | |
| Primary Indicators (minimum of one is required; check all that apply) | econdary 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) Sphagnum Moss (D8) (LRR T, U) |
| Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): | drology Present? Yes No X |
| Describe Recorded Data (stream gauge, monitoring weil, aenai photos, providus inspections), il avain | able. |
| Remarks: | |

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| VEGETATION (Five Strata) – Use scient | • | Sampling Point: 27-A |
|---------------------------------------|--|---|
| Tree Stratum (Plot size: 30) | Absolute Dominant Indicator % Cover Species? Status | Dominance Test worksheet: |
| 1 | · | Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) |
| 3 | | Total Number of Dominant Species Across All Strata: 1 (B) |
| 56 | · | Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B) |
| | =Total Cover | Prevalence Index worksheet: |
| 50% of total cover: | 20% of total cover: | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | OBL species 0 x 1 = 0 |
| 1 | · · | FACW species 0 x 2 = 0 |
| 2 | | FAC species 0 x 3 = 0 |
| 3 | | FACU species 0 x 4 = 0 |
| 4 | | UPL species 60 x 5 = 300 |
| 5 | | Column Totals: 60 (A) 300 (B) |
| 6. | | Prevalence Index = B/A = 5.00 |
| | =Total Cover | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | 20% of total cover: | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | 2 - Dominance Test is >50% |
| 1 | | 3 - Prevalence Index is ≤3.0 ¹ |
| 2. | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2 | | |
| A | | |
| 5. | · · | |
| | · · · | ¹ Indicators of hydric soil and wetland hydrology must b |
| 6 | Tatal Causa | present, unless disturbed or problematic. |
| | =Total Cover | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% of total cover: | |
| Herb Stratum (Plot size: 30) | | approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). |
| 1. / cine max | <u>60 Yes UPL</u> | |
| 2 | | Sapling – Woody plants, excluding woody vines, |
| 3 4 | · | approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. |
| 5 | · | Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. | | Herb - All berbaccous (non woody) plants including |
| 8 | | Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody |
| 9. | · | plants, except woody vines, less than approximately 3 ft (1 m) in height. |
| 10 11 | · | Woody Vine – All woody vines, regardless of height. |
| | 60 =Total Cover | |
| 50% of total cover: | 30 20% of total cover: 12 | |
| Woody Vine Stratum (Plot size: 30) | | |
| 1 | | |
| 2. | | |
| 3. | | |
| 4. | | |
| 5. | | |
| - | =Total Cover | Hydrophytic |
| | -10101 00761 | Vegetation |
| 50% of total cover: | 20% of total cover: | Present? Yes No X |

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| OIL | | | | | | | | Sampling Point: 27-A | | |
|---------------|---|------------|--------------------------|-----------------------|-----------------------------------|------------------|---|--|--|--|
| | - | to the dep | | | | ator or co | onfirm the absence o | f indicators.) | | |
| Depth | Matrix | | | x Featur | | Loc ² | Tauduna | | | |
| inches) | Color (moist) | % | Color (moist) | % | Type ¹ | LOC | Texture | Remarks | | |
| 0-2 | 10YR 4/3 | 100 | | | | | Loamy/Clayey | | | |
| 2-20 | 10YR 5/3 | 95 | 10YR 4/6 | 5 | С | Μ | Loamy/Clayey | Distinct redox concentration | | |
| | | · | | | | · | | | | |
| | | · | | | | · | | | | |
| | oncentration, D=Depl Indicators: (Applica | | | | | Grains. | | L=Pore Lining, M=Matrix. or Problematic Hydric Soils ³ : | | |
| Histosol | | DIE LO AII | Thin Dark S | | - | S T II) | | - | | |
| | | | | | | | 1 cm Muck (A9) (LRR O) 2 cm Muck (A10) (LRR S) | | | |
| | pipedon (A2) | | | | | | | ast Prairie Redox (A16) | | |
| Black Hi | () | | | | | | | | | |
| | n Sulfide (A4) | | Loamy Muc | - | | RR () | | de MLRA 150A) | | |
| | Layers (A5) | | Loamy Gley | | | | | Vertic (F18) | | |
| | Bodies (A6) (LRR P, | | Depleted Ma | | | | | de MLRA 150A, 150B) | | |
| | icky Mineral (A7) (LR | | | | · · / | | | nt Floodplain Soils (F19) (LRR P | | |
| | esence (A8) (LRR U) | | Depleted Da | | | | | bus Bright Floodplain Soils (F20) | | |
| | ick (A9) (LRR P, T) | | Redox Depr | | (F8) | | - | A 153B) | | |
| | Below Dark Surface | e (A11) | Marl (F10) (| | | | Red Parent Material (F21) | | | |
| Thick Da | ark Surface (A12) | | Depleted Oc | hric (F1 | 1) (MLRA | A 151) | Very Sha | Shallow Dark Surface (F22) | | |
| | rairie Redox (A16) (M | | · | | | | O, P, T) (outside MLRA 138, 152A in FL, 154) | | | |
| Sandy N | lucky Mineral (S1) (L | RR 0, S) | Umbric Surf | ace (F13 | 8) (LRR F | P, T, U) | Barrier Islands Low Chroma Matrix (TS7) | | | |
| Sandy G | ileyed Matrix (S4) | | Delta Ochric | : (F17) (ľ | MLRA 15 | 1) | (MLRA 153B, 153D) | | | |
| | Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 7 | | | | 150A, 15 | 0B) Other (E | xplain in Remarks) | | | |
| | Matrix (S6) | | Piedmont Fl | oodplain | Soils (F | 19) (MLR | A 149A) | | | |
| | rface (S7) (LRR P, S | | Anomalous | - | | | | | | |
| | lyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) | | | ³ Indicato | ors of hydrophytic vegetation and | | | | | |
| (LRR | S, T, U) | | Very Shallov (MLRA 13 | | | | | nd hydrology must be present, s disturbed or problematic. | | |
| Restrictive I | _ayer (if observed): | | | | | | | | | |
| Type: | | | | | | | | | | |
| Depth (ir | nches): | | | | | | Hydric Soil Preser | nt? Yes No X | | |
| | | | | | | | | | | |

| | Attachment 2.D.1 |
|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 9/24/20 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 28-A |
| Investigator(s): S. Kupiec Section, Township, Range: | |
| Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none | e): <u>None</u> Slope (%): <u>0-1</u> |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.566900 Long: -77.63 | 35915 Datum: |
| Soil Map Unit Name: Roanoke Loam | NWI classification: N/A |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes X N | No (If no, explain in Remarks.) |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal Circur | mstances" present? Yes X No |
| | any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations | s, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? Wetland Hydrology Present? Yes X No | Yes <u>X</u> No |
| Remarks: Wetland at Flag CB-2. | |
| L HYDROLOGY | |
| Wetland Hydrology Indicators: Sec | condary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that apply) | Surface Soil Cracks (B6) |
| Surface Water (A1) Aquatic Fauna (B13) | Sparsely Vegetated Concave Surface (B8) |
| X High Water Table (A2) Marl Deposits (B15) (LRR U) X Saturation (A3) Hydrogen Sulfide Odor (C1) | Drainage Patterns (B10) Moss Trim Lines (B16) |
| Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) | Dry-Season Water Table (C2) |
| Sediment Deposits (B2) Presence of Reduced Iron (C4) | Crayfish Burrows (C8) |
| Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) | Saturation Visible on Aerial Imagery (C9) |
| | Geomorphic Position (D2) |
| Iron Deposits (B5) Other (Explain in Remarks) | Shallow Aquitard (D3) |
| Inundation Visible on Aerial Imagery (B7) X Water-Stained Leaves (B9) | FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: | |
| Surface Water Present? Yes No X Depth (inches): | |
| Water Table Present? Yes X No Depth (inches): 8 | |
| Saturation Present? Yes X No Depth (inches): 0 Wetland Hydr | rology Present? Yes X No |
| (includes capillary fringe) | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if availal | ble: |
| | |
| Remarks: | |
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Attachment 2.D.1 Page 193 of 230

| VEGETATION (Five Strata) - Use scient | fic names | of plants. | | Sampling Point:28-A |
|---|------------|-----------------|-----------|--|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC:3 (A) |
| 3 | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: <u>3</u> (B) |
| 5 | | | | Percent of Dominant Species |
| 6 | | | | That Are OBL, FACW, or FAC: 100.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1. cer rubrum | 10 | Yes | FAC | FACW species 105 x 2 = 210 |
| 2 | | | | FAC species 60 x 3 = 180 |
| 3 | | | | FACU species 5 x 4 = 20 |
| 4 | | | | UPL species 0 x 5 = 0 |
| 5 | | | | Column Totals: 170 (A) 410 (B) |
| 6 | | | | Prevalence Index = B/A = 2.41 |
| | 10 | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | 5 20% | of total cover: | 2 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | X 3 - Prevalence Index is ≤3.0 ¹ |
| 2. | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6. | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. Solidago rugosa | 50 | Yes | FAC | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. rundinaria tecta | 35 | Yes | FACW | Sapling – Woody plants, excluding woody vines, |
| 3. ndropogon glomeratus | 25 | No | FACW | approximately 20 ft (6 m) or more in height and less |
| 4. Dichanthelium scoparium | 20 | No | FACW | than 3 in. (7.6 cm) DBH. |
| 5. ernonia no eboracensis | 15 | No | FACW | Shrub - Woody Plants, excluding woody vines, |
| 6. upatorium perfoliatum | 10 | No | FACW | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. teridium a uilinum | 5 | No | FACU | Herb – All herbaceous (non-woody) plants, including |
| 8. | | | | herbaceous vines, regardless of size, and woody |
| 9. | | | | plants, except woody vines, less than approximately 3 |
| 10. | | | | ft (1 m) in height. |
| 11. | | | | Woody Vine – All woody vines, regardless of height. |
| | 160 | =Total Cover | | |
| 50% of total cover: 8 | | of total cover: | 32 | |
| Woody Vine Stratum (Plot size: 30) | 2070 | | | |
| | | | | |
| 2. | | | | |
| 3. | | | | |
| | | | | |
| 4. | | | | |
| 5 | | Total Occurs | | Hydrophytic |
| E00/ of total action | | =Total Cover | | Vegetation Present? Vec. X No. |
| 50% of total cover: | | of total cover: | | Present? Yes X No |
| Remarks: (If observed, list morphological adaptatio | ns below.) | | | |

Sampling Point: 28-A Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix **Redox Features** Color (moist) % Color (moist) Loc² Texture Remarks (inches) % Type¹ 0-8 2.5Y 4/1 100 Loamy/Clayey 8-20 2.5Y 6/1 80 10YR 5/8 20 Loamy/Clayey Prominent redox concentrations С Μ ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:

SOIL

| | | | Attachment 2.D.1 | | |
|---|--|---------------------------------------|--|--|--|
| U.S. Arm WETLAND DETERMINATION DATA See ERDC/EL TR-07-24; | | 0 | OMB Control #: 0710-xxxx, Exp: Pending | | |
| Project/Site: TL 254/2201 Clubhouse - La | keview 230 kV Rebuild | City/County: Greensvill | e Sampling Date: 9/23/20 | | |
| Applicant/Owner: Dominion Energy Vin | ginia | | State: VA Sampling Point: 28-B | | |
| Investigator(s): S. Kupiec | S | ection, Township, Range: | | | |
| Landform (hillside, terrace, etc.): Slope | Loca | Il relief (concave, convex, i | none): Convex Slope (%): 2-4 | | |
| Subregion (LRR or MLRA): LRR P, MLRA | 133A Lat: 36.567078 | Long: -7 | 7.635813 Datum: | | |
| Soil Map Unit Name: Roanoke loam | | 0 | NWI classification: N/A | | |
| Are climatic / hydrologic conditions on the | site typical for this time of year | ? Yes X | No (If no, explain in Remarks.) | | |
| Are Vegetation, Soil, or Hyd | | | ircumstances" present? Yes X No | | |
| Are Vegetation, Soil, or Hyd | | | plain any answers in Remarks.) | | |
| | | | • | | |
| SUMMARY OF FINDINGS – Attac | ch site map showing sa | ampling point location | ons, transects, important features, etc. | | |
| Hydrophytic Vegetation Present? Hydric Soil Present? | Yes No_X YesNo_X | Is the Sampled Area within a Wetland? | Yes No X | | |
| Wetland Hydrology Present? | Yes No X | | | | |
| Remarks: Upland above Flag CB-2. | | | | | |
| L HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | | | Secondary Indicators (minimum of two required) | | |
| Primary Indicators (minimum of one is rec | | | Surface Soil Cracks (B6) | | |
| Surface Water (A1) | Aquatic Fauna (B13) | | Sparsely Vegetated Concave Surface (B8) | | |
| High Water Table (A2) Saturation (A3) | Marl Deposits (B15) (L Hydrogen Sulfide Odo | | Drainage Patterns (B10) Moss Trim Lines (B16) | | |
| Water Marks (B1) | Oxidized Rhizospheres | | Dry-Season Water Table (C2) | | |
| Sediment Deposits (B2) | Presence of Reduced | | Crayfish Burrows (C8) | | |
| Drift Deposits (B3) | Recent Iron Reduction | in Tilled Soils (C6) | Saturation Visible on Aerial Imagery (C9) | | |
| Algal Mat or Crust (B4) | Thin Muck Surface (C | , | Geomorphic Position (D2) | | |
| Iron Deposits (B5) | Other (Explain in Rem | arks) | Shallow Aquitard (D3) | | |
| Inundation Visible on Aerial Imagery (| B7) | | X FAC-Neutral Test (D5) | | |
| Water-Stained Leaves (B9) | | | Sphagnum Moss (D8) (LRR T, U) | | |
| Field Observations: | No. V. Donth (inchos | \. | | | |
| Surface Water Present? Yes Water Table Present? Yes | No X Depth (inches No X Depth (inches | · | | | |
| Saturation Present? Yes | No X Depth (inches | | Hydrology Present? Yes No X | | |
| (includes capillary fringe) | | , <u> </u> | | | |
| Describe Recorded Data (stream gauge, r | monitoring well, aerial photos, | previous inspections), if av | vailable: | | |
| | | | | | |
| Remarks: | | | | | |
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Attachment 2.D.1 Page 196 of 230

| VEGETATION (Five Strata) - Use scienti | fic names | of plants. | | Sampling Point: | 28-B |
|--|------------|---------------------------------|-----------|---|---------------------------|
| | Absolute | Dominant | Indicator | | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: | |
| 1. 2. | | | | Number of Dominant Species That Are OBL, FACW, or FAC: | 1 (A) |
| 3 | | | | Total Number of Dominant Species Across All Strata: | 2 (B) |
| 5 | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: | 50.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: | () |
| 50% of total cover: | | of total cover: | | | ultiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = | |
| 1. <u> </u> | | | | FACW species 55 x 2 = | |
| 2. | | | | | 0 |
| 2 | | | | FACU species 25 x 4 = | |
| 4 | | | | UPL species 0 x 5 = | 0 |
| 5. | | | | Column Totals: 80 (A) | 210 (B) |
| 6. | | | | Prevalence Index = $B/A =$ | 2.63 |
| | | =Total Cover | | Hydrophytic Vegetation Indicators: | |
| 50% of total cover: | | of total cover: | | 1 - Rapid Test for Hydrophytic Ve | |
| Shrub Stratum (Plot size: 30) | | | | 2 - Dominance Test is >50% | 901011011 |
| 1 | | | | $3 - Prevalence Index is \leq 3.0^1$ | |
| | | | | Problematic Hydrophytic Vegetati | on ¹ (Explain) |
| 3 | | | | | |
| 1 | | | | | |
| 4 5 | | | | 1 | |
| 6. | | | | ¹ Indicators of hydric soil and wetland h present, unless disturbed or problema | |
| 0. | | =Total Cover | | Definitions of Five Vegetation Strat | |
| 50% of total cover: | | of total cover: | | - | |
| Herb Stratum (Plot size: 30) | 2070 | | | Tree – Woody plants, excluding wood approximately 20 ft (6 m) or more in h | |
| 1. ndropogon glomeratus | 50 | Yes | FACW | (7.6 cm) or larger in diameter at breas | |
| 2. teridium a uilinum | 25 | Yes | FACU | | |
| 3. Dichanthelium scoparium | 5 | No | FACW | Sapling – Woody plants, excluding w approximately 20 ft (6 m) or more in h | |
| | | NO | TACW | than 3 in. (7.6 cm) DBH. | long in and looo |
| 5. | | | | Shrub - Woody Plants, excluding woo | dy vince |
| 6. | | | | approximately 3 to 20 ft (1 to 6 m) in h | |
| 7 | | | | Herb – All herbaceous (non-woody) p | |
| 8 | | | | herbaceous vines, regardless of size, | |
| 9 | | | | plants, except woody vines, less than ft (1 m) in height. | approximately 3 |
| 10 | | | | Woody Vine – All woody vines, regard | dless of height. |
| 11 | 80 | =Total Cover | | | aleee el lleight |
| 50% of total cover: 4 | | of total cover: | 16 | | |
| | 0 20% | | 10 | | |
| Woody Vine Stratum (Plot size: 30) | | | | | |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4. | | | | | |
| 5 | | | | Hydrophytic | |
| 50% of total cover: | | =Total Cover of total cover: | | Vegetation | х |
| Remarks: (If observed, list morphological adaptation | | | | | |
| | 13 DCIOW.) | | | | |

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SOIL Sampling Point: 28-B Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix Color (moist) % Color (moist) Loc² Texture Remarks (inches) % Type¹ 2.5Y 4/4 0-6 100 Loamy/Clayey 6-20 2.5Y 5/4 100 Loamy/Clayey ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:

| | | Attachment 2.D.1 | | |
|--|----------------------------------|--|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf C See ERDC/EL TR-07-24; the proponent agency is CE | 0 | OMB Control #: 0710-xxxx, Exp: Pending | | |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Ci | ty/County: Greensville | Sampling Date: 9/23/20 | | |
| Applicant/Owner: Dominion Energy Virginia | | State: VA Sampling Point: 29-A | | |
| | n, Township, Range: | | | |
| | ef (concave, convex, no | one): Concave Slope (%): 2-3 | | |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.559376 | Long: -77 | | | |
| Soil Map Unit Name: Mattaponi sandy loam | | NWI classification: N/A | | |
| | Yes X | | | |
| Are climatic / hydrologic conditions on the site typical for this time of year? | | No (If no, explain in Remarks.) | | |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed | | cumstances" present? Yes X No | | |
| Are Vegetation, Soil, or Hydrologynaturally problematic | | ain any answers in Remarks.) | | |
| SUMMARY OF FINDINGS – Attach site map showing samp | ling point location | ns, transects, important features, etc. | | |
| | the Sampled Area thin a Wetland? | YesNo_X | | |
| Wetland Hydrology Present? Yes No X | | | | |
| Remarks: Upland near Structure 254-104. | | | | |
| HYDROLOGY | | | | |
| Wetland Hydrology Indicators: | 5 | Secondary Indicators (minimum of two required) | | |
| Primary Indicators (minimum of one is required; check all that apply) | | Surface Soil Cracks (B6) | | |
| Surface Water (A1) Aquatic Fauna (B13) | | Sparsely Vegetated Concave Surface (B8) | | |
| High Water Table (A2) Marl Deposits (B15) (LRR U Saturation (A3) Hydrogen Sulfide Odor (C1) | | Drainage Patterns (B10) Moss Trim Lines (B16) | | |
| Water Marks (B1) Oxidized Rhizospheres on I | - | Dry-Season Water Table (C2) | | |
| Sediment Deposits (B2) Presence of Reduced Iron (| - · · · - | Crayfish Burrows (C8) | | |
| Drift Deposits (B3) | | Saturation Visible on Aerial Imagery (C9) | | |
| Algal Mat or Crust (B4) Thin Muck Surface (C7) | | X Geomorphic Position (D2) | | |
| Iron Deposits (B5) Other (Explain in Remarks) | | Shallow Aquitard (D3) | | |
| Inundation Visible on Aerial Imagery (B7) | | FAC-Neutral Test (D5) | | |
| Water-Stained Leaves (B9) | | Sphagnum Moss (D8) (LRR T, U) | | |
| Field Observations: | | | | |
| Surface Water Present? Yes No X Depth (inches): | <u> </u> | | | |
| Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): | Wotland Hy | /drology Present? Yes No X | | |
| Saturation Present? Yes No X Depth (inches): | | /drology Present? Yes No X | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previ | ous inspections), if ava | ilable: | | |
| | , | | | |
| Remarks: | | | | |
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| VEGETATION (FIVe Strata) – Use scientif | | of plants. | | Sampling Point: 29-A |
|--|---------------------|----------------------|---------------------|---|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1. 2. | | | | Number of Dominant Species That Are OBL, FACW, or FAC:3(A) |
| 3. 4. | | | | Total Number of Dominant Species Across All Strata: 4 (B) |
| 5. 6. | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1 | | | | FACW species 45 x 2 = 90 |
| 2. | | | | FAC species 45 x 3 = 135 |
| 3. | | | | FACU species 10 x 4 = 40 |
| 4. | | | | UPL species 45 x 5 = 225 |
| 5. | | | | Column Totals: 145 (A) 490 (B) |
| 6. | | | | Prevalence Index = $B/A = 3.38$ |
| | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | | of total cover: | | 1 - Rapid Test for Hydrophytic Vegetation |
| <u>Shrub Stratum</u> (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1. hus copallinum | 45 | Yes | UPL | $3 - \text{Prevalence Index is } \le 3.0^1$ |
| , | | 103 | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. | | | | |
| 4 | | | | |
| 4 | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6. | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: 2 | 3 20% | of total cover: | 9 | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). |
| 1. ndropogon irginicus | 40 | Yes | FAC | |
| 2. anicum errucosum | 35 | Yes | FACW | Sapling – Woody plants, excluding woody vines, |
| 3. upatorium perfoliatum | 10 | No | FACW | approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. |
| 4. Chamaecrista fasciculata | 5 | No | FACU | |
| 5. Solanum carolinense | 5 | No | FACU | Shrub - Woody Plants, excluding woody vines, |
| 6 | | | | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7 | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, and woody |
| 9 | | | | plants, except woody vines, less than approximately 3 |
| 10 | | | | ft (1 m) in height. |
| 11 | | | | Woody Vine – All woody vines, regardless of height. |
| | 95 | =Total Cover | | |
| 50% of total cover: 4 | 8 20% | of total cover: | 19 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. Smilax rotundifolia | 5 | Yes | FAC | |
| 2. | | | | |
| 3. | | | | |
| 4 | | | | |
| 4 5 | | | | |
| · · · · · · · · · · · · · · · · · · · | 5 | =Total Cover | | Hydrophytic |
| 50% of total cover: 3 | | of total cover: | 1 | Vegetation Present? Yes X No |
| | | | <u> </u> | |
| Remarks: (If observed, list morphological adaptation | is below.) | | | |

| SOIL | | | | | | | | Sampling Point: | 29-A | |
|--|--|------------|--------------------|--|-------------------|------------------|------------------------|----------------------------|----------------------|--|
| Profile Des | cription: (Describe | to the dep | oth needed to doc | ument t | he indica | ator or co | onfirm the absence | of indicators.) | | |
| Depth | Depth Matrix Redox Features | | | | | | | | | |
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks | | |
| 0-16 | 2.5Y 4/1 | 98 | 10YR 4/6 | 2 | С | Μ | Loamy/Clayey | Prominent redox con | centrations | |
| 16-20 | 2.5Y 6/2 | 80 | 10YR 5/6 | 20 | С | М | Loamy/Clayey | Prominent redox con | centrations | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| ¹ Type: C=C | oncentration, D=Depl | etion, RM | =Reduced Matrix, I | MS=Mas | ked San | d Grains. | ² Location: | PL=Pore Lining, M=Matrix | κ. | |
| Hydric Soil | Indicators: (Applica | ble to all | LRRs, unless oth | erwise r | noted.) | | Indicators | for Problematic Hydric S | Soils ³ : | |
| Histosol | (A1) | | Thin Dark S | urface (S | 39) (LRR | S, T, U) | 1 cm N | /luck (A9) (LRR O) | | |
| | pipedon (A2) | | Barrier Islan | | | 12) | | /luck (A10) (LRR S) | | |
| | istic (A3) | | | (MLRA 153B, 153D) | | | | Prairie Redox (A16) | | |
| | en Sulfide (A4) | | | Loamy Mucky Mineral (F1) (LRR O) | | | | | | |
| | d Layers (A5) | | | Loamy Gleyed Matrix (F2) | | | Reduced Vertic (F18) | | | |
| | Bodies (A6) (LRR P, | | | _ Depleted Matrix (F3) (outside MLRA 150A, 150B) | | | · | | | |
| | ucky Mineral (A7) (LR | | | Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LR | | | | | | |
| | esence (A8) (LRR U) |) | | _ Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F2 | | | ils (F20) | | | |
| | uck (A9) (LRR P, T) | (444) | Redox Depr | | (F8) | | | RA 153B) | | |
| | d Below Dark Surface | ; (A11) | Marl (F10) (| | | * 4 - 1) | | arent Material (F21) | ` | |
| Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) | | | | | | , | | | | |
| | rairie Redox (A16) (N | | | | | | | side MLRA 138, 152A in I | | |
| | Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) | | | | | | nx (1 <i>51</i>) | | | |
| | Redox (S5) | | Reduced Ve | . , . | | - | | (Explain in Remarks) | | |
| | Matrix (S6) | | Piedmont Fl | | , . | | · _ · | | | |
| | rface (S7) (LRR P, S | . T. U) | Anomalous | | | , . | | | | |
| | le Below Surface (S8 | | (MLRA 14 | - | • | | | tors of hydrophytic vegeta | tion and | |
| | S, T, U) | , | Very Shallov | | | | | and hydrology must be pre | | |
| | | | (MLRA 13 | | | | | ess disturbed or problemat | | |
| Restrictive | Layer (if observed): | | | | | | | | | |
| Type: | <u>,</u> | | | | | | | | | |
| Depth (ii | nches): | | | | | | Hydric Soil Prese | ent? Yes <u>X</u> | No | |
| Remarks: | | | | | | | 1 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| | Attachment 2.D.1 |
|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 9/24/20 |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 29-B |
| Investigator(s): S. Kupiec Section, Township, Range: | |
| Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, non | ne): Convex Slope (%): 2-4 |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.557470 Long: -77.6 | 640565 Datum: |
| Soil Map Unit Name: Fluvanna-Mattaponi complex | NWI classification: N/A |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal Circu | No (If no, explain in Remarks.) umstances" present? Yes X No n any answers in Remarks.) s, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes No X within a Wetland? Wetland Hydrology Present? Yes No X | YesNo_X |
| Remarks: Upland above Flag CE-5. | |
| HYDROLOGY | |
| Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Aquatic Fauna (B13) High Water Table (A2) Marl Deposits (B15) (LRR U) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) Sediment Deposits (B2) Presence of Reduced Iron (C4) Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Algal Mat or Crust (B4) Thin Muck Surface (C7) Iron Deposits (B5) Other (Explain in Remarks) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Field Observations: | econdary 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) Sphagnum Moss (D8) (LRR T, U) |
| Surface Water Present? Yes No X Depth (inches): Wetland Hyc Water Table Present? Yes No X Depth (inches): Wetland Hyc Saturation Present? Yes No X Depth (inches): Wetland Hyc (includes capillary fringe) Ves No X Depth (inches): Wetland Hyc Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available Ves Ves Ves | drology Present? Yes No X |
| | |
| Remarks: | |

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

| VEGETATION (FIVe Strata) – Use scienti | nc names | of plants. | | Sampling Point: 29-B |
|--|---------------------|----------------------|---------------------|---|
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
| 1. 2. | | | | Number of Dominant Species That Are OBL, FACW, or FAC:3(A) |
| 3. 4. | | | | Total Number of Dominant Species Across All Strata: 4 (B) |
| 5. 6. | | | | Percent of Dominant Species That Are OBL, FACW, or FAC: |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 0 x 1 = 0 |
| 1 | | | | FACW species 30 x 2 = 60 |
| 2. | | | | FAC species 20 x 3 = 60 |
| 3. | | | | FACU species 65 x 4 = 260 |
| 4. | | | | UPL species $0 	 x 5 = 0$ |
| 5 | | | | Column Totals: 115 (A) 380 (B) |
| 6 | | | | Prevalence Index = $B/A = 3.30$ |
| 0. | | =Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: | | of total cover: | | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | 2070 | or total cover. | | X 2 - Dominance Test is >50% |
| | | | | 3 - Prevalence Index is $\leq 3.0^{1}$ |
| 1 | | | | |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4. | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6. | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. teridium a uilinum | 65 | Yes | FACU | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. Chasmanthium laxum | 30 | Yes | FACW | Sapling – Woody plants, excluding woody vines, |
| 3 | | | | approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. |
| 5. | | | | Shrub Woody Plants, oxcluding woody vinos |
| 6. | | | | Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. |
| 7 | | | | Herb – All herbaceous (non-woody) plants, including |
| 8 | | | | herbaceous vines, regardless of size, and woody |
| 9 | | | | plants, except woody vines, less than approximately 3 |
| 10. | | | | ft (1 m) in height. |
| 11. | | | | Woody Vine - All woody vines, regardless of height. |
| | 95 | =Total Cover | | |
| 50% of total cover: 4 | 8 20% | of total cover: | 19 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1. itis rotundifolia | 15 | Yes | FAC | |
| 2. Campsis radicans | 5 | Yes | FAC | |
| 3. | | | | |
| | | | | |
| 4 | | | | |
| 5 | | | | Hydrophytic |
| | | =Total Cover | | Vegetation |
| 50% of total cover:1 | 0 20% | of total cover: | 4 | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | |

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SOIL Sampling Point: 29-B Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix Color (moist) % Color (moist) Loc² Texture Remarks (inches) % Type¹ 10YR 4/3 0-2 100 Loamy/Clayey 2-20 10YR 5/4 100 Loamy/Clayey ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:

| | Attachment 2.D.1 | | |
|---|---|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R | OMB Control #: 0710-xxxx, Exp: Pending | | |
| Project/Site: TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild City/County: Greensville | Sampling Date: 9/24/20 | | |
| Applicant/Owner: Dominion Energy Virginia | State: VA Sampling Point: 30-A | | |
| Investigator(s): S. Kupiec Section, Township, Range: | | | |
| Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, no | ne): None Slope (%): <u>1-2</u> | | |
| Subregion (LRR or MLRA): LRR P, MLRA 133A Lat: 36.548510 Long: -77. | 645753 Datum: | | |
| Soil Map Unit Name: Craven clay loam | NWI classification: N/A | | |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes X | No (If no, explain in Remarks.) | | |
| Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal Circ | cumstances" present? Yes X No | | |
| Are Vegetation, Soil, or Hydrologynaturally problematic? (If needed, expla | in any answers in Remarks.) | | |
| SUMMARY OF FINDINGS – Attach site map showing sampling point location | ns, transects, important features, etc. | | |
| Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? Wetland Hydrology Present? Yes X No No | Yes <u>X</u> No | | |
| Remarks: Wetland near Flag CF-2. | | | |
| HYDROLOGY | | | |
| Primary Indicators (minimum of one is required; check all that apply) | econdary Indicators (minimum of two required)Surface Soil Cracks (B6) | | |
| Surface Water (A1) Aquatic Fauna (B13) High Water Table (A2) Marl Deposits (B15) (LRR U) | Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) | | |
| X Saturation (A3) Hydrogen Sulfide Odor (C1) | Moss Trim Lines (B16) | | |
| Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) | Dry-Season Water Table (C2) | | |
| Sediment Deposits (B2) Presence of Reduced Iron (C4) | Crayfish Burrows (C8) | | |
| Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) This Muck Surface (C7) | Saturation Visible on Aerial Imagery (C9) | | |
| Algal Mat or Crust (B4) Thin Muck Surface (C7) Iron Deposits (B5) Other (Explain in Remarks) | Geomorphic Position (D2) Shallow Aquitard (D3) | | |
| | X FAC-Neutral Test (D5) | | |
| Water-Stained Leaves (B9) | Sphagnum Moss (D8) (LRR T, U) | | |
| Field Observations: Surface Water Present? Yes No X Depth (inches): No Water Table Present? Yes X No Depth (inches): 18 Saturation Present? Yes X No Depth (inches): 4 Wetland Hy (includes capillary fringe) Ves X No Depth (inches): 4 Wetland Hy | /drology Present? Yes X No | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available | lable: | | |
| | | | |
| Remarks: | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

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| VEGETATION (Five Strata) - Use scient | ific names | of plants. | | Sampling Point: 30-A |
|---|------------|-----------------|-----------|--|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: 6 (A) |
| 3 | | | | Total Number of Dominant |
| 4 | | | | Species Across All Strata: 6 (B) |
| 5 | | | | Percent of Dominant Species |
| 6. | | | | That Are OBL, FACW, or FAC: 100.0% (A/B) |
| | | =Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | 20% | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | OBL species 5 x 1 = 5 |
| 1. Li uidambar st raciflua | 15 | Yes | FAC | FACW species 75 x 2 = 150 |
| 2. uercus nigra | 15 | Yes | FAC | FAC species 95 x 3 = 285 |
| 3. | | | | FACU species $0 	 x 4 = 0$ |
| 4 | | | | UPL species $0 	 x5 = 0$ |
| 5. | | | | Column Totals: 175 (A) 440 (B) |
| 6. | | | | $\frac{1}{2} \frac{1}{2} \frac{1}$ |
| · · · · · · · · · · · · · · · · · · · | 30 : | =Total Cover | | Hydrophytic Vegetation Indicators: |
| | | | 0 | 5 . 5 . 5 |
| | 15 20% | of total cover: | 6 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | X 3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4. | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | : | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. Dichanthelium scoparium | 30 | Yes | FACW | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. Dichanthelium dichotomum | 30 | Yes | FAC | Sapling – Woody plants, excluding woody vines, |
| 3. arathel pteris no eboracensis | 20 | Yes | FAC | approximately 20 ft (6 m) or more in height and less |
| 4. ernonia no eboracensis | 15 | No | FACW | than 3 in. (7.6 cm) DBH. |
| 5. icrostegium imineum | 15 | No | FAC | Shrub - Woody Plants, excluding woody vines, |
| 6. C perus strigosus | 5 | No | FACW | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7. ersicaria sagittata | 5 | No | OBL | Herb – All herbaceous (non-woody) plants, including |
| 8. | | | | herbaceous vines, regardless of size, and woody |
| 9. | | | | plants, except woody vines, less than approximately 3 |
| 10. | | | | ft (1 m) in height. |
| 11. | | | | Woody Vine – All woody vines, regardless of height. |
| ···· | 120 : | =Total Cover | | |
| 50% of total cover: | | of total cover: | 24 | |
| | 2078 | | 24 | |
| Woody Vine Stratum (Plot size: 30) | 05 | Vaa | | |
| 1. pios americana | 25 | Yes | FACW | |
| 2. | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | Hydrophytic |
| | | =Total Cover | | Vegetation |
| 50% of total cover: | 13 20% | of total cover: | 5 | Present? Yes X No |
| Remarks: (If observed, list morphological adaptatio | ns below.) | | | |

SOIL Sampling Point: 30-A Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix Loc² Color (moist) % Color (moist) Texture (inches) % Type¹ Remarks 10YR 4/1 С ΡL 0-5 85 10YR 3/6 15 Loamy/Clayey Prominent redox concentrations 5-10 10YR 5/1 80 10YR 4/6 20 С Μ Loamy/Clayey Prominent redox concentrations 10-15 2.5Y 6/2 85 10YR 4/6 С Loamy/Clayey Prominent redox concentrations 15 Μ ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) X Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) (MLRA 149A, 153C, 153D) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:

| | | | Attachment 2.D.1 Page 207 of 230 |
|---|--|---------------------------------------|--|
| U.S. Arm WETLAND DETERMINATION DATA See ERDC/EL TR-07-24; | | 0 | OMB Control #: 0710-xxxx, Exp: Pending |
| Project/Site: TL 254/2201 Clubhouse - La | keview 230 kV Rebuild | City/County: Greensville | Sampling Date: <u>9/24/20</u> |
| Applicant/Owner: Dominion Energy Vir | ginia | | State: VA Sampling Point: 30-B |
| Investigator(s): S. Kupiec | S | ection, Township, Range: | |
| Landform (hillside, terrace, etc.): Slope | | al relief (concave, convex, ne | one): Convex Slope (%): 2-4 |
| Subregion (LRR or MLRA): LRR P, MLRA | 133A Lat: 36.548924 | Long: -77 | 7.644986 Datum: |
| Soil Map Unit Name: Craven clay loam | | | NWI classification: N/A |
| Are climatic / hydrologic conditions on the s | ite typical for this time of yea | r? Yes <u>X</u> | No (If no, explain in Remarks.) |
| Are Vegetation, Soil, or Hydr | rologysignificantly dist | turbed? Are "Normal Cir | rcumstances" present? Yes X No |
| Are Vegetation, Soil, or Hydr | | | ain any answers in Remarks.) |
| | | | ns, transects, important features, etc. |
| Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? | Yes X No Yes No X Yes No X | Is the Sampled Area within a Wetland? | Yes No X |
| Remarks: Upland at Flag CF-2. | | | |
| HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | <u>{</u> | Secondary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is requ | uired; check all that apply) | | Surface Soil Cracks (B6) |
| Surface Water (A1) | Aquatic Fauna (B13) | - | Sparsely Vegetated Concave Surface (B8) |
| High Water Table (A2) Saturation (A3) | Marl Deposits (B15) (I Hydrogen Sulfide Odd | | Drainage Patterns (B10) Moss Trim Lines (B16) |
| Water Marks (B1) | | es on Living Roots (C3) | Dry-Season Water Table (C2) |
| Sediment Deposits (B2) | Presence of Reduced | - | Crayfish Burrows (C8) |
| Drift Deposits (B3) | Recent Iron Reduction | | Saturation Visible on Aerial Imagery (C9) |
| Algal Mat or Crust (B4) | Thin Muck Surface (C | , | Geomorphic Position (D2) |
| Iron Deposits (B5) | Other (Explain in Rem | - | Shallow Aquitard (D3) |
| Inundation Visible on Aerial Imagery (F Water-Stained Leaves (B9) | 37) | - | X FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: | | <u> </u> | |
| Surface Water Present? Yes | No X Depth (inches | s): | |
| Water Table Present? Yes | No X Depth (inches | · | |
| Saturation Present? Yes | No X Depth (inches | s): Wetland H | ydrology Present? Yes No X |
| (includes capillary fringe) | | <i></i> | |
| Describe Recorded Data (stream gauge, n | nonitoring well, aerial photos, | previous inspections), it ava | ailable: |
| | | | |
| Remarks: | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Attachment 2.D.1 Page 208 of 230

| VEGETATION (Five Strata) - Use scienti | fic names o | of plants. | | Sampling Point: 30-B |
|--|-------------|-----------------|-----------|---|
| | Absolute | Dominant | Indicator | |
| Tree Stratum (Plot size: 30) | % Cover | Species? | Status | Dominance Test worksheet: |
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: 5 (A) |
| 3 | | | | Total Number of Dominant |
| 4. | | | | Species Across All Strata: 5 (B) |
| 5. | | | | Percent of Dominant Species |
| 6. | | | | That Are OBL, FACW, or FAC: 100.0% (A/B) |
| | | Total Cover | | Prevalence Index worksheet: |
| 50% of total cover: | | of total cover: | | Total % Cover of: Multiply by: |
| Sapling Stratum (Plot size: 30) | | | | $\begin{array}{c c c c c c c c c c c c c c c c c c c $ |
| | 20 | Vaa | | |
| 1. Li uidambar st raciflua | 30 | Yes | FAC | |
| 2. inus taeda | 10 | Yes | FAC | FAC species $80 \times 3 = 240$ |
| 3 | | | | FACU species x 4 = |
| 4 | | | | UPL species 0 x 5 = 0 |
| 5 | | | | Column Totals: 110 (A) 300 (B) |
| 6 | | | | Prevalence Index = B/A = 2.73 |
| | 40 = | Total Cover | | Hydrophytic Vegetation Indicators: |
| 50% of total cover: 2 | .0 20% | of total cover: | 8 | 1 - Rapid Test for Hydrophytic Vegetation |
| Shrub Stratum (Plot size: 30) | | | | X 2 - Dominance Test is >50% |
| 1 | | | | 3 - Prevalence Index is ≤3.0 ¹ |
| 2. | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3 | | | | |
| 4. | | | | |
| | | | | |
| 5 | | | | ¹ Indicators of hydric soil and wetland hydrology must be |
| 6 | | | | present, unless disturbed or problematic. |
| | | =Total Cover | | Definitions of Five Vegetation Strata: |
| 50% of total cover: | 20% | of total cover: | | Tree – Woody plants, excluding woody vines, |
| Herb Stratum (Plot size: 30) | | | | approximately 20 ft (6 m) or more in height and 3 in. |
| 1. ndropogon irginicus | 30 | Yes | FAC | (7.6 cm) or larger in diameter at breast height (DBH). |
| 2. upatorium perfoliatum | 15 | Yes | FACW | Sapling – Woody plants, excluding woody vines, |
| 3. Chasmanthium laxum | 15 | Yes | FACW | approximately 20 ft (6 m) or more in height and less |
| 4. Solidago rugosa | 5 | No | FAC | than 3 in. (7.6 cm) DBH. |
| 5. ubus argutus | 5 | No | FAC | Shrub - Woody Plants, excluding woody vines, |
| 6 | | - | | approximately 3 to 20 ft (1 to 6 m) in height. |
| 7 | | | | |
| 8. | | | | Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody |
| | | · | | plants, except woody vines, less than approximately 3 |
| 9 | | | | ft (1 m) in height. |
| 10 | | | | Woody Vine – All woody vines, regardless of height. |
| 11 | | | | woody vine – All woody vines, regardless of height. |
| | 70 = | =Total Cover | | |
| 50% of total cover: 3 | 5 20% | of total cover: | 14 | |
| Woody Vine Stratum (Plot size: 30) | | | | |
| 1 | | | | |
| 2. | | | | |
| 3 | | | | |
| | | | | |
| 4 5 | | | | |
| | | =Total Cover | | Hydrophytic |
| | | | | Vegetation |
| 50% of total cover: | | of total cover: | | Present? Yes X No |
| Remarks: (If observed, list morphological adaptation | ns below.) | | | |

Attachment 2.D.1 Page 209 of 230

SOIL Sampling Point: 30-B Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth **Redox Features** Matrix (inches) Color (moist) % Color (moist) Loc² Texture Remarks % Type¹ 10YR 3/2 0-1 100 Loamy/Clayey 1-20 10YR 4/2 100 Loamy/Clayey ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S) Black Histic (A3) (MLRA 153B, 153D) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Depleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22) Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U) Barrier Islands Low Chroma Matrix (TS7) Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151) (MLRA 153B, 153D) Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B) Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D) ³Indicators of hydrophytic vegetation and Polyvalue Below Surface (S8) wetland hydrology must be present, (LRR S, T, U) Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:

APPENDIX C

Jurisdictional Determination Request Form and Site Information Summary Sheet

Preliminary Jurisdictional Determination Request TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild



NORFOLK DISTRICT REGULATORY OFFICE PRE-APPLICATION AND/OR JURISDICTIONAL WATERS DETERMINATION REQUEST FORM

This form is used when you want to determine if areas on your property fall under regulatory requirements of the U.S. Army Corps of Engineers (USACE). Please supply the following information and supporting documents described below. This form can be filled out online and/or printed and then mailed, faxed, or e-mailed to the Norfolk District. Submitting this request authorizes the US Army Corps of Engineers to field inspect the property site, if necessary, to help in the determination process. **THIS FORM MUST BE SIGNED BY THE PROPERTY OWNER TO BE CONSIDERED A FORMAL REQUEST.**

The printed form and supporting documents should be mailed to:

U.S. Army Corps of Engineers, Norfolk District Regulatory Office 803 Front Street Norfolk, Virginia 23510-1096

Or faxed to (757) 201-7678

Or sent via e-mail to: CENAO.REG_ROD@usace.army.mil

Additional information on the Regulatory Program is available on our website at: http://www.nao.usace.army.mil/ Please contact us at 757-201-7652 if you need any assistance with filling out this form.

Location and Information about Property to be subject to a Jurisdictional Determination:

- 1. Date of Request: 10/21/2020
- 2. Project Name: TL 254/2201 Clubhouse Lakeview 230 kV Rebuild
- 3. City or County where property located: Greensville
- 4. Address of property and directions (attach a map of the property location and a copy of the property plat): Please refer to Preliminary JD request cover letter for the project description and directions. Location and vicinity maps are also included in the submittal package.
- 5. Coordinates of property (if known): Start: 36.718542 -77.585233 End: 36.545257 -77.646638
- 6. Size of property in acres: 378.5
- 7. Tax Parcel Number / GPIN (if available):
- 8. Name of Nearest Waterway: Meherrin Rvr., Fountains Ck., Cattail Ck., Massie Brnch., Collier Brnch.

- 7. Brief Description of Proposed Activity, Reason for Preapplication Request, and/or Reason for Jurisdictional Waters Determination Request: Environmental constraints analysis for transmission line rebuild.
- 8. Has a wetland delineation/determination been completed by a consultant or the Corps on the property previously? YES NO VUNKNOWN

If yes, please provide the name of the consultant and/or Corps staff and Corps permit number, if available:

Property Owner Contact Information:

| Property Owner Name: | Dominion Energy c/o Mark Allen |
|----------------------|--------------------------------|
| Mailing Address: | 10900 Nuckols Road, 4th Floor |
| City: State: Zip: | Glen Allen, Virginia 23060 |
| Daytime Telephone: | (804) 257-4711 |
| | Mark.Allen@dominionenergy.com |
| E-mail Address: | Mark.Allen@dominionenergy.com |

If the person requesting the Jurisdictional Determination is **NOT** the Property Owner, please also supply the Requestor's contact information here:

| Requestor Name: | Rachel Studebaker - Dominion Energy Environmental Services |
|--------------------|--|
| Mailing Address: | 120 Tredegar Street |
| City: State: Zip: | Richmond, Virginia 23219 |
| Daytime Telephone: | (804) 217-1847 |
| E-mail Address: | Rachel.M.Studebaker@dominionenergy.com |

Additionally, if you have any of the following information, please include it with your request: wetland delineation map, other relevant maps, drain tile survey, topographic survey, and/or site photographs.

CERTIFICATION: I am hereby requesting a preapplication consultation or jurisdictional waters and/or wetlands determination from the U.S. Army Corps of Engineers, for the property(ies) I have described herein. I agree to allow the duly authorized representatives of the Norfolk District Corps of Engineers and other regulatory or advisory agencies to enter upon the premises of the project site at reasonable times to evaluate inspect and photograph site conditions. This consent to enter the property is superior to, takes precedence over, and waives any communication to the contrary. For example, if the property is posted as "no trespassing" this consent specifically supercedes and waives that prohibition and grants permission to enter the property despite such posting. I hereby certify that the information contained in the Request for a Jurisdictional **Determination** is accurate and complete:

Requestor's Signature

LU/23/2020

Wetland Delineation Report Site Information Summary TL 254/2201 Clubhouse – Lakeview 230 kV Rebuild (378.5) Greensville County, Virginia

Date October 21, 2020

Latitude/ Longitude in Decimal Degrees using coordinate plane (NAD 1983) Start: 36.718542 -77.585233 End: 36.545257 -77.646638

Has a previous delineation or JD been performed? If so please provide USACE Project Number:

Unknown

Hydrologic Unit Code (HUC)

03010204-Meherrin; 0301020406-Meherrin River-Reedy Creek; 030102040603-Meherrin River-Douglas Run 03010204-Meherrin; 0301020407-Fountains Creek; 030102040703-Fountains Creek-Cattail Creek 03010204-Meherrin; 0301020407-Fountains Creek; 030102040704-Beaverpond Creek

USGS Topographic Sheet

Emporia, Virginia (2019) Skippers, Virginia (2019) Barley, Virginia (2019)

Nearest Waterbody

The project area is within the Meherrin River, Fountains Creek, Cattail Creek, Massie Branch, and Collier Branch drainage basins.

Delineation Methods

U.S. Army Corps of Engineers 1987 Wetland Delineation Manual in conjunction with the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (version 2.0) and the 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0) were used to complete this delineation. The 2018 National Wetland Plant List was also used to conduct this delineation.

On-Site Investigation Date

Wetland delineation was conducted June to September 2020.

Wetland Delineation Plan

The proposed wetland boundaries and Data Sampling Point locations are depicted on the plans entitled "Wetland Delineation Map" prepared by C2 Environmental, Inc. (C2 Env) on October 21, 2020.

Wetland Investigation Results

Wetlands: A total of approximately 77.5 acres of wetlands were identified by C2 Env within the project area. This includes 42.0 acres of palustrine emergent (PEM) wetlands, 4.5 acres of palustrine scrub-shrub wetlands (PSS), and 31.0 acres of palustrine forested (PFO) wetlands. A total of 11,004 linear feet (4.2 acres) of stream channel was identified within the project area. This includes 3,847 linear feet (0.5 acres) of intermittent (R4) stream channel, 5,412 linear feet (1.1 acres) of upper perennial (R3) stream channel, and 1,745 linear feet (2.6 acres) of lower perennial (R2) stream channel. A total 72 linear feet (244 square feet) of jurisdictional ditch was identified within the project area. A total of 0.8 acres of palustrine unconsolidated bottom (PUB) was identified within the project area. Representative wetland data points include data points 4-B, 5-A, 7-A, 7-C, 9-A, 12-C, 13-A, 15-B, 16-C, 17-A, 19-B, 20-A, 21-A, 22-A, 23-A, 25-A, 28-A, and 30-A.

Water bodies onsite identified as Section 10: N/A

Uplands: A total of approximately 296.0 acres of uplands were identified during this investigation. The majority of uplands consisted of existing transmission line right of way, agricultural land, and a forested community type. Representative upland data points include data points 4-A, 5-B, 5-C, 6-A, 6-B, 7-B, 7-D, 8-A, 9-B, 10-A, 11-A, 11-B, 12-A, 12-B, 13-B, 13-C, 14-A, 14-B, 15-A, 16-A, 16-B, 17-B, 18-A, 18-B, 19-A, 20-B, 21-B, 21-C, 22-B, 22-C, 23-B, 23-C, 24-A, 25-B, 26-A, 27-A, 28-B, 29-A, 29-B, and 30-B.

100-Year Floodplains

As depicted on the Federal Emergency Management Agency's (FEMA) on-line Flood Insurance Rate Maps #51081C0154C, 51081C0175C, 51081C0300C, and 51081C0275C, effective July 7, 2009, portions of the project fall within Zone A of the 100-year floodplain.

National Wetlands Inventory

The online NWI wetlands mapper indicates the presence of freshwater forested/shrub wetlands, freshwater emergent wetlands, intermittent streams, unknown perennial streams, a lower perennial stream, and a lake within the project area.

USDA Soil Survey

The NRCS Web Soil Survey for the County of Greensville County, Virginia indicates the site is primarily underlain by Craven clay loam, Emporia loamy fine sand, Fluvanna clay loam, Fluvanna-Mattaponi complex, Mattaponi sandy loam, Roanoke loam, Uchee loamy sand, and Woodington fine sandy loam. Of these Roanoke loam and Woodington fine sandy loam are classified as predominantly hydric in Greensville County, Virginia.

Waters Table:

The ORM Aquatic Resources Spreadsheet can be provided upon request following the onsite confirmation meeting with the Corps.

APPENDIX D

Existing Condition Photographs

EXISTING CONDITION PHOTOGRAPHS



TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild

| LOCATION: | Greensville County, Virginia Start: 36.718542°, -77.585233° End: 36.545257°, -77.646638° |
|-------------|---|
| APPLICANT: | Dominion Energy Virginia |
| DATE TAKEN: | June-September, 2020 |
| C2 ENV JOB: | 0115 |
| Credit | Scott Kupiec, C2 Environmental Inc. |

Рното 1Р

Orientation: Northeast



Description: A representative view of a wetland at Line A.

Existing Condition Photographs TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Page 2 of 15

Рното 2Р

Orientation: Southwest



Description: A representative view of a wetland at Line D.



Description: A representative view of an upland at Data Point 6-A.

Рното ЗР Orientation:

Southwest

Existing Condition Photographs TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Page 3 of 15

Рното 4Р

Orientation: Southwest



Description: A representative view of a wetland at Line I.

Рното 5Р

Orientation: Southwest



Description: A representative view of open water within a wetland near Structure 254/19.

Existing Condition Photographs TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Page 4 of 15

Рното 6Р

Orientation: Southwest

Рното 7Р

Orientation: Northeast



Description: A representative view of an upland near Structure 254/24.



Description: A representative view of a wetland at Line Q.

Existing Condition Photographs TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Page 5 of 15

Рното 8Р

Orientation: Northeast



Description: A representative view of an upland at Data Point 11-B.



Description: A representative view of a lower perennial stream at Line W.

Рното 9Р Orientation:

Southwest

Existing Condition Photographs TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Page 6 of 15

Рното 10Р

Orientation: Northeast



Description: A representative view of an upland at Data Point 13-C.



Description: A representative view of a wetland at Line AG.

Orientation: Southwest

Рното 11Р

Existing Condition Photographs TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Page 7 of 15

Рното 12Р

Orientation: Southwest



Description: A representative view of an upland adjacent to Brink Road.



Description: A representative view of a pond at Structure 254/50.

Orientation: Southwest

Рното 13Р

Existing Condition Photographs TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Page 8 of 15

Рното 14Р

Orientation: Northeast



Description: A representative view of an agricultural field near Structure 254/54.



Orientation: Southwest



Description: A representative view of an upland at Data Point 18-A.

Existing Condition Photographs TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Page 9 of 15

Рното 16Р

Orientation: West



Description: A representative view of a stream/wetland complex at Line AX.



Description: A representative view of an upland at Data Point 19-A.

Orientation: Northeast

Рното 17Р

Existing Condition Photographs TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Page 10 of 15

Рното 18Р

Orientation: Northwest



Description: A representative view of a wetland at Line BB.



Description: A representative view of an existing road at Line BB.

Orientation: Northeast

Рното 19Р

Existing Condition Photographs TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Page 11 of 15

Рното 20Р

Orientation: West

Рното 21Р Orientation: Southwest



Description: A representative view of a wetland at Line BJ.



Description: A representative view of a stream/wetland complex at Line BP.

Existing Condition Photographs TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Page 12 of 15

Рното 22Р

Orientation: Southwest



Description: A representative view of a fallow agricultural field at Structure 254/85.



Description: A representative view of a wetland at Line BV.

Рното 23Р Orientation: West Existing Condition Photographs TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Page 13 of 15

Рното 24Р

Orientation: West



Description: A representative view of a stream/wetland complex at Line BY.



Description: A representative view of an agricultural field at Data Point 27-A.

Рното 25Р

Orientation: Northeast Existing Condition Photographs TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Page 14 of 15

Рното 26Р Orientation: Northeast



Description: A representative view of an upland at Data Point 28-B.



Description: A representative view of an upland at Data Point 29-B.

Рното 27Р Orientation:

Southwest

Existing Condition Photographs TL 254/2201 Clubhouse - Lakeview 230 kV Rebuild Page 15 of 15

Рното 28Р

Orientation: Northeast



Description: A representative view of and agricultural field near Structure 254/108.

Orientation: South

Рното 29Р



Description: A representative view of a wetland near Structure 254/112.



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 1111 E. Main Street, Suite 1400, Richmond, Virginia 23219 Mailing address: P.O. Box 1105, Richmond, Virginia 23218 www.deq.virginia.gov

David K. Paylor Director

(804) 698-4000 1-800-592-5482

October 5, 2020

Matthew J. Strickler

Secretary of Natural Resources

Rachel Studebaker Dominion Energy Services 120 Tredegar Street, Richmond, VA 23219

RE: Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread- Lakeview Line #254 230 kV Virginia Rebuild Project Greensville County, Virginia

Dear Ms. Studebaker;

In accordance with the Department of Environmental Quality-State Corporation Commission *Memorandum of Agreement Regarding Wetland Impact Consultation* (July 2003), we have reviewed the information submitted by Dominion Energy Services (here after, Dominion) regarding potential wetland impacts on the above referenced project. Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service life, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

Summary of Findings

C2 Environmental delineated wetlands and other waters of the United States using the Routine Determination Method as outlined in the 1987 Corps of Engineers Wetland Delineation Manual and methods described in the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). The limits of these features are provided below in Table 1. The limits of wetlands of other waters of the United States will be submitted to the U.S. Army Corps of Engineers for confirmation.

| PFO (Acres) | PSS (Acres) | PEM (Acres) | Open Waters (Acres) | Stream Channels (R2) Acres (LF) | Stream Channels (R3) Acres (LF) | Stream Channels (R4) Acres (LF) | Jurisdictional Ditch Acres (LF) |
|----------------|----------------|----------------|---|---|---|---|---------------------------------------|
| 6.3 | 1.8 | 39.0 | 0.5 | 1.0 (243) | 0.6 (3,071) | 0.3 (1,919) | 0.003 (21) |

Table 1. Jurisdictional Features Identified within the ROW

According to Dominion, impacts will occur from new foundations as the structures are being replaced due to end of life criteria. DEQ recommends structures should be sited to avoid wetlands to the extent practicable and should be sited outside of stream channels. DEQ further recommends wetland and stream avoidance and minimization efforts, where practical, during project construction by: (1) spanning wetlands and streams, (2) maintaining 100-foot buffers along either side of streams, (3) placing support structure foundations outside of wetlands and streambeds, and (4) using removable mats in wetland areas to reduce compaction and rutting.

The DEQ Piedmont Regional Office (PRO) will make the final permitting decisions.

Recommendations and Potential Permits

DEQ offers the following recommendations:

- 1. Wetland and stream impacts should be avoided and minimized to the maximum extent practicable.
- 2. If the scope of the project changes, additional review will be necessary by one or more offices in the Commonwealth's Secretariat of Natural Resources and/or the Corps.
- 3. At a minimum, any required compensation for impacts to State Waters, including the compensation for permanent conversion of forested wetlands to emergent wetlands, should be in accordance with all applicable state regulations and laws. Consider mitigating impacts to forested or converted wetlands by establishing new forested wetlands within the impacted watershed.
- 4. Any temporary impacts to surface waters associated with this project should be restored to pre-existing conditions.
- 5. No activity may substantially disrupt the movement of aquatic life indigenous to the water body, including those species, which normally migrate through the area, unless the primary purpose of the activity is to impound water. Culverts placed in streams must be installed to maintain low flow conditions. No activity may cause more than minimal adverse effect on navigation. Furthermore the activity must not impede the passage of normal or expected high flows and the structure or discharge must withstand expected high flows.
- 6. Erosion and sedimentation controls should be designed in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992. These controls should be placed prior to clearing and grading and maintained in good working order to minimize

impacts to state waters. These controls should remain in place until the area is stabilized and should then be removed. Any exposed slopes and streambanks should be stabilized immediately upon completion of work in each permitted area. All denuded areas should be properly stabilized in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992.

- 7. No machinery may enter surface waters, unless authorized by a Virginia Water Protection (VWP) individual permit, general permit, or general permit coverage.
- 8. Heavy equipment in temporarily impacted surface waters should be placed on mats, geotextile fabric, or other suitable material, to minimize soil disturbance to the maximum extent practicable. Equipment and materials should be removed immediately upon completion of work.
- 9. Activities should be conducted in accordance with any Time-of-Year restriction(s) as recommended by the Department of Game and Inland Fisheries, the Department of Conservation and Recreation, or the Virginia Marine Resources Commission. The permittee should retain a copy of the agency correspondence concerning the Time-of-Year restriction(s), or the lack thereof, for the duration of the construction phase of the project.
- 10. All construction, construction access, and demolition activities associated with this project should be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters, unless authorized by a Virginia Water Protection (VWP) individual permit, general permit, or general permit coverage. Wet, excess, or waste concrete should be prohibited from entering surface waters.
- 11. Herbicides used in or around any surface water should be approved for aquatic use by the United States Environmental Protection Agency (EPA) or the U.S. Fish & Wildlife Service. These herbicides should be applied according to label directions by a licensed herbicide applicator. A non-petroleum based surfactant should be used in or around any surface waters.

Permits:

Based on DEQ's review of the additional information provided in an email dated October 5, 2020, the proposed project <u>may</u> require a Virginia Water Protection (VWP) individual permit or general permit coverage. The applicant may submit a Joint Permit Application (JPA) in accordance with form instructions for further evaluation and final permit need determination by DEQ.

Should you have any questions, please don't hesitate to contact me at 804-698-4007 or at **michelle.henicheck@deq.virginia.gov.**

Sincerely,

Michelle Henicluck

Michelle Henicheck, PWS Senior Wetland Ecologist Office of Wetlands & Stream Protection Cc: Jaime Bauer Robb, DEQ - PRO Bettina Sullivan, DEQ - Office of Environmental Review



Memorandum

| То: | Rachel M. Studebaker, Dominion Energy Virginia |
|-------------------|--|
| From: | Christine F. Conrad, PhD, C2 Environmental, Inc. |
| Date: | October 5, 2020 |
| Project: | Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project |
| Reference: | Solid and Hazardous Waste Review |

On behalf of Dominion Energy Virginia (Dominion), C2 Environmental, Inc. (C2Env) has completed online database searches for federal and state threatened and endangered species for the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project . The proposed project includes the rebuild of approximately 12.5 miles of existing 230kV overhead electric transmission line. The project will take place within the existing, cleared transmission line right-of-way (ROW) beginning at the Clubhouse Substation, to the dry Bread Substation, and terminating at Virginia state line, within Greensville County, Virginia.

Publicly available data from the Environmental Protection Agency (EPA) Facility Registry System (FRS) were obtained, which provide information about facilities, sites, or places subject to environmental regulation or of environmental interest. Although this data set includes all sites subject to environmental regulation by the EPA or other state authority, such as sites that fall under air emissions or wastewater programs, the results reported here only include those sites which fall under the EPA's hazardous waste, solid waste, remediation, and underground storage tank programs. These sites include the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Superfund; Resource Conservation and Recovery Act (RCRA); and brownfield sites. Comparison with the EPA's NEPAssist Tool resulted in identifying four registered RCRA facilities present within 0.5-mile of the project, described in Table 1 below.

| Name | ID | Latitude | Longitude | Distance From |
|------------------|--------------|-----------|------------|--------------------|
| | | | | Project Centerline |
| | | | | (miles) |
| Sunoco Service | VAD000759092 | 36.711111 | -77.598056 | 0.48 |
| Station | | | | |
| Emporia Machine | VAD023720154 | 36.711111 | -77.598056 | 0.48 |
| and Welding | | | | |
| Sadler Chevrolet | VAD023720568 | 36.711111 | -77.598056 | 0.48 |
| Sunoco Service | VAD000759084 | 36.711111 | -77.598056 | 0.48 |
| Station | | | | |

| Table 1. Registered RCRA Facilities within 0.5 mile of the Clubhouse-Dry Bread Line |
|--|
| #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project |

The Virginia Department of Environmental Quality (DEQ) records were also searched for the presence of solid waste management facilities, Voluntary Remediation Program sites, petroleum releases, and registered tank facilities within 0.5-mile of the proposed project. No solid waste management facilities, Voluntary Remediation Program sites, or petroleum release sites were identified within 0.5 mile of the project area. One registered tank facility was identified within the 0.5-mile search radius of the proposed project and is described in Table 2 below.

Table 2. Registered Tank Facilities within 0.5 mile of the Clubhouse-Dry Bread Line #2201

 and Dry Bread-Lakeview Line #254 230kV Virginia Rebuild Project

| , | | | 0 | , | |
|------------|---------|----------------|----------|-----------|--------------------|
| Name | ID | Number and | Latitude | Longitude | Distance From |
| | | Туре | | | Project Centerline |
| | | | | | (miles) |
| Edward Lee | 4018496 | 1 Inactive UST | 36.68155 | -77.60572 | 0.35 |

In conclusion, there are four RCRA sites and one registered tank site located within a 0.5mile radius of the project site. None of the sites are located within the project ROW. No EPA registered CERCLA/Superfund sites or Brownfield sites, no solid waste permits, Virginia Voluntary Remediation Program sites, or petroleum releases are located within 0.5-mile of the project area.



MEMORANDUM

| To: | Rachel M. Studebaker, Dominion Energy Virginia |
|------------|--|
| FROM: | Christine F. Conrad, Ph.D., C2 Environmental, Inc. |
| DATE: | October 5, 2020 |
| Project: | Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project |
| Reference: | Threatened and Endangered Species Review |
| Јов No: | 0115 |

On behalf of Dominion Energy Virginia (Dominion), C2 Environmental, Inc. (C2Env) has completed online database searches for federal and state threatened and endangered species for the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project . The proposed project includes the rebuild of approximately 12.5 miles of existing 230kV overhead electric transmission line. The project will take place within the existing, cleared transmission line right-of-way (ROW) beginning at the Clubhouse Substation, to the dry Bread Substation, and terminating at Virginia state line, within Greensville County, Virginia. The online database searches included the following:

- U.S. Fish & Wildlife (USFWS) Information, Planning, and Conservation (IPaC)
- USFWS Critical Habitat for Threatened and Endangered Species Mapper
- USFWS Bald Eagle Concentration Area Map
- Center for Conservation Biology (CCB) Eagle Nest Locator for Virginia
- Department of Wildlife Resources (DWR) Virginia Fish and Wildlife Information Service (VAFWIS)
- DWR Northern Long-eared Bat (NLEB) Winter Habitat and Roost Trees Map
- Virginia Department of Conservation and Recreation (DCR) Natural Heritage Data Explorer (NHDE)
- DWR Little Brown Bat (MYLU) and Tri-colored Bat (PESU) Habitat Application

Original database searches were completed on June 3, 2020.

RESULTS

Species identified by the database searches to have a confirmed or potential presence within the project vicinity are discussed below in Table 1.

Page **2** of **4**

| Table 1. Database Search Results |
|----------------------------------|
|----------------------------------|

| Species | Status* | Database | Results |
|--|-----------|---|--|
| Northern long-eared bat (Myotis septentrionalis) | FT, ST | USFWS-IPaC, DWR-NLEB Winter Habitat and Roost Tree Map | No known hibernacula or summer roosts are identified in the vicinity of the project. |
| Roanoke logperch (Percina rex) | FE, SE | USFWS-IPaC | Noted as potentially occurring in the vicinity of the project. |
| Alantic pigtoe (Fusconaia masoni) | (P)FT, ST | USFWS-IPaC | Noted as potentially occurring in the vicinity of the project. The project is not within the federal proposed critical habitat for this species. |
| Yellow lance (Elliptio lanceolata) | FT | USFWS-IPaC | Noted as potentially occurring in the vicinity of the project. The project is not within the proposed critical habitat. |
| Loggerhead shrike (Lanius ludovicianus) | ST | VAFWIS | Observed within the vicinity of the project. |
| Green floater (Lasmigona subviridis) | ST | VAFWIS | Observed within the vicinity of the project. |
| Reclining bulrush (Scirpus flaccidifoliius) | ST | DCR-NHDE | Noted as potentially occurring in the vicinity of the project. |
| Bald eagle (Haliaeetus leucocephalus) | FP | CCB Eagle Nest Locator; USFWS Eagle Concentration Areas | No bald eagle nests are located within 660 feet of the project area. No bald eagle concentration areas are present within the project vicinity. |

*FT: federally threatened, FE: federally endangered, FP: federally protected, ST: state threatened, SE: state endangered, (P) Proposed

CONCLUSIONS

The following conclusions are based upon the proposed scope of work, as described by Dominion. The proposed scope of work assumes construction access will avoid stream crossings where practical or use crane mats to span stream crossings, and erosion and sediment controls will be used as appropriate throughout the project to protect wetlands and water resources. The scope of work assumes the work will occur within the existing, cleared and maintained ROW, although limited clearing may be required within the existing ROW easement and construction access roads.

The project is located within the White Nose Syndrome Zone for the federal and state threatened northern long-eared bat (NLEB). The NLEB has been identified by USFWS and DWR as potentially occurring within the proposed project area. However, DWR records

Attachment 2.F.1

indicate that no known hibernacula or maternity roost trees occur within the vicinity. The proposed project will occur within an existing maintained ROW and tree removal is expected to be limited to danger trees and select limbing. The project is expected to rely upon the Programmatic Biological Opinion for the Final 4(d) Rule on the NLEB with no required time of year restriction for tree removal.

The federal and state endangered Roanoke logperch has been identified by USFWS as potentially occurring within the vicinity of the project. This species is typically found in small or medium river with warm, clear water. It is found in riffles, runs, and pools with sandy or rocky bottoms and is generally intolerant of heavy siltation. No impacts to this species are expected as no instream work is anticipated in conjunction with the project.

The state and proposed federally threatened Atlantic pigtoe has been identified by USFWS as potentially occurring within the vicinity of the project. This species typically occurs within high quality riverine habitats. It prefers coarse substrates such as sand and gravel following riffles within the stream channel. No impacts to this species are expected as no instream work is anticipated in conjunction with the project.

The federally threatened yellow lance has been identified by USFWS as potentially occurring within the vicinity of the project. This species generally prefers sandy substrates and can be found in main channels of stream channels as well as small stream channels. No impacts to this species are expected as no instream work is anticipated in conjunction with the project.

DWR recorded observations of the state threatened loggerhead shrike within the project vicinity. This species prefers open habitat, such as pastures with scattered shrubs and trees, but can also be found in open, forested habitat. The presence of perches used for hunting are an essential part of their habitat. The project is not expected to adversely affect this species as no additional clearing of right-of-way is required.

DWR recorded observations of the state threatened green floater within the project area. This species prefers smaller streams with sandy or gravel bottoms. It can occur in pools or calm waters, lacking strong currents. It prefers shallow water but is more likely to occur in streams not prone to drying. No impacts to this species are expected as no instream work is anticipated in conjunction with the project.

The state threatened reclining bulrush has been identified by DCR as potentially occurring within the project area. This species occurs in wetlands, particularly in clearings or cut-over forests and along roadsides. Timber mats will be used for access through wetlands to minimize ground disturbance and potential impacts to this species.

The CCB Bald Eagle Nest Locator identified no bald eagle nests within 660-feet of the project. The closest identified nest to the project is located approximately 9.14-miles from the project area. The USFWS Bald Eagle Concentration Area Map additionally confirms that the project is not located within a designated Eagle Concentration Area.

The complete results from the database searches are attached for your reference. If you have any questions, please contact me at your earliest convenience.

ATTACHMENTS

USFWS-IPaC Database Search Results USFWS Critical Habitat for Threatened and Endangered Species Mapper Database Search Results USFWS Bald Eagle Concentration Area Database Search Results CCB Bald Eagle Nest Locator for Virginia Database Search Results VAFWIS-DWR Database Search Results DWR-NLEB Winter Habitat and Roost Tree Map Database Search Results DCR - NHDE Database Search Results DWR-MYLU and PESU Habitat Application Database Search Results

ATTACHMENT

USFWS-IPaC

Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project Threatened and Endangered Species Review



United States Department of the Interior

FISH AND WILDLIFE SERVICE Virginia Ecological Services Field Office 6669 Short Lane Gloucester, VA 23061-4410 Phone: (804) 693-6694 Fax: (804) 693-9032 http://www.fws.gov/northeast/virginiafield/



June 03, 2020

In Reply Refer To: Consultation Code: 05E2VA00-2020-SLI-4114 Event Code: 05E2VA00-2020-E-11591 Project Name: TL 254 Clubhouse - Lakeview Rebuild

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/ eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/correntBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office

6669 Short Lane Gloucester, VA 23061-4410 (804) 693-6694

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

Raleigh Ecological Services Field Office

Post Office Box 33726 Raleigh, NC 27636-3726 (919) 856-4520

Project Summary

| Consultation Code: | 05E2VA00-2020-SLI-4114 |
|--------------------|-------------------------------------|
| Event Code: | 05E2VA00-2020-E-11591 |
| Project Name: | TL 254 Clubhouse - Lakeview Rebuild |
| Project Type: | TRANSMISSION LINE |

Project Description: Transmission Line

Project Location:

Approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/place/36.631844931791434N77.6113605424625W</u>



Counties: Northampton, NC | Greensville, VA

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

| NAME | STATUS |
|--|------------------------|
| Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/9045</u> | Threatened |
| Fishes | |
| NAME | STATUS |
| Roanoke Logperch <i>Percina rex</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/1134</u> Clams | Endangered |
| NAME | STATUS |
| Atlantic Pigtoe <i>Fusconaia masoni</i> There is proposed critical habitat for this species. Your location is outside the critical habitat. Species profile: <u>https://ecos.fws.gov/ecp/species/5164</u> | Proposed Threatened |
| Yellow Lance <i>Elliptio lanceolata</i> There is proposed critical habitat for this species. Your location is outside the critical habitat. Species profile: <u>https://ecos.fws.gov/ecp/species/4511</u> | Threatened |

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

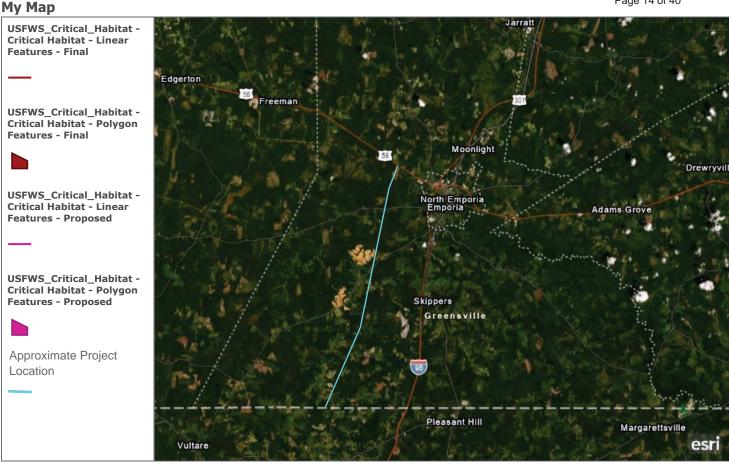
Any activity proposed on lands managed by the <u>National Wildlife Refuge</u> system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

USFWS Critical Habitat for Threatened and Endangered Species

6/3/2020

Final Critical Habitat for Threatened and Endangered Species, USFWS Attachment 2.F.1 Page 14 of 40



Earthstar Geographics | VITA, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA

USFWS Bald Eagle Concentration Area



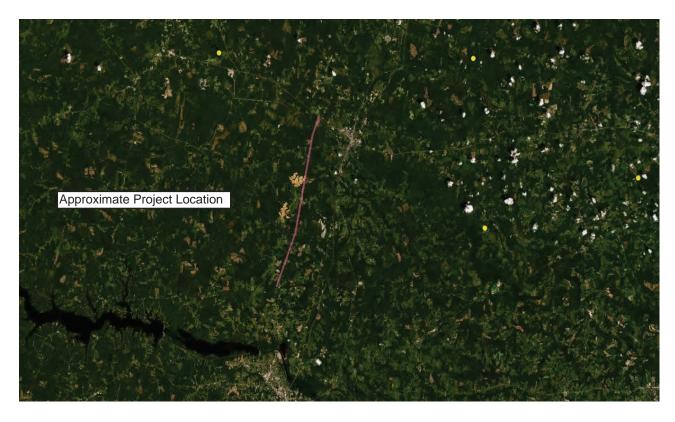


Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user

CCB Bald Eagle Nest Locator



CCB Mapping Portal



Layers: VA Eagle Nest Locator, VA Eagle Nest Buffers

Map Center [longitude, latitude]: [-77.58785247802734, 36.65409778131013]

Map Link:

 $\label{eq:https://www.ccbbirds.org/maps/#layer=VA+Eagle+Nest+Locator&layer=VA+Eagle+Nest+Buffers&zoom=12&lat=36.65409778131013&lng=-77.58785247802734&legend=legend_tab_7c321b7e-e523-11e4-aaa0-0e0c41326911&base=World+Imagery+%28ESRI%29$

Report Generated On: 06/03/2020

The Center for Conservation Biology (CCB) provides certain data online as a free service to the public and the regulatory sector. CCB encourages the use of its data sets in wildlife conservation and management applications. These data are protected by intellectual property laws. All users are reminded to view the <u>Data Use Agreement</u> to ensure compliance with our data use policies. For additional data access questions, view our <u>Data Distribution Policy</u>, or contact our Data Manager, Marie Pitts, at mlpitts@wm.edu or 757-221-7503.

Report generated by The Center for Conservation Biology Mapping Portal.

To learn more about CCB visit <u>ccbbirds.org</u> or contact us at info@ccbbirds.org

DWR - VAFWIS

Known or likely to occur within a **2 mile buffer around line beginning 36,35,51.7 -77,37,30.2** in **081 Greensville County, 595 Emporia City, VA**

<u>View Map of</u> <u>Site Location</u>

473 Known or Likely Species ordered by Status Concern for Conservation (displaying first 25) (25 species with Status* or Tier I** or Tier II**)

| BOVA Code | Status* | Tier** | Common Name | Scientific Name | Confirmed | Database(s) |
|--------------|---------|--------|--|--------------------------------------|-----------|-------------------------------|
| 040228 | FESE | Ia | Woodpecker, red- cockaded | Picoides borealis | | BOVA |
| 010214 | FESE | IIa | Logperch, Roanoke | Percina rex | Potential | BOVA,Habitat,HU6 |
| 050022 | FTST | Ia | Bat, northern long- eared | Myotis septentrionalis | | BOVA |
| 060029 | FTST | IIa | Lance, yellow | Elliptio lanceolata | | HU6 |
| 050020 | SE | Ia | Bat, little brown | Myotis lucifugus | | BOVA |
| 050034 | SE | Ia | Bat, Rafinesque's eastern big-eared | Corynorhinus rafinesquii macrotis | | BOVA,HU6 |
| 050027 | SE | Ia | Bat, tri-colored | Perimyotis subflavus | | BOVA |
| 040293 | ST | Ia | Shrike, loggerhead | Lanius ludovicianus | Yes | BOVA,BBA,SppObs,HU6 |
| 040385 | ST | Ia | Sparrow, Bachman's | Peucaea aestivalis | | BOVA,HU6 |
| 060173 | FPST | Ia | Pigtoe, Atlantic | Fusconaia masoni | Potential | BOVA,Habitat,HU6 |
| 020002 | ST | IIa | Treefrog, barking | Hyla gratiosa | | BOVA |
| 060081 | ST | IIa | Floater, green | Lasmigona subviridis | Yes | BOVA, TEW aters, Habitat, HU6 |
| 010070 | ST | IIc | Shiner, whitemouth | Notropis alborus | | HU6 |
| 040292 | ST | | Shrike, migrant loggerhead | Lanius ludovicianus migrans | | BOVA |
| 030063 | CC | IIIa | Turtle, spotted | Clemmys guttata | Yes | BOVA,SppObs,HU6 |
| 010174 | | Ia | Bass, Roanoke | Ambloplites cavifrons | Yes | BOVA,Habitat,SppObs,HU6 |
| 020063 | | IIa | Toad, oak | Anaxyrus quercicus | Potential | BOVA,Habitat,HU6 |
| 040052 | | IIa | Duck, American black | Anas rubripes | Potential | BOVA,BBA,HU6 |
| 040036 | | IIa | Night-heron, yellow- crowned | Nyctanassa violacea violacea | | BOVA |
| 040320 | | IIa | Warbler, cerulean | Setophaga cerulea | | BOVA,HU6 |
| 040140 | | IIa | Woodcock, American | Scolopax minor | Potential | BOVA,BBA,HU6 |
| 060071 | | IIa | Lampmussel, yellow | Lampsilis cariosa | | BOVA,HU6 |
| 040105 | | IIb | Rail, king | Rallus elegans | | BOVA |

| 060175 | IIb | Slabshell, Roanoke | Elliptio roanokensis | Potential | Attachment 2.F.1 BOVA,Habiteat,Hobo |
|--------|-----|---------------------|----------------------------|-----------|--|
| 040304 | IIc | Warbler, Swainson's | Limnothlypis swainsonii | | HU6 |

To view All 473 species View 473

*FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; CC=Collection Concern

**I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need Virginia Wildlife Action Plan Conservation Opportunity Ranking:

a - On the ground management strategies/actions exist and can be feasibly implemented.;

b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.;

c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

View Map of All Query Results from All Observation Tables

Bat Colonies or Hibernacula: Not Known

Anadromous Fish Use Streams (2 records)

<u>View Map of All</u> <u>Anadromous Fish Use Streams</u>

| | | | | omous Fish Sp | pecies | X 7• X <i>T</i> |
|-----------|-----------------|--------------|--|---------------|----------------|-------------------------------|
| Stream ID | Stream Name | Reach Status | Different Species Highest TE [*] Highes | | Highest Tier** | View Map |
| C23 | Fountains Creek | Confirmed | 3 | | IV | Yes |
| C50 | Meherrin River | Confirmed | 5 | | IV | Yes |

Impediments to Fish Passage (5 records)

| ID | Name | River | View Map |
|-----|---------------|-------------------|----------|
| 194 | EMPORIA DAM | MEHERRIN RIVER | Yes |
| 199 | GARNERS DAM | BEAVER POND CREEK | Yes |
| 201 | MITCHELLS DAM | FONTAINE CREEK | Yes |
| 202 | ROBINSON DAM | COLLIER BRANCH | Yes |
| 200 | SMITHS DAM | CATTAIL CREEK | Yes |

Colonial Water Bird Survey

N/A

| Threatened and Endange | red Waters | (14 Reaches) View Map of All Threatened and Endangere | | ters |
|------------------------|------------|--|-------------------------|----------|
| | | T&E Waters Specie | es | |
| Stream Name | Highest | | | View Map |
| | TE* | BOVA Code, Status [*] , Tier ^{**} , C | ommon & Scientific Name | |
| | | | | |

https://vafwis.dgif.virginia.gov/...500+-77.5853304&searchType=L&coord=LL&streamSearchLength=0&lastMenu=Home.__By+Coordinates[6/3/2020 8:41:06 AM]

<u>View Map of All</u> <u>Fish Impediments</u> VAFWIS Seach Report

| FWIS Seach Report | | | | | | | 4 |
|--|----|--------|----|-----|--------------------------|---|------------|
| Meherrin River (0272518) | ST | 060081 | ST | IIa | <u>Floater,</u> green | Attachment 2.F. Lasmigona Page 22 of 4 subviridis | |
| Meherrin River (0273247 | ST | 060081 | ST | IIa | <u>Floater,</u> green | Lasmigona subviridis | Yes |
| Meherrin River (0275907) | ST | 060081 | ST | IIa | <u>Floater,</u> green | Lasmigona subviridis | <u>Yes</u> |
| Meherrin River (0278943 | ST | 060081 | ST | IIa | <u>Floater,</u> green | Lasmigona subviridis | Yes |
| Meherrin River (0284087 | ST | 060081 | ST | IIa | <u>Floater,</u> green | Lasmigona subviridis | Yes |
| Meherrin River (0284143 | ST | 060081 | ST | IIa | <u>Floater,</u> green | Lasmigona subviridis | Yes |
| Meherrin River (0285714 | ST | 060081 | ST | IIa | <u>Floater,</u> green | Lasmigona subviridis | Yes |
| Meherrin River (0286073 | ST | 060081 | ST | IIa | <u>Floater,</u> green | Lasmigona subviridis | Yes |
| Meherrin River (0288046 | ST | 060081 | ST | IIa | <u>Floater,</u> green | Lasmigona subviridis | Yes |
| Meherrin River (0290744 | ST | 060081 | ST | IIa | <u>Floater,</u> green | Lasmigona subviridis | Yes |
| Meherrin River (0290826 | ST | 060081 | ST | IIa | <u>Floater,</u> green | Lasmigona subviridis | Yes |
| Meherrin River (0292409 | ST | 060081 | ST | IIa | Floater, green | Lasmigona subviridis | Yes |
| <u>Meherrin River (0298067</u> <u>)</u> | ST | 060081 | ST | IIa | Floater, green | Lasmigona subviridis | Yes |
| <u>Meherrin River (0300607</u>) | ST | 060081 | ST | IIa | <u>Floater,</u> green | Lasmigona subviridis | Yes |

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests (1 records)

٦٢

View Map of All Query Results Bald Eagle Nests

| Nest | N Obs | Latest Date | DGIF Nest Status | View Map |
|---------------|-------|-------------|---------------------|----------|
| <u>GV1001</u> | 1 | Mar 24 2010 | UNKNOWN | Yes |

Displayed 1 Bald Eagle Nests

(94 records - displaying first 20 , 3 Observations with Threatened or **Species Observations** Endangered species)

<u>View Map of All Query Results</u> <u>Species Observations</u>

| | | | |] | N Species | | X 70 |
|--------------|----------|------------------|--|----------------------|----------------------------|-------------------------------|-------------|
| obsID | class | Date Observed | Observer | Different Species | Highest TE [*] | Highest Tier ^{**} | View Map |
| 322076 | SppObs | Jun 15 2009 | John and Thelma Dalmas (VSO) | 1 | ST | Ι | Yes |
| <u>3490</u> | SppObs | Jun 2 1989 | Div of Natural Heritage 1 ST | | Ι | Yes | |
| 364052 | SppObs | Jan 1 1900 | | 2 | CC | III | Yes |
| 8264 | SppObs | Jan 1 1900 | MITCHELL NORMAN | 1 | | Ι | Yes |
| 318801 | SppObs | Apr 22 2007 | John Alderman | 7 | | III | Yes |
| 311327 | SppObs | Jun 17 2005 | Paul Angermeier (Principle Permittee) & Anita Lahey | 35 | | III | Yes |
| 375326 | Aquatics | Nov 10 2004 | B. T. Watson, S. L. Huffer | 12 | | III | |
| <u>11671</u> | SppObs | Sep 20 1990 | ANGERMEIER ET AL | 23 | | III | |
| 2444 | SppObs | Aug 1 1990 | Blaine D. Snyder 13 III | | III | Yes | |
| 2442 | SppObs | May 8 1990 | Blaine D. Snyder | 4 | | III | Yes |
| 322282 | SppObs | | M. Norman; R. Southwick; J. St. Martin | 14 | | III | Yes |
| <u>11315</u> | SppObs | Jul 22 1985 | NORMAN | 19 | | III | Yes |
| 11317 | SppObs | Jul 22 1985 | NORMAN | 11 | | III | Yes |
| 10371 | SppObs | May 23 1984 | Norman | 15 | III | | Yes |
| 338015 | SppObs | Jan 1 1984 | MDN-B-NORMAN 15 III | | III | Yes | |
| 337894 | SppObs | Jan 1 1984 | SPM-B-MCINICH 3 III | | III | Yes | |
| 337560 | SppObs | Jan 1 1983 | REJ-B-JENKINS | 7 | | III | Yes |
| | | Aug 15 | | | | | |

| 15465 SppObs | 1979 H J PETRIMOULX | 7 | At | tachment 2.F.1 Page []] of 40 | Yes |
|---------------|--------------------------------|---|----|---|-----|
| 336724 SppObs | Jan 1 1979 HJP-B-PETRIMOULX | 7 | | III | Yes |
| 334597 SppObs | Jan 1 1973 WE-WOODWARD ENVICON | 5 | | III | Yes |

Displayed 20 Species Observations

Selected 94 Observations View all 94 Species Observations

Habitat Predicted for Aquatic WAP Tier I & II Species (2 Reaches)

View Map Combined Reaches from Below of Habitat Predicted for WAP Tier I & II Aquatic Species

| | | | | Tier | Species | | X 7• |
|------------------------------|----------------------------|--------|---------|--------------------|-------------------------------|--------------------------|-------------|
| Stream Name | Highest TE [*] | BOVA | Code, S | tatus [*] | , Tier ^{**} , Common | & Scientific Name | View Map |
| Maclins Creek (03010201) | EESE | 010214 | FESE | IIa | Logperch, Roanoke | Percina rex | Vac |
| | FESE | 060173 | FPST | Ia | Pigtoe, Atlantic | Fusconaia masoni | <u>Yes</u> |
| | | 010174 | | Ia | Bass, Roanoke | Ambloplites cavifrons | |
| Meherrin River (03010204) | ST | 060081 | ST | IIa | Floater, green | Lasmigona subviridis | <u>Yes</u> |
| | | 060175 | | IIb | <u>Slabshell,</u> Roanoke | Elliptio roanokensis | |
| | | 010174 | | Ia | Bass, Roanoke | Ambloplites cavifrons | |
| Meherrin River (03010204) | ST | 060081 | ST | IIa | Floater, green | Lasmigona subviridis | <u>Yes</u> |
| | | 060175 | | IIb | Slabshell, Roanoke | Elliptio roanokensis | |

Habitat Predicted for Terrestrial WAP Tier I & II Species

| BOVA Code | Status* | Tier** | Common Name | Scientific Name | View Map |
|------------------|---------|--------|------------------|--------------------|----------|
| 020063 | | IIa | <u>Toad, oak</u> | Anaxyrus quercicus | Yes |

Virginia Breeding Bird Atlas Blocks (6 records)

<u>View Map of All Query Results</u> <u>Virginia Breeding Bird Atlas Blocks</u>

| BBA ID | | | g Bird Atlas S | | |
|--------|-----------------------------|--------------------------|----------------|----------------------------|----------|
| | Atlas Quadrangle Block Name | Different Species | Highest TE* | Highest Tier ^{**} | View Map |
| 49026 | Ante, SE | 73 | | II | Yes |
| 49014 | Barley, CE | 61 | ST | Ι | Yes |

https://vafwis.dgif.virginia.gov/...500+-77.5853304&searchType=L&coord=LL&streamSearchLength=0&lastMenu=Home.__By+Coordinates[6/3/2020 8:41:06 AM]

VAFWIS Seach Report

| 49012 | Barley, NE | 25 | | III | Attachment 2.F. ² <u>Ye</u> Page 25 of 40 |
|-------|--------------|----|--|-----|---|
| 50024 | Emporia, CE | 32 | | IV | Yes |
| 50013 | Skippers, CW | 55 | | III | Yes |
| 50011 | Skippers, NW | 68 | | II | Yes |

Public Holdings:

N/A

| Summary of BOVA | A Species Asso | ciated with Citio | es and Counties | of the Commonw | ealth of Virginia: |
|-----------------|----------------|-------------------|-----------------|----------------|--------------------|
|-----------------|----------------|-------------------|-----------------|----------------|--------------------|

| FIPS Code | City and County Name | Different Species | Highest TE | Highest Tier |
|-----------|----------------------|--------------------------|------------|---------------------|
| 081 | Greensville | 376 | FESE | Ι |
| 595 | Emporia City | 308 | FESE | Ι |

USGS 7.5' Quadrangles:

Barley Ante Skippers Emporia

USGS NRCS Watersheds in Virginia:

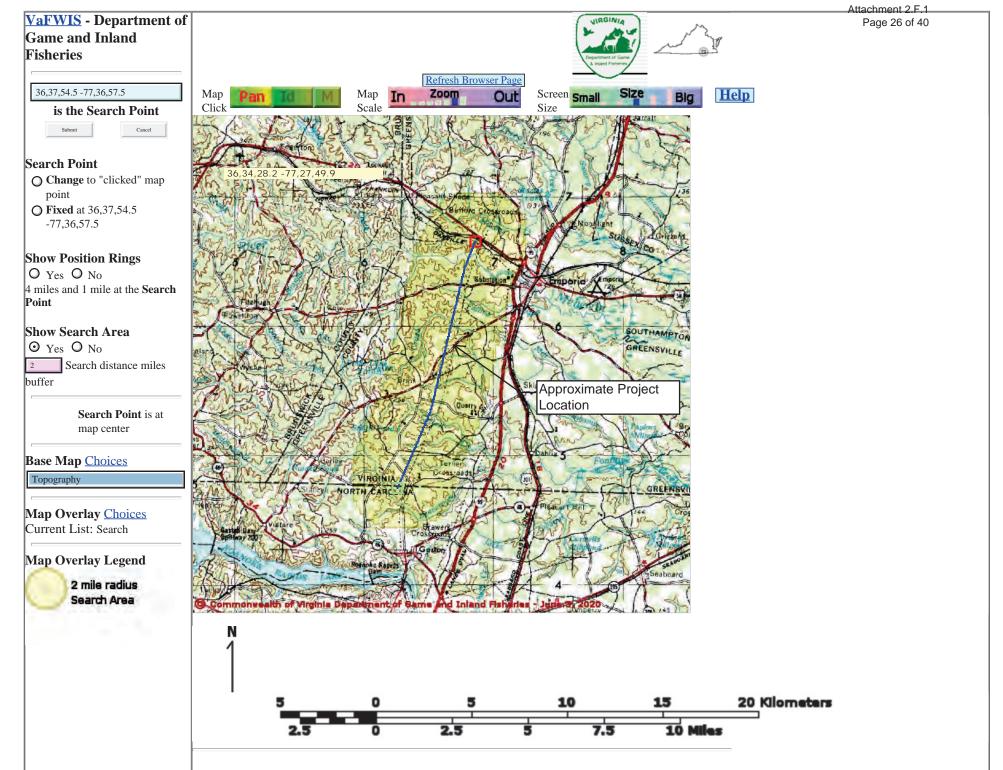
N/A

USGS National 6th Order Watersheds Summary of Wildlife Action Plan Tier I, II, III, and IV Species:

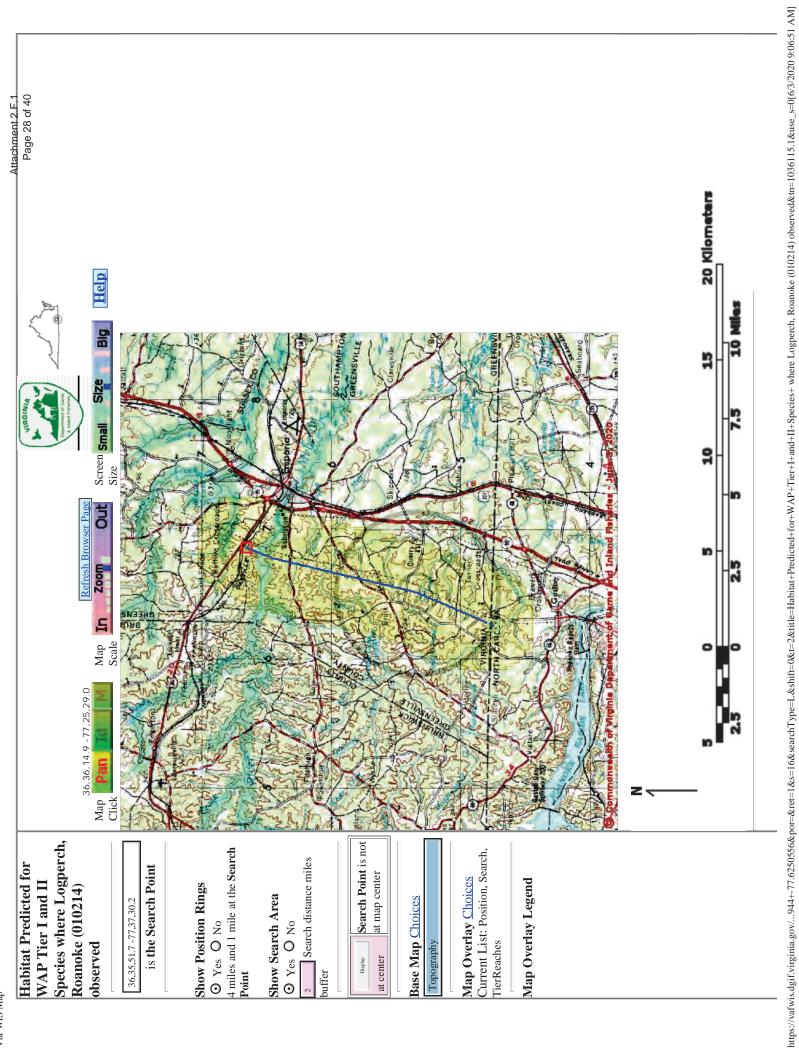
| HU6 Code | USGS 6th Order Hydrologic Unit | Different Species | Highest TE | Highest Tier |
|----------|---------------------------------------|--------------------------|------------|--------------|
| CM19 | Meherrin River-Douglas Run | 65 | FTSE | Ι |
| CM20 | Meherrin River-Falling Run | 67 | FTSE | Ι |
| CM24 | Fontaine Creek-Cattail Creek | 60 | SE | Ι |
| CM25 | Beaverpond Creek | 55 | SE | Ι |
| CM27 | Fontaine Creek-Mill Swamp | 58 | SE | Ι |
| CU38 | Maclins Creek | 54 | FESE | Ι |

Compiled on 6/3/2020, 8:39:52 AM 11036115.0 report=all searchType=L dist= 3218 poi= 36,35,51.7 -77,37,30.2 siteDD= 36.5452916 -77.6466082;36.5991972 -77.6196360;36.6999694 -77.5941804;36.7183500 -77.5853304

PixelSize=64; Anadromous=0.066451; BBA=0.172125; BECAR=0.034675; Bats=0.035859; Buffer=0.672206; County=0.149522; HU6=0.306746; Impediments=0.04891; Init=0.744198; PublicLands=0.076031; Quad=0.249184; SppObs=0.552846; TEWaters=0.104496; TierReaches=0.202315; TierTerrestrial=0.596031; Total=3.836674; Tracking_BOVA=0.183149; Trout=0.099933; huva=0.200812

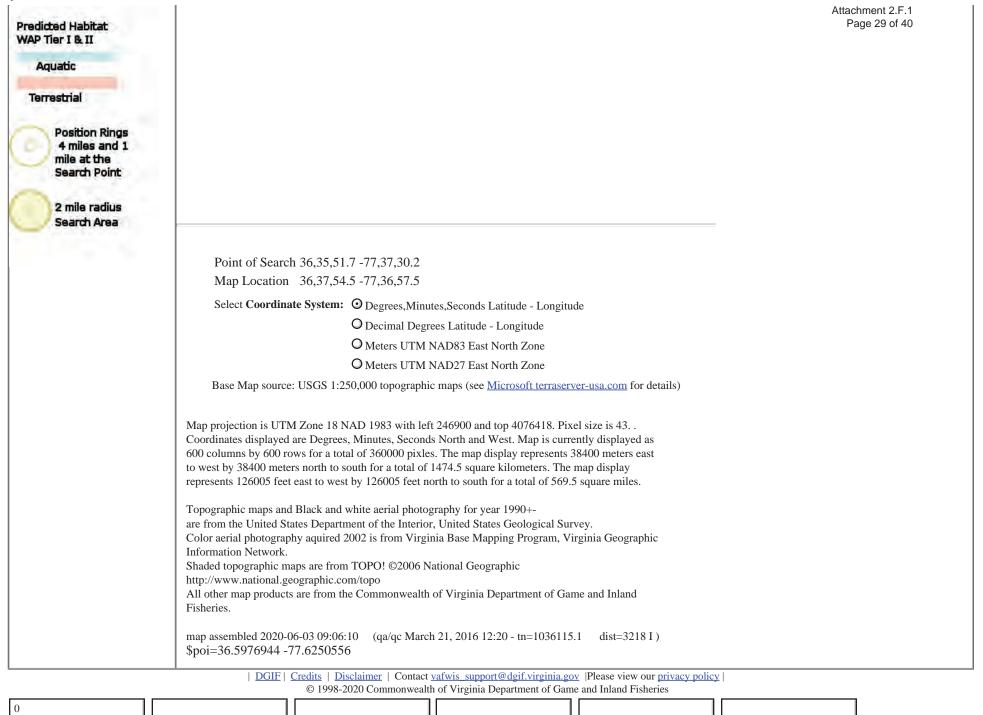


| VaFWIS Map | | |
|------------|--|-----------------------------------|
| | | Attachment 2.F.1 Page 27 of 40 |
| | Map Locauoli 2000 , 1000 , | |
| | Select Coordinate System: O Degrees, Minutes, Seconds Latitude - Longitude | |
| | O Decimal Degrees Latitude - Longitude | |
| | O Meters UTM NAD83 East North Zone | |
| | O Meters UTM NAD27 East North Zone | |
| | Base Map source: USGS 1:250,000 topographic maps (see Microsoft terraserver-usa.com for details) | |
| | Map projection is UTM Zone 18 NAD 1983 with left 246900 and top 4076418. Pixel size is 43. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as | |
| | 600 columns by 600 rows for a total of 560000 pixles. The map display represents 58400 meters east to west by 38400 meters north to south for a total of 1474.5 square kilometers. The map display represents 126005 feet east to west by 126005 feet north to south for a total of 569.5 square miles. | |
| | Topographic maps and Black and white aerial photography for year 1990+- are from the United States Department of the Interior, United States Geological Survey. | |
| | Color aerial photography aquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network. | |
| | Shaded topographic maps are from TOPO! ©2006 National Geographic | |
| | All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries. | |
| | map assembled 2020-06-03 08:34:17 (qa/qc March 21, 2016 12:20 - tn=1036115 dist=32181) \$poi=36.5977000 -77.6250600 | |
| | <u>DGIF</u> <u>Credits</u> <u>Disclaimer</u> Contact vafwis support@dgif.virginia.gov Please view our privacy policy © 1998-2020 Commonwealth of Virginia Department of Game and Inland Fisheries | |
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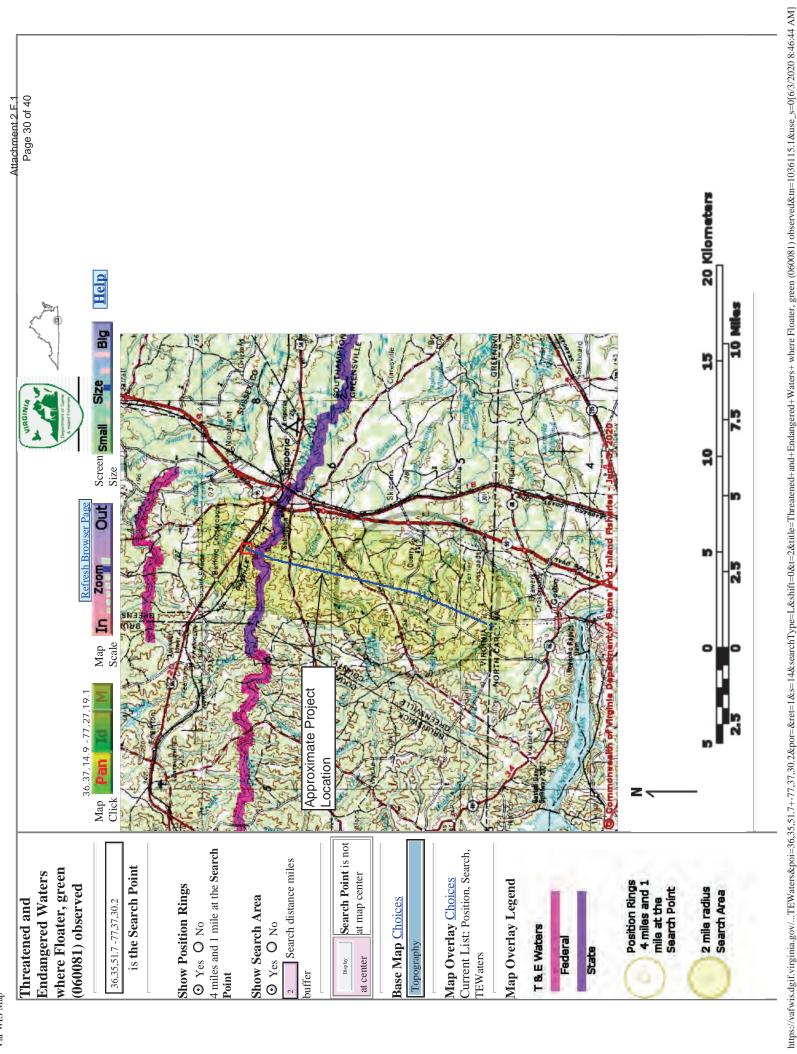


VaFWIS Map

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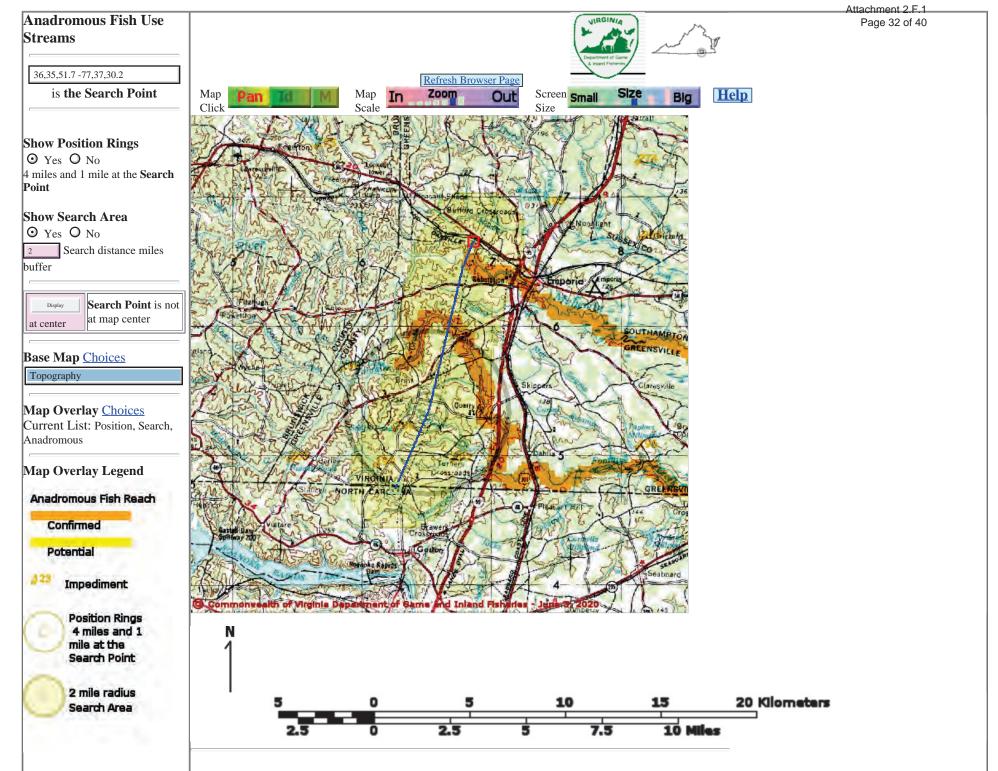


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VaFWIS Map

| VaFWIS Map | | |
|------------|--|-----------------------------------|
| | Attachmer Point of Search 36,35,51.7 -77,37,30.2 | Attachment 2.F.1 Page 31 of 40 |
| | Map Location 36,37,54.5 -77,36,57.5 | |
| | Select Coordinate System: O Degrees, Minutes, Seconds Latitude - Longitude | |
| | O Decimal Degrees Latitude - Longitude | |
| | O Meters UTM NAD83 East North Zone | |
| | O Meters UTM NAD27 East North Zone | |
| | Base Map source: USGS 1:250,000 topographic maps (see Microsoft terraserver-usa.com for details) | |
| | Map projection is UTM Zone 18 NAD 1983 with left 246900 and top 4076418. Pixel size is 43. | |
| | Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixles. The map display represents 38400 meters east | |
| | to west by 38400 meters north to south for a total of 1474.5 square kilometers. The map display represents 126005 feet east to west by 126005 feet north to south for a total of 569.5 square miles. | |
| | - - | |
| | Topographic maps and Black and white aerial photography for year 1990+- are from the United States Department of the Interior, United States Geological Survey. | |
| | Color aerial photography aquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network | |
| | Shaded topographic maps are from TOPO! ©2006 National Geographic | |
| | http://www.national.geographic.com/topo All other map products are from the Commonwealth of Virginia Department of Game and Inland | |
| | Fisheries. | |
| | map assembled 2020-06-03 08:45:45 (qa/qc March 21, 2016 12:20 - tn=1036115.1 dist=3218 I) \$poi=36.5976944 -77.6250556 | |
| | DGIF Credits Disclaimer Contact vafwis support@dgif.virginia.gov Please view our privacy policy @ 1000-2020 Commencedth of Virginia Documents of Comments of Linesd Eicherice | |
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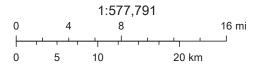
| V aF WIS MIAP | | |
|---------------|---|-----------------------------------|
| | Attachme Point of Search 36,35,51.7 -77,37,30.2 Page 3 | Attachment 2.F.1 Page 33 of 40 |
| | Map Location 36,37,54.5 -77,36,57.5 |) |
| | Select Coordinate System: O Degrees, Minutes, Seconds Latitude - Longitude | |
| | O Decimal Degrees Latitude - Longitude | |
| | O Meters UTM NAD83 East North Zone | |
| | O Meters UTM NAD27 East North Zone | |
| | Base Map source: USGS 1:250,000 topographic maps (see Microsoft terraserver-usa.com for details) | |
| | Map projection is UTM Zone 18 NAD 1983 with left 246900 and top 4076418. Pixel size is 43. | |
| | Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixles. The map display represents 38400 meters east | |
| | to west by 38400 meters north to south for a total of 1474.5 square kilometers. The map display represents 126005 feet east to west by 126005 feet north to south for a total of 569.5 square miles. | |
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| | CORD ACTOR PROVOSTAPRY AQUICUT 2002 IN TRUE VIRSUINA DASS INAPPUIS LIOSTAIR, VIRSUIA OCOSTAPRIC Information Network. | |
| | Shaded topographic maps are from TOPO! ©2006 National Geographic | |
| | All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries. | |
| | | |
| | map assembled 2020-06-03 08:54:44 (qa/qc March 21, 2016 12:20 - tn=1036115.0 dist=32181) \$poi=36.5976944 -77.6250556 | |
| | DGIF Credits Disclaimer Contact vafwis support@dgif.virginia.gov Please view our privacy policy © 1008-2020 Commonwealth of Vircinia Denortment of Game and Inland Ficheries | |
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DWR-NLEB Winter Habitat and Roost Tree Map

NLEB Locations and Roost Trees



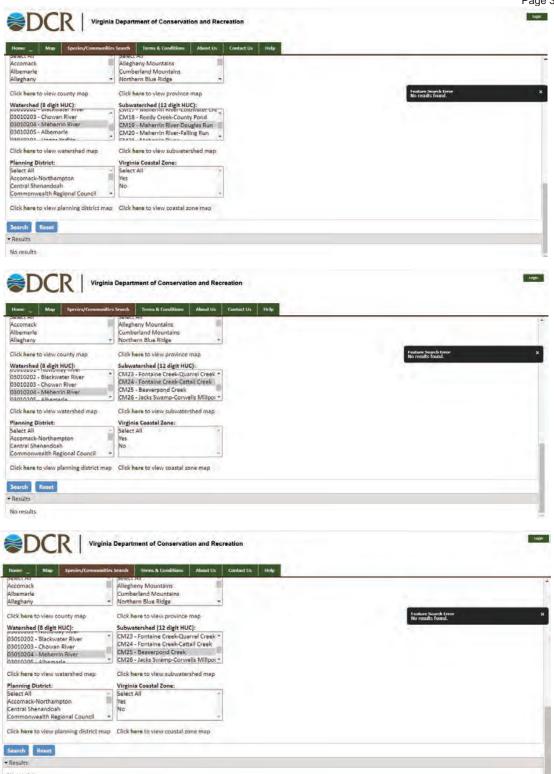
6/2/2020, 3:31:32 PM



Esri, HERE, Garmin, (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

DCR-NHDE

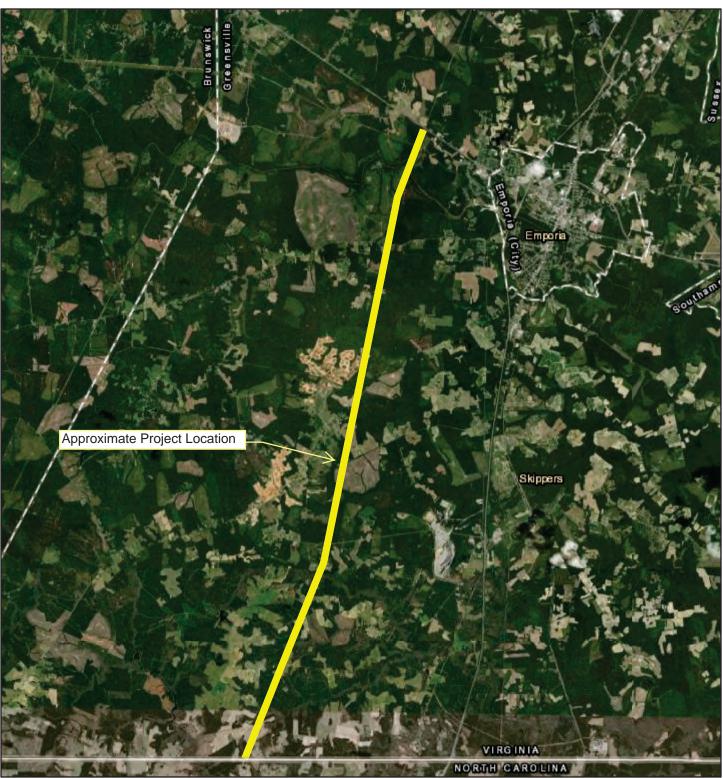
| Scientific Name Scientific Name Scientific Conservation State Conservation Occurrences State Conservation State Conservatio | Click scientific names below to go to NatureServe report. Click column headings for an explanation of species and community ranks. Common Scientific Name Scientific Name Global Conservation State Conservation Federal Legal Status State Legal State State Legal State State Legal State S | Total Species returned: 1 | Search Run: 6/3/2020 9:27:04 AM <mark>Result Summary</mark> | Subwatershed (12 digit HUC): CM20 - Meherrin River-Falling Run | state Legal status: Select All Watershed (8 digit HUC): 03010204 - Meherrin River | Federal Legal Status: Select All | Taxonomic Group: Select All | <u>Your Criteria</u> | Attachment 2.F.1 Page 37 of 40 |
|--|--|---------------------------|--|--|--|----------------------------------|-----------------------------|----------------------|-----------------------------------|
|--|--|---------------------------|--|--|--|----------------------------------|-----------------------------|----------------------|-----------------------------------|



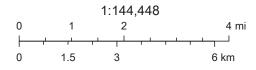
No results

DWR-MYLU and PESU Habitat Application

MYLU PESU Habitat Map



6/3/2020, 8:22:15 AM



Esri, HERE, Garmin, (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

Rachel M Studebaker (Services - 6)

| From: | Rhur, Roberta <robbie.rhur@dcr.virginia.gov></robbie.rhur@dcr.virginia.gov> |
|----------|---|
| Sent: | Thursday, October 8, 2020 11:06 AM |
| То: | Rachel M Studebaker (Services - 6) |
| Subject: | [EXTERNAL] Re: Clubhouse to Lakeview 230kV Rebuild Project |

This is an EXTERNAL email that was NOT sent from Dominion Energy. Are you expecting this message? Are you expecting a link or attachment? DO NOT click links or open attachments until you verify them

Good Morning;

I have reviewed the project area for resources and have determined that there are no impact to PRR resources. As always, please consult with DCR Division of Natural Heritage for their comments.

Thank you Robbie Rhur

On Wed, Oct 7, 2020 at 4:11 PM <u>Rachel.M.Studebaker@dominionenergy.com</u> <<u>Rachel.M.Studebaker@dominionenergy.com</u>> wrote:

Ms. Rhur,

Please see the attached letter and project map notifying you of the proposed transmission line rebuild project located in Greensville County, Virginia.

Please contact me with any questions or for additional information.

Thank you,

Rachel Studebaker

Environmental Specialist II

Dominion Energy Services

120 Tredegar Street, Richmond, VA 23219

Office: (804) 273-4086

Attachment 2.F.2 Page 2 of 2

Cell: (804) 217-1847



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--Robbie Rhur DCR VOP Project Planner and Environmental Review Coordinator 600 East Main Street Richmond VA 23219 804-371-2594

Rachel M Studebaker (Services - 6)

| From: | Hypes, Rene' <rene.hypes@dcr.virginia.gov></rene.hypes@dcr.virginia.gov> |
|----------|--|
| Sent: | Thursday, October 8, 2020 6:06 AM |
| То: | Rachel M Studebaker (Services - 6) |
| Cc: | nhreview, rr |
| Subject: | [EXTERNAL] Re: Clubhouse to Lakeview 230kV Rebuild Project |

This is an EXTERNAL email that was NOT sent from Dominion Energy. Are you expecting this message? Are you expecting a link or attachment? DO NOT click links or open attachments until you verify them

Ms. Studebaker,

Thank you for your request. In order for us to initiate the review of this project, we need a completed <u>information</u> <u>services order form</u> along with the attached project map. It would also be helpful if you could provide an ArcGIS shapefile. Please note, our standard review time is 30 calendar days starting upon receipt of the completed information services order form. I am happy to speak to you or your supervisor about our review process.

Please let me know if you have any questions.

Sincerely,

Rene' Hypes

On Wed, Oct 7, 2020 at 4:14 PM <u>Rachel.M.Studebaker@dominionenergy.com</u> <<u>Rachel.M.Studebaker@dominionenergy.com</u>> wrote:

Ms. Hypes,

Please see the attached letter and project map notifying you of the proposed transmission line rebuild project located in Greensville County, Virginia.

Please contact me with any questions or for additional information.

Thank you,

Rachel Studebaker

Environmental Specialist II

Dominion Energy Services

120 Tredegar Street, Richmond, VA 23219

Office: (804) 273-4086

Cell: (804) 217-1847



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S. Rene' Hypes

Project Review Coordinator

Department of Conservation and Recreation

Division of Natural Heritage

600 East Main Street, 24th Floor

Richmond, Virginia 23219

804-371-2708 (phone)

804-371-2674 (fax)

rene.hypes@dcr.virginia.gov

http://www.dcr.virginia.gov/natural-heritage

Rachel M Studebaker (Services - 6)

| From: | Ewing, Amy <amy.ewing@dwr.virginia.gov></amy.ewing@dwr.virginia.gov> |
|----------|--|
| Sent: | Thursday, October 8, 2020 1:14 PM |
| То: | Rachel M Studebaker (Services - 6) |
| Subject: | [EXTERNAL] Re: Clubhouse to Lakeview 230kV Rebuild Project |

This is an EXTERNAL email that was NOT sent from Dominion Energy. Are you expecting this message? Are you expecting a link or attachment? DO NOT click links or open attachments until you verify them

Thank you for contacting us about your project. Due to staffing limitations, we are unable to review and provide comments on projects that are not currently involved in one of the regulatory review processes for which we are a formal consulting agency (see https://www.DWR.virginia.gov/environmental-programs/). If your project becomes involved in one of these review processes, we will review the project at that time and provide our comments to the requesting agency. In advance of that, we recommend that you conduct a preliminary desktop analysis to evaluate your project's potential impacts upon the Commonwealth's wildlife resources by accessing our online information system, the Virginia Fish and Wildlife Information Service (VAFWIS) and using the Geographic Search function to generate an Initial Project Assessment (IPA) report.

We recommend the following steps:

A. Access VAFWIS at this link: <u>https://vafwis.DWR.virginia.gov/fwis/</u> If you are not already a VAFWIS subscriber, you should request to become one by emailing a request to <u>VAFWIS support@DWR.virginia.gov</u>. VAFWIS Subscriptions are free of charge. As a subscriber, one is able to generate an IPA for the project area (project site plus a minimum 2-mile buffer) which generates a list of imperiled wildlife and designated wildlife resources known from the project area. You may also access VAFWIS as a visitor, but access to data and mapping at this user level is restricted.

Alternatively, you may contact our Geographic Information Systems (GIS) Coordinator, Jay Kapalczynski, at <u>Jay.Kapalczynski@DWR.virginia.gov</u> to request access to the Wildlife Mapping and Environmental Review Map Service (WERMS) which allows you to download GIS data into your own system.

B. Access information about the location of bat hibernacula and roosts from the following locations:

Northern Long-Eared Bats: <u>https://www.dwr.virginia.gov/wildlife/bats/northern-long-eared-bat-application/</u>

Little Brown Bats and Tricolored Bats: <u>https://www.dwr.virginia.gov/wildlife/bats/little-brown-bat-tri-colored-bat-winter-habitat-roosts-application/</u>

C. Access up to date information about the location and status of bald eagle nests in

Virginia by accessing the Center for Conservation Biology's Eagle Nest Locator at <u>https://ccbbirds.org/what-we-do/research/species-of-concern/virginia-eagles/nest-locator/</u>

D. Review the DWR information, guidance, and protocols available on our website at the bottom of this page in the "Additional Resources" section and implement, as appropriate.

E. Include the results of your desktop analysis with your project documents, applications, etc.



Amy Martin Ewing

Environmental Services Biologist Manager, Wildlife Information P 804.367.2211 **Department of Wildlife Resources** CONSERVE. CONNECT. PROTECT. A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228 www.VirginiaWildlife.gov

On Wed, Oct 7, 2020 at 4:12 PM <u>Rachel.M.Studebaker@dominionenergy.com</u> <<u>Rachel.M.Studebaker@dominionenergy.com</u>> wrote:

Ms. Ewing,

Please see the attached letter and project map notifying you of the proposed transmission line rebuild project located in Greensville County, Virginia.

Please contact me with any questions or for additional information.

Thank you,

Rachel Studebaker

Environmental Specialist II

Dominion Energy Services

120 Tredegar Street, Richmond, VA 23219

Attachment 2.F.4 Page 3 of 3

Office: (804) 273-4086

Cell: (804) 217-1847



CONFIDENTIALITY NOTICE: This electronic message contains information which may be legally confidential and or privileged and does not in any case represent a firm ENERGY COMMODITY bid or offer relating thereto which binds the sender without an additional express written confirmation to that effect. The information is intended solely for the individual or entity named above and access by anyone else is unauthorized. If you are not the intended recipient, any disclosure, copying, distribution, or use of the contents of this information is prohibited and may be unlawful. If you have received this electronic transmission in error, please reply immediately to the sender that you have received the message in error, and delete it. Thank you.

Attachment 2.F.5 Page 1 of 9

Rochelle Altholz Deputy Director of Administration and Finance

Russell W. Baxter Deputy Director of Dam Safety & Floodplain Management and Soil & Water Conservation

Nathan Burrell Deputy Director of Government and Community Relations

> Thomas L. Smith Deputy Director of Operations

November 13, 2020

Matthew J. Strickler Secretary of Natural Resources

Clyde E. Cristman Director



COMMONWEALTH of VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION

Christine Conrad C2 Environmental, Inc 11818 Rock Landing Drive Suite 103 Newport News, VA 23606

Re: C2E TL2201/254, Clubhouse - Lakeview 230 KV Rebuild

Dear Ms. Conrad:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, the following conservations are within the project area listed from north (Route 58) to south (North Carolina line): South Meherrin Powerline Conservation Site, Round Hill Church Powerline, Cattail Creek Powerline and Collier Branch Powerline (Figure 1).

Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. DCR comments are provided by 1:24,000 quadrangle below.

Emporia Quad

The South Meherrin Powerline Conservation Site (Figure 2) has been given a biodiversity significance ranking of B5, which represents a site of general significance. The natural heritage resource of concern at this site is:

Paspalum dissectum

Walter's paspalum

G4?/S2/NL/NL

Walter's paspalum is a rhizomatous, perennial grass which grows in open, shallow pools, puddles, and exposed mud, interdune swales and ponds, impoundment edges and seasonally exposed sandy or gravelly river shores and bars (Weakley, et al.). During late summer, when water levels are at their lowest, the grass blooms and fruits. The species is currently known from nine locations and historically known from four locations in Virginia's

600 East Main Street, 24th Floor | Richmond, Virginia 23219 | 804-786-6124

southeastern wetlands. Walter's paspalum is threatened by habitat loss and competition from non-native invasive species that utilize this habitat type (TNC, 1996).

The Round Hill Church Powerline Conservation Site (Figure 3) has been given a biodiversity significance ranking of B5, which represents a site of general significance. The natural heritage resource of concern at this site is:

Paspalum dissectumWalter's paspalumG4?/S2/NL/NL

Skippers Quad

The Cattail Creek Powerline Conservation Site (Figure 4) has been given a biodiversity significance ranking of B5, which represents a site of general significance. The natural heritage resources of concern at this site are:

| Hypericum setosum | Hairy St. John's-wort | G4G5/S1S2/NL/NL |
|-------------------|-----------------------|-----------------|
| Scleria minor | Slender Nutrush | G4/S2/NL/NL |

Barley Quad

The Collier Branch Powerline Conservation Site (Figure 5) has been given a biodiversity significance ranking of B4, which represents a site of moderate significance. The natural heritage resources of concern at this site are:

Ludwigia hirtella Rafinesque's seedbox G5/S2/NL/NL Coreopsis linifolia Savanna coreopsis G4Q/S1/NL/NL Sabatia campanulata Slender Marsh Pink G5/S2/NL/NL *Hypericum adpressum* Bog St. John's-wort G3/S1/NL/NL Juncus elliottii Bog Rush G4G5/S1/NL/NL Mitreola sessilifolia Swamp hornpod G4G5/S1/NL/NL *Eryngium integrifolium* Blue-flower eryngo G5/S1/NL/NL

All Quads

DCR recommends avoidance of the documented natural heritage resources within the powerline right-of-way during the rebuild of the powerline including but not limited to tower placement, access and staging areas for the project (see attached maps for natural heritage resource locations). DCR also recommends the development and implementation of an invasive species plan to be included as part of the maintenance practices for the right-of-way (ROW). The invasive species plan should include an invasive species inventory for the project area based on the current DCR Invasive Species List (<u>http://www.dcr.virginia.gov/natural-heritage/document/nh-invasive-plant-list-2014.pdf</u>) and methods for treating the invasives. ROW restoration include appropriate revegetation using native species in a mix of grasses and forbs, robust monitoring and adaptive management plan to provide guidance if initial revegetation efforts are unsuccessful or if invasive species outbreaks occur. DCR supports post construction ROW maintenance following the same pre-construction maintenance protocol in maintaining suitable habitat for the documented rare plants.

If tree removal is proposed, the project will fragment Ecological Cores (**C1**, **C3**, **C4** and **C5**) as identified in the Virginia Natural Landscape Assessment (<u>https://www.dcr.virginia.gov/natural-heritage/vaconvisvnla</u>), one of a suite of tools in Virginia ConservationVision that identify and prioritize lands for conservation and protection.

Ecological Cores are areas of unfragmented natural cover with at least 100 acres of interior that provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as species that

utilize marsh, dune, and beach habitats. Cores also provide benefits in terms of open space, recreation, water quality (including drinking water protection and erosion prevention), and air quality (including carbon sequestration and oxygen production), along with the many associated economic benefits of these functions. The cores are ranked from C1 to C5 (C5 being the least ecologically relevant) using many prioritization criteria, such as the proportions of sensitive habitats of natural heritage resources they contain.

Fragmentation occurs when a large, contiguous block of natural cover is dissected by development, and other forms of permanent conversion, into one or more smaller patches.. Habitat fragmentation results in biogeographic changes that disrupt species interactions and ecosystem processes, reducing biodiversity and habitat quality due to limited recolonization, increased predation and egg parasitism, and increased invasion by weedy species.

Therefore minimizing fragmentation is a key mitigation measure that will preserve the natural patterns and connectivity of habitats that are key components of biodiversity. The deleterious effects of fragmentation can be reduced by minimizing edge in remaining fragments; by retaining natural corridors that allow movement between fragments; and by designing the intervening landscape to minimize its hostility to native wildlife (natural cover versus lawns). Mapped cores in the project area can be viewed via the Virginia Natural Heritage Data Explorer, available here: http://vanhde.org/content/map.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on statelisted threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

New and updated information is continually added to Biotics. Please re-submit a completed order form and project map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

A fee of \$630.00 has been assessed for the service of providing this information. Please find attached an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, DCR Finance, 600 East Main Street, 24th Floor, Richmond, VA 23219. Payment is due within thirty days of the invoice date. Please note late payment may result in the suspension of project review service for future projects.

The Virginia Department of Wildlife Resources (VDWR) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from <u>http://vafwis.org/fwis/</u> or contact Ernie Aschenbach at 804-367-2733 or <u>Ernie.Aschenbach@dgif.virginia.gov</u>. According to the information currently in our files, Meherrin River, which has been designated by the VDWR as a "Threatened and Endangered Species Water" for the Green Floater is within the submitted project boundary. Therefore, DCR recommends coordination with VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with protected species legislation.

Should you have any questions or concerns, feel free to contact me at 804-371-2708. Thank you for the opportunity to comment on this project.

Attachment 2.F.5 Page 4 of 9

Sincerely,

Rem' Hy -

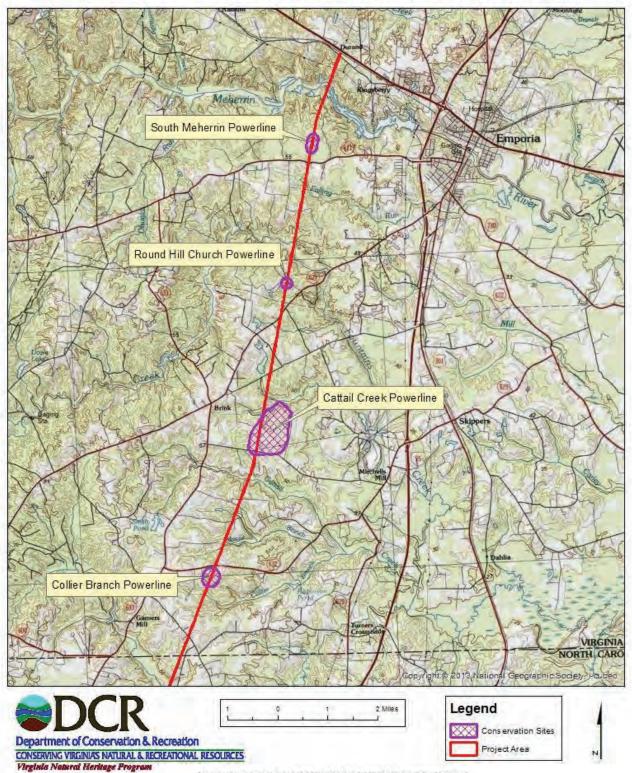
S. René Hypes Natural Heritage Project Review Coordinator

Cc: Ernie Aschenbach, VDWR

Literature Cited

The Nature Conservancy. 1996. Biological and Conservation Data System. Arlington, Virginia, USA.

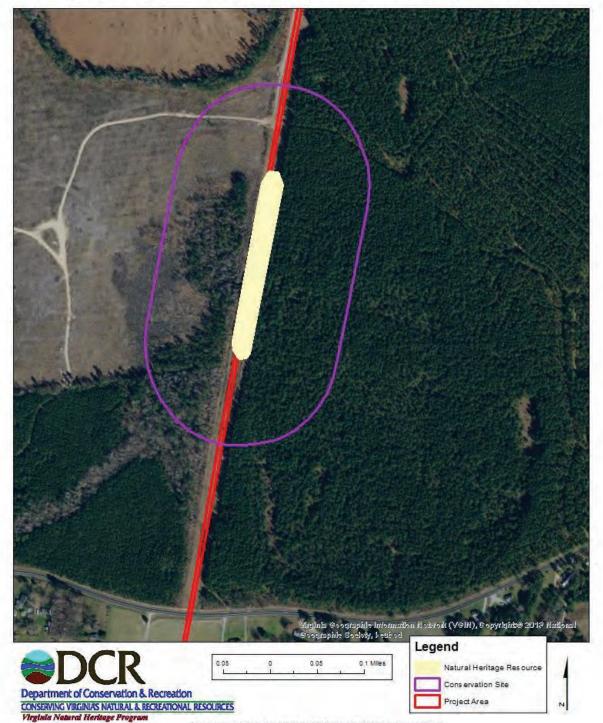
Weakley, A.S., J.C. Ludwig and J.F. Townsend. 2012. *Flora of Virginia*. Botanical Research Institute of Texas Press, Fort Worth. p. 322.



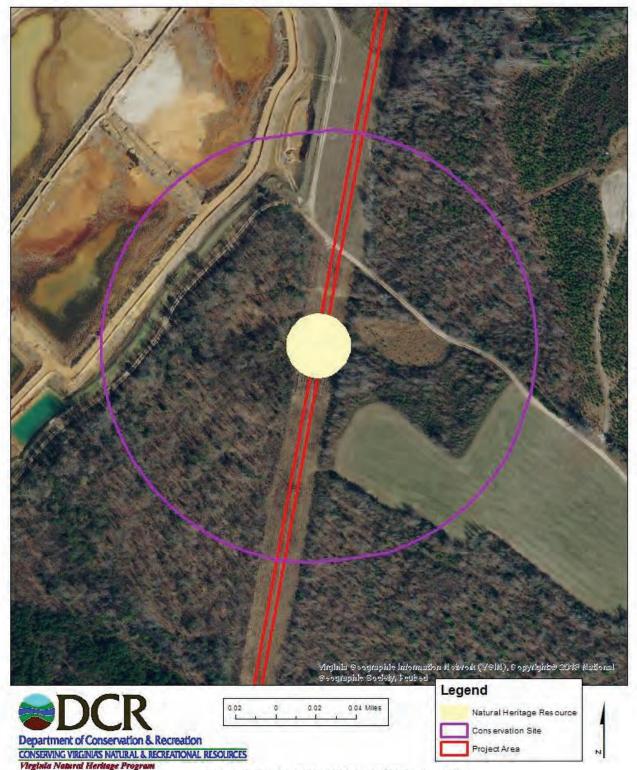
TL2201/254 Clubhouse - Lakeview 230 kV Rebuild Figure 1. Location of Conservation Sites

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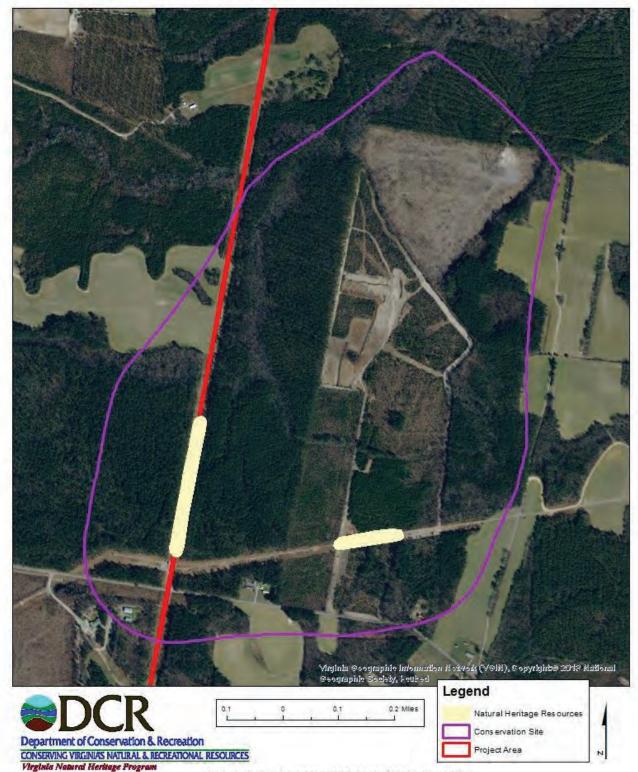
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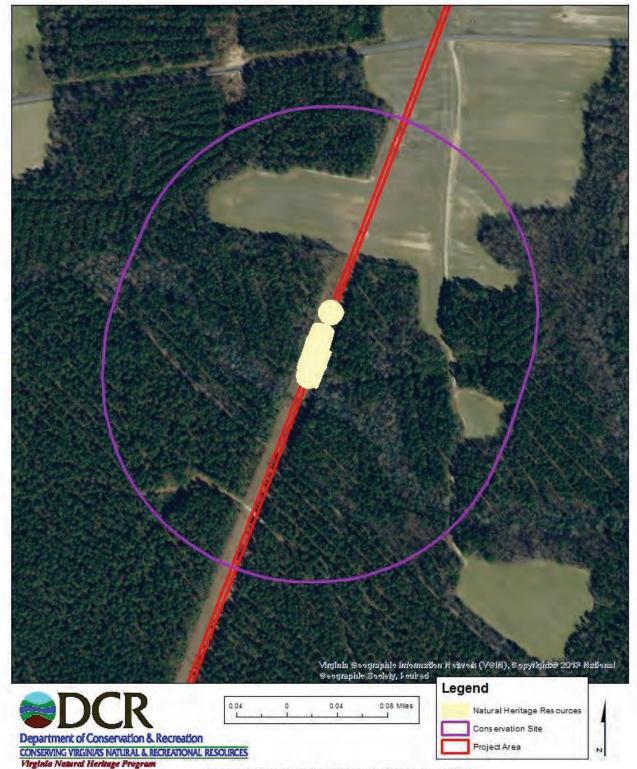
TL2201/254 Clubhouse - Lakeview 230 kV Rebuild Figure 3. Round Hill Church Powerline Conservation Site



TL2201/254 Clubhouse - Lakeview 230 kV Rebuild Figure 4. Cattail Creek Powerline Conservation Site



TL2201/254 Clubhouse - Lakeview 230 kV Rebuild Figure 5. Collier Branch Powerline Conservation Site





Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

1111 E. Main Street, Suite 1400, Richmond, Virginia 23219 P.O. Box 1105, Richmond, Virginia 23218 (800) 592-5482 www.deq.virginia.gov

Matthew J. Strickler Secretary of Natural Resources David K. Paylor Director (804) 698-4000

August 13, 2019

Mr. Jason E. Williams Director Environmental Services Dominion Energy 5000 Dominion Boulevard Glen Allen, VA 23060

Transmitted electronically: jason.e.william@dominionenergy.com

Subject: Dominion Energy (Electric Transmission) – Annual Standards and Specifications for Erosion & Sediment Control and Stormwater Management (AS&S for ESC and SWM)

Dear Mr. Williams:

The Virginia Department of Environmental Quality ("DEQ") hereby approves the Annual Standards and Specifications for Erosion & Sediment Control and Stormwater Management for Dominion Energy (Electric Transmission) dated "May 29, 2019". This coverage is effective from August 13, 2019 to August 12, 2020.

To ensure compliance with approved specifications, the Virginia Erosion and Sediment Control Law and the Virginia Stormwater Management Act, DEQ staff will conduct random site inspections, respond to complaints, and provide on-site technical assistance with specific erosion and sediment control and stormwater management measures and plan implementation.

Please note that your approved Annual Standards and Specifications include the following requirements:

- 1. Variance, exception, and deviation requests must be submitted separately from this Annual Standards and Specifications submission to DEQ. DEQ may require project-specific plans associated with variance requests to be submitted for review and approval.
- 2. The following information must be submitted to DEQ for each project at least two weeks in advance of the commencement of regulated land-disturbing activities. Notifications shall be sent by email to: <u>StandardsandSpecs@deq.virginia.gov</u>
 - i: Project name or project number;
 - ii: Project location (including nearest intersection, latitude and longitude, access point);
 - iii: On-site project manager name and contact info;
 - iv: Responsible Land Disturber (RLD) name and contact info;
 - v: Project description;

Dominion Energy (Electric Transmission) – AS&S for ESC and SWM August 12, 2019 Page 2 of 2

- vi: Acreage of disturbance for project;
- vii: Project start and finish date; and
- viii: Any variances/exceptions/waivers associated with this project.
- 3. Project tracking of all regulated land disturbing activities (LDA) must be submitted to the DEQ on a bi-annual basis. Project tracking records shall contain the same information as required in the two week e-notifications for each regulated LDA.
- 4. Erosion & Sediment Control and Stormwater Management plan review and approval must be conducted by DEQ-Certified plan reviewers and documented in writing.

To ensure an efficient information exchange and response to inquiries, the DEQ Central Office is your primary point of contact. Central Office staff will coordinate with our Regional Office staff as appropriate.

Thank you very much for your submission and continued efforts to conserve and protect Virginia's precious natural resources.

Sincerely,

Jaime B. Robb

Jaime B. Robb, Manager Office of Stormwater Management

Cc: Amelia Boschen, <u>Amelia.h.boschen@dominionenergy.com</u> Elizabeth Hester, <u>Elizabeth.l.hester@dominionenergy.com</u> Stacey Ellis, Stacey.t.ellis@dominionenergy.com

Case Decision Information:

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period.

REPORT >

SCC Pre-Application Analysis Of Cultural Resources for the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230kV Virginia Rebuild Project

LOCATION > Greensville County, Virginia

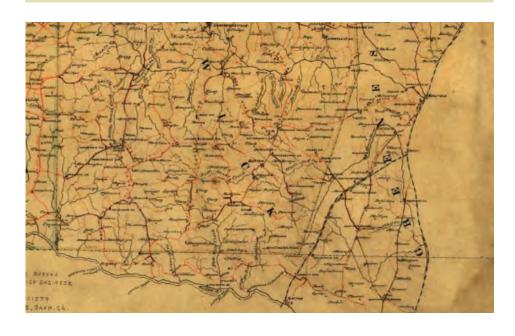
DATE> OCTOBER 2020

PREPARED FOR >

Dominion Energy

PREPARED BY > Dutton + Associates, LLC

PROJECT REVIEW # >



Dutton + Associates

SCC Pre-Application Analysis of Cultural Resources for the Clubhouse-Dry Bread Line #2201 and Dry Bread- Lakeview Line #254 230kV Virginia Rebuild Project

Greensville County, Virginia

Prepared For: Dominion Energy

PREPARED BY:

DUTTON + ASSOCIATES, LLC 1115 Crowder Drive Midlothian, Virginia 23236 804.644.8290

PRINCIPAL INVESTIGATOR: Robert J. Taylor, Jr. M.A.

October 2020

Abstract

Dutton + Associates, LLC (D+A) conducted a Pre-Application Analysis (analysis) of cultural resources for the Clubhouse-Dry Bread Line #2201 and Dry Bread- Lakeview Line #254 230kV Virginia Rebuild Project in Greensville County, Virginia. The analysis was performed for Dominion Virginia Power (Dominion) in support of a State Corporation Commission (SCC) application. The analysis was completed in accordance with Virginia Department of Historic Resources' (VDHR) guidance titled "Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia" (January 2008).

As part of Clubhouse-Dry Bread Line #2201 and Dry Bread- Lakeview Line #254 230kV Virginia Rebuild Project, Dominion proposes to rebuild approximately 1.6 miles of the existing Clubhouse-Dry Bread Line #2201 which runs from Structure #2201/A within the existing Clubhouse Substation to Structure #2201/14 / #254/14 within the existing Dry Bread Substation. An additional 10.9 miles of the existing Dry Bread-Lakeview Line #254 extending from Structure #254/14 within the Dry Bread Substation to Structure #254/113 at the Virginia state line will also be rebuilt. The existing line was built in 1962, and is suspended from two-pole, H-frame wood structures that average 63-feet in height. They will be replaced on a one-to-one basis with two-pole, H-frame weathering steel structures that average 70-feet in height. No additional clearing or ROW will be required as part of the project.

The background research conducted as part of this analysis was guided by VDHR guidance and designed to identify all previously recorded National Historic Landmarks (NHL) located within 1.5-miles of the proposed project, all historic properties listed in the National Register of Historic Places (NRHP) or battlefields located within 1-mile of the proposed project, all historic properties considered eligible for listing in the NRHP located within 0.5-miles of the proposed project, and all buildings, structures, and archaeological sites located directly within the proposed project area. Historic properties include architectural and archaeological (terrestrial and underwater) resources, historic and cultural landscapes, battlefields, and historic districts. For each historic property within the defined tiers, a review of existing documentation and a field reconnaissance was undertaken to assess each property's significant character-defining features, as well as the character of its current setting. Following identification of historic properties, D+A assessed the potential for impacts to any identified properties as a result of the proposed project. Specific attention was given to determining whether or not construction related to the project could introduce new visual elements into the property's viewshed or directly impact the property through construction, which would either directly or indirectly alter those qualities or characteristics that qualify the historic property for listing in the NRHP.

Review of the VDHR VCRIS inventory records revealed a total of 93 previously recorded architectural resources are located 1.5-miles of the proposed project. Of these, there are no NHLs located within 1.5-miles of the proposed project, no properties listed in the NRHP or battlefields located within 1-mile of the project, and one property that has been determined eligible for listing in the NRHP within 0.5-miles of the project. This consists of the c.1838 Chambliss House which was determined eligible for listing in the NRHP in 1999 as part of a proposed rehabilitation tax credit project. VCRIS also revealed there are one-hundred-twenty (120) previously recorded archaeological sites within one mile of the project area. Eighteen (18) of these sites are located directly within or adjacent to the project area (within 100 feet of the project centerline). The sites within or adjacent to the project area primarily consist of prehistoric lithic scatters, camps, and occupation sites. There is also one historic-period domestic site and two artifact scatters. None of the sites within or adjacent to the project area have been previously determined eligible for listing in the NRHP. The two Reconstruction-era artifact scatters have been determined not eligible for listing in the NRHP by the VDHR, and the remaining sites have not been formally evaluated.

Field inspection and representative photographs reveal that the project will be mostly to completely screened from view from all locations within and around the Chambliss House property. An existing transmission line crosses through an agricultural field on the Chambliss House property with unobstructed views from the house, however, the portion of the line to be rebuilt is across the road within a thickly wooded area that completely screens it from visibility and will likely continue to do so. It is therefore D+A's opinion that the proposed Clubhouse-Dry Bread Line #2201 and Dry Bread- Lakeview Line #254 230kV Virginia Rebuild Project will have no more than a **minimal impact** on the Chambliss House.

A summary of findings and recommendations is provided in the table below.

| <u> </u> | | | |
|--------------|-----------------|-------------------|---------|
| VDHR ID # | Resource Name | NRHP Status | Impact |
| 040-0010 | Chambliss House | NRHP- Eligible | Minimal |

Potential Impacts Summary for Architectural Resources

With regards to archaeology, there are 18 previously recorded sites within or immediately adjacent (within 100-feet of the centerline) to the project area. Of these, two sites have been determined not eligible for listing in the NRHP and the remaining 16 have not been formally evaluated. No archaeological survey or inspection was conducted as part of this effort. It is therefore D+A's opinion that re-identification and verification of site boundaries and eligibility should be conducted prior to any earth-moving or ground-disturbing activity associated with the Clubhouse-Dry Bread Line #2201 and Dry Bread- Lakeview Line #254 230kV Virginia Rebuild Project.

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| Virginia |
| Table 4-4: Previously recorded archaeological resources within one mile of the project area. Bold |
| listings denote sites determined eligible for the NRHP. Orange highlight denotes site is located |
| within or adjacent to the project area4-15 |
| Table 4-5: Previously recorded archaeological sites within or adjacent to the project area for the |
| Line 254 Clubhouse-Lakeview Rebuild project as specified in the VDHR Guidelines for |
| Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic |
| Resources in the Commonwealth of Virginia |
| Table 6-1: Potential impacts summary for architectural resources |

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1. INTRODUCTION

In August 2020, Dutton + Associates, LLC (D+A) conducted a Pre-Application Analysis (analysis) of cultural resources for the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230kV Virginia Rebuild Project. The analysis was performed for Dominion Energy (Dominion) in support of a State Corporation Commission (SCC) application. The analysis was conducted in accordance with Virginia Department of Historic Resources' (VDHR) guidance titled *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (January 2008) and Commonwealth of Virginia State Corporation Commission Division of Public Utility Regulation *Guidelines for Transmission Line Applications Filed Under Title 56 of the Code of Virginia* (August 2017).

This analysis was performed at a level that meets the purpose and intent of VDHR and the SCC's guidance. It provides information on the presence of previously recorded National Historic Landmark (NHL) properties located within a 1.5-mile buffer area established around the project area, properties listed on the National Register of Historic Places (NRHP), battlefields, and historic landscapes located within a 1-mile buffer around the project area, and properties previously determined eligible for listing in the NRHP located within a 0.5-mile buffer area around the project area, and previously identified archaeological resources directly within the project area. This analysis will not satisfy Section 106 identification and evaluation requirements in the event federal permits or licenses are needed; however, it can be used as a planning document to assist in making decisions under Section 106 as to whether further cultural resource identification efforts may be warranted.

This report contains a research design which describes the scope and methodology of the analysis, discussion of previously identified historic properties, and an assessment of potential impacts. D+A Senior Architectural Historian Robert J. Taylor, Jr. M.A. served as Principal Investigator and oversaw the general course of the project and supervised all aspects of the work. Copies of all notes, maps, correspondence, and historical research materials are on file at the D+A main office in Midlothian, Virginia.

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2. PROJECT DESCRIPTION

As part of Clubhouse-Dry Bread Line #2201 and Dry Bread- Lakeview Line #254 230kV Virginia Rebuild Project, Dominion proposes to rebuild approximately 1.6 miles of the existing Clubhouse-Dry Bread Line #2201 which runs from Structure #2201/A within the existing Clubhouse Substation to Structure #2201/14 / #254/14 within the existing Dry Bread Substation. An additional 10.9 miles of the existing Dry Bread-Lakeview Line #254 extending from Structure #254/14 within the Dry Bread Substation to Structure #254/13 at the Virginia state line will also be rebuilt (Figure 2-1). The existing line, which was built in 1962, is suspended from two-pole, H-frame wood structures that average 63-feet in height. They will be replaced on a one-to-one basis with two-pole, H-frame weathering steel structures that average 70-feet in height. Representative existing and proposed structure schematics are depicted in Figure 2-2. No additional clearing or ROW will be required as part of the project.



Figure 2-1: Project Alignment General Location. Source: Dominion Energy



Figure 2-2: Location of Structures to be replaced (North half of alignment). Source: Dominion Energy



Figure 2-3: Location of Structures to be replaced (South half of alignment). Source: Dominion Energy

| heights. Source: Dominion Energy | | | |
|----------------------------------|---------------------------------|---------------------------------|--|
| Structure Number | Existing Structure Height | Proposed Structure Height | |
| 238/264, 2201/1A | 80 | N/A | |
| 2201/1 | 59 | 61 | |
| 2201/2 | 69 | 79 | |
| 2201/3 | 67 | 79 | |
| 2201/4 | 58 | 70 | |
| 2201/5 | 76 | 84 | |
| 2201/6 | 82 | 97 | |
| 2201/7 | 80 | 79 | |
| 2201/8 | 57 | 70 | |
| 2201/9 | 59 | 66 | |
| 2201/10 | 62 | 70 | |
| 2201/11 | 71 | 75 | |
| 2201/12 | 61 | 65 | |
| 2201/13 | 61 | N/A | |
| 254/14, 2201/14 | 75 | N/A | |
| 254/15 | 61 | N/A | |
| 254/16 | 66 | N/A | |
| 254/17 | 58 | 61 | |
| 254/18 | 57 | 66 | |
| 254/19 | 55 | 66 | |
| 254/20 | 63 | 66 | |
| 254/21 | 57 | 66 | |
| 254/22 | 55 | 61 | |
| 254/23 | 66 | N/A | |
| 254/24 | 57 | 61 | |
| 254/25 | 66 | 75 | |
| 254/26 | 55 | 70 | |
| 254/27 | 65 | 75 | |
| 254/28 | 57 | 66 | |
| 254/29 | 57 | 66 | |
| 254/30 | 67 | 70 | |
| 254/31 | 63 | 66 | |
| 254/32 | 61 | 70 | |
| 254/33 | 55 | 66 | |
| 254/34 | 67 | 75 | |

 Table 2-1: Table of existing and proposed structure heights. Source: Dominion Energy

| Structure Number | Existing Structure Height | Proposed Structure Height |
|------------------|---------------------------------|---------------------------------|
| 254/35 | 63 | 70 |
| 254/36 | 66 | N/A |
| 254/37 | 57 | 70 |
| 254/38 | 66 | N/A |
| 254/39 | 57 | 61 |
| 254/40 | 66 | 75 |
| 254/41 | 61 | 70 |
| 254/42 | 61 | N/A |
| 254/43 | 56 | 70 |
| 254/44 | 63 | 70 |
| 254/45 | 62 | 70 |
| 254/46 | 58 | 75 |
| 254/47 | 67 | 75 |
| 254/48 | 67 | 75 |
| 254/49 | 75 | N/A |
| 254/50 | 61 | 70 |
| 254/51 | 70 | N/A |
| 254/52 | 56 | 61 |
| 254/53 | 56 | 66 |
| 254/54 | 62 | 70 |
| 254/55 | 59 | 66 |
| 254/56 | 56 | 66 |
| 254/57 | 62 | 66 |
| 254/58 | 57 | 61 |
| 254/59 | 62 | 70 |
| 254/60 | 62 | 66 |
| 254/61 | 66 | N/A |
| 254/62 | 66 | N/A |
| 254/63 | 72 | 79 |
| 254/64 | 70 | N/A |
| 254/65 | 57 | 56.5 |
| 254/66 | 62 | 70 |
| 254/67 | 75 | N/A |
| 254/68 | 56 | 61 |
| 254/69 | 61 | N/A |
| 254/70 | 61 | 66 |
| 254/71 | 56 | 66 |
| 254/72 | 56 | 66 |

| Structure Number | Existing Structure Height | Proposed Structure Height |
|------------------|---------------------------------|---------------------------------|
| 254/73 | 66 | N/A |
| 254/74 | 62 | 75 |
| 254/75 | 62 | 66 |
| 254/76 | 61 | 66 |
| 254/77 | 61 | 66 |
| 254/78 | 62 | 65 |
| 254/79 | 68 | 70 |
| 254/80 | 53 | 57 |
| 254/81 | 58 | 66 |
| 254/82 | 63 | 70 |
| 254/83 | 62 | 70 |
| 254/84 | 61 | 66 |
| 254/85 | 61 | 70 |
| 254/86 | 56 | 66 |
| 254/87 | 64 | 75 |
| 254/88 | 66 | 75 |
| 254/89 | 58 | 66 |
| 254/90 | 62 | 70 |
| 254/91 | 75 | N/A |
| 254/92 | 62 | 84 |
| 254/93 | 66 | N/A |
| 254/94 | 62 | 70 |
| 254/95 | 66 | N/A |
| 254/96 | 61 | 70 |
| 254/97 | 56 | 66 |
| 254/98 | 55 | 66 |
| 254/99 | 62 | 75 |
| 254/100 | 66 | 70 |
| 254/101 | 65 | 79 |
| 254/102 | 62 | 70 |
| 254/103 | 62 | 66 |
| 254/104 | 62 | 70 |
| 254/105 | 56 | 66 |
| 254/106 | 62 | 70 |
| 254/107 | 62 | 66 |
| 254/108 | 66 | 70 |
| 254/109 | 60 | 66 |
| 254/110 | 55 | 61 |

| | Existing | Proposed |
|------------------|-----------|-----------|
| | Structure | Structure |
| Structure Number | Height | Height |
| 254/111 | 59 | 66 |
| 254/112 | 63 | 75 |
| 254/113 | 56 | 66 |
| 254/114 | 61 | 70 |
| 254/115 | 55 | 70 |
| 254/116 | 61 | 75 |
| 254/117 | 63 | 70 |
| 254/118 | 57 | 70 |
| 254/119 | 58 | 70 |
| 254/120 | 67 | 75 |
| 254/121 | 56 | 66 |
| 254/122 | 62 | 66 |
| 254/123 | 57 | 70 |
| 254/124 | 70 | N/A |
| 254/125 | 55 | 61 |
| 254/126 | 55 | 66 |
| 254/127 | 56 | 66 |
| 254/128 | 63 | 66 |
| 254/129 | 62 | 70 |
| 254/130 | 58 | 66 |
| 254/131 | 56 | 61 |
| 254/132 | 56 | 66 |
| 254/133 | 62 | 66 |
| 254/134 | 55 | 61 |
| 254/135 | 57 | 66 |
| 254/136 | 55 | 66 |
| 254/137 | 66 | N/A |
| 254/138 | 62 | 65 |
| 254/139 | 67 | 75 |
| 254/140 | 57 | 61 |
| 254/141 | 73 | 84 |
| 254/142 | 66 | 75 |
| 254/143 | 58 | 75 |
| 254/144 | 60 | 66 |
| 254/145 | 61 | N/A |
| 254/146 | 61 | 75 |
| 254/147 | 57 | 75 |
| 254/148 | 55 | 61 |

| Structure Number | Existing Structure Height | Proposed Structure Height |
|------------------|---------------------------------|---------------------------------|
| 254/149 | 56 | 66 |
| 254/150 | 61 | 70 |
| 254/151 | 63 | 65 |
| 254/152 | 56 | 61 |
| 254/153 | 77 | 65 |
| 254/154 | 65 | 75 |
| 254/155 | 62 | 66 |
| 254/156 | 67 | 70 |
| 254/157 | 66 | 97 |
| 254/158 | 69 | |
| 254/159 | 68 | 100 |
| 254/160 | 63 | 100 |
| 254/161 | 79 | N/A |
| 254/161A | 90 | |
| 254/162 | 120 | 120 |
| 254/163 | 110 | N/A |
| 2141/1, 254/164 | 95 | N/A |

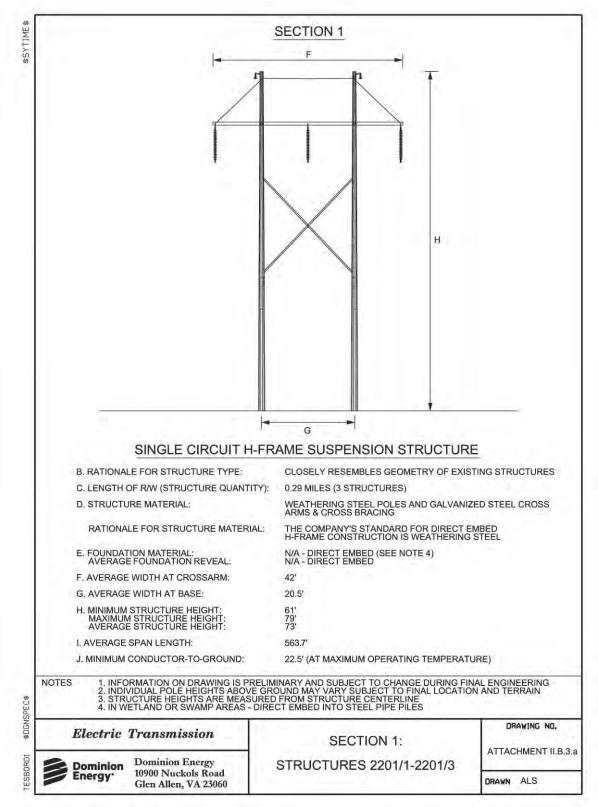


Figure 2-4: Representative proposed structures (2201/1 – 2201/3). Source: Dominion Energy

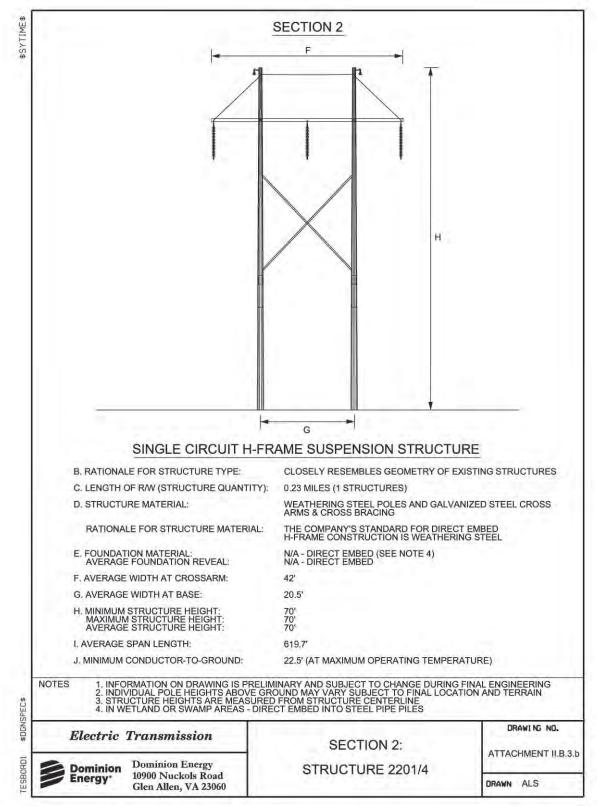


Figure 2-5: Proposed structure 2201/4. Source: Dominion Energy

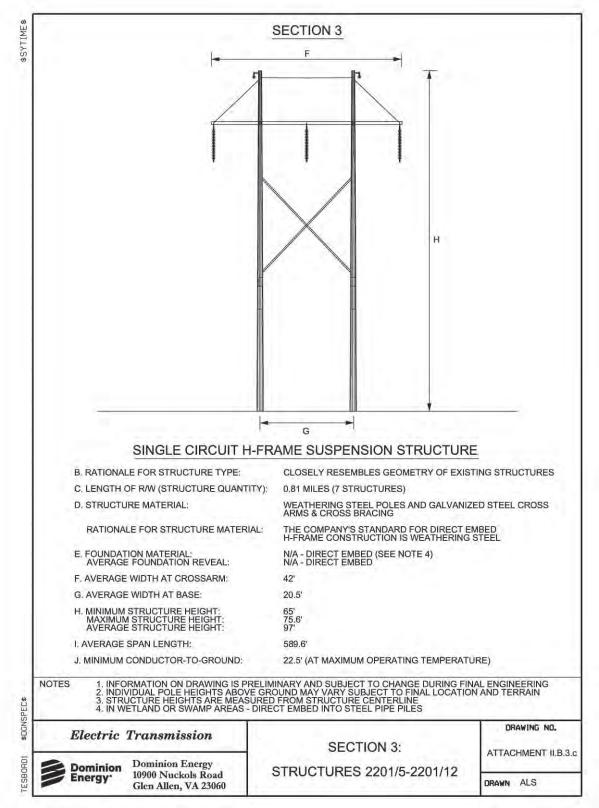


Figure 2-6: Representative proposed structures (2201/5 - 2201/12). Source: Dominion Energy

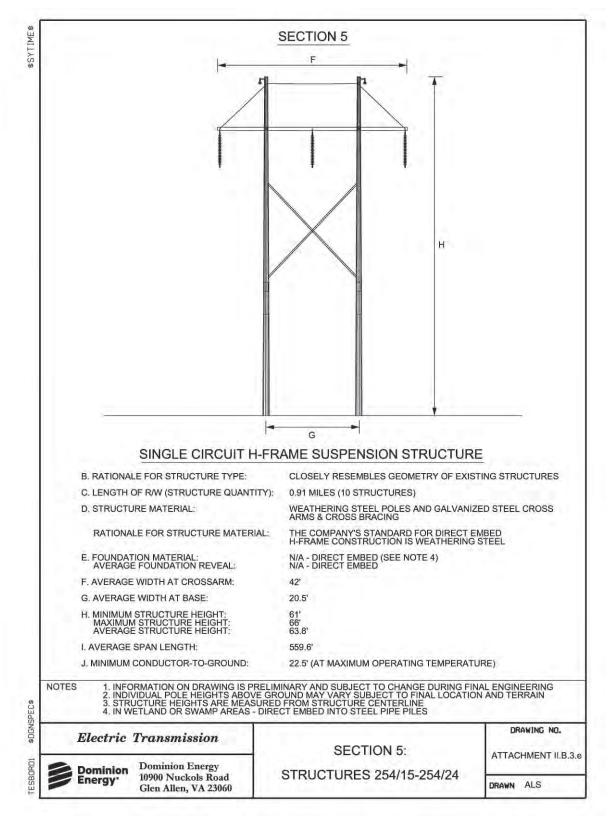


Figure 2-7: Representative proposed structures (254/15 – 254/24). Source: Dominion Energy

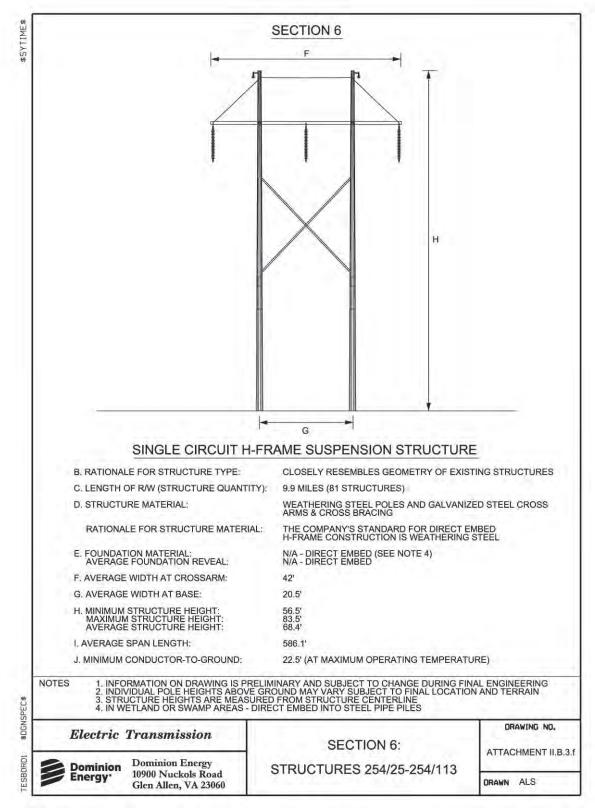


Figure 2-8: Representative proposed structures (254/25 - 254/113). Source: Dominion Energy

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3. RESEARCH DESIGN

The intent of this effort was to identify all known historic properties within the vicinity of the proposed project area in order to assess them for potential impacts brought about by the project. Historic properties include architectural and archaeological (terrestrial and underwater) resources, historic and cultural landscapes, battlefields, and historic districts. For each previously recorded historic property, an examination of property documentation, current aerial photography, and a field reconnaissance was undertaken to assess each property's integrity of feeling, setting, and association, and to provide photo documentation of the property including views toward the proposed project. The D+A personnel who directed and conducted this survey meet the professional qualification standards of the Department of the Interior (48 FR 44738-9).

ARCHIVAL RESEARCH

In August 2020, D+A conducted archival research with the goal of identifying all previously recorded historic properties and any additional historic property locations referred to in historic documents and other archives, as well as consultation with local informants and other professionals with intimate knowledge of the project area as appropriate. Background research was conducted at the VDHR and on the internet and included the following sources:

- > VDHR Virginia Cultural Resource Information System (V-CRIS) site files; and
- National Park Service (NPS), American Battlefield Protection Program (ABPP), maps and related documentation.

Data collection was performed according to VDHR guidance in *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (January 2008) and was organized in a multi-tier approach. As such, the effort was designed to identify all previously recorded NHL's located within 1.5-miles of the proposed project area, all historic properties listed in the NRHP, battlefields, and historic landscapes located within 1-mile of the project area, all historic properties previously determined eligible for listing in the NRHP located within 0.5-mile of the project area, and all properties located directly within the project area.

FIELD RECONNAISSANCE

Field reconnaissance included visual inspection of those previously recorded historic properties listed in the NRHP located within 1-mile of the project area, and all properties considered eligible for listing in the NRHP within 0.5-miles of the project area. Visual inspection included digital photo documentation of each property's existing conditions including its setting and views toward the proposed project. Photographs were taken of primary resource elevations, general setting, and existing viewsheds. All photographs were taken from public right-of-way or where property access was granted. No subsurface archaeological testing was conducted as part of this effort.

ASSESSMENT OF POTENTIAL IMPACTS

Following identification and field inspection of historic properties, D+A assessed each resource for potential impacts brought about by the proposed project. When assessing impacts, D+A considered those qualities and characteristics that qualify the property for listing and whether the project had the potential to alter or diminish the integrity of the property and its associated significance. Specific attention was given to determining whether or not the proposed project would introduce new visual elements into a property's viewshed, which would either directly or indirectly alter those qualities or characteristics that qualify the historic property for listing in the NRHP. Identified impacts were characterized as severe (fully visible and incompatible with character-defining viewshed or setting), moderate (partially visible and incompatible with existing viewshed or setting), or minimal (not visible and/or not out of character with existing viewscape).

REPORT PREPARATION

The results of the archival resource, field inspection, and analysis were synthesized and summarized in a summary report accompanied by maps, illustrations, and photographs as appropriate. All research material and documentation generated by this project is on file at D+A's office in Midlothian, Virginia.

4. ARCHIVAL RESEARCH

This section includes a summary of efforts to identify previously known and recorded cultural resources within the tiered project buffers. It includes lists, maps, and descriptive data on all previously conducted cultural resource surveys, and previously recorded architectural resources and archaeological sites according to the VDHR archives and VCRIS database.

PREVIOUSLY SURVEYED AREAS

VDHR and VCRIS records indicate that there have been seven prior Phase I cultural resource surveys within one mile of the project area, five of which directly included portions of the project area. These surveys are at minimum archaeological in nature, although some include architectural resources as well. The five surveys that include portions of the project area were conducted for a variety of project types and purposes, including a comprehensive county-wide assessment, a linear pipeline project, a mining study, and two solar power generation site surveys. The previously conducted cultural resource surveys are listed in Table 4-1 and illustrated in Figures 4-1 through 4-3.

| VDHR Survey # | Title | Author | Date |
|------------------|---|---------------------------|------|
| | | Thunderbird | - |
| | A Preliminary Archeological Reconnaissance of | Archaeological Associates | |
| | Locations in Greensville County, Virginia and | (Thunderbird Research | |
| GV-004 | Northampton County, North Carolina | Corp.) | 1985 |
| | | Thunderbird | |
| | | Archaeological Associates | |
| | An Intensive Study of Four Areas Along Fontaine | (Thunderbird Research | |
| GV-005 | Creek, Greensville County, Virginia | Corp.) | 1985 |
| | Phase I Cultural Resource Survey of Three Falls Zone | (College of) William and | |
| | Tracts Proposed for Surface Mining, Greensville | Mary Center for | |
| GV-025 | County, Virginia and Halifax County, North Carolina | Archaeological Research | 1992 |
| | Phase I Cultural Resources Survey of Approximately | | |
| | 5.735 Miles of Proposed Brink Pipeline, City of | James River Institute for | |
| GV-032 | Emporia and Greensville County, Virginia | Archaeology | 2008 |
| | Phase I Cultural Resources Survey of the ±665 | | |
| | hectare (±1643 acre) Sadler Project Area, Greensville | | |
| GV-049 | County, Virginia | Dutton & Associates | 2018 |
| | A Phase I Cultural Resources Survey of | | |
| | Approximately 846 Acres for the Proposed Meherrin | Stantec Consulting | |
| GV-056 | Solar Site in Greensville County, Virginia | Services | 2019 |
| | Phase I Archaeological Survey of Proposed Solo | | |
| PG-085 | Pipeline Vol. I-IV | Gray and Pape, Inc. | 1999 |

Table 4-1: Previously conducted cultural resource surveys within 1-mile of the Project Area (orange highlight denote surveys that included portions of the project area). Source: VDHR.

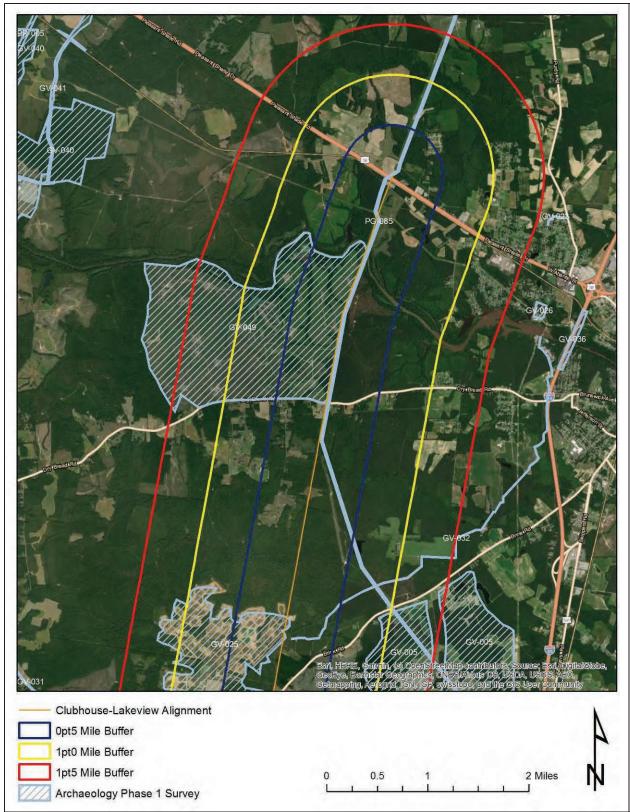


Figure 4-1: Previously conducted phase I surveys within 1-mile of the project area (northern portion). Source: VCRIS

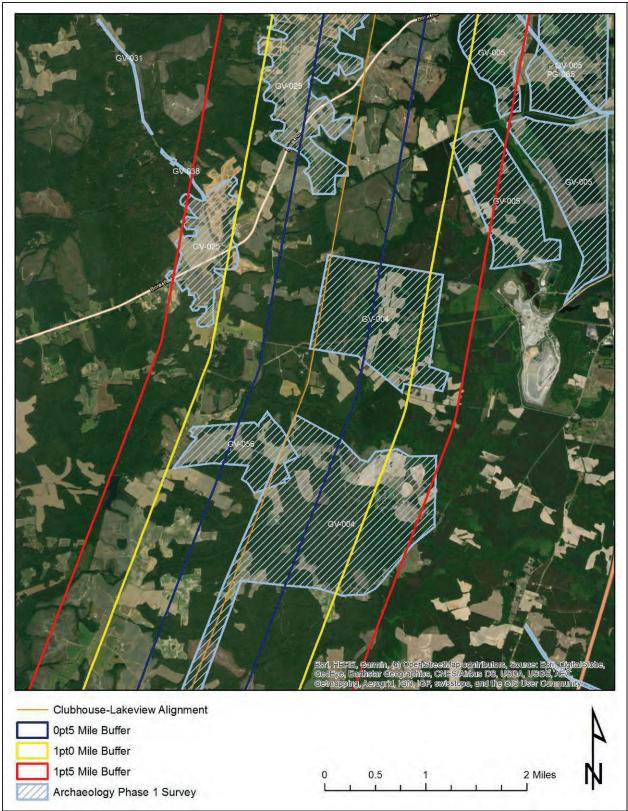


Figure 4-2: Previously conducted phase I surveys within 1-mile of the project area (central portion). Source: VCRIS

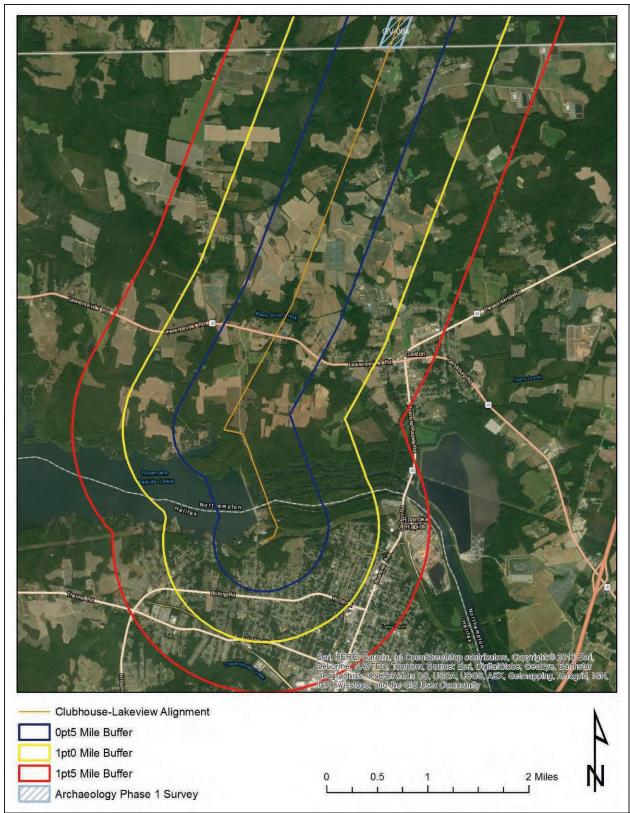


Figure 4-3: Previously conducted phase I surveys within 1-mile of the project area (southern portion). Source: VCRIS

ARCHITECTURAL RESOURCES

Review of the VDHR VCRIS inventory records revealed a total of 93 previously recorded architectural resources are located within 1.5-miles of the proposed project. Of these, there are no NHLs located within 1.5-miles of the proposed project, no properties listed in the NRHP or battlefields located within 1-mile of the project, and one property that has been determined eligible for listing in the NRHP within 0.5-miles of the project.

The one previously recorded NRHP-eligible property located within one-half mile of the project area is the Chambliss House (VDHR# 040-0010), a c.1838 Greek Revival dwelling that was determined eligible in 1999 for significant associations to the Chambliss family, as well as intact and distinctive architecture.

Table 4-2 provides a list of all previously recorded architectural resources within 1.5-miles of the project area and Table 4-3 lists NRHP-listed and eligible resources within their respective buffered tiers. Maps of all previously recorded architectural resources within 1.5-miles of the project are depicted in Figures 4-4 through 4-6 and maps of NRHP-listed and Eligible resources are found in Figure 4-7 through 4-9.

| VDHR # | Resource Name/ Address | NRHP Status |
|---------------|---------------------------------------|-------------------------|
| | Cedar Lawn (Historic), Chaplin Place | |
| | (Current Name), House, Brunswick Road | |
| 040-0003 | (Function/Location) | Not Evaluated |
| | Chambliss House (Historic), Woodview | DHR Board Det. |
| 040-0010 | (Historic/Current) | Eligible |
| 040-0021 | House, Route 677 (Function/Location) | Not Evaluated |
| 040-0022 | House, Route 677 (Function/Location) | Not Evaluated |
| 040-0025 | House, Route 621 (Function/Location) | Not Evaluated |
| 040-0026 | House, Route 621 (Function/Location) | Not Evaluated |
| 040-0030 | House, Route 650 (Function/Location) | Not Evaluated |
| 040-0031 | Hicks House (Historic) | Not Evaluated |
| 040-0032 | House, Rt. 679 (Function/Location) | Not Evaluated |
| | House, Pine Log Road (Route 633) | |
| 040-0033 | (Function/Location) | DHR Staff: Not Eligible |
| 040-0034 | Gordon-Robinson Cemetery (Historic) | DHR Staff: Not Eligible |
| | Farmstead, Pine Log Road (Route 633) | |
| 040-0035 | (Function/Location) | DHR Staff: Not Eligible |
| 040-0036 | Forest Hill Baptist Church (Historic) | DHR Staff: Not Eligible |
| | House, 2342 Pine Log Road | |
| 040-0037 | (Function/Location) | DHR Staff: Not Eligible |
| | House, Pine Log Road | |
| 040-0038 | (Function/Location) | DHR Staff: Not Eligible |
| | Hill House (Historic/Current), House, | |
| 040-0039 | Pine Log Road (Function/Location) | DHR Staff: Not Eligible |
| 040-0040 | Justice House (Historic/Current) | Not Evaluated |
| | Ligon, George B., Store | Not Evaluated |
| 040-0041 | (Historic/Current) | |
| 040-0044 | House, Brink Road (Function/Location) | DHR Staff: Not Eligible |
| 040-0045 | Robinson House and Cemetery | DHR Staff: Not Eligible |

Table 4-2: Previously recorded architectural resources within 1.5-miles of the project area (bold listings denote sites determined eligible for the NRHP).

| VDHR # | Resource Name/ Address | NRHP Status |
|----------|---|---------------------------|
| | (Historic/Current), Robinson Place | |
| | (Historic) | |
| 040-0046 | Brink Store (Historic) | DHR Staff: Not Eligible |
| | Brink Polling House (Current), Voting | |
| | House, Brink Road | |
| 040-0047 | (Function/Location) | DHR Staff: Eligible |
| | Brink Ruritan Club (Current), Brink | |
| 040-0048 | School (Historic) | DHR Staff: Not Eligible |
| 040-0049 | House, Route 627 (Function/Location) | DHR Staff: Not Eligible |
| 040-0050 | Davis Place (Current) | DHR Staff: Not Eligible |
| 040-0051 | House, Route 627 (Function/Location) | DHR Staff: Not Eligible |
| 040-0052 | House, Route 627 (Function/Location) | DHR Staff: Not Eligible |
| 040-0053 | House, Route 627 (Function/Location) | DHR Staff: Not Eligible |
| 010 0000 | House, 135 Independence Church Rd (Rt | Diffe Sum ret Englete |
| 040-0054 | 633) (Function/Location) | DHR Staff: Not Eligible |
| 0.0000 | House, Brink Road (Route 627) | |
| 040-0055 | (Function/Location) | DHR Staff: Not Eligible |
| 010 0000 | House, Pine Log Road/Route 633 | Diffe Suite 1 (or Englore |
| 040-0056 | (Function/Location) | DHR Staff: Not Eligible |
| | House, 750 Pine Log Road (Route 633) | Diffe Sum ret Englete |
| 040-0057 | (Function/Location) | DHR Staff: Not Eligible |
| 040-0058 | House, Route 627 (Function/Location) | DHR Staff: Not Eligible |
| 040-0059 | House, Route 627 (Function/Location) | DHR Staff: Not Eligible |
| 040-5001 | House, Route 632 (Function/Location) | Not Evaluated |
| 0.00001 | Schoolhouse, Rock Bridge Road (Route | Not Evaluated |
| 040-5010 | 639) (Function/Location) | T (of E) (undered |
| 040-5014 | Round Hill Church (Historic) | Not Evaluated |
| 0102011 | Store/Gas Station, 6838 Brink Rd (Rt | |
| 040-5051 | 627) (Function/Location) | DHR Staff: Not Eligible |
| 040-5067 | Cook Family Cemetery (Descriptive) | Not Evaluated |
| 0.00000 | House, 422 Collins Road | |
| 040-5068 | (Function/Location) | DHR Staff: Not Eligible |
| | House, 2501 Rock Bridge Road | 8 |
| 040-5126 | (Function/Location) | DHR Staff: Not Eligible |
| | Outbuilding, 422 Collins Road | <u> </u> |
| 040-5128 | (Function/Location) | DHR Staff: Not Eligible |
| 040-5129 | House, Brink Road (Function/Location) | DHR Staff: Not Eligible |
| 040-5131 | House, Hilltop Lane (Function/Location) | DHR Staff: Not Eligible |
| | House, Cattail Creek Road | 2 |
| 040-5138 | (Function/Location) | DHR Staff: Not Eligible |
| | House, 6755 Brink Road | <u> </u> |
| 040-5139 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 100 Lundy Lane | <u> </u> |
| 040-5143 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 4279 Dry Bread Road | |
| 040-5144 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 4131 Dry Bread Road | |
| 040-5145 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 4070 Dry Bread Road | <u> </u> |
| 040-5146 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 3758 Dry Bread Road | <u> </u> |
| 040-5147 | (Function/Location) | DHR Staff: Not Eligible |

| VDHR # | Resource Name/ Address | NRHP Status |
|---------------|---|--------------------------|
| | Dwelling, 3658 Dry Bread Road | |
| 040-5148 | (Function/Location) | DHR Staff: Not Eligible |
| 0.0001.0 | Dwelling, 167 Allen Town Road | |
| 040-5149 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 239 Allen Town Road | 6 |
| 040-5150 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 286 Allen Town Road | 6 |
| 040-5151 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 363 Allen Town Road | |
| 040-5152 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 383 Allen Town Road | |
| 040-5153 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 399 Allen Town Road | |
| 040-5154 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 502 Allen Town Road | |
| 040-5155 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 410 Allen Town Road | |
| 040-5156 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 360 Allen Town Road | |
| 040-5157 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 258 Allen Town Road | |
| 040-5158 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 3338 Dry Bread Road | |
| 040-5159 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 3294 Dry Bread Road | |
| 040-5160 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 47 Camp Ground Road | |
| 040-5161 | (Function/Location) | DHR Staff: Not Eligible |
| | Commercial Building, 63 Camp Ground | |
| 040-5162 | Road (Function/Location) | DHR Staff: Not Eligible |
| | Cemetery, Camp Ground Road | |
| | (Function/Location), James Delbridge | |
| 040-5163 | Cemetery (Current Name) | DHR Staff: Not Eligible |
| | Dwelling, 419 Camp Ground Road | |
| 040-5164 | (Function/Location) | DHR Staff: Not Eligible |
| 0.40 51 65 | Dwelling, 423 Camp Ground Road | |
| 040-5165 | (Function/Location) | DHR Staff: Not Eligible |
| 040 5166 | Dwelling, 447 Camp Ground Road | |
| 040-5166 | (Function/Location) | DHR Staff: Not Eligible |
| 040 51(7 | Dwelling, 463 Camp Ground Road | |
| 040-5167 | (Function/Location) | DHR Staff: Not Eligible |
| 040 5169 | Dwelling, Camp Ground Road | DUD Staff. Nat Elizible |
| 040-5168 | (Function/Location) | DHR Staff: Not Eligible |
| 040 5160 | Dwelling, 215 Camp Ground Road (Function/Location) | DHR Staff: Not Eligible |
| 040-5169 | (Function/Location) Dwelling, Dry Bread Road | DIR Stall: Not Eligible |
| 040 5170 | (Function/Location) | DUD Staff: Nat Elizible |
| 040-5170 | (Function/Location) Dwelling, 2998 Dry Bread Road | DHR Staff: Not Eligible |
| 040-5171 | (Function/Location) | DHR Staff: Not Eligible |
| 0-10-01/1 | Dwelling, 2830 Dry Bread Road | DTIK Stan. Not Eligible |
| 040-5172 | (Function/Location) | DHR Staff: Not Eligible |
| 040-31/2 | Dwelling, 2810 Dry Bread Road | DIIK Stall. Not Eligible |
| 040-5173 | (Function/Location) | DHR Staff: Not Eligible |
| 0-0-01/5 | | DIIK Stall. Not Eligible |

| VDHR # | Resource Name/ Address | NRHP Status |
|----------|-------------------------------|-------------------------|
| | Dwelling, 2706 Dry Bread Road | |
| 040-5174 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, Dry Bread Road | |
| 040-5175 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 2540 Dry Bread Road | |
| 040-5176 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 46 Bob White Court | |
| 040-5177 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 2502 Dry Bread Road | |
| 040-5178 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, 2418 Dry Bread Road | |
| 040-5179 | (Function/Location) | DHR Staff: Not Eligible |
| | Dwelling, Lundy Road | |
| 040-5180 | (Function/Location) | DHR Staff: Not Eligible |
| | House, 2494 Pine Log Road | |
| 040-5199 | (Function/Location) | DHR Staff: Not Eligible |
| | House, 2315 Pine Log Road | |
| 040-5200 | (Function/Location) | DHR Staff: Not Eligible |
| | House, 1863 Pine Log Road | |
| 040-5201 | (Function/Location) | DHR Staff: Not Eligible |
| | House, 1735 Pine Log Road | |
| 040-5202 | (Function/Location) | DHR Staff: Not Eligible |
| | House, 1491 Pine Log Road | |
| 040-5203 | (Function/Location) | DHR Staff: Not Eligible |
| | House, 1290 Pine Log Road | |
| 040-5204 | (Function/Location) | DHR Staff: Not Eligible |
| | House, 858 Pine Log Road | |
| 040-5205 | (Function/Location) | DHR Staff: Not Eligible |
| | House, 695 Pine Log Road | |
| 040-5206 | (Function/Location) | DHR Staff: Not Eligible |
| | House, 570 Pine Log Road | |
| 040-5207 | (Function/Location) | DHR Staff: Not Eligible |

Table 4-3: Previously recorded architectural resources within their respective tiered buffer zones for the Clubhouse-Dry Bread Line #2201 and Dry Bread- Lakeview Line #254 230kV Virginia Rebuild Project as specified in the VDHR Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia

| Buffer(miles) | Considered Resources | VDHR # | Description |
|---------------|--|----------|--|
| 1.5 | National Historic Landmarks | None | N/A |
| | | | |
| | National Register Properties (Listed) | None | N/A |
| 1.0 | Battlefields | None | N/A |
| | Historic Landscapes | None | N/A |
| | | | |
| 0.5 | National Register- Eligible | 040-0010 | Chambliss House (Historic), Woodview (Historic/Current) |

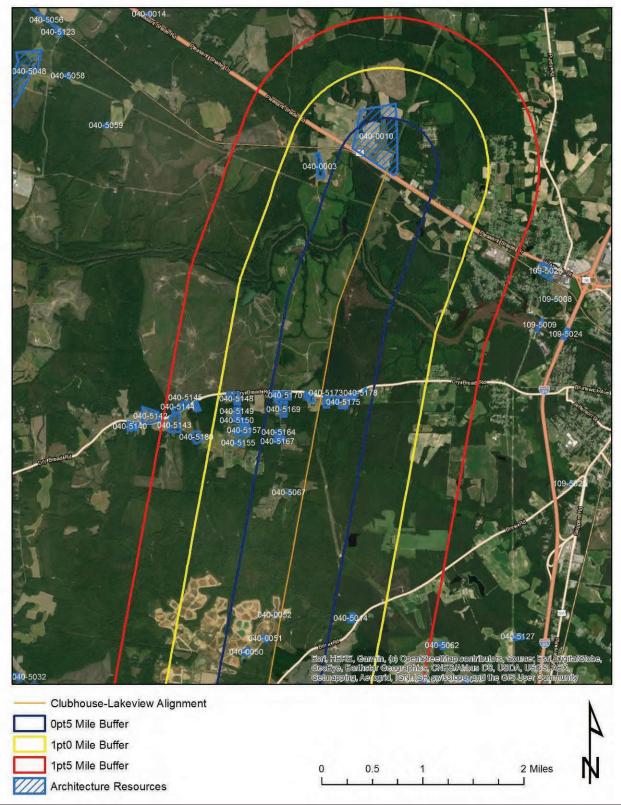


Figure 4-4: All previously identified architectural resources within 1.5-miles of the project area (northern portion). Source: VCRIS

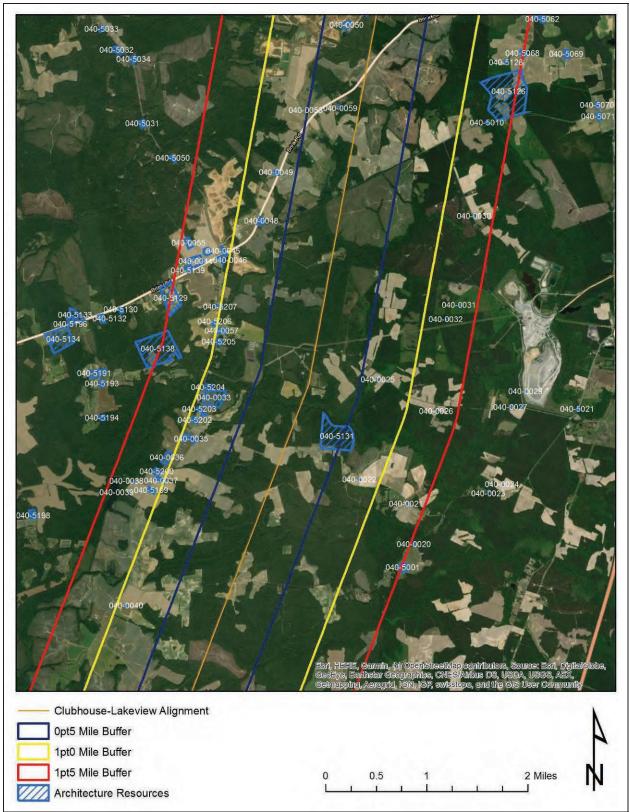


Figure 4-5: All previously identified architectural resources within 1.5-miles of the project area (central portion). Source: VCRIS

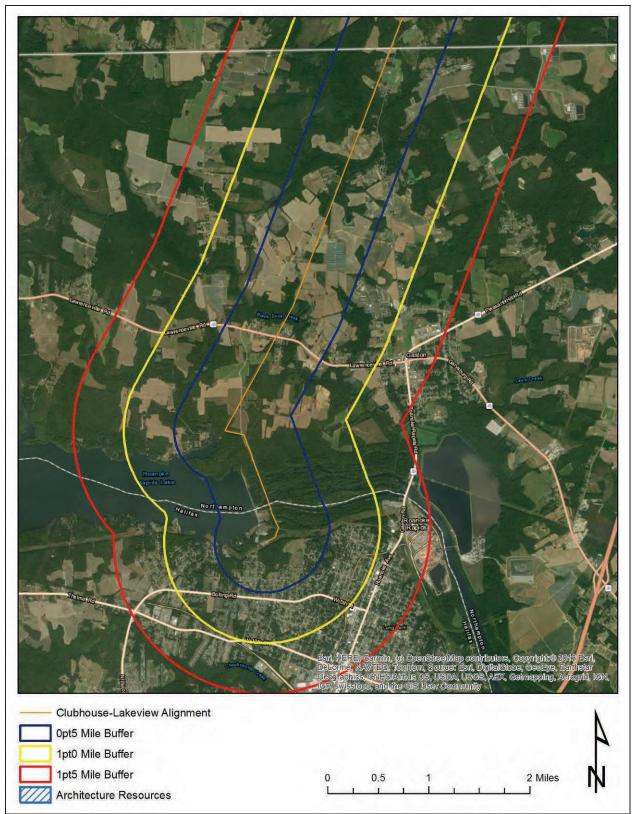


Figure 4-6: All previously identified architectural resources within 1.5-miles of the project area (southern portion). Source: VCRIS

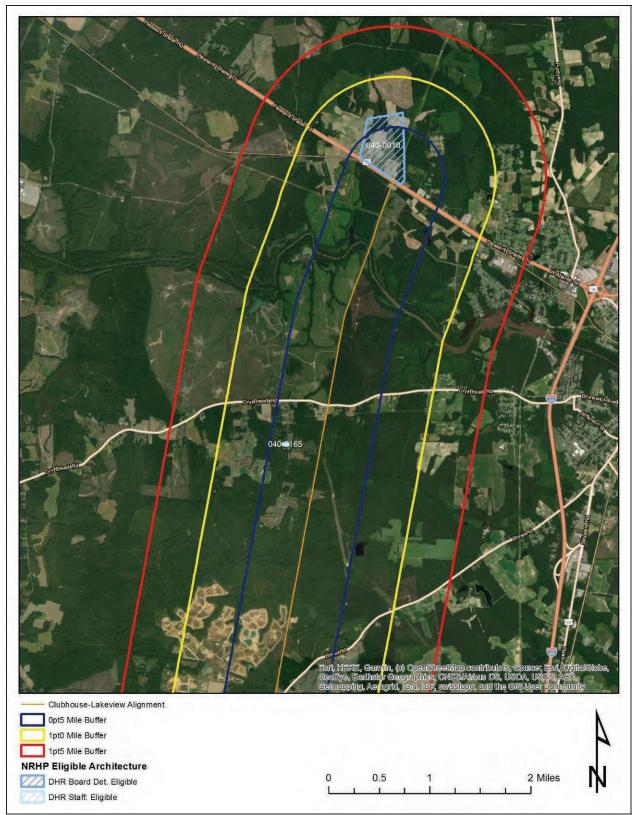


Figure 4-7: NRHP-Listed and Eligible architectural resources within 1.5-miles of the project area (northern portion). Source: VCRIS

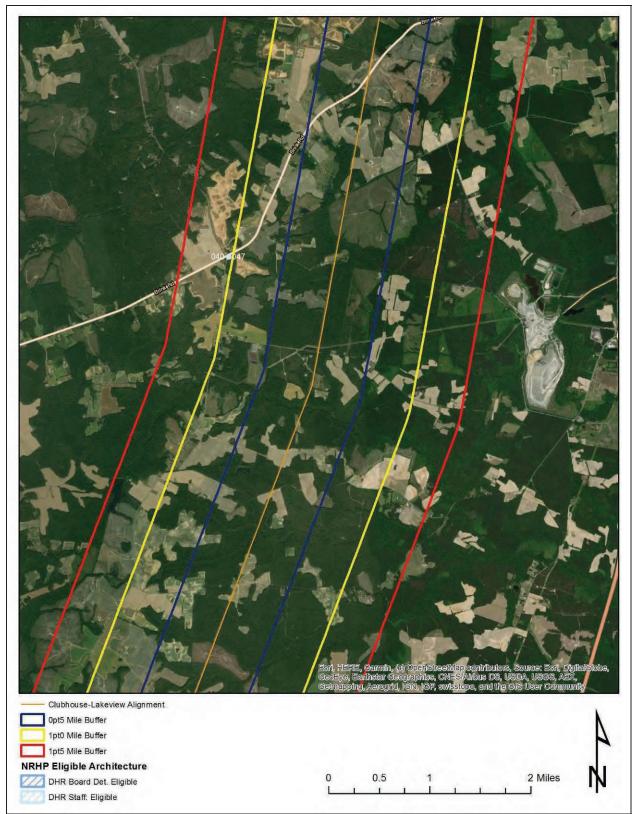


Figure 4-8: NRHP-Listed and Eligible architectural resources within 1.5-miles of the project area (central portion). Source: VCRIS

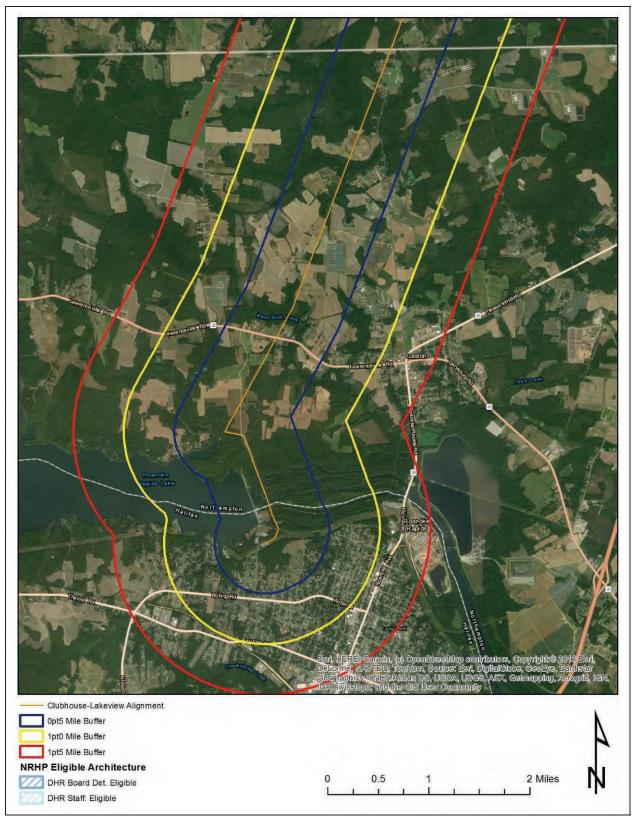


Figure 4-9: NRHP-Listed and Eligible architectural resources within 1.5-miles of the project area (southern portion). Source: VCRIS

ARCHAEOLOGICAL SITES

Review of the VDHR VCRIS records reveals there are one-hundred-twenty (120) previously recorded archaeological sites within one mile of the project area. Eighteen (18) of these sites are located directly within or adjacent to the project area (within 100 feet of the project centerline). Of the sites within one mile, four have been determined potentially eligible for listing in the NRHP, 23 have been determined not eligible, and the remaining have not been formally evaluated. The sites within or adjacent to the project area primarily consist of prehistoric lithic scatters, camps, and occupation sites. There is also one historic-period domestic site and two artifact scatters. None of the sites within or adjacent to the project area have been previously determined eligible for listing in the NRHP. The two Reconstruction-era artifact scatters have been determined not eligible for listing in the NRHP by the VDHR, and the remaining sites have not been formally evaluated.

Table 4-4 lists the previously recorded archaeological resources within one-mile of the project area and Table 4-5 lists previously recorded sites that located within or adjacent to the project area (within 100 feet of the centerline). Figures 4-10 through 4-12 illustrates the locations of the previously recorded sites in relation to the project area.

| VDHR ID # | Site Category | Site Type | Temporal Association | NRHP Status |
|--------------|----------------|------------------|---------------------------------------|---------------|
| | | | Historic/Unknown, Middle Archaic | |
| | | | (6500 - 3001 B.C.), Middle Woodland | |
| 44GV0090 | Domestic | Camp, temporary | (300 - 999 A.D.) | Not Evaluated |
| | | _ | Prehistoric/Unknown (15000 B.C | Not Evaluated |
| 44GV0091 | Domestic | Camp, temporary | 1606 A.D.) | |
| 44GV0092 | Domestic | Hamlet | Archaic (8500 - 1201 B.C.) | Not Evaluated |
| 44GV0093 | Domestic | Dwelling, single | <null></null> | Not Evaluated |
| 44GV0094 | Domestic | Camp, temporary | Middle Archaic (6500 - 3001 B.C.) | Not Evaluated |
| | | | Prehistoric/Unknown (15000 B.C | Not Evaluated |
| 44GV0095 | Domestic | Camp, temporary | 1606 A.D.) | |
| | | | Middle Archaic (6500 - 3001 B.C.), | Not Evaluated |
| | Domestic, | Camp, temporary, | 19th Century: 2nd half (1850 - 1899), | |
| 44GV0104 | Funerary | Cemetery | 20th Century: 1st half (1900 - 1949) | |
| | | | Prehistoric/Unknown (15000 B.C | Not Evaluated |
| 44GV0105 | <null></null> | <null></null> | 1606 A.D.) | |
| 44GV0106 | Domestic | Camp, temporary | Middle Archaic (6500 - 3001 B.C.) | Not Evaluated |
| | | | Prehistoric/Unknown (15000 B.C | Not Evaluated |
| 44GV0107 | <null></null> | <null></null> | 1606 A.D.) | |
| | | | Prehistoric/Unknown (15000 B.C | Not Evaluated |
| 44GV0108 | <null></null> | <null></null> | 1606 A.D.) | N. F. 1. 1 |
| 446370100 | | Camp, temporary, | | Not Evaluated |
| 44GV0109 | Domestic | Dwelling, single | Late Archaic (3000 - 1201 B.C.) | |
| | DSS Legacy, | | | Not Evaluated |
| | Industry/Proc | т 'л' | Middle Archaic (6500 - 3001 B.C.), | |
| 4403/0110 | essing/Extract | Lithic quarry, | Late Archaic (3000 - 1201 B.C.), | |
| 44GV0110 | ion | Lithic workshop | Woodland (1200 B.C 1606 A.D.) | |

Table 4-4: Previously recorded archaeological resources within one mile of the project area. Bold listings denote sites determined eligible for the NRHP. Orange highlight denotes site is located within or adjacent to the project area

| 44GV0112 I 44GV0113 I 44GV0114 I | Domestic Domestic Domestic | Camp, temporary | Woodland (1200 B.C 1606 A.D.) | |
|--|----------------------------------|------------------------------------|--|---------------|
| 44GV0113 I 44GV0114 I | | | | Not Evaluated |
| 44GV0114 I | Domestic | Camp, temporary | Early Archaic (8500 - 6501 B.C.) | Not Evaluated |
| | Domestic | Camp, temporary | Archaic (8500 - 1201 B.C.) | Not Evaluated |
| | | * * * | Late Archaic (3000 - 1201 B.C.), | Not Evaluated |
| 440300115 | Domestic | Camp, temporary | Middle Woodland (300 - 999 A.D.) | |
| 44GV0115 I | Domestic | Dwelling, single | Historic/Unknown, Late Archaic (3000 - 1201 B.C.) | Not Evaluated |
| 44GV0116 I | Domestic | Camp, temporary | Late Archaic (3000 - 1201 B.C.), Middle Woodland (300 - 999 A.D.) | Not Evaluated |
| 44GV0117 I | Domestic | Camp, temporary | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| 44GV0118 I | Domestic | Camp, temporary | Middle Archaic (6500 - 3001 B.C.) | Not Evaluated |
| 44GV0119 I | Domestic | Camp, temporary | Middle Woodland (300 - 999 A.D.) | Not Evaluated |
| 44GV0120 I | Domestic | Camp, temporary | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| 44GV0124 < | <null></null> | <null></null> | Archaic (8500 - 1201 B.C.), Middle Woodland (300 - 999 A.D.) | Not Evaluated |
| | Domestic | Camp, temporary | Middle Archaic (6500 - 3001 B.C.) | Not Evaluated |
| 44GV0126 I | Domestic | Camp, temporary | Middle Woodland (300 - 999 A.D.) | Not Evaluated |
| | Domestic | Camp, temporary | Late Woodland (1000 - 1606) | Not Evaluated |
| | Domestic | Camp, temporary | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| | | 1, 1, 2 | Prehistoric/Unknown (15000 B.C | Not Evaluated |
| 44GV0129 I | Domestic | Camp, temporary | 1606 A.D.) | |
| 44GV0130 I | Domestic | Dwelling, single | <null></null> | Not Evaluated |
| 44GV0131 I | Domestic | Camp, temporary | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| 44GV0134 I | Domestic | Camp, temporary | Early Archaic (8500 - 6501 B.C.) | Not Evaluated |
| 44GV0135 I | Domestic | Camp, temporary | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| I | Domestic, DSS Legacy | Dwelling, single, Other | Historic/Unknown | Not Evaluated |
| | Domestic | Camp, temporary | Early Archaic (8500 - 6501 B.C.) | Not Evaluated |
| | Domestic | Camp, temporary | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| | Domestic | Camp, temporary | <null></null> | Not Evaluated |
| | Domestic | Camp, temporary | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| | Domestic | Camp, temporary | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| | Domestic | Camp, temporary | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| | Domestic | Camp, temporary | Late Woodland (1000 - 1606) | Not Evaluated |
| | Domestic | Camp, temporary | Middle Archaic (6500 - 3001 B.C.) | Not Evaluated |
| | Domestic | Hamlet | Middle Woodland (300 - 999 A.D.) | Not Evaluated |
| | Domestic | Hamlet | Middle Archaic (6500 - 3001 B.C.), Middle Woodland (300 - 999 A.D.) | Not Evaluated |
| | Domestic | Camp, temporary | Middle Woodland (300 - 999 A.D.) Middle Woodland (300 - 999 A.D.) | Not Evaluated |
| | Domestic | Camp, temporary Camp, temporary | Middle Woodland (300 - 999 A.D.) Middle Woodland (300 - 999 A.D.) | Not Evaluated |
| | Domestic | Camp, temporary | Middle Woodland (300 - 999 A.D.) Middle Woodland (300 - 999 A.D.) | Not Evaluated |

| VDHR ID # | Site Category | Site Type | Temporal Association | NRHP Status |
|----------------------|--|--------------------------------------|---|------------------------------------|
| 44GV0154 | Domestic | Camp, temporary | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| 44GV0155 | Domestic, DSS Legacy | Camp, temporary, Other | Historic/Unknown, Middle Archaic (6500 - 3001 B.C.) | Not Evaluated |
| 44GV0156 | Domestic | Dwelling, single | Historic/Unknown, Late Archaic (3000 - 1201 B.C.) | Not Evaluated |
| 44GV0157 | Domestic | Camp, temporary | <null></null> | Not Evaluated |
| 44GV0159 | Domestic | Camp, temporary | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| 44GV0160 | Domestic | Camp, temporary, Dwelling, single | Historic/Unknown, Paleo-Indian (15000 - 8501 B.C.), Early Archaic (8500 - 6501 B.C.) | Not Evaluated |
| 44GV0161 | Domestic | Camp, temporary | Late Woodland (1000 - 1606) | Not Evaluated |
| 44GV0162 | Domestic, DSS Legacy | Dwelling, single, Other | Historic/Unknown, Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| 44GV0163 | Domestic | Camp, temporary | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| 44GV0164 | Domestic | Camp, temporary | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| 44GV0165 | Domestic | Camp, temporary, Dwelling, single | Historic/Unknown, Middle Woodland (300 - 999 A.D.) | Not Evaluated |
| 44GV0167 | Domestic | Camp, temporary | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| 44GV0168 | Domestic | Camp, temporary | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| 44GV0202 | Domestic | Camp, temporary | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| 44GV0203 | Domestic | Camp, temporary | Middle Woodland (300 - 999 A.D.) | Not Evaluated |
| 44GV0204 | Domestic | Farmstead | 19th Century (1800 - 1899), 20th Century: 1st half (1900 - 1949) | Not Evaluated |
| 44GV0262 | DSS Legacy | Camp | Middle Archaic (6500 - 3001 B.C.), Late Archaic (3000 - 1201 B.C.), Woodland (1200 B.C 1606 A.D.) | Not Evaluated |
| 44GV0263 | DSS Legacy | Camp | Prehistoric/Unknown (15000 B.C 1606 A.D.) | Not Evaluated |
| 44GV0264 | DSS Legacy | Camp | Middle Archaic (6500 - 3001 B.C.) | Not Evaluated |
| 44GV0265 | DSS Legacy | Camp | Middle Archaic (6500 - 3001 B.C.) Prehistoric/Unknown (15000 B.C 1606 A.D.), 20th Century (1900 - | Not Evaluated Not Evaluated |
| 44GV0266 | Domestic | Dwelling, single | 1999) | |
| 44GV0269 | DSS Legacy | Camp | Early Archaic (8500 - 6501 B.C.) | Not Evaluated |
| 44GV0270 | DSS Legacy | Camp | Woodland (1200 B.C 1606 A.D.) | Not Evaluated |
| 44GV0271 | DSS Legacy | Camp | Woodland (1200 B.C 1606 A.D.) | Not Evaluated |
| 44GV0272 | DSS Legacy | Camp | <null></null> | Not Evaluated |
| 44GV0273 | DSS Legacy | Railroad bed | 19th Century (1800 - 1899) | Not Evaluated DHR Staff: Elicitude |
| 44GV0274 | Domestic Demostic | Camp, temporary | Woodland (1200 B.C 1606 A.D.) | Eligible Not Evaluated |
| 44GV0275 44GV0279 | Domestic DSS Legacy, Subsistence/A | Camp, temporary Mill, Well | Middle Archaic (6500 - 3001 B.C.) 20th Century: 1st half (1900 - 1949) | Not Evaluated |

| VDHR ID # | Site Category | Site Type | Temporal Association | NRHP Status |
|--------------|----------------|-------------------|--|----------------------------|
| | griculture | | | |
| 44GV0281 | DSS Legacy | Mill | 20th Century: 2nd half (1950 - 1999) | Not Evaluated |
| | Domestic, | | | |
| | Subsistence/A | Dwelling, single, | | DHR Staff: Not |
| 44GV0282 | griculture | Well | <null></null> | Eligible |
| 44GV0283 | Domestic | Dwelling, single | 19th Century: 4th quarter (1875 - 1899) | Not Evaluated |
| 44GV0287 | Domestic | Dwelling, single | 19th Century (1800 - 1899) | Not Evaluated |
| 44GV0288 | Domestic | Farmstead | 20th Century (1900 - 1999) | Not Evaluated |
| 446340000 | Domestic, | Cemetery, | 19th Century (1800 - 1899), 20th | DHR Staff: Not |
| 44GV0289 | Funerary | Dwelling, single | Century (1900 - 1999) | Eligible |
| | | | 18th Century: 4th quarter (1775 - 1799), 19th Century: 1st quarter (1800 | DHR Staff: Not |
| 44GV0290 | Domestic | Farmstead | - 1825) | Eligible |
| 44GV0290 | Domestic | Dwelling, single | 20th Century (1900 - 1999) | Not Evaluated |
| 440 0291 | Domestic | Dwennig, single | 18th Century: 4th quarter (1775 - | Not Evaluated |
| 1 | | | 1799), 19th Century (1800 - 1899), | Not Evaluated |
| 44GV0292 | Domestic | Farmstead | 20th Century (1900 - 1999) | |
| | Domestic, | | | Not Evaluated |
| | Subsistence/A | Farmstead, | | |
| 44GV0293 | griculture | Outbuilding | <null></null> | |
| | | | 19th Century: 2nd half (1850 - 1899), | Not Evaluated |
| 44GV0294 | Domestic | Dwelling, single | 20th Century: 1st half (1900 - 1949) | |
| 44GV0295 | Domestic | Dwelling, single | 19th Century (1800 - 1899) | Not Evaluated |
| | | | 19th Century: 2nd half (1850 - 1899), | Not Evaluated |
| 44GV0296 | DSS Legacy | Trash scatter | 20th Century: 1st half (1900 - 1949) | |
| 44034000 | D | 5 111 1 1 | 19th Century: 2nd half (1850 - 1899), | Not Evaluated |
| 44GV0297 | Domestic | Dwelling, single | 20th Century: 1st half (1900 - 1949) | Nut Franka 1 |
| | | | Prehistoric/Unknown (15000 B.C 1606 A.D.), 19th Century: 4th quarter | Not Evaluated |
| 44GV0298 | DSS Legacy | Trash scatter | (1875 - 1899) | |
| 44GV0299 | Domestic | Dwelling, single | 20th Century: 1st quarter (1900 - 1924) | Not Evaluated |
| 440 (02)) | Domestic, | Dwennig, single | 20th Century: 1st quarter (1900 - 1924) | Not Evaluated |
| | Funerary, | Cemetery, | | 1 tot E valuated |
| | Subsistence/A | Dwelling, single, | 19th Century: 1st quarter (1800 - | |
| 44GV0300 | griculture | Outbuilding | 1825), 20th Century (1900 - 1999) | |
| | Domestic, | Dwelling, single, | 20th Century: 2nd/3rd quarter (1925 - | Not Evaluated |
| 44GV0301 | DSS Legacy | Trash scatter | 1974) | |
| 44000000 | | | | DHR Staff: |
| 44GV0302 | Domestic | Dwelling, single | 20th Century: 1st half (1900 - 1949) | Eligible |
| 44GV0312 | Domestic | Farmstead | 20th Century (1900 - 1999) | Not Evaluated |
| | | | 19th Century: 4th quarter (1875 - 1899), 20th Century: 1st half (1900 - | DID Ct- C. N. 4 |
| 44GV0340 | DSS Legacy | Railroad bridge | 1899), 20th Century: 1st half (1900 - 1949) | DHR Staff: Not Eligible |
| -TTU V 0340 | Doo Legacy | Kanioau onuge | Middle Archaic Period (6500 - 3001 | DHR |
| | | | B.C.E), Late Archaic Period (3000 - | Evaluation |
| | | | 1201 B.C.E), Early Woodland (1200 | Committee: |
| 44GV0373 | Domestic | Camp, base | B.C.E - 299 C.E) | Eligible |
| | Industry/Proc | | | |
| | essing/Extract | | | DHR Staff: Not |
| 44GV0378 | ion | Lithic scatter | Pre-Contact | Eligible |
| 440340204 | | | The New Dominion (1946 - 1991), Post | DHR Staff: Not |
| 44GV0394 | Funerary | Cemetery | Cold War (1992 - Present) | Eligible |

| VDHR ID # | Site Category | Site Type | Temporal Association | NRHP Status |
|----------------------|--|---|---|---|
| | | | Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991), Post Cold War (1992 - | DHR Staff: Not |
| 44GV0398 44GV0406 | Domestic Domestic, Funerary | Artifact scatter Cemetery, Dwelling, single | Present) Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and Growth (1866 - 1916) | Eligible DHR Staff: Potentially Eligible |
| 44GV0407 | Domestic | Artifact scatter, Camp, base | Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860) | DHR Evaluation Committee: Not Eligible |
| 44GV0409 | Industry/Proc essing/Extract ion | Lithic scatter | Early Archaic Period (8500 - 6501 B.C.E) | DHR Evaluation Committee: Not Eligible |
| 44GV0410 | Industry/Proc essing/Extract ion | Lithic workshop | Early Archaic Period (8500 - 6501 B.C.E) | DHR Evaluation Committee: Not Eligible |
| 44GV0411 | Domestic | Artifact scatter | Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606) | DHR Staff: Not Eligible |
| 44GV0415 | Domestic | Dwelling, single | Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945) | DHR Evaluation Committee: Not Eligible |
| 44GV0416 | Industry/Proc essing/Extract ion | Lithic scatter | Pre-Contact | DHR Staff: Not Eligible |
| 44GV0418 | Domestic | Dwelling, single | Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945) | DHR Staff: Not Eligible |
| 44GV0419 | Domestic | Artifact scatter | Pre-Contact | DHR Staff: Not Eligible |
| 44GV0420 | Domestic | Dwelling, single | World War I to World War II (1917 - 1945) | DHR Staff: Not Eligible |
| 44GV0422 | Domestic | Artifact scatter | Pre-Contact | DHR Staff: Not Eligible |
| 44GV0423 | Domestic | Artifact scatter | Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945) | DHR Staff: Not Eligible |
| 44GV0441 | Domestic | Artifact scatter | Antebellum Period (1830 - 1860), Civil War (1861 - 1865), Reconstruction and | Not Evaluated |

| VDHR ID # | Site Category | Site Type | Temporal Association | NRHP Status |
|--------------|---------------|-------------------|---|----------------------------|
| | | | Growth (1866 - 1916), World War I to | |
| | | | World War II (1917 - 1945), The New Dominion (1946 - 1991) | |
| | | | Reconstruction and Growth (1866 - | |
| | | | 1916), World War I to World War II (1917 - 1945), The New Dominion | DHR Staff: Not |
| 44GV0452 | Domestic | Artifact scatter | (1946 - 1991) | Eligible |
| 44GV0453 | Indeterminate | Artifact scatter | Pre-Contact | DHR Staff: Not Eligible |
| 44030454 | Domestic | A stifuet contton | Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion | DHR Staff: Not |
| 44GV0454 | Domestic | Artifact scatter | (1946 - 1991) | Eligible DHR Staff: Not |
| 44GV0455 | Indeterminate | Artifact scatter | Pre-Contact | Eligible |
| 44GV0456 | Domestic | Artifact scatter | Reconstruction and Growth (1866 - 1916), World War I to World War II (1917 - 1945), The New Dominion (1946 - 1991) | DHR Staff: Not Eligible |
| 44GV0457 | Domestic | Artifact scatter | Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860) | DHR Staff: Not Eligible |

Table 4-5: Previously recorded archaeological sites within or adjacent to the project area for the Line 254 Clubhouse-Lakeview Rebuild project as specified in the VDHR Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia

| Buffer(miles) | Considered Resources | VDHR # | Description |
|---------------------------------------|----------------------|----------|---|
| 0.0 (within or adjacent to ROW) | Archaeological Sites | 44GV0095 | Camp, temporary - Prehistoric/Unknown (15000 B.C 1606 A.D.) Camp, temporary, Cemetery - Middle Archaic (6500 - 3001 |
| | | 44GV0104 | B.C.), 19th Century: 2nd half (1850 - 1899), 20th Century: 1st half (1900 - 1949) |
| | | 44GV0106 | Camp, temporary - Middle Archaic (6500 - 3001 B.C.) <null> - Prehistoric/Unknown</null> |
| | | 44GV0107 | (15000 B.C 1606 A.D.) |
| | | 44GV0108 | <null> - Prehistoric/Unknown (15000 B.C 1606 A.D.)</null> |
| | | | Camp, temporary - Prehistoric/Unknown (15000 |
| | | 44GV0128 | B.C 1606 A.D.) |
| | | 44GV0153 | Camp, temporary - Middle Woodland (300 - 999 A.D.) |

| Buffer(miles) | Considered Resources | VDHR # | Description |
|---------------|-----------------------------|-----------|--|
| | | | Camp, temporary - Prehistoric/Unknown (15000 |
| | | 44GV0154 | B.C 1606 A.D.) |
| | | | Camp, temporary - |
| | | 44GV0159 | Prehistoric/Unknown (15000 B.C 1606 A.D.) |
| | | | Camp, temporary - Late |
| | | 44GV0161 | Woodland (1000 - 1606) |
| | | | Dwelling, single, Other - Historic/Unknown, |
| | | | Prehistoric/Unknown (15000 |
| | | 44GV0162 | B.C 1606 A.D.) |
| | | | Camp, temporary - |
| | | 44GV0163 | Prehistoric/Unknown (15000 B.C 1606 A.D.) |
| | | 440 00105 | Camp - Middle Archaic (6500 - |
| | | | 3001 B.C.), Late Archaic (3000 - |
| | | 446330262 | 1201 B.C.), Woodland (1200 |
| | | 44GV0262 | B.C 1606 A.D.) Camp - Prehistoric/Unknown |
| | | 44GV0263 | (15000 B.C 1606 A.D.) |
| | | | Camp - Middle Archaic (6500 - |
| | | 44GV0264 | 3001 B.C.) |
| | | 44GV0265 | Camp - Middle Archaic (6500 - 3001 B.C.) |
| | | | Artifact scatter - Reconstruction |
| | | | and Growth (1866 - 1916), |
| | | 44GV0423 | World War I to World War II (1917 - 1945) |
| | | | Artifact scatter - Reconstruction |
| | | | and Growth (1866 - 1916), |
| | | | World War I to World War II |
| | | 44GV0454 | (1917 - 1945), The New Dominion (1946 - 1991) |

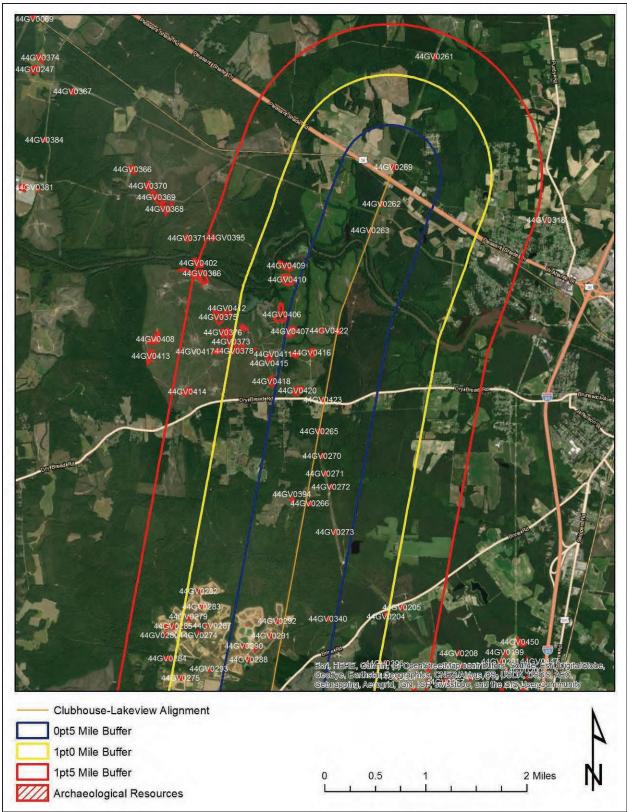


Figure 4-10: Previously recorded archaeological resources located within 1- mile of project area (northern portion. Source: VCRIS

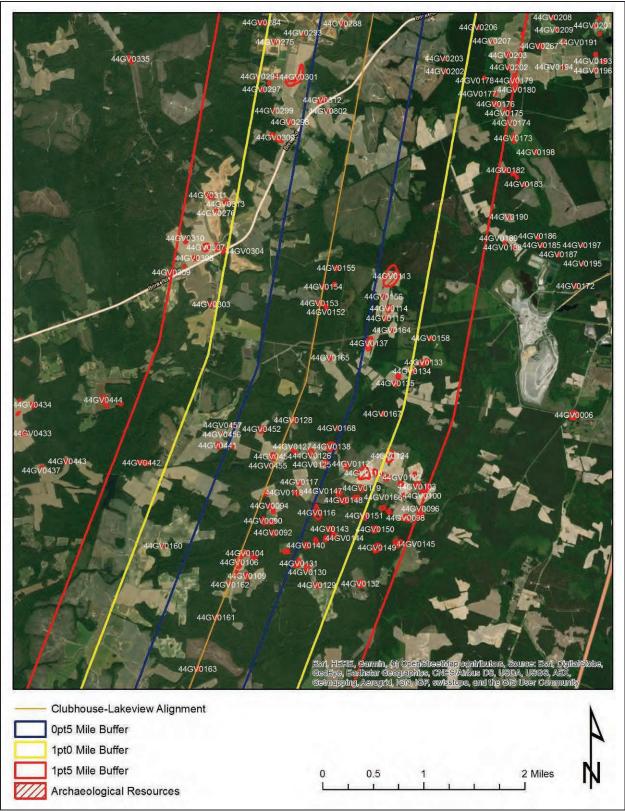


Figure 4-11: Previously recorded archaeological resources located within 1- mile of project area (central portion). Source: VCRIS

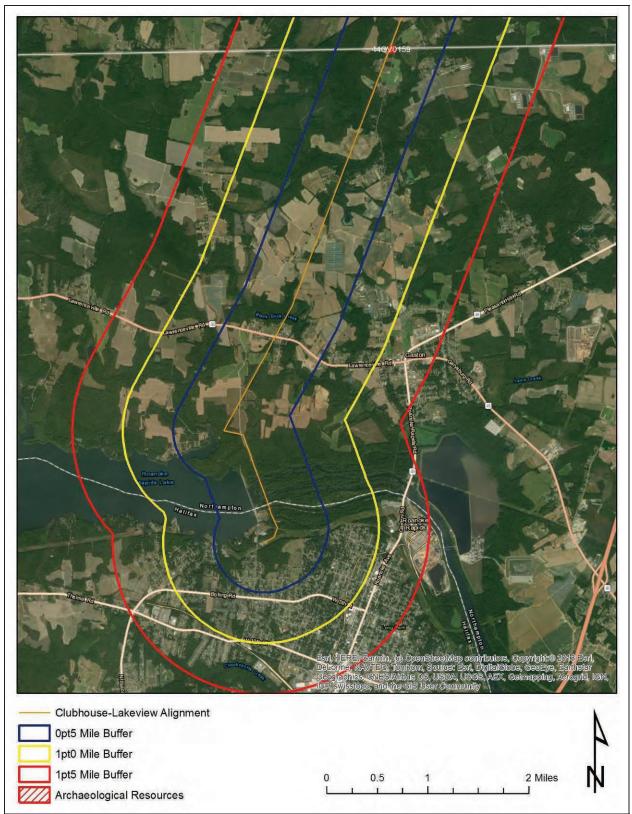


Figure 4-12: Previously recorded archaeological resources located within 1- mile of project area (southern portion). Source: VCRIS

NPS AMERICAN BATTLEFIELD PROTECTION PROGRAM (ABPP)

A review of the NPS ABPP records and maps prepared by the Civil War Sites Advisory Commission (CWSAC) revealed no portions of any noted battlefield are located within one mile of the project area.

5. RESULTS OF FIELD RECONNAISSANCE

In accordance with the VDHR guidelines for assessing impacts of proposed electric transmission lines on historic resources, each of the previously recorded historic architectural properties either listed or determined eligible for listing in the NRHP located within 1-mile or 0.5 miles of the project were field verified for existing conditions and photo documented. Archaeological sites were not subject to inspection or verification as part of this effort. The results of the field reconnaissance for each resource are summarized below.

Chambliss House (VDHR ID# 040-0010)

The Chambliss House, also known as Woodview, is a Greek Revival-styled dwelling believed to have been built in 1838. The home's first owner was Brigadier General John R. Chambliss, a noted Confederate Civil War commander who was killed in battle on August 16 1864. His grave is located on the property and marked by a marble slab given by General Robert E. Lee. The home was passed down through the Chambliss family, and remained owned by the family as of 1999. The home is set on a large rural property with a small collection of outbuildings. It represents an intact and notable example of early-nineteenth century architecture in the county, and is also significant for its association to the Chambliss family. The property was determined eligible for listing in the NRHP in 1999 and was subsequently subject to a historic rehabilitation tax credit project.

The Chambliss House is located on a 118-acre property at 1855 Pleasant Shade Drive (Route 58) in the Emporia vicinity of Greensville County. The home is set upon a slight knoll roughly onequarter of a mile back from the road. It rests on a grassy home site shaded by mature trees with a line of vegetative screening along the front of the yard. The several associated outbuildings are set within the yard to the rear of the house and the building complex is bordered by open agricultural fields beyond.

The project area is located to the southeast of the Chambliss House. Although the corner of the property is located directly across US-58 from the northern terminus of the project alignment, the house itself is set over 0.26 miles away. The project's northern terminus is at an existing substation across US-58 from the property and extends away from the property through a wooded area to the south. Another portion of the existing transmission line extends north from the substation, across the road and through the agricultural fields in the eastern edge of the Chambliss House property.

In order to assess the potential impact of the proposed project, visual inspection and groundbased digital photography was conducted of the setting around the resource property with emphasis on views towards the project area to document existing setting, sitelines, and viewshed. This assessment found that the rural setting of the property is generally intact with some modern change and intrusion. US-58 which the home is located along is a twentieth century highway that is now a wide, four-lane divided highway. This route was built between the Chambliss House property and the nineteenth century Norfolk and Western Railroad corridor beyond. The driveway in front of the house historically crossed the railroad to Brunswick Road beyond, however, this length was removed when US-58 was built and the home no longer has connectivity or visibility of the rail line and older road because of the highway and the bordering treeline. The setting and viewshed to the east of the house also includes the presence of an existing transmission line corridor that crosses through the fields to the east of the home. This power line was built in the early-twentieth century.

A substation was built along the line across US-58 from the Chambliss House property in the 1970s and is the beginning point of the Line 254 Clubhouse-Lakeview Rebuild project. The portion of the line extending to the south is included in the rebuild project, while the length to the north, including the portion that runs through the Chambliss House property will not be rebuilt or otherwise modified as part of this project. Inspection from the Chambliss House driveway and points along US-58 in front of the property revealed that the portion of the transmission line north of the highway that is not subject to this rebuild is visible from most vantage points. It crosses open agricultural field to the east of the house without visual obstruction. As it extends beyond the property to the north, it crosses through a treeline where it becomes screened from visibility. Inspection also revealed that the length of the line south of the substation and subject to this rebuild effort is not visible from most locations throughout and bordering the property. Both the substation and existing line are bordered by thick wooded areas to both sides that completely screen it from the homesite, driveway, and most publicly-accessible locations along US-58 with the exception of views from immediately beneath the existing transmission line corridor.

The intervening wooded areas that screen the project alignment from the house and property are spread across multiple properties and border the Norfolk and Western Railroad Corridor, Brunswick Road, and a large private property parcel beyond. None of these wooded are included within the project area or will be cleared or trimmed as part of the rebuild effort. As such, views from the house and property following the rebuild are likely to be similar, with no visibility of the rebuilt transmission line. The nearest transmission line structure to the property is located directly within the substation and will not be replaced as part of the rebuild. The existing structure, which is currently not visible, is a concrete monopole at 80-feet tall above ground level. The next three structures in proximity to the property are currently wood H-frame structures at 59, 69, and 67-feet tall respectively, and will be replaced with weathering steel Hframe structures at 61, 79, and 79-feet tall respectively. As the proposed increased height of these structures will be shorter than the existing 80-feet tall structure within the substation that is not currently visible, it is anticipated that these structures will likewise remain not visible. This was confirmed with photo simulation that reveals all proposed structures will remain beneath the treeline and not visible. At the third structure, the transmission line perpendicularly crosses another transmission line ROW which is also currently not visible from the property, and therefore it is anticipated that there will continue to be no visibility of the portion of the rebuild alignment beyond that corridor.

As such, the Clubhouse-Dry Bread Line #2201 and Dry Bread- Lakeview Line #254 230kV Virginia Rebuild Project is not anticipated to increase visibility of the existing transmission line or otherwise introduce any new or substantially different character or qualities into the viewshed of or from the Chambliss House property. The project alignment is currently not visible from the home or property and will likely continue to be screened by intervening vegetation as the nearest structures will continue to be shorter than an existing substation structure that is not currently

visible. Therefore, it is D+A's opinion that the proposed Clubhouse-Dry Bread Line #2201 and Dry Bread- Lakeview Line #254 230kV Virginia Rebuild Project will have no more than a *minimal impact* on the Chambliss House.

Figure 5-1 depicts the location of the resource relation to the project alignment and viewshed buffers, and Figure 5-2 illustrates the location of structures to be replaced as part of this project in relation to the resource. Figure 5-3 illustrates the location and direction of all photographs and views. Figures 5-3 through 5-14 are representative photographs of the property, as well as those taken from locations within the property towards the project alignment.

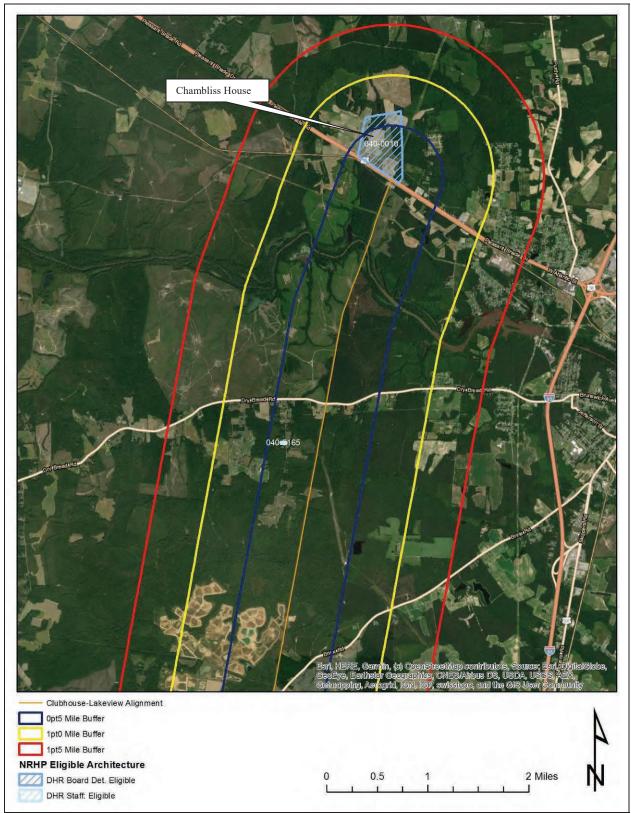


Figure 5-1: Chambliss House in relation to the project area and tiered buffers.



Figure 5-2: Chambliss House in relation to structure locations.

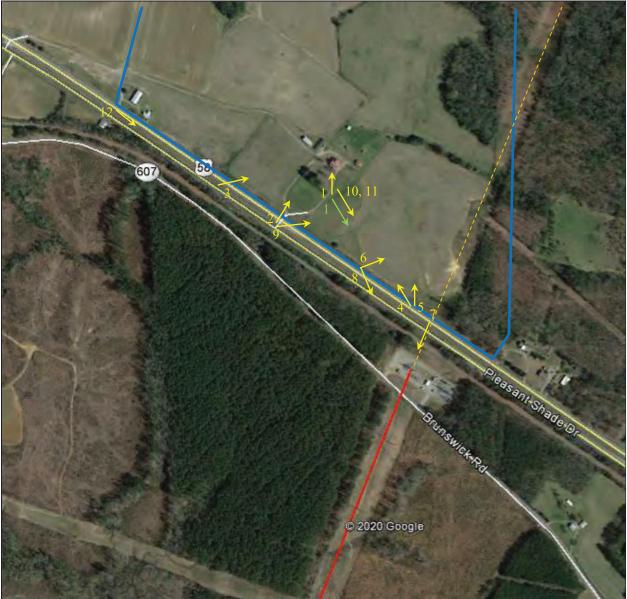


Figure 5-3: Location and directions of photographs (yellow) and photo simulations (green) from Chambliss House (blue) towards the project area (red). Existing transmission line not to be rebuilt or included in this effort shown in orange dashed line.



Figure 5-4: Photo location 1- View of Chambliss House front, facing northwest.



Figure 5-5: Photo location 2- View of Chambliss House setting from front, facing north.



Figure 5-6: Photo location 3- View of Chambliss House setting from US-58, facing northeast.



Figure 5-7: Photo location 4- View of Chambliss House setting from US-58, facing west.



Figure 5-8: Photo location 5- View of existing transmission line (not included in this rebuild project) crossing through Chambliss House property, facing north.



Figure 5-9: Photo location 6- View of existing transmission line (not included in this rebuild project) crossing through Chambliss House property, facing northeast.



Figure 5-10: Photo location 7- View of existing substation and project rebuild alignment across US-58 from Chambliss House property, facing south.

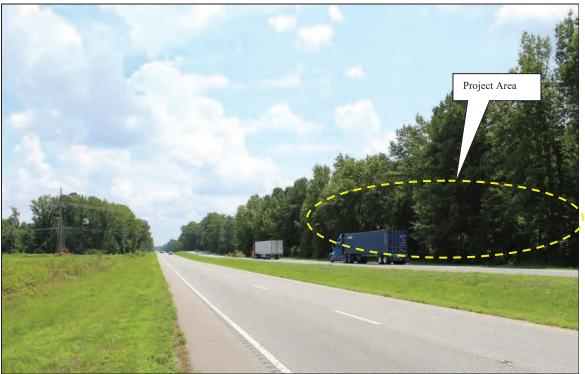


Figure 5-11: Photo location 8- View from US-58 bordering Chambliss House property towards project area (not visible) showing existing transmission line (not included in this rebuild project), facing east.



Figure 5-12: Photo location 9- View from US-58 in front of Chambliss House property showing existing transmission line (not included in this rebuild project), facing northeast.

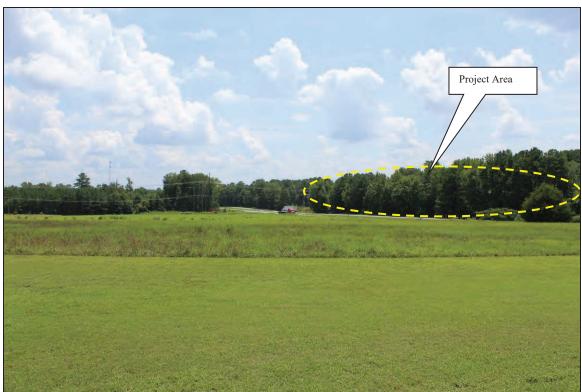


Figure 5-13: Photo location 10- View from Chambliss House homesite towards project area (not visible) showing existing transmission line (not included in this rebuild project), facing southeast.

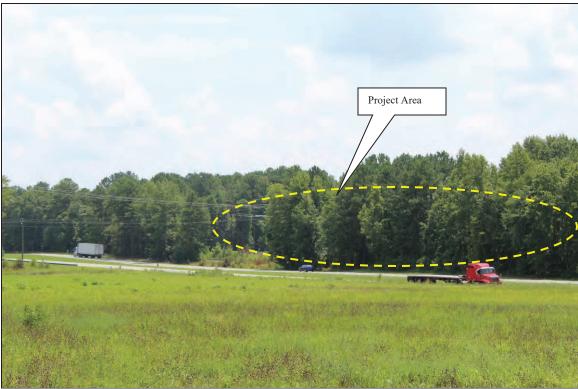
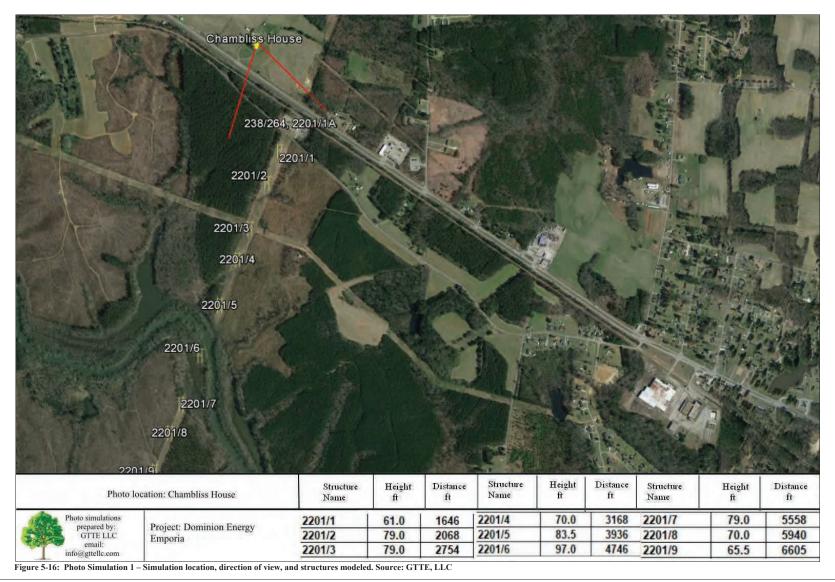
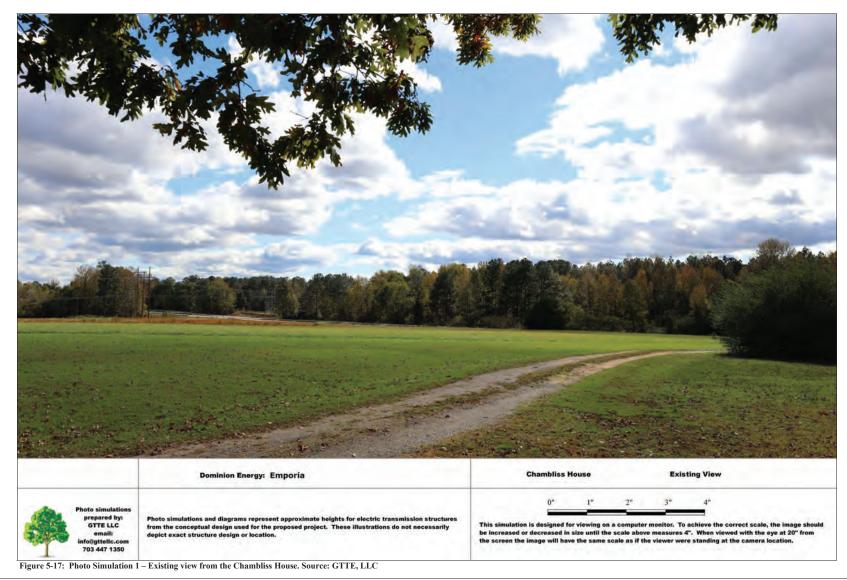


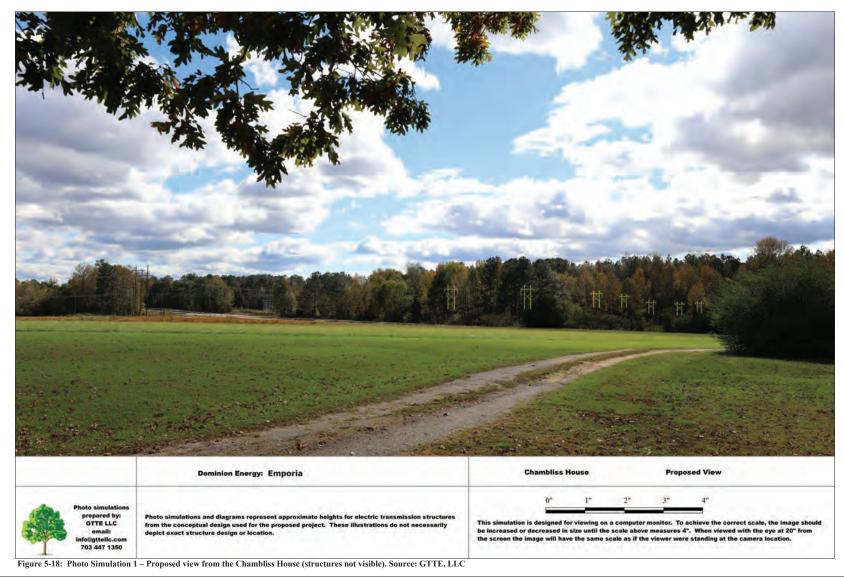
Figure 5-14: Photo location 11- Detail of view from Chambliss House homesite towards project area (not visible) showing existing transmission line (not included in this rebuild project), facing southeast.



Figure 5-15: Photo location 12- View from US-58 bordering Chambliss House property towards project area (not visible) showing existing transmission line (not included in this rebuild project), facing east







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6. SUMMARY OF POTENTIAL IMPACTS

As part of this pre-application analysis of cultural resources for the proposed Clubhouse-Dry Bread Line #2201 and Dry Bread- Lakeview Line #254 230kV Virginia Rebuild Project, potential impacts to previously recorded historic properties listed or considered eligible for listing in the NRHP within the VDHR-defined buffered tiers were assessed in accordance with the VDHR guidelines. For the purposes of this analysis, an impact is one that alters, either directly or indirectly, those qualities or characteristics that qualify a particular property for listing in the NRHP and does so in a manner that diminishes the integrity of a property's materials, workmanship, design, location, setting, feeling, and/or association. With respect to transmission lines, direct impacts typically are associated with ground disturbance resulting from ROW clearing and structure construction. Indirect impacts typically are associated with the introduction of new visual elements or changes to the physical features of a property's setting or viewshed. According to VDHR guidance, project impacts are characterized as such:

- None Project is not visible from the property
- **Minimal** Occur within viewsheds that have existing transmission lines, locations where there will only be a minor change in tower height, and/or views that have been partially obstructed by intervening topography and vegetation.
- **Moderate** Include viewsheds with expansive views of the transmission line, more dramatic changes in the line and tower height, and/or an overall increase in the visibility of the route from the historic properties.
- Severe Occur within viewsheds that do not have existing transmission lines and where the views are primarily unobstructed, locations where there will be a dramatic increase in tower visibility due to the close proximity of the route to historic properties, and viewsheds where the visual introduction of the transmission line is a significant change in the setting of the historic properties.

With regards to architectural resources, one historic property that is either designated and NHL, listed in, or determined eligible for listing in the NRHP is located within defined study tiers. This includes the c.1838 Chambliss House which was determined eligible for listing in the NRHP in 1999 as part of a proposed rehabilitation tax credit project.

Field inspection, representative photographs, and photo simulation reveal that the project will be mostly to completely screened from view from all locations within and around the Chambliss House property. An existing transmission line crosses through an agricultural field on the Chambliss House property with unobstructed views from the house, however, the portion of the line to be rebuilt is across the road within a thickly wooded area that completely screens it from visibility and likely continue to do so. It is therefore D+A's opinion that the proposed Clubhouse-Dry Bread Line #2201 and Dry Bread- Lakeview Line #254 230kV Virginia Rebuild Project will have no more than a *minimal impact* on the Chambliss House.

| VDHR ID # | Resource Name | NRHP Status | Impact |
|--------------|-----------------|-------------------|---------|
| 040-0010 | Chambliss House | NRHP- Eligible | Minimal |

With regards to archaeology, there are 18 previously recorded sites within or immediately adjacent (within 100-feet of the centerline) to the project area. Of these, two sites have been determined not eligible for listing in the NRHP and the remaining 16 have not been formally evaluated. No archaeological survey or inspection was conducted as part of this effort. Reidentification and verification of site boundaries and eligibility should be conducted prior to any earth-moving or ground-disturbing activity associated with the Clubhouse-Dry Bread Line #2201 and Dry Bread- Lakeview Line #254 230kV Virginia Rebuild Project.

7. REFERENCES

National Park Service

2009 "Civil War Sites Advisory Commission Report Update and Resurvey," American Battlefield Protection Program

Virginia Cultural Resource Information System (VCRIS)

- 1991 Architectural Survey Form. *Black Walnut*. VDHR# 041-0006.
- 2009 Architectural Survey Form. Staunton River Bridge Battlefield. VDHR# 019-5190.

Virginia Department of Historic Resources

2008 Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia

Virginia Department of Historic Resources

2016 Virginia Cultural Resource Information System (VCRIS) database and GIS server.

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Rachel M Studebaker (Services - 6)

| From: | ImpactReview <impactreview@vof.org></impactreview@vof.org> |
|--------------|--|
| Sent: | Thursday, October 8, 2020 1:26 PM |
| То: | Nancy R Reid (Services - 6) |
| Subject: | [EXTERNAL] RE: Virginia Rebuild Project Greensville County, Virginia |
| Attachments: | 2020.10.08 Martha Little VOF.pdf |

This is an EXTERNAL email that was NOT sent from Dominion Energy. Are you expecting this message? Are you expecting a link or attachment? DO NOT click links or open attachments until you verify them

Ms. Reid,

The Virginia Outdoors Foundation has reviewed the project referenced above and described in the attached document. As of 8 October 2020, there are not any existing nor proposed VOF open-space easements in the immediate vicinity of the project.

Please contact VOF again for further review if the project area changes or if this project does not begin within 24 months. Thank you for considering conservation easements.

Thanks, Mike

Mike Hallock-Solomon, AICP Virginia Outdoors Foundation

From: Nancy.R.Reid@dominionenergy.com <Nancy.R.Reid@dominionenergy.com>
Sent: Thursday, October 8, 2020 7:21 AM
To: ImpactReview <impactreview@vof.org>
Subject: RE: Virginia Rebuild Project Greensville County, Virginia

Alert: This email originated from outside VOF Dear Ms. Little,

Please find attached the information for the proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project.

Most respectfully,

Nancy

Nancy Reid Siting & Permitting Specialist Electric Transmission 10900 Nuckols Rd Glen Allen, VA 23060 434.532.7579 cell CONFIDENTIALITY NOTICE: This electronic message contains information which may be legally confidential and or privileged and does not in any case represent a firm ENERGY COMMODITY bid or offer relating thereto which binds the sender without an additional express written confirmation to that effect. The information is intended solely for the individual or entity named above and access by anyone else is unauthorized. If you are not the intended recipient, any disclosure, copying, distribution, or use of the contents of this information is prohibited and may be unlawful. If you have received this electronic transmission in error, please reply immediately to the sender that you have received the message in error, and delete it. Thank you.

| From: | Scott Denny |
|----------|--|
| То: | Nancy R Reid (Services - 6) |
| Subject: | [EXTERNAL] Re: Virginia Rebuild Project Greensville County, Virginia |
| Date: | Thursday, October 15, 2020 3:10:30 PM |

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Dear Ms. Reid:

The Virginia Department of Aviation has reviewed the information package provided in your October 8, 2020 email pertaining to the Clubhouse-Dry Bread and Dry Bread to Lakeview Line rebuild project. This project does not appear to be located within 20,000 linear feet of a public use airport. Therefore, unless any portion of this project will include a structure, temporary or permanent, that will reach a height of 200' above ground level, the submission of a 7460 form will not be required. If a structure, such as a crane, will be erected that reaches a height of 200' above ground level, a 7460 must be submitted to the Federal Aviation Administration to determine if the proposed development will result in the creation of a hazard to air navigation.

Please note that this email will serve as the Department's official response unless a copy of our comments are specifically requested on Department letterhead. Please let me know if you have any questions.

Sincerely,

S. Scott Denny Senior Aviation Planner Virginia Department of Aviation

On Thu, Oct 8, 2020 at 7:22 AM <u>Nancy.R.Reid@dominionenergy.com</u> <<u>Nancy.R.Reid@dominionenergy.com</u>> wrote:

Dear Mr. Denny,

Please find attached the information for the proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project.

Most respectfully,

Nancy

Nancy Reid

Siting & Permitting Specialist

Electric Transmission

10900 Nuckols Rd

Glen Allen, VA 23060

434.532.7579 cell

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S. Scott Denny Senior Aviation Planner Virginia Department of Aviation 804-236-3638 scott.denny@doav.virginia.gov