

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

APPLICATION OF
CENTRAL VIRGINIA ELECTRIC COOPERATIVE

FOR APPROVAL AND CERTIFICATION
OF ELECTRIC FACILITIES

Gladstone to Tower Hill 138kV Transmission Line Rebuild Project

Case No. PUR-2021-00016

Filed: February 3, 2021

Volume 2 of 2
DEQ Supplement & Attachments

DEQ Supplement

BOOTH & ASSOCIATES, LLC

GLADSTONE TO TOWER HILL 138KV REBUILD PROJECT DEQ SUPPLEMENT

Prepared for:

Central Virginia Electric Cooperative
800 Cooperative Way
Arrington, Virginia 22922.

Prepared by:

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1.0 PROJECT DESCRIPTION

The Gladstone Rebuild Project is necessary to rebuild and upgrade the Cooperative's Gladstone to Tower Hill transmission line from 46kV to 138kV and to make necessary upgrades at the Gladstone and Tower Hill Substations to take delivery from Appalachian Power Company ("APCo"), an affiliate of American Electric Power ("AEP"). This transmission line currently receives transmission service by an AEP 46kV transmission line. AEP is a member of the regional transmission organization PJM Interconnection L.L.C. ("PJM"). As part of PJM's ongoing Regional Transmission Expansion Plan study process, AEP identified thermal and voltage violations of the AEP transmission reliability criteria on several 46 kV sub-transmission facilities. To address the thermal and voltage violations, AEP proposed transmission improvement projects, which include the retiring of the existing 46kV line serving CVEC, and construction of a new 138kV transmission line to the Gladstone substation delivery point. As a result, CVEC must make appropriate upgrades to its system to take delivery from AEP at 138 kV. Further, the existing Gladstone to Tower Hill 46kV line providing service to the Gladstone and Tower Hill substations is a 55-year-old wood pole transmission line in need of update as the assets are at the end of their service life. CVEC will rebuild the line at 138kV and make necessary upgrades at its Gladstone and Tower Hill Substations to take delivery from AEP at 138kV.

2.0 ENVIRONMENTAL ANALYSIS

The Cooperative solicited comments from all relevant state and local agencies about the proposed Gladstone Rebuild Project in December 2020. Copies of those letters are included as Attachment III.B to the Appendix.

A. AIR QUALITY

CVEC solicited DEQ for comments about the proposed Rebuild Project in December 2020.

CVEC will control fugitive dust during construction in accordance with DEQ regulations. During construction, if the weather is dry for an extended period, there will be airborne particles from the use of vehicles and equipment within the right-of-way. However, 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 is addressed in Section 2.G, below. Equipment and vehicles that are powered by gasoline or diesel motors will be used during the construction of the line so there will be exhaust from those motors.

The width of the existing transmission line right-of-way is 100 feet throughout the length of the route. The Gladstone Rebuild Project lies entirely within the existing ROW. No new ROW will be cleared for the Gladstone Rebuild Project. The Gladstone to Tower Hill transmission line will be rebuilt in the existing ROW. The ROW vegetation is managed on a five-year cycle using utility standard mechanical and chemical vegetation management practices. CVEC does not expect to burn cleared material, but if necessary, will coordinate with the responsible locality to ensure all local ordinances are met. CVEC'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 main waterbody being crossed by the project route is the James River. The David Creek along with its unnamed tributaries also crosses the line. No streambeds or waters will be disturbed by this project. See Attachment 2.B for a streams map.

C. DISCHARGE OF COOLING WATERS

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

D. TIDAL AND NON-TIDAL WETLANDS

Non-tidal wetlands have been delineated by CZR of Wilmington, North Carolina and the Army Corp will schedule a field visit or perform a desktop review of the results. A preliminary wetland report is available. Exhibits showing the wetlands are attached as Attachment 2.D.

E. SOLID AND HAZARDOUS WASTE

No solid or hazardous waste will be generated by the Gladstone Rebuild Project.

F. NATURAL HERITAGE, THREATENED AND ENDANGERED SPECIES

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. According to the information currently available, natural heritage resources have not been documented within the submitted project boundary including a 100-foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources. 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 state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects. There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity. Please see attached full letters from the biologist CZR of Wilmington.

G. EROSION AND SEDIMENT CONTROL

The DEQ has approved CVEC's Annual Standards and Specifications for Erosion and Sediment Control and Stormwater Management. These standards and specifications are shared with contractors and full erosion and sedimentation control plans are issued as part of each construction drawing set for a project. Projects with over 1 acre of disturbance are also permitted

with the DEQ for VPDES approval. Please see attached DEQ responses, included herein as Attachment 2.G.

H. ARCHAEOLOGICAL, HISTORIC, SCENIC, CULTURAL OR ARCHITECTURAL RESOURCES

Booth and Associates assisted CVEC in developing the RUS Environmental Report and as part of this process the Virginia Department of Historic Resources has responded with a listing of historic sites within a 1-mile radius of the Gladstone and Tower Hill Substations. Copies of the listing and map are included as Attachment 2.H. No historic or cultural resources are located along the project route.

I. CHESAPEAKE BAY PRESERVATION AREAS

The Gladstone Rebuild Project is not part of the Chesapeake Bay Preservation Area.

J. WILDLIFE RESOURCES

The United States Department of the Interior Fish and Wildlife Service responded to Booth & Associates' request for information regarding species in the project area. See Attachment 2.J.1. The Virginia Department of Conservation and Recreation's Division of Natural Heritage (DCR) Ecological Services Field Office issued letters dated 12/8/2020 indicating the species which is listed or proposed to be listed as present in the route area. See Attachment 2.J.2. The James River will have an aerial crossing, but no impacts to the waterway are anticipated. The CZR group has issued the rare species report based on a November 30 through December 2020 site visit, which is included as Attachment 2.J.3.

K. RECREATION, AGRICULTURAL AND FOREST RESOURCES

No recreation areas exist within the right-of-way of the transmission line. Agricultural activities are permitted in easement areas and CVEC will coordinate with easement owners as needed to minimize any agricultural interruptions. There are no forest areas within the easement due to clearing practices. No additional easement or reduction in forest adjacent to the route is anticipated.

L. USE OF PESTICIDES AND HERBICIDES

CVEC typically uses only EPA approved, non-restrictive use herbicides on select undesirable plant species. Backpack or by-hand low-volume application is used instead of aerial application and only certified technicians are used for this work. Only herbicides approved by the DEQ for aquatic use are in use by CVEC at this time.

M. GEOLOGY AND MINERAL RESOURCES

Geology and Mineral Resources Site information has been downloaded and no sinkholes are located within a 1-mile buffer of the route.

Source:

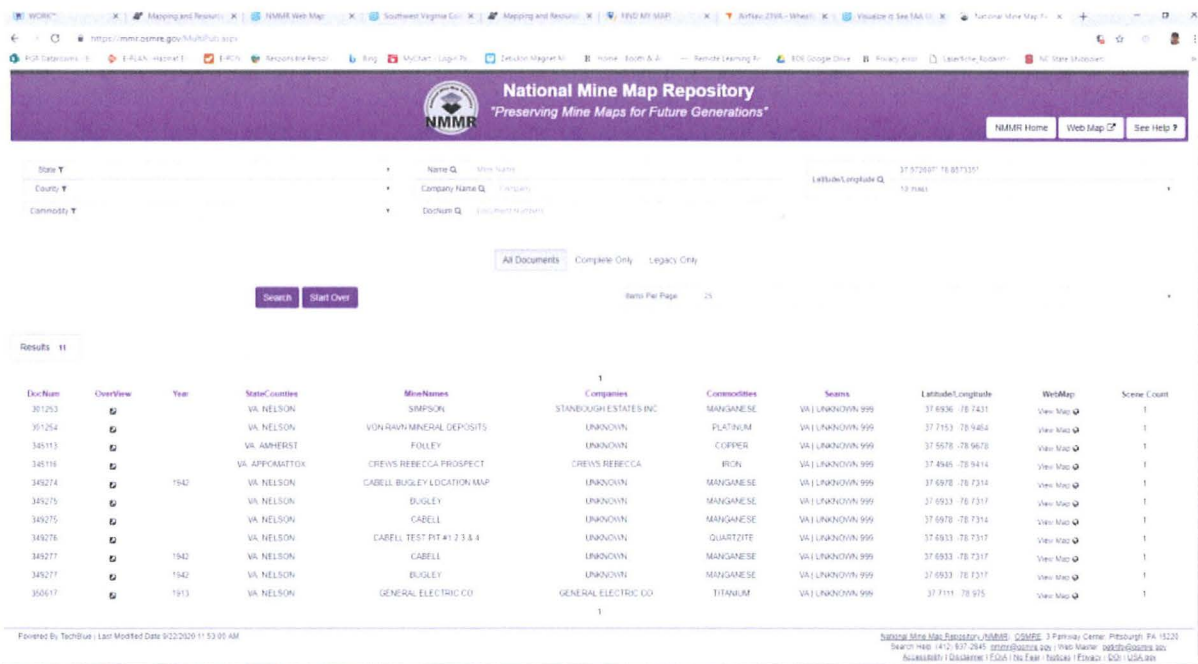
<https://www.dmme.virginia.gov/webmaps/DGMR/>

The primary bedrock types in the project route include marble, meta-argillite, antinolite schist, greenstone, felsic metavolcanic, and mica schist.

Source:

<https://vadmme.maps.arcgis.com/apps/InformationLookup/index.html?appid=5a26b4feca034a5dbc8353740222f0d8>.

There are no active mines or quarries in the area. Results from the National Mine Repository indicate mines within a 10-mile radius of the project route, but no mines within 5 miles.



Doc Num	Overview	Year	State/Country	Mine Name	Company	Commodity	Seams	Latitude/Longitude	WebMap	Score Count
301293			VA, NELSON	SIMPSON	STANBOUGH ESTATES INC	MANGANESE	VA UNKNOWN-999	37.8936 -78.7431	View Map	1
301294			VA, NELSON	VON RAVEN MINERAL DEPOSITS	UNKNOWN	PLATINUM	VA UNKNOWN-999	37.7153 -78.9484	View Map	1
345113			VA, AMHERST	FOLLEY	UNKNOWN	COPPER	VA UNKNOWN-999	37.5578 -78.9678	View Map	1
345114			VA, APPOMATTOX	CREWS REBECCA PROSPECT	CREWS REBECCA	IRON	VA UNKNOWN-999	37.4945 -78.9414	View Map	1
349274		1942	VA, NELSON	CABELL BUGLEY LOCATION MAP	UNKNOWN	MANGANESE	VA UNKNOWN-999	37.6978 -78.7314	View Map	1
349275			VA, NELSON	BUGLEY	UNKNOWN	MANGANESE	VA UNKNOWN-999	37.6933 -78.7317	View Map	1
349276			VA, NELSON	CABELL	UNKNOWN	MANGANESE	VA UNKNOWN-999	37.6878 -78.7314	View Map	1
349278			VA, NELSON	CABELL TEST PIT #1 2 3 & 4	UNKNOWN	QUARTZITE	VA UNKNOWN-999	37.6933 -78.7317	View Map	1
349277		1942	VA, NELSON	CABELL	UNKNOWN	MANGANESE	VA UNKNOWN-999	37.6933 -78.7317	View Map	1
349277		1942	VA, NELSON	BUGLEY	UNKNOWN	MANGANESE	VA UNKNOWN-999	37.6933 -78.7317	View Map	1
350617		1913	VA, NELSON	GENERAL ELECTRIC CO	GENERAL ELECTRIC CO	TITANIUM	VA UNKNOWN-999	37.7111 -78.975	View Map	1

Source: <https://mmr.osmre.gov/MultiPub.aspx>.

N. TRANSPORTATION INFRASTRUCTURE

The existing right-of-way crosses 20 public and private roads and are all low volume county roads. In addition, the right-of-way crosses Andersen Highway. CVEC plans to apply to VDOT for encroachment permits for any state road crossings prior to construction. The Cooperative will also apply for the CSX railroad permit prior to the start of the Gladstone Rebuild Project.

The Federal Aviation Administration's "Notice Criteria Tool" was used to submit the location and heights of four (4) sample poles along the alignment of the proposed transmission line. None of

the filings exceeded Notice Criteria. The closest airport to the Gladstone Rebuild Project route include the following airfields:

1. Wood Farm Airport, Hanover, VA
 - 8.07 miles away
 - <https://www.airnav.com/airport/VA50>
2. Wheatland Airport, Buckingham, VA
 - 6.9 miles away
 - <https://www.airnav.com/airport/23VA>
3. Nashs Airport, Appomattox, VA
 - 8.6 miles away
 - <https://www.airnav.com/airport/10VA>

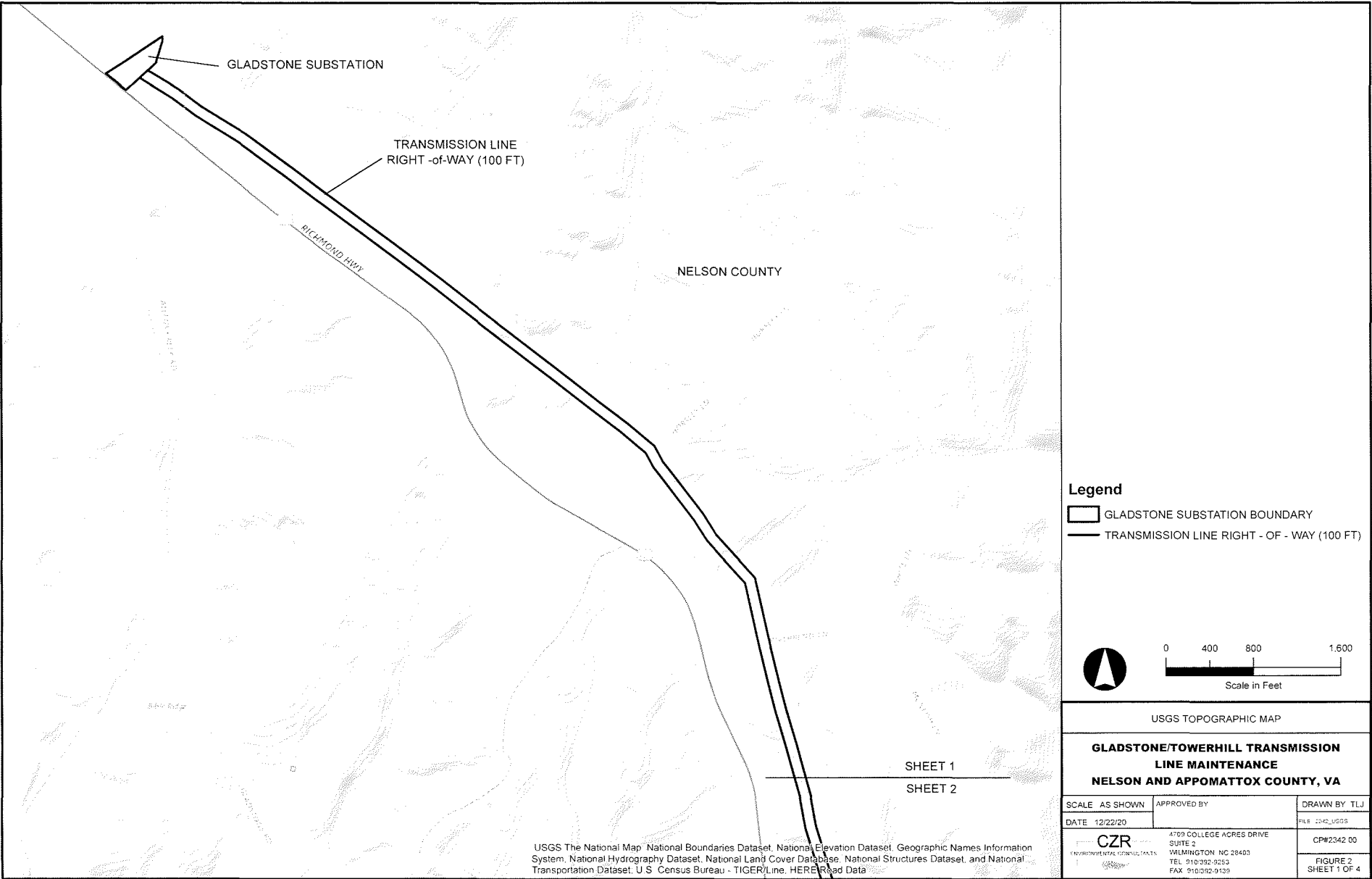
No private airports were identified using the Notice Criteria Tool, but one was identified using Google Earth: 620 feet from the line trail and runs parallel with the route at Hwy 60 and Riverbend Ln, just south of the Gladstone substation. Coordinates: 37, 33' 25.46" N 78, 50' 05.36" W

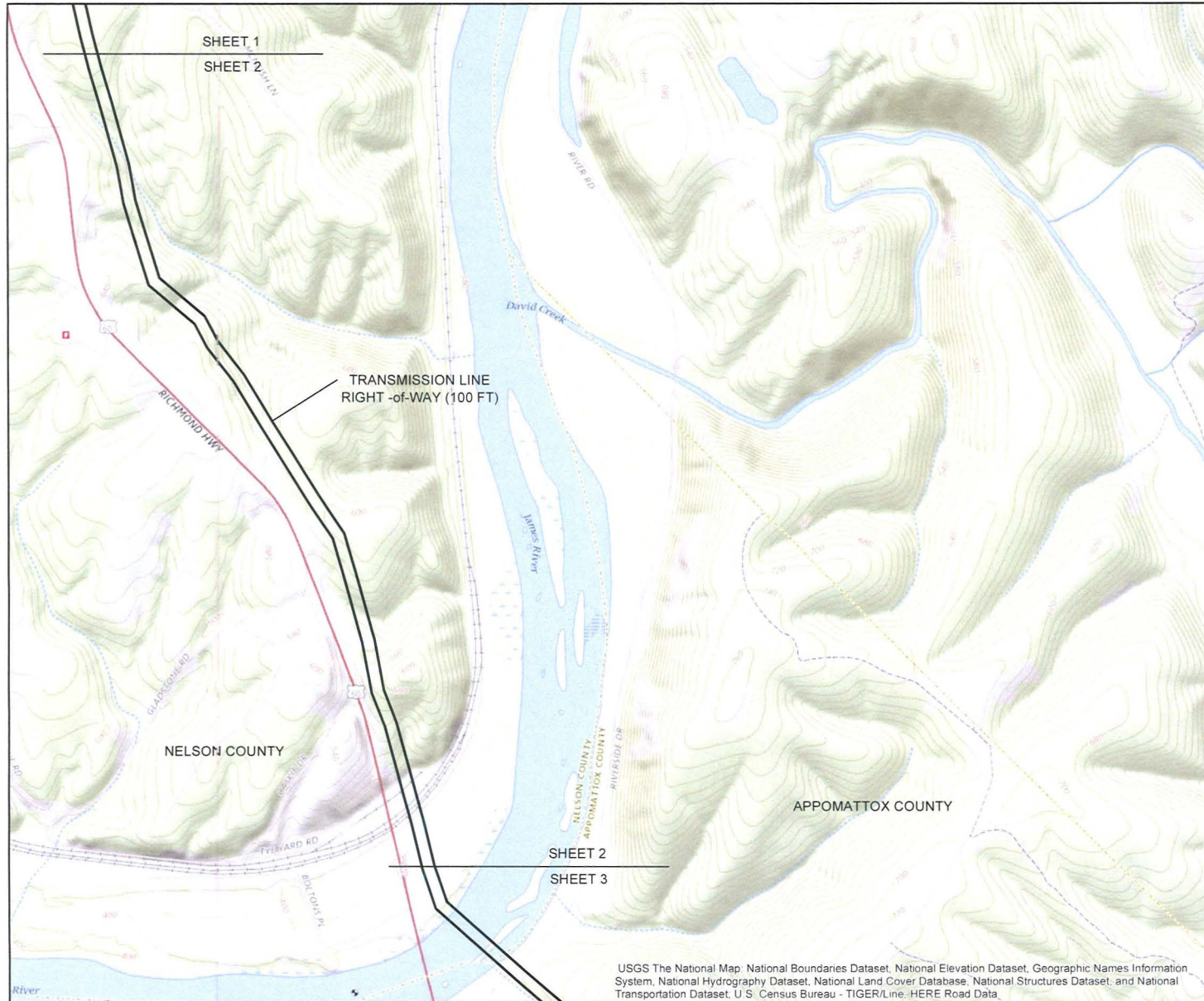
A screenshot image is provided below.



CVEC will coordinate with the DOT, CSX Railroad, DOAv and FAA in order to receive necessary permits.

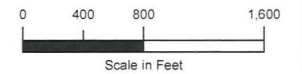
Attachments





Legend

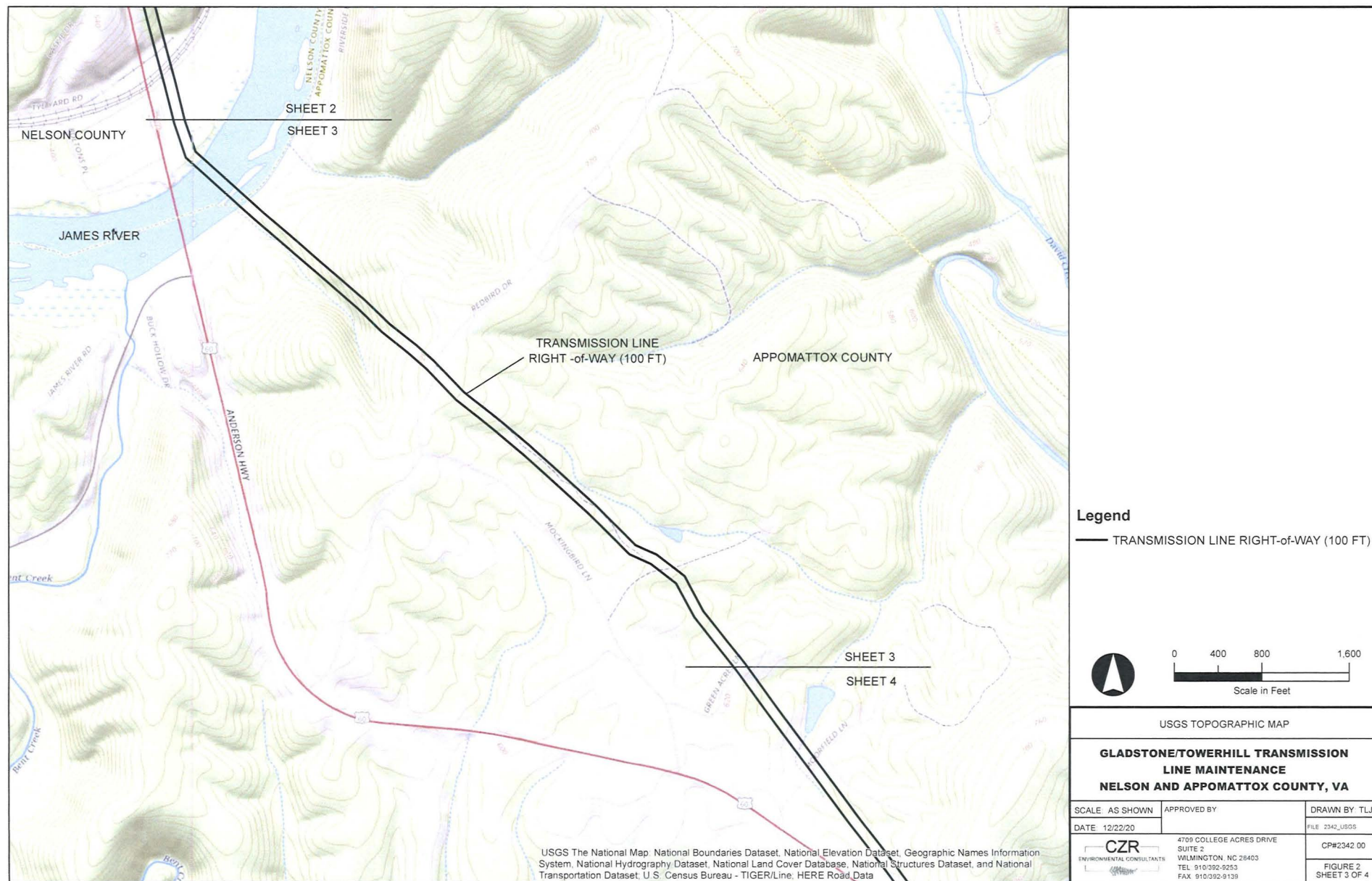
— TRANSMISSION LINE RIGHT - of - WAY (100 FT)

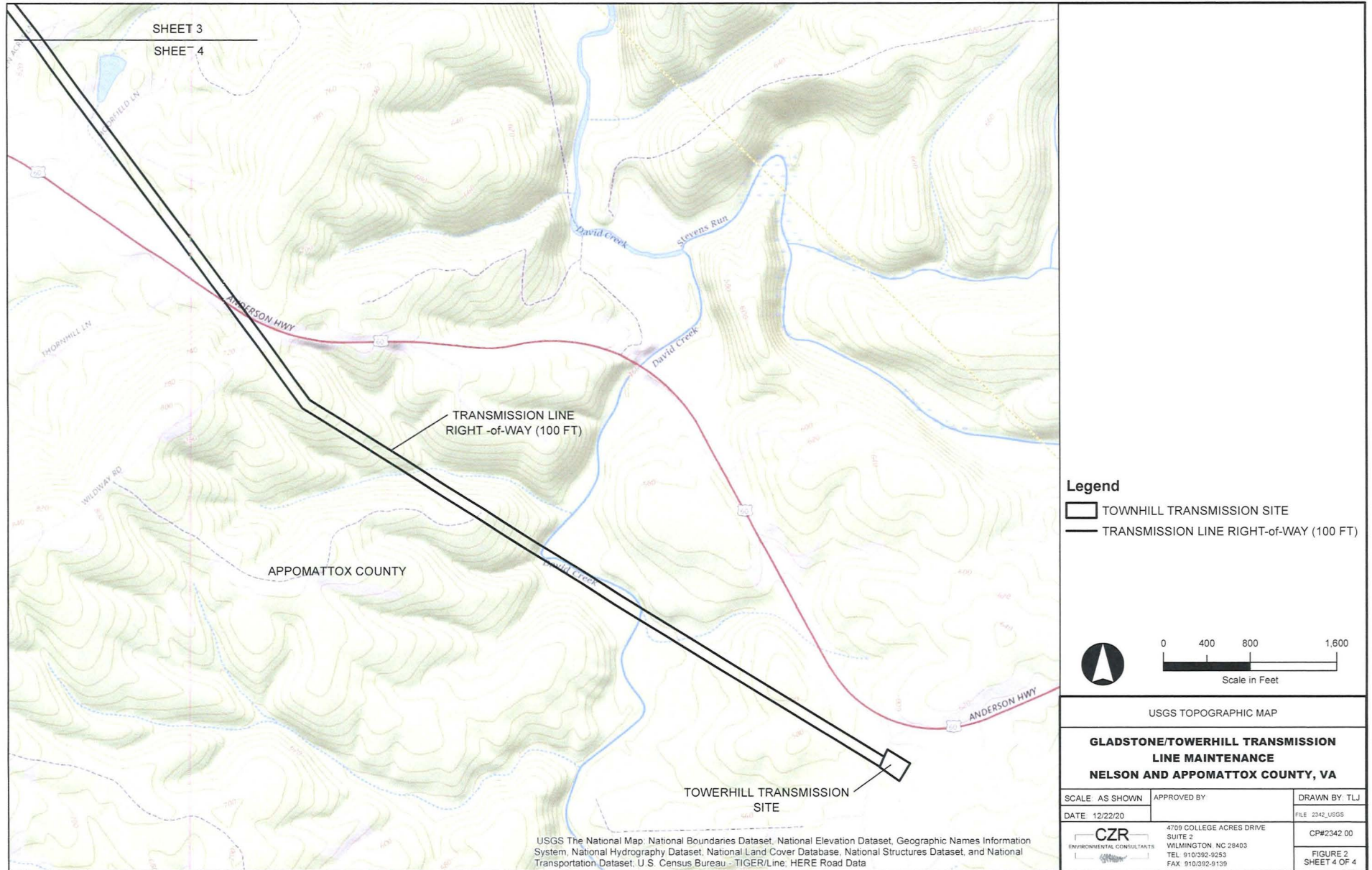


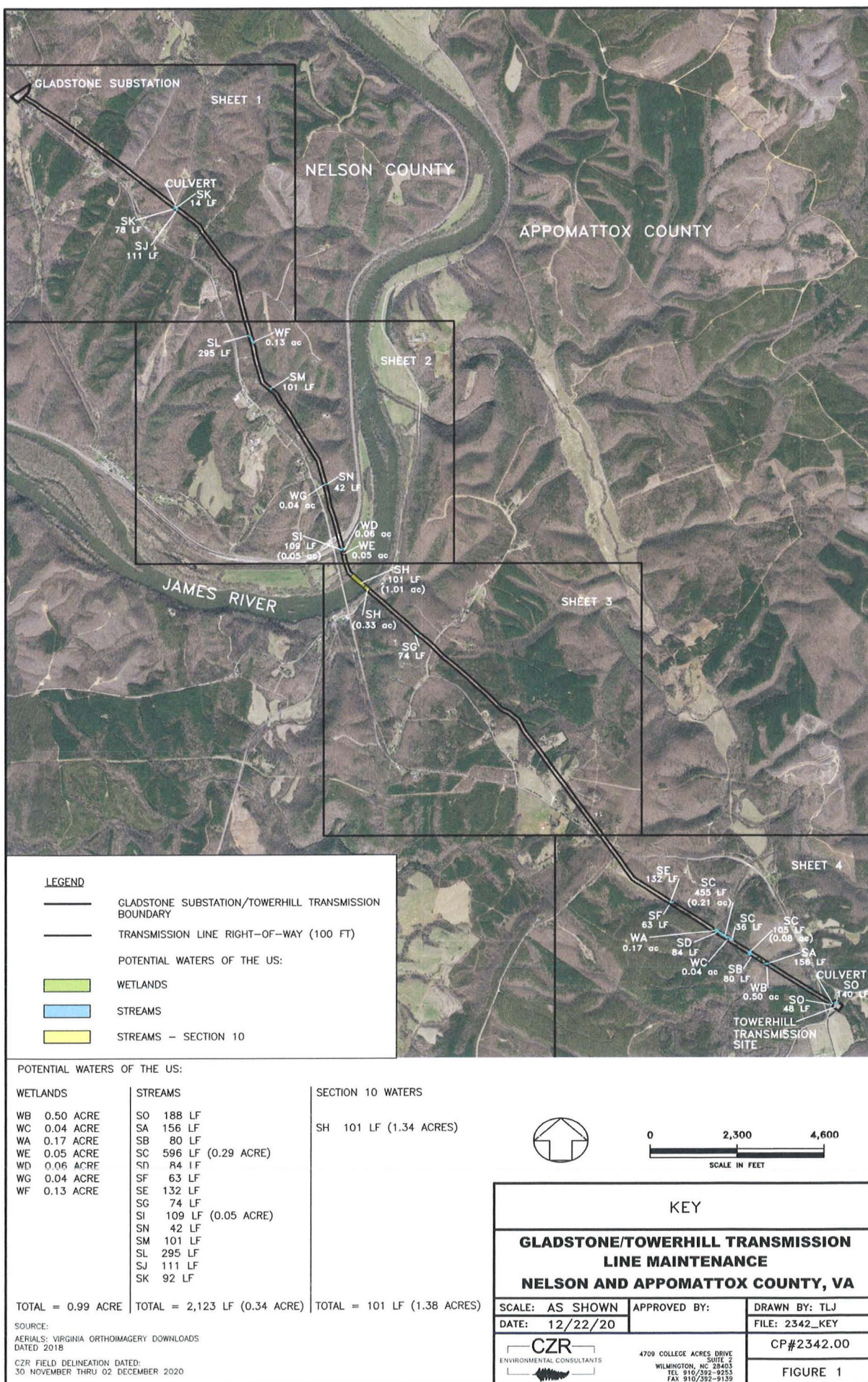
USGS TOPOGRAPHIC MAP

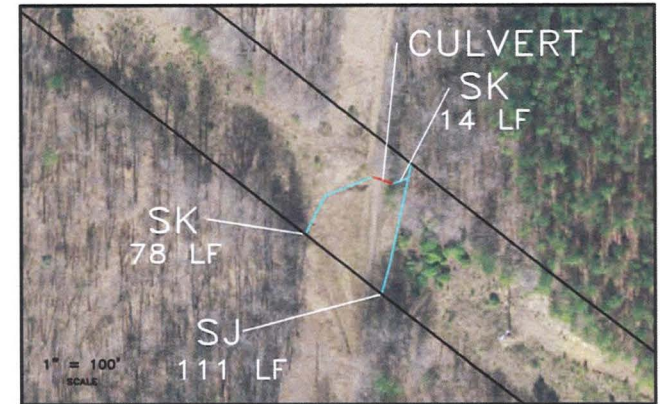
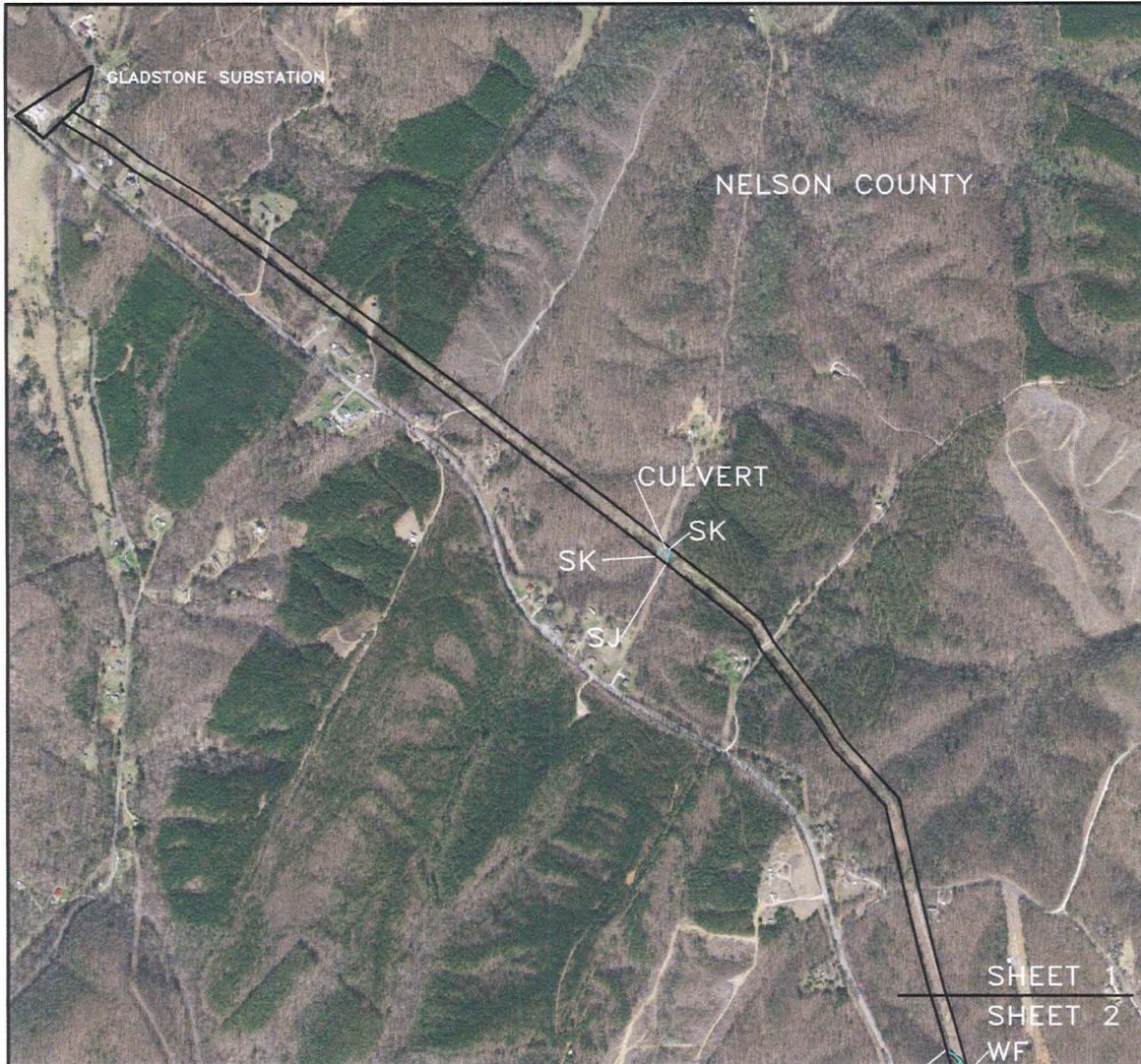
**GLADSTONE/TOWERHILL TRANSMISSION
LINE MAINTENANCE
NELSON AND APPOMATTOX COUNTY, VA**

SCALE AS SHOWN	APPROVED BY	DRAWN BY: TLJ
DATE 12/22/20		FILE 2342_USGS
CZR <small>ENVIRONMENTAL CONSULTANTS</small>		CP#2342 00
<small>4709 COLLEGE ACRES DRIVE WILMINGTON, NC 28403 TEL: 910/392-9253 FAX: 910/392-9139</small>		FIGURE 2 SHEET 2 OF 4

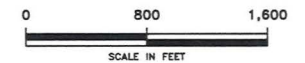






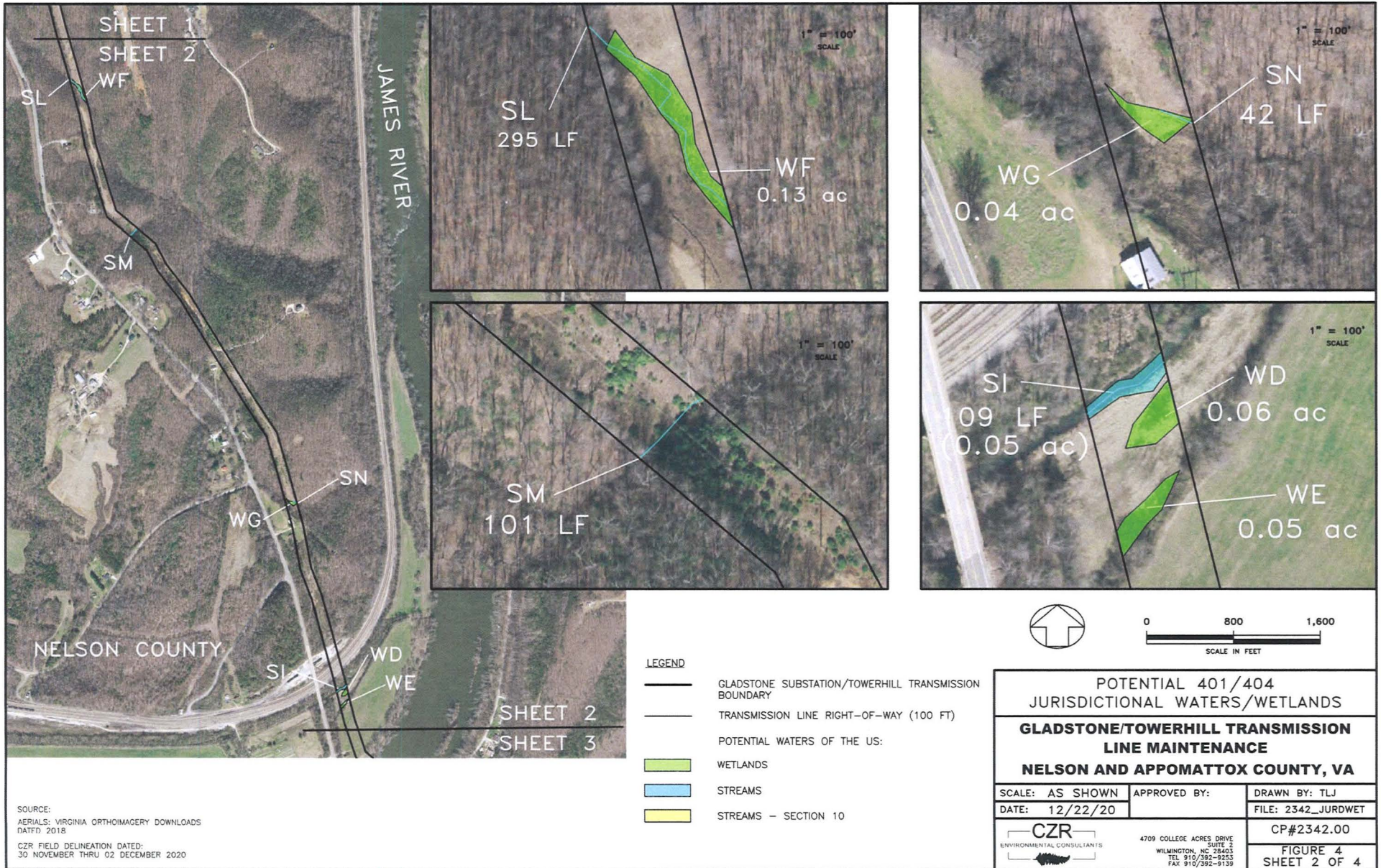
**LEGEND**

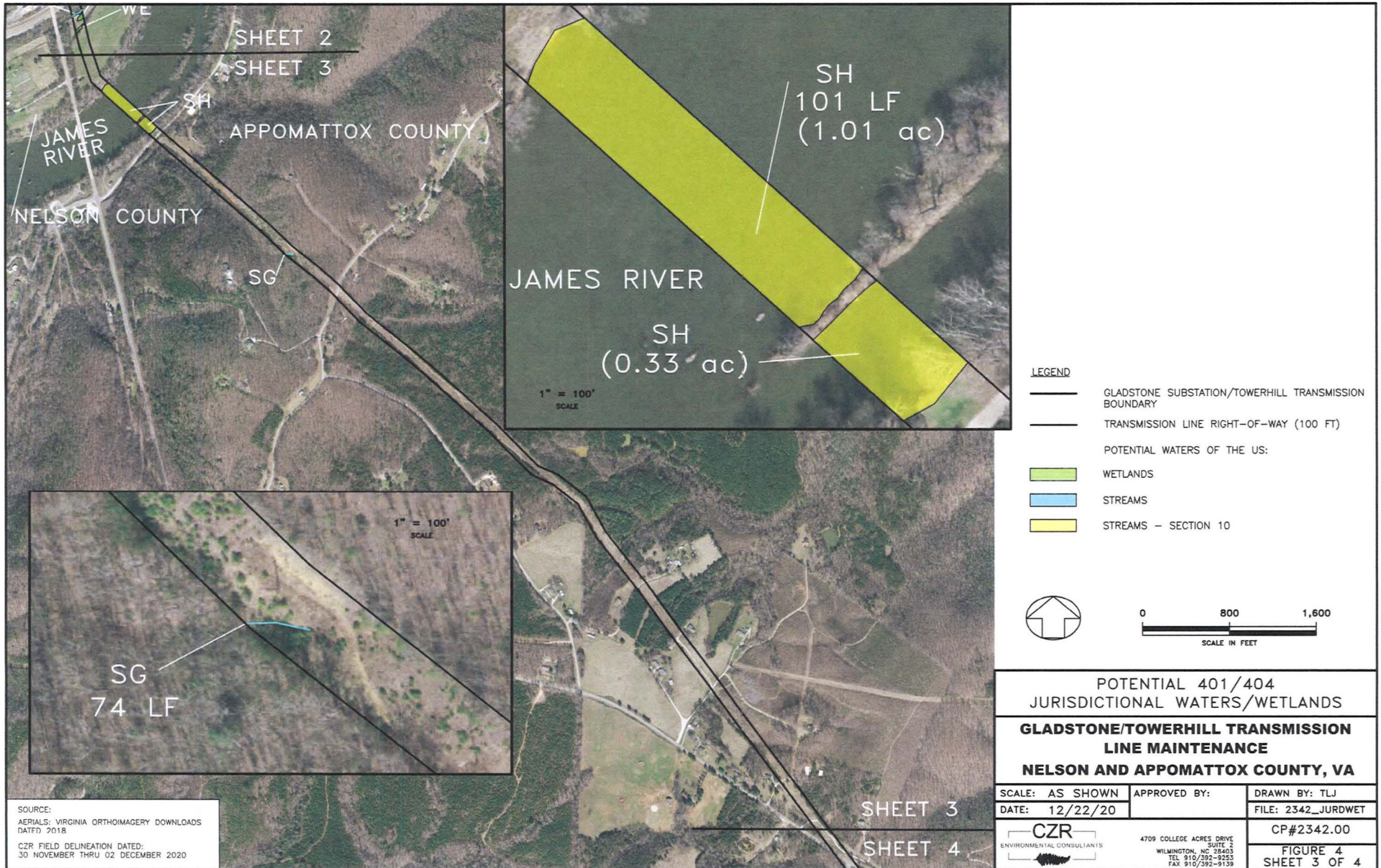
- GLADSTONE SUBSTATION/TOWERHILL TRANSMISSION BOUNDARY
- TRANSMISSION LINE RIGHT-OF-WAY (100 FT)
- POTENTIAL WATERS OF THE US:
 - WETLANDS
 - STREAMS
 - STREAMS - SECTION 10



SOURCE:
AERIALS: VIRGINIA ORTHOIMAGERY DOWNLOADS
DATED 2018
CZR FIELD DELINEATION DATED:
30 NOVEMBER THRU 02 DECEMBER 2020

POTENTIAL 401/404 JURISDICTIONAL WATERS/WETLANDS		
GLADSTONE/TOWERHILL TRANSMISSION LINE MAINTENANCE		
NELSON AND APPOMATTOX COUNTY, VA		
SCALE: AS SHOWN	APPROVED BY:	DRAWN BY: TLJ
DATE: 12/22/20		FILE: 2342_JURDWET
		CP#2342.00
4709 COLLEGE ACRES DRIVE SUITE 2 WILMINGTON, NC 28403 TEL 910/392-8253 FAX 910/392-8138		FIGURE 4 SHEET 1 OF 4







COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 1111 E. Main Street, Suite 1400, Richmond, Virginia 23219

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Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

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

December 28, 2020

Kate Massey
Booth & Associates, LLC
5811 Glenwood Avenue Ste. 109
Raleigh, NC 27612

**RE: Wetland Impact Consultation; Environmental Report (EA) associated with the 20212-2024
Work Plan Virginia 29**

Dear Ms. Massey:

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 Central Virginia Electric Cooperative (here after, CVEC) regarding potential wetland impacts on the above referenced project. CVEC is in the process of applying to the Rural Utilities Service (RUS) for loan funds to finance upgrades and construction of electric power facilities. These proposed facilities are located in Nelson and Appomattox Counties, Virginia. In order to obtain RUS funds, CVEC must complete an Environmental Report (ER). The project will consists of building new substations and rebuilding of overhead transmission lines. The transmission line is entirely within existing transmission line right-of-way and no additional right-of-way is necessary.

Based on review of the information provided by Booth and Associates on behalf of CVEC, both wetland areas and stream areas were identified within the project areas.

Summary of Findings

DEQ's Office of Wetland and Streams Protection (OWSP) is unable to determine if direct or indirect impacts will occur to wetlands and streams and if compensation is associated with these potential impacts. If direct or indirect impacts occur, then under the Code of Virginia 9VAC25-210, a Virginia Water Protection (VWP) permit may be required. The DEQ Valley Regional Office (VRO) will make the final permitting decisions.

DEQ recommends structures should be sited to avoid wetlands to the extent practicable and should be sited outside of stream channels. Timbering debris should not be placed in wetlands or streams. 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.

Recommendations and Potential Permits

Based upon review of the information provided, DEQ's OWSP offers the following general recommendations concerning potential surface water impacts:

1. Wetland and stream impacts, including any secondary 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 information received December 11, 2020, DEQ's OWSP is unable to determine if the proposed project may or may not require a Virginia Water Protection (VWP) individual permit or general permit coverage. If a permit is necessary, 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 Henicheck

Michelle Henicheck, PWS
Senior Wetland Ecologist
Office of Wetlands & Stream Protection

Cc: Keith Fowler, DEQ - VRO
Bettina Sullivan, DEQ - Office of Environmental Review

Kate P. Massey

From: Keith Fowler <keith.fowler@deq.virginia.gov>

Sent: Monday, January 04, 2021 2:34 PM

To: Kate P. Massey <MasseyKP@booth-assoc.com>; Michelle Henicheck <michelle.henicheck@deq.virginia.gov>

Subject: RE: Environmental Project Review for Central Virginia Electric Cooperative

Below is additional information general information related to DEQ programs which should be considered when initiating a construction project in Virginia. In addition, you may wish to refer to DEQ's Environmental Impact Reviews web site, <http://www.deq.virginia.gov/Programs/EnvironmentalImpactReview.aspx>, and our Pollution Prevention / Environmental Excellence pages, <http://www.deq.virginia.gov/Programs/PollutionPrevention.aspx>, for other general information. We are glad to discuss specifics for any aspect of your project with you as it relates to any DEQ programs.

1. Water Quality and Wetlands. Measures must be taken to avoid and minimize impacts to surface waters and wetlands during construction activities. The disturbance of surface waters or wetlands may require prior approval by DEQ and/or the U.S. Army Corps of Engineers. The Army Corps of Engineers is the final authority for an official confirmation of whether there are federal jurisdictional wetlands or other surface waters that may be impacted by the proposed project. DEQ may confirm additional waters as jurisdictional beyond those under federal authority. Review of National Wetland Inventory maps or topographic maps for locating wetlands or streams may not be sufficient; there may need to be a site-specific review of the site by a qualified professional. Even if there will be no intentional placement of fill material in jurisdictional waters, potential water quality impacts resulting from construction site surface runoff must be minimized. This can be achieved by using Best Management Practices (BMPs). If construction activities will occur in or along any streams (perennial, intermittent, or ephemeral), open water or wetlands, the applicant should contact Catherine Wright at DEQ-VRO (540-574-7804, Catherine.Wright@deq.virginia.gov) to determine the need for any permits prior to commencing work that could impact surface waters or wetlands.

2. Erosion and Sediment Control and Storm Water Management. DEQ has regulatory authority for the Virginia Pollutant Discharge Elimination System (VPDES) programs related to municipal separate storm sewer systems (MS4s) and construction activities. Erosion and sediment control measures are addressed in local ordinances and State regulations. Additional information is available at <http://www.deq.virginia.gov/Programs/Water/StormwaterManagement.aspx>. Non-point source pollution resulting from this project should be minimized by using effective erosion and sediment control practices and structures. Consideration should also be given to using permeable paving for parking areas and walkways where appropriate, and denuded areas should be promptly revegetated following construction work. If the total land disturbance exceeds 10,000 square feet, an erosion and sediment control plan will be required. Some localities also require an E&S plan for disturbances less than 10,000 square feet. A stormwater management plan may also be required. For any land disturbing activities equal to one acre or more, you are required to apply for coverage under the VPDES General Permit for Discharges of Storm Water from Construction Activities. The Virginia Stormwater Management Permit Authority may be DEQ or the locality. Specific questions regarding the Stormwater Management Program requirements should be directed to Gary Flory at DEQ-VRO (540-574-7840, Gary.Flory@deq.virginia.gov).

3. Other Site Development Considerations. Fugitive dust generated during construction should be controlled by using measures such as the prompt removal of spilled or tracked dirt or other materials from paved streets, limited application of water to suppress dust, and washing of construction vehicles and paved roadways immediately adjacent to construction sites. Do not use water for dust control to the extent that it results in runoff to surface waters or wetlands. Land clearing wastes (vegetative debris) generated during construction should be properly managed in accordance with applicable regulations and local ordinances. Shredding/chipping of vegetative debris and reuse on-site is usually recommended over open burning. Any open burning of vegetative debris must be performed in accordance with the Open Burning Regulation and coordinated with the local fire official to ensure that all local ordinances are met. A copy of DEQ's open burning regulation and related information are accessible from <http://www.deq.virginia.gov/Programs/Air/AirQualityPlans/OpenBurning.aspx>. Also, no open burning should take place in violation of the Virginia Waste Management Regulations, <http://law.lis.virginia.gov/admincode/title9/agency20/>. Contact Keith Fowler at DEQ-VRO (540-574-7812, Keith.Fowler@deq.virginia.gov) for any questions related to the proper control of fugitive dust, or open burning requirements and prohibitions.

4. Potable Water. Installation of potable water lines and appurtenances must comply with the State's Waterworks Regulations. The Virginia Department of Health (VDH), <http://www.vdh.state.va.us/ODW/>, administers both federal and state laws governing waterworks operation. For more information, contact the VDH's Lexington Office of Water Programs at (540) 463-7136.

5. Wastewaters. DEQ has approval authority over wastewater discharges per the State Water Control Law and corresponding regulations. This includes discharges or land application of any wastewaters generated from washing of materials, products, or vehicles, or other practices relevant to this project, including water contaminated by chemicals used on-site. DEQ also has approval authority over plans and specifications for sewage collection systems and treatment works (except drainfields and other on-site systems approved by the local health department), per the Sewage Collection and Treatment (SCAT) Regulations, <http://law.lis.virginia.gov/admincode/title9/agency25/chapter790/>. Any wastewaters generated by this project must be properly managed and disposed. For additional information and assistance, contact Brandon Kiracofe at DEQ-VRO (540-574-7892, Brandon.Kiracofe@deq.virginia.gov).

6. Air Quality. Installation / operation / modification / replacement of stationary or portable fuel burning equipment (e.g., generators, wood chippers/grinders, boilers, etc.) or other sources of air pollutants, including dust, may be subject to registration and/or air permitting requirements (<http://www.deq.virginia.gov/Programs/Air/PermittingCompliance/Permitting/TypesofAirPermits.aspx>); for questions regarding this, please contact Janardan Pandey at DEQ-VRO (540-574-7817, Janardan.Pandey@deq.virginia.gov).

7. Petroleum Storage Tanks. Installation / operation / modification of tanks used for the storage of petroleum and CERCLA substances may be subject to registration and/or other regulatory requirements (<http://www.deq.virginia.gov/Programs/LandProtectionRevitalization/PetroleumProgram/StorageTanks.aspx>). If petroleum-contaminated soils or water are encountered during excavation work, or if old petroleum tanks need to be removed or replaced, contact DEQ. For questions regarding any of this, please contact Todd Pitsenberger at DEQ-VRO (540-574-7847, Todd.Pitsenberger@deq.virginia.gov).

8. Solid and Hazardous Wastes, and Hazardous Substances. DEQ administers the Virginia Waste Management Regulations, <http://law.lis.virginia.gov/admincode/title9/agency20/>. All solid wastes, hazardous wastes, and hazardous materials, including construction and demolition (C&D) wastes and universal wastes (batteries, fluorescent lights, refrigerants, mercury switches, mercury thermostats, etc.), must be managed in accordance with all applicable federal, state, and local environmental regulations. The generation of hazardous wastes should be minimized and solid wastes generated at the site should be reduced at the source, reused, or recycled. DEQ encourages the management of certain organic wastes by on-site composting or reuse as animal feed or soil amendment. Also, if you encounter any improperly disposed solid or hazardous wastes, or petroleum contaminated soils, you should contact DEQ-VRO. You may wish to refer to the web link for "What's in My Back Yard?", <http://www.deq.virginia.gov/ConnectWithDEQ/VEGIS.aspx>, to help you determine areas where residual contamination may be more likely. Contact Graham Simmerman at DEQ-VRO (540-574-7865, Graham.Simmerman@deq.virginia.gov) for any questions related to waste management / disposal, including any questions related to open burning requirements and prohibitions. Manage / dispose of any asbestos-containing materials (ACMs) in accordance with Virginia Department of Labor and Industry (DOLI) regulations. Contact Doug Wiggins at DOLI (Richard.Wiggins@doli.virginia.gov, 540-562-3580, ext. 131) for any questions related to management / disposal of ACMs.

9. Pesticides and Herbicides. DEQ recommends that herbicides or pesticides for construction or landscape maintenance, when necessary, be used in accordance with the principles of integrated pest management, and that the least toxic pesticides that are effective in controlling the target species be used. Please contact the Department of Agriculture and Consumer Services at (804) 786-3501 for more information. If applying aquatic pesticides to surface waters, the applicant must comply with the DEQ's Pesticide General Permit, <http://www.deq.virginia.gov/Programs/Water/PermittingCompliance/PollutionDischargeElimination/PermitsFees.aspx#pest>.

10. Natural Heritage Resources. The Virginia Department of Conservation and Recreation (DCR) Division of Natural Heritage (DNH) can search its Biotics Data System for occurrences of natural heritage resources from the area indicated on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered animal and plant species, unique or exemplary natural communities, and significant geologic communities. We recommend that the DNH be contacted at (804) 786-7951 to secure updated information on natural heritage resources before commencing the project.

11. Wildlife Resources. The Virginia Department of Game and Inland Fisheries (DGIF) exercises enforcement and regulatory jurisdiction over wildlife and freshwater fish, including state or federally listed endangered or threatened species. DGIF determines likely impacts on fish and wildlife resources and habitat, and recommends appropriate measures to avoid, reduce, or compensate for those impacts. For more information, see the DGIF website at <http://www.dgif.virginia.gov> or contact Ray Fernald at (804) 367-6913.

12. Historic and Archaeological Resources. *Section 106 of the National Historic and Preservation Act of 1966*, as amended, requires that activities that receive federal funding must consider effects to properties that are listed or eligible for listing on the National Register of Historic Places. The Department of Historic Resources (DHR) conducts reviews of projects to determine their effect on historic structures or cultural resources. If applicable, contact DHR. In the event that archaeological resources are encountered during construction, immediately contact Ms. Ethel Eaton, DHR, at (804) 367-2323.

13. Pollution Prevention. DEQ recommends that construction projects incorporate the principles of pollution prevention including the following recommendations:

- Consider environmental attributes when purchasing materials. For example, the extent of recycled material content and toxicity level should be considered.
- Consider contractors' commitment to the environment when choosing contractors. Also, specifications regarding raw material selection (alternative fuels and energy sources) and construction practices can be included in contract documents and requests for proposals.
- Choose sustainable practices and materials in infrastructure and construction and design. These could include asphalt and concrete containing recycled materials and integrated pest management in landscaping.
- Integrate pollution prevention techniques into maintenance and operation activities to include source reduction (fixing leaks, energy efficient products).

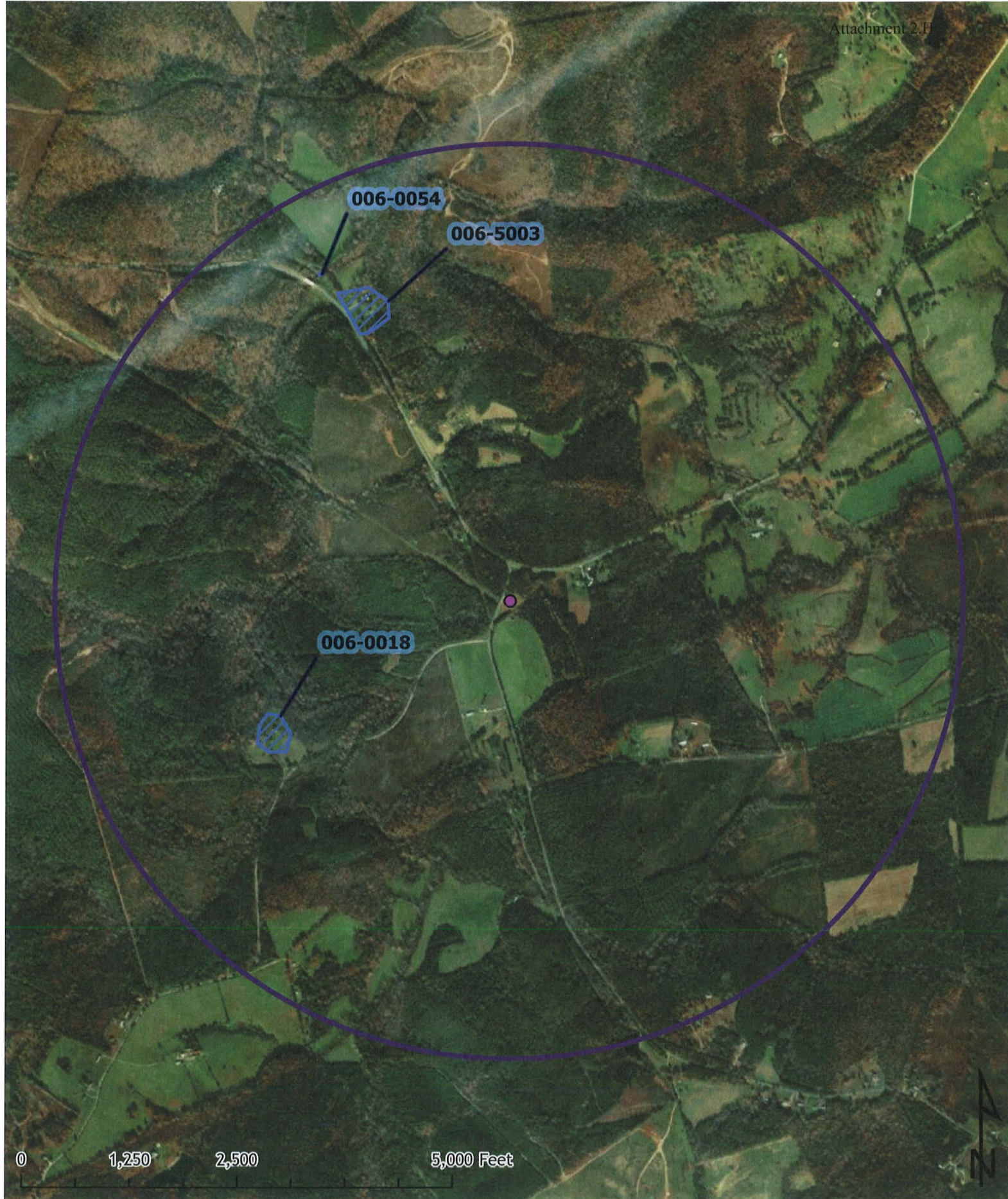
Pollution prevention measures are likely to reduce potential environmental impacts and reduce costs for material purchasing and waste disposal. DEQ's Office of Pollution of Prevention hosts a number of programs and initiatives that provide non-regulatory assistance to businesses, institutions, and communities including the Virginia Environmental Excellence Program and Virginia Green. For more information, please visit our web site at <http://www.deq.virginia.gov/Programs/PollutionPrevention.aspx>.

14. Energy Conservation. Any structures should be planned and designed to comply with state and federal guidelines and industry standards for energy conservation and efficiency. For example, energy efficiency of the structures can be enhanced by maximizing the use of the following:

- thermally-efficient building shell components (roof, wall, floor, and insulation);
- high efficiency heating, ventilation, air conditioning systems; and
- high efficiency lighting systems.

Matt Heller at the Department of Mines, Minerals and Energy, (434) 951-6351, may be contacted for assistance in meeting this challenge.

B. Keith Fowler | Deputy Regional Director | DEQ-Valley Regional Office | 4411 Early Road | P. O. Box 3000 | Harrisonburg, VA 22801 | 540-574-7812 | Keith.Fowler@deq.virginia.gov



Project: CVEC 2021 ER (Tower Hill Substation Rebuild)
 Location: 37°30'25.20"N, 78°46'57.34"W
 Gladstone, Virginia 24553
 Date: 12/9/2020
 Created by: Kristina Donnally

- TOWERHILL
- 1-mile-buffer
- Architecture Resources
- Archaeological Resources

Sources: VDHR 2020, ESRI 2020
 Records of the Virginia Department of Historic Resources (DHR) have been gathered over many years and the representation depicted is based on the field observation date and may not reflect current ground conditions. The map is for general illustration purposes and is not intended for engineering, legal or other site-specific uses. The map may contain errors and is provided "as-is". Contact DHR for the most recent information as data is updated continually.



DHR
 Department of Historic Resources

Virginia Department of Historic Resources
Architectural Survey Form

DHR ID: 006-0054
Other DHR ID: No Data

Property Information

Property Names

Name Explanation
Function/Location
Current

Name
Bridge #1007, Davis Creek, Route 60
Bridge #1007

Property Evaluation Status

DHR Staff: Not Eligible

Property Addresses

Current - Route 60

County/Independent City(s): Appomattox (County)

Incorporated Town(s): *No Data*

Zip Code(s): *No Data*

Magisterial District(s): *No Data*

Tax Parcel(s): *No Data*

USGS Quad(s): GLADSTONE

Additional Property Information

Architecture Setting: Rural

Acreage: *No Data*

Site Description:

No Data

Surveyor Assessment:

No Data

Surveyor Recommendation: *No Data*

Ownership

Ownership Category
Public - State

Ownership Entity
No Data

Primary Resource Information

Resource Category: Transportation

Resource Type: Bridge

NR Resource Type: Structure

Historic District Status: *No Data*

Date of Construction: 1931

Date Source: Written Data

Historic Time Period: World War I to World War II (1917 - 1945)

Historic Context(s): Transportation/Communication

Other ID Number: *No Data*

Architectural Style: No Discernable Style

Form: *No Data*

Number of Stories: *No Data*

Condition: Fair

Threats to Resource: Deterioration

Architectural Description:

Architecture Summary: This is a three span 113 foot t-beam (104) bridge with cork railings.

Bridge Information

Structure Number: 1007

VDOT Bridge ID: *No Data*

Entity Crossed Name: David Creek

Virginia Department of Historic Resources
Architectural Survey Form

DHR ID: 006-0054
Other DHR ID: No Data

Entity Crossed Type: Water
Bridge Type: Beam
Current Use: Road
Number of Spans: 3
Number of Lanes: 3

Secondary Resource Information

Historic District Information

Historic District Name: No Data
Local Historic District Name: No Data
Historic District Significance: No Data

CRM Events

Event Type: DHR Staff: Not Eligible

DHR ID: 006-0054
Staff Name: HSTG
Event Date: 11/1/1995
Staff Comment
Reconfirmed, 2001-0635.

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: No Data
Investigator: VTRC
Organization/Company: Unknown (DSS)
Photographic Media: No Data
Survey Date: 7/14/1994
Dhr Library Report Number: No Data
Project Staff/Notes:
No Data

Bibliographic Information

Bibliography:

No Data

Property Notes:

Name: Unknown
Company 1: Commonwealth of Virginia
State: Virginia
Owner Relationship: Owner of property

Virginia Department of Historic Resources
Architectural Survey Form

DHR ID: 006-5003
Other DHR ID: No Data

Property Information

Property Names

Name Explanation
Historic

Name
Wells Home House

Property Evaluation Status

DHR Staff: Not Eligible

Property Addresses

- U.S. Route 60

County/Independent City(s): Appomattox (County)

Incorporated Town(s): *No Data*

Zip Code(s): *No Data*

Magisterial District(s): *No Data*

Tax Parcel(s): 6-A-28

USGS Quad(s): GLADSTONE

Additional Property Information

Architecture Setting: Rural

Acreage: 8.5

Site Description:

The property is a well-tended 8.5-acre rural parcel with a driveway, a prefabricated metal shed, and a tobacco barn.

The garage is immediately west of the main house. The tobacco barn is further west. The cemetery is northeast of the house.

Surveyor Assessment:

The house, called "The old Wells home house" in deeds dated 1943 and 1980, was evidently built ca. 1900 for Sarah and Alonza Wells. For many years it was the home of Whitcomb A. Wells and Early J. Wells his wife. The house is still owned by the Wells family. The house is a modest example of an extremely common Virginia house type. The property is marginally associated with the broad historic patterns of settlement and domestic architecture, and it does not convey significant information related to those patterns. The property is no longer part of a working farmstead. The house does not appear to have been associated with persons important in history. The house is a modest and significantly-altered example of an extremely common house type, neither distinctive nor illustrative. The property is unlikely to yield information significant in history or pre-history. No further evaluation of the property is recommended.

Surveyor Recommendation: *No Data*

Ownership

Ownership Category
Private

Ownership Entity
No Data

Primary Resource Information

Resource Category: Domestic

Resource Type: Single Dwelling

NR Resource Type: Building

Historic District Status: *No Data*

Date of Construction: Ca 1900

Date Source: Deed

Historic Time Period: Reconstruction and Growth (1866 - 1916)

Historic Context(s): Domestic, Funerary, Subsistence/Agriculture

Other ID Number: *No Data*

Architectural Style: No Discernable Style

Form: *No Data*

Number of Stories: 2.0

Condition: Good

Threats to Resource: None Known

Architectural Description:

Architecture Summary: The Wells Home House is a two-story frame residence, with a primary single-pile block and a two-story rear wing. The gable roofs are sheathed in asphalt shingles. The main wing has two exterior end chimneys; the chimneys are clad in stucco, and they appear to be of brick and stone construction. The rear wing has a single interior end chimney. On the front, a big modern enclosed porch or deck with a broad gable roof covers the original facade.

Exterior Components

Component	Component Type	Material	Material Treatment
Roof	Gable	Asphalt	Shingle
Windows	Sash, Double-Hung	Wood	6/6
Chimneys	Exterior End	Brick	Other
Chimneys	Interior End	Brick	Other
Structural System and Exterior Treatment	Frame	Wood	Veneer
Structural System and Exterior Treatment	Frame	Wood	Other
Porch	Other	<i>No Data</i>	<i>No Data</i>
Porch	Other	Metal	Cast Metal Supports

Secondary Resource Information**Secondary Resource #1**

Resource Category: Domestic
Resource Type: Garage
Date of Construction: 1980Ca
Date Source: Map
Historic Time Period: The New Dominion (1946 - 1991)
Historic Context(s): Domestic, Funerary, Subsistence/Agriculture
Architectural Style: No Discernable Style
Form: *No Data*
Condition: Good
Threats to Resource: None Known
Architectural Description:
 Architecture Summary: One-story prefabricated metal garage.
Number of Stories: *No Data*

Secondary Resource #2

Resource Category: Agriculture/Subsistence
Resource Type: Tobacco Barn
Date of Construction: 1900Ca
Date Source: *No Data*
Historic Time Period: Reconstruction and Growth (1866 - 1916)
Historic Context(s): Domestic, Funerary, Subsistence/Agriculture
Architectural Style: No Discernable Style
Form: *No Data*
Condition: Poor
Threats to Resource: Neglect
Architectural Description:
 Architecture Summary: This single-pen log barn is described as a tobacco barn in the deeds. The logs are V-notched. Random horizontal boards cover some of the logs. V-crimp metal roofing covers the gable roof.
Number of Stories: *No Data*

Secondary Resource #3

Resource Category: Funerary
Resource Type: Cemetery
Date of Construction: Ca
Date Source: *No Data*

Virginia Department of Historic Resources
Architectural Survey Form

DHR ID: 006-5003
Other DHR ID: No Data

Historic Time Period: Reconstruction and Growth (1866 - 1916)
Historic Context(s): Domestic, Funerary, Subsistence/Agriculture
Architectural Style: *No Data*
Form: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
No Data
Current Use: *No Data*
Historic Religious Affiliation: *No Data*
Ethnic Affiliation: *No Data*
Has Marked Graves: *No Data*
Has Unmarked Graves: *No Data*
Enclosure Type: *No Data*
Number Of Gravestones: *No Data*
Earliest Marked Death Year: *No Data*
Latest Marked Death Year: *No Data*

Historic District Information

Historic District Name: *No Data*
Local Historic District Name: *No Data*
Historic District Significance: *No Data*

CRM Events

Event Type: DHR Staff: Not Eligible

DHR ID: 006-5003
Staff Name: Metz, Cara
Event Date: 4/11/2001
Staff Comment:
No Data

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: 2001-0635
Investigator: Wells, John
Organization/Company: Unknown (DSS)
Photographic Media: *No Data*
Survey Date: 3/1/2001
Dhr Library Report Number: *No Data*
Project Staff/Notes:
 VDOT PPMS 16038

Project Bibliographic Information:

Record Type: Deed
 Bibliographic Notes: This land was owned by Jno. R. Phelps in the late 19th century. (Appomattox County does not have land records earlier than 1891.) Deed Book 7, p. 425 (Oct. 3, 1901) describes the sale of the land from the heirs of Jno. R. Phelps (decd.) to S. E. Wells and W. A. Wells, noting that this is the "same land on which the said Wells now resides." The sale appears to have been delayed; in the 1908 county Land Book, the land is under the name of S. P. Coleman, trustee for W. Phelps, and the property (363 acres) has buildings assessed at \$300. (This assessment was in the middle range of county property assessments for the time; few properties had improvement assessments as high as \$1,000.) County Deed Book 11, p. 428 (December 7, 1909): J. W. Phelps et al. convey to W. A. Wells and Early J. Wells 363 acres, land on which Sarah and Alonza Wells have resided for years. Sarah and Alonza Wells retain life tenancy in the house. The 1916 land book shows W.

Virginia Department of Historic Resources
Architectural Survey Form

DHR ID: 006-5003
Other DHR ID: No Data

A. and Early J. Wells (white) in possession of the 363-acre parcel on David Creek; the improvements are still assessed at \$300. Further deed citations: DB 42, p. 248, 1943; DB 147, p. 64, 1980; and DB 169, p. 175, 1987, by which 8.5 acres, with a house and tobacco barn, on the north side of U.S. Route 60, are sold by Katie Coleman Wells Williams & Ferris E. Williams to Lloyd Dale Wells, the current property owner.

Bibliographic Information**Bibliography:**

No Data

Property Notes:

No Data

Virginia Department of Historic Resources
Architectural Survey Form

DHR ID: 006-0018
Other DHR ID: No Data

Property Information

Property Names

Name Explanation
Historic/Current

Name
Walnut Hill

Property Evaluation Status

DHR Staff: Not Eligible

Property Addresses

Alternate - Route 615
Current - Walnut Hill Road

County/Independent City(s): Appomattox (County)

Incorporated Town(s): *No Data*

Zip Code(s): *No Data*

Magisterial District(s): *No Data*

Tax Parcel(s): *No Data*

USGS Quad(s): GLADSTONE

Additional Property Information

Architecture Setting: Rural

Acreage: *No Data*

Site Description:

Located on north side of Walnut Hill Road (Rt 615), just southwest of it junction with Route 654 and also Route 60. The David Creek runs north and east of the house.

Surveyor Assessment:

"On an original land grant made to Thomas Jefferson."

Surveyor Recommendation: *No Data*

Ownership

Ownership Category
Private

Ownership Entity
No Data

Primary Resource Information

Resource Category: Domestic

Resource Type: Single Dwelling

NR Resource Type: Building

Historic District Status: *No Data*

Date of Construction: Ca 1845

Date Source: Owner

Historic Time Period: Antebellum Period (1830 - 1860)

Historic Context(s): Domestic

Other ID Number: *No Data*

Architectural Style: *No Data*

Form: *No Data*

Number of Stories: 2.0

Condition: Good

Interior Plan: Central Passage, Single Pile

Threats to Resource: None

Architectural Description:

Architecture Summary: 3-bay facade

Exterior Components

Component
Windows

Component Type
Sash, Double-Hung

Material
Wood

Material Treatment
6/6

Virginia Department of Historic Resources
Architectural Survey Form

DHR ID: 006-0018
Other DHR ID: No Data

Roof	Gable, Side	Asphalt	Shingle
Chimneys	Interior End	Brick	Other
Structural System and	Masonry	Brick	Other
Exterior Treatment			
Porch	2-story	Wood	Removed/None

Secondary Resource Information

Historic District Information

Historic District Name: *No Data*
Local Historic District Name: *No Data*
Historic District Significance: *No Data*

CRM Events

Event Type: DHR Staff: Not Eligible

DHR ID: 006-0018
Staff Name: DHR
Event Date: 3/5/1991
Staff Comment: *No Data*

Event Type: PIF

Project Review File Number: *No Data*
Investigator: Sayre, Robert M.
Organization/Company: Unknown (DSS)
Photographic Media: *No Data*
Survey Date: 2/25/1991
Dhr Library Report Number: *No Data*
Project Staff/Notes: *No Data*

Event Type: Survey:HABS Inventory

Project Review File Number: *No Data*
Investigator: Newman, W.C.
Organization/Company: Unknown (DSS)
Photographic Media: *No Data*
Survey Date: 9/4/1957
Dhr Library Report Number: *No Data*
Project Staff/Notes: *No Data*

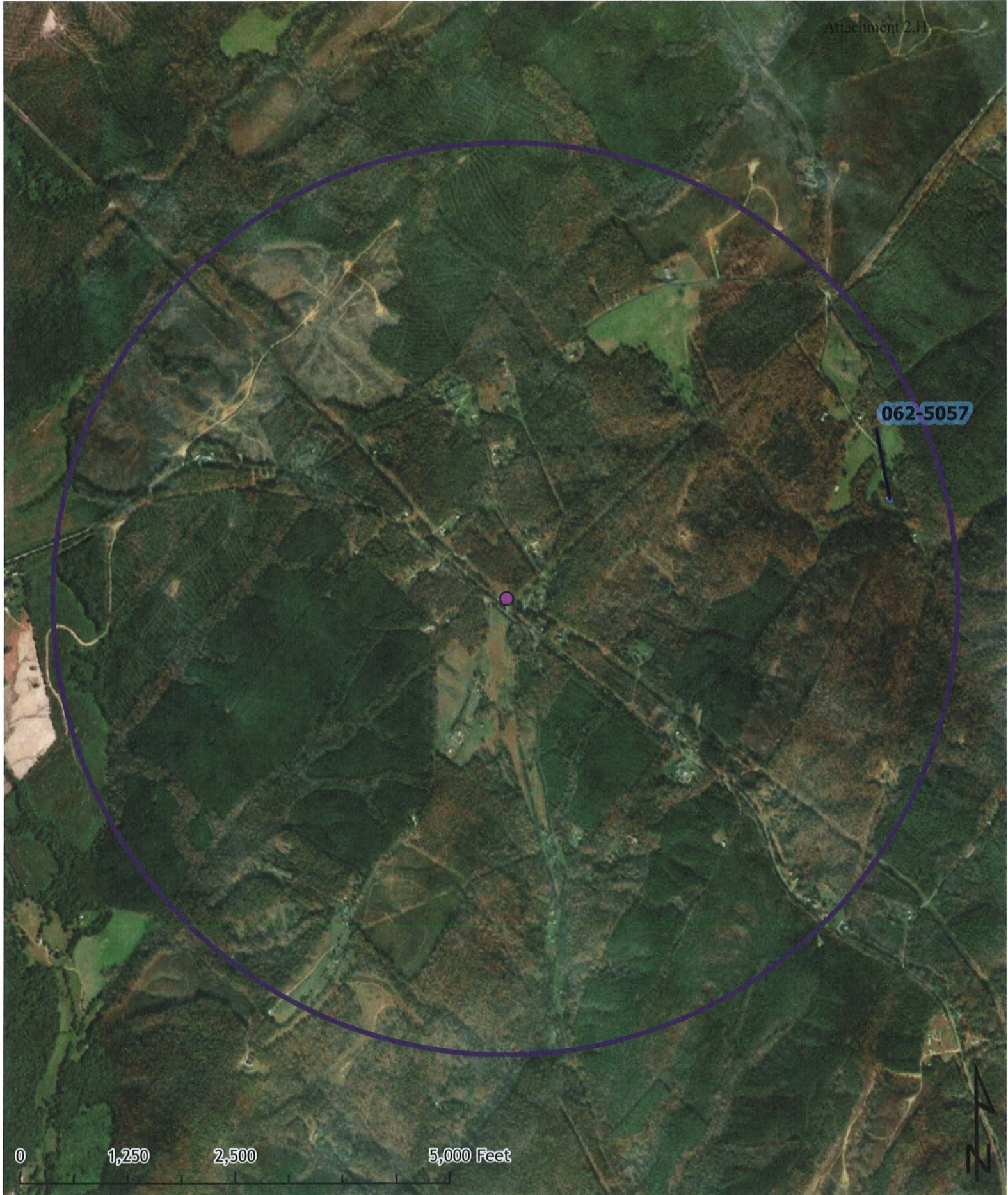
Bibliographic Information

Bibliography:





No Data

Property Notes:

No Data



Project: CVEC 2021 ER (Gladstone Substation Rebuild)
 Location: 37°34'21.39"N, 78°51'26.41"W
 Gladstone, Virginia 24553
 Date: 12/9/2020
 Created by: Kristina Donnally

-  GLADSTONE
-  1-mile-buffer
-  Architecture Resources
-  Archaeological Resources

Sources: VDHR 2020, ESRI 2020
 Records of the Virginia Department of Historic Resources (DHR) have been gathered over many years and the representation depicted is based on the field observation date and may not reflect current ground conditions. The map is for general illustration purposes and is not intended for engineering, legal or other site-specific uses. The map may contain errors and is provided "as-is". Contact DHR for the most recent information as data is updated continually.



DHR
 Department of Historic Resources

Virginia Department of Historic Resources
Architectural Survey Form

DHR ID: 062-5057
Other DHR ID: No Data

Property Information

Property Names

Name Explanation
Historic

Name
Rose Hill and Cemetery

Property Evaluation Status

Not Evaluated

Property Addresses

Alternate - Route 809
Current - 1162 Payne Place

County/Independent City(s): Nelson (County)

Incorporated Town(s): *No Data*

Zip Code(s): *No Data*

Magisterial District(s): *No Data*

Tax Parcel(s): *No Data*

USGS Quad(s): GLADSTONE

Additional Property Information

Architecture Setting: Rural

Acreage: *No Data*

Site Description:

The house is situated on the east side of Payne Place which separates the house from the outbuildings and the cemetery. An immense holly tree in the front yard was planted in the early-nineteenth century by Willis Harris, ancestor of the current owners.

The outbuildings are all non-historic, built in the late-twentieth century. The historic cemetery is located across Route 809 from the dwelling.

Surveyor Assessment:

William Horsley, III, purchased the Rose Hill tract in 1811. The property was part of a grant, in excess of 2,600 acres, delivered to William Horsley, II, in 1780 and 1781 by Dr. William Cabell, William's maternal grandfather. William Horsley, III, and his wife Sarah Christian Horsley resided at Rose Hill. Their daughter, Martha married Willis Harris in the house which she later inherited. The property was inherited by their daughter Sallie Ida Harris who married Sterling Claiborne Payne. Their son, Frank, inherited the property and it is now owned by James and Mary Payne Strickland. This property should be surveyed at the Intensive level because of its age, architectural character and historic associations.

Surveyor Recommendation: *No Data*

Primary Resource Information

Resource Category: Domestic

Resource Type: Single Dwelling

NR Resource Type: Building

Historic District Status: *No Data*

Date of Construction: Ca 1800

Date Source: Site Visit/Written Data

Historic Time Period: Early National Period (1790 - 1829)

Historic Context(s): Architecture/Community Planning

Other ID Number: *No Data*

Architectural Style: Georgian

Form: *No Data*

Number of Stories: 1.5

Condition: Good

Interior Plan: Central Passage, Single Pile

Threats to Resource: None Known

Architectural Description:

Architecture Summary: Rose Hill is a 1-1/2-story, 3-bay wide by 1-bay deep, single-pile, center -all plan, frame dwelling. The centered entrance has a rectangular, multi-light transom. The flanking 6/6, double-hung, wood sash windows have moulded sills. The chimney located on the

west end is constructed of coursed rubble. The porch is 4-bays wide with a shed roof supported by turned wooden posts.

Exterior Components

Component	Component Type	Material	Material Treatment
Chimneys	Exterior End	Concrete	Block
Porch	1-story, 3-bay	Wood	Other
Windows	Sash, Double-Hung	Wood	6/6
Structural System and Exterior Treatment	Frame	Wood	Siding, Aluminum
Foundation	Solid/Continuous	Concrete	Block
Roof	Gable	Metal	Standing Seam
Chimneys	Exterior End	Stone	Coursed Rubble

Secondary Resource Information**Secondary Resource #1**

Resource Category:	Funerary
Resource Type:	Cemetery
Date of Construction:	Ca
Date Source:	No Data
Historic Time Period:	No Data
Historic Context(s):	Architecture/Community Planning
Architectural Style:	No Data
Form:	No Data
Condition:	No Data
Threats to Resource:	No Data
Architectural Description:	No Data
Current Use:	Private
Historic Religious Affiliation:	No Data
Ethnic Affiliation:	Unknown
Has Marked Graves:	False
Has Unmarked Graves:	False
Enclosure Type:	No Data
Number Of Gravestones:	No Data
Earliest Marked Death Year:	No Data
Latest Marked Death Year:	No Data

Secondary Resource #2

Resource Category:	DSS Legacy
Resource Type:	Shed
Date of Construction:	Ca
Date Source:	No Data
Historic Time Period:	No Data
Historic Context(s):	Architecture/Community Planning
Architectural Style:	No Data
Form:	No Data
Condition:	No Data
Threats to Resource:	No Data
Architectural Description:	No Data
Number of Stories:	No Data

Secondary Resource #3

Resource Category: DSS Legacy
Resource Type: Shed
Date of Construction: Ca
Date Source: *No Data*
Historic Time Period: *No Data*
Historic Context(s): Architecture/Community Planning
Architectural Style: *No Data*
Form: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
No Data
Number of Stories: *No Data*

Secondary Resource #4

Resource Category: DSS Legacy
Resource Type: Shed
Date of Construction: Ca
Date Source: *No Data*
Historic Time Period: *No Data*
Historic Context(s): Architecture/Community Planning
Architectural Style: *No Data*
Form: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
No Data
Number of Stories: *No Data*

Secondary Resource #5

Resource Category: Agriculture/Subsistence
Resource Type: Barn
Date of Construction: Ca
Date Source: *No Data*
Historic Time Period: *No Data*
Historic Context(s): Architecture/Community Planning
Architectural Style: *No Data*
Form: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
No Data
Number of Stories: *No Data*

Secondary Resource #6

Resource Category: Agriculture/Subsistence
Resource Type: Barn
Date of Construction: Ca
Date Source: *No Data*
Historic Time Period: *No Data*
Historic Context(s): Architecture/Community Planning

Architectural Style: *No Data*
Form: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
No Data
Number of Stories: *No Data*

Secondary Resource #7

Resource Category: Agriculture/Subsistence
Resource Type: Corncrib
Date of Construction: Ca
Date Source: *No Data*
Historic Time Period: *No Data*
Historic Context(s): Architecture/Community Planning
Architectural Style: *No Data*
Form: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
No Data

Secondary Resource #8

Resource Category: Domestic
Resource Type: Garage
Date of Construction: Ca
Date Source: *No Data*
Historic Time Period: *No Data*
Historic Context(s): Architecture/Community Planning
Architectural Style: *No Data*
Form: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
No Data
Number of Stories: *No Data*

Secondary Resource #9

Resource Category: Domestic
Resource Type: Garage
Date of Construction: Ca
Date Source: *No Data*
Historic Time Period: *No Data*
Historic Context(s): Architecture/Community Planning
Architectural Style: *No Data*
Form: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
No Data
Number of Stories: *No Data*

Virginia Department of Historic Resources
Architectural Survey Form

DHR ID: 062-5057
Other DHR ID: No Data

Historic District Information

Historic District Name: *No Data*

Local Historic District Name: *No Data*

Historic District Significance: *No Data*

CRM Events**Event Type: Survey:Phase I/Reconnaissance**

Project Review File Number: 062-5057

Investigator: Clifford E. and Louise M. Wood

Organization/Company: Unknown (DSS)

Photographic Media: *No Data*

Survey Date: 3/4/1998

Dhr Library Report Number: The Cabells and Their Kin

Project Staff/Notes:

No Data

Project Bibliographic Information:

Name: Brown, Alexander

DHR CRM Report Number: The Cabells and Their Kin

Record Type: Book

Bibliographic Information**Bibliography:**

No Data

Property Notes:

Name: Clifford and Louise Wood

Address 1: 115 Arrowhead Lane

Phone 1: 804-263-5654

Owner Relationship: Informant

Name: James and Mary Payne Strickland

Address 1: 1162 Payne Place

City: Gladstone

State: Virginia

ZIP: 24553

Phone 1: 804-933-8201

Owner Relationship: Owner of property



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/>



In Reply Refer To:

December 08, 2020

Consultation Code: 05E2VA00-2021-SLI-1027

Event Code: 05E2VA00-2021-E-02923

Project Name: 1006_Gladstone-TowerHill Trans Line_CVEC

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/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

Project Summary

Consultation Code: 05E2VA00-2021-SLI-1027

Event Code: 05E2VA00-2021-E-02923

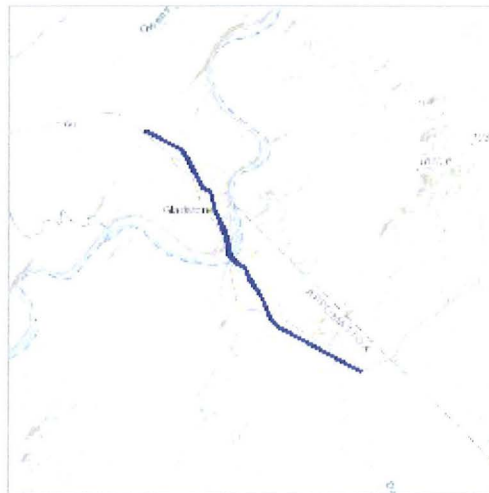
Project Name: 1006_Gladstone-TowerHill Trans Line_CVEC

Project Type: TRANSMISSION LINE

Project Description: The existing 6.4 mile Gladstone to Tower Hill 46 kV Transmission line will be rebuilt to 138 kV, in place and within the existing 100 ft right-of-way. The rebuilt line will utilize steel poles with 400 – 450 ft spans.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/37.539699019766374N78.82739059267954W>



Counties: Appomattox, VA | Nelson, VA

Endangered Species Act Species

There is a total of 3 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. [NOAA Fisheries](#), 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
Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Flowering Plants

NAME	STATUS
Small Whorled Pogonia <i>Isotria medeoloides</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1890	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 National Wildlife Refuge 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.



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/>



In Reply Refer To:

December 08, 2020

Consultation Code: 05E2VA00-2021-SLI-1025

Event Code: 05E2VA00-2021-E-02919

Project Name: 516_Tower Hill Sub Rebuild_CVEC

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/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

Project Summary

Consultation Code: 05E2VA00-2021-SLI-1025

Event Code: 05E2VA00-2021-E-02919

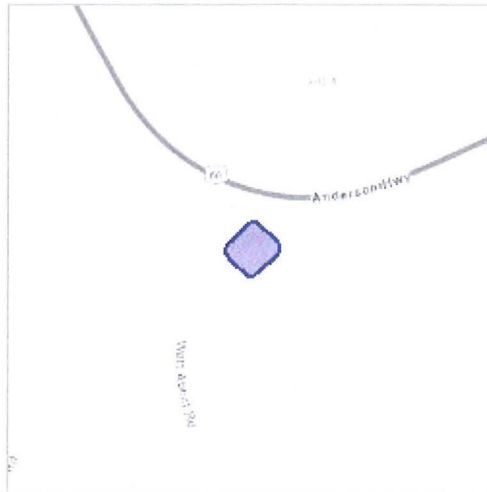
Project Name: 516_Tower Hill Sub Rebuild_CVEC

Project Type: ** OTHER **

Project Description: The rebuild of the Tower Hill Substation is necessary to support the incoming Cooperative-owned transmission, rebuilt to 138 kV. The Substation will be rebuilt on an adjacent 1.2 acre location, owned by the Cooperative.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/37.50720864779231N78.78216295085207W>



Counties: Appomattox, VA

Endangered Species Act Species

There is a total of 2 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. [NOAA Fisheries](#), 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
Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	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 National Wildlife Refuge 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.



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/>



In Reply Refer To:

December 08, 2020

Consultation Code: 05E2VA00-2021-SLI-1022

Event Code: 05E2VA00-2021-E-02910

Project Name: 521_Gladstone Sub Rebuild_CVEC

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/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

Project Summary

Consultation Code: 05E2VA00-2021-SLI-1022

Event Code: 05E2VA00-2021-E-02910

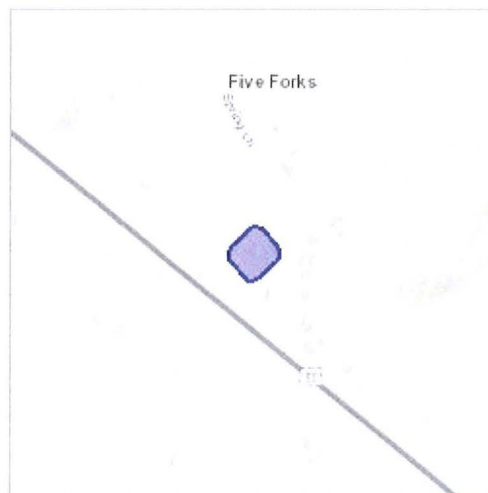
Project Name: 521_Gladstone Sub Rebuild_CVEC

Project Type: ** OTHER **

Project Description: The rebuild of the Gladstone Substation is necessary to support the incoming 138 kV AEP Transmission. The substation will be rebuilt on an adjacent 1.2 acre location, owned by the Cooperative.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/37.572956049093726N78.8569074882231W>



Counties: Nelson, VA

Endangered Species Act Species

There is a total of 1 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. NOAA Fisheries, 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: https://ecos.fws.gov/ecp/species/9045	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 National Wildlife Refuge 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.

Matthew J. Strickler
Secretary of Natural Resources

Clyde E. Cristman
Director



COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

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*

January 7, 2021

Nathan Cooksey
Booth and Associates, Inc.
5811 Glenwood Avenue, Suite 109
Raleigh, NC 27612

Re: 1006, Gladstone – Tower Hill Transmission Rebuild

Dear Mr. Cooksey:

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 Biotics, natural heritage resources have not been documented within the submitted project boundary including a 100 foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

Furthermore, if tree removal is proposed for the project, it will fragment Ecological Cores (**C3, C4 and C5**) as identified in the Virginia Natural Landscape Assessment (<https://www.dcr.virginia.gov/natural-heritage/vaconvisvnla>), 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).

DCR 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 (<http://www.dcr.virginia.gov/natural-heritage/document/nh-invasive-plant-list-2014.pdf>) and methods for treating the invasives. DCR also recommends the ROW restoration and maintenance practices planned include appropriate revegetation using native species in a mix of grasses and forbs, robust monitoring and an adaptive management plan to provide guidance if initial revegetation efforts are unsuccessful or if invasive species outbreaks occur.

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 state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

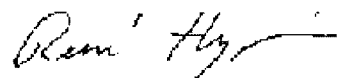
New and updated information is continually added to Biotics. Please re-submit a completed order form and project map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

A fee of \$90.00 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 <http://vafwis.org/fwis/> or contact Ernie Aschenbach at 804-367-2733 or Ernie.Aschenbach@dwr.virginia.gov. According to the information currently in our files, the James 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 including a 100-foot buffer. 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.

Sincerely,



S. René Hypes
Natural Heritage Project Review Coordinator

Cc: Ernie Aschenbach, VDWR



4709 COLLEGE ACRES DRIVE
SUITE 2
WILMINGTON, NC 28403

TEL (910) 392-9253
FAX (910) 392-9139
czrwilm@czr-inc.com

15 January 2021

Ms. Briana Eddy
Booth and Associates, LLC
5811 Glenwood Avenue, Suite 109
Raleigh, NC 27612

Re: Reconnaissance and pedestrian survey for the presence of potential habitat for, or individuals of, protected species (federal or state listed endangered or threatened) on an approximate: 2.2-acre substation (Gladstone), 2.0-acre substation (Tower Hill), and 6.5-mile existing transmission line, Appomattox and Nelson counties, Virginia.

Dear Ms. Eddy,

CZR Incorporated (CZR) completed a reconnaissance and pedestrian survey for federal/state-listed protected species within two substations and an existing transmission line right-of-way in Appomattox and Nelson counties, Virginia. The study area includes the approximately 2.2-acre Gladstone substation, 2.0-acre tower Hill substation, and the 6.5-mile transmission line that connects these substations. The Gladstone substation is located northeast of the intersection of US 60 and Buck Mountain Lane and the Tower Hill substation is located south of the intersection of US 60 and Watt Abbitt Road. The parcel boundaries for the substations and the centerline for the transmission line were provided by the client on 29 October 2020 (shapefiles). The study area for the transmission line was generated by 50-foot offsets from the centerline. Field work was conducted by CZR staff on 30 November through 2 December 2020.

Background Research

Prior to the initiation of field efforts available resources were reviewed for the project area including:

- U.S. Geological Survey (USGS) 7.5 minute topographic quadrangle of Gladstone, VA.
- Natural Resource Conservation Service (NRCS) published Soil Surveys of Appomattox County and Nelson County, VA.
- Aerial photography.
- U.S. Fish and Wildlife Service (USFWS) list of Endangered, Threatened, and Candidate Species for Appomattox and Nelson counties, Virginia.
- Virginia Department of Conservation and Recreation's Division of Natural Heritage (DCR) Biotics Data System.

Federal and State-listed Protected Species

The USFWS lists five federally protected species under the Endangered Species Act (ESA) for Appomattox County and six federally protected species under the ESA for Nelson County (Table 1). Table 1 also indicates the presence or absence of potentially suitable habitat for each species in the study area based on field reconnaissance. In addition to the six species with both federal and state

Ms. Briana Eddy
Booth & Associates, LLC
15 January 2021

Page 2 – Gladstone to Tower Hill Transmission Line Maintenance, Appomattox and Nelson counties, VA

protection, there are five state protected species without federal protection. These species are listed and addressed in Table 2.

Table 1. Federally Protected Species.

Common Name	Scientific Name	Federal Status ¹	State Status ²	County Listed ³	Potential Habitat Present
Bald eagle	<i>Haliaeetus leucocephalus</i>	BGPA	--	A, N	Yes
Gray bat	<i>Myotis grisescens</i>	E	LE	A	No
Northern long-eared bat	<i>Myotis septentrionalis</i>	T	LT	A, N	No
Atlantic pigtoe	<i>Fusconaia masoni</i>	PT	LT	A, N	Yes
James spinymussel	<i>Pleurobema collina</i>	E	LE	N	Yes
Small whorled pogonia	<i>Isotria medeoloides</i>	T	LE	A, N	No
Swamp pink	<i>Helonias bullata</i>	T	LE	N	No

¹ E – Endangered; T – Threatened; PT – Proposed Threatened; BGPA – Bald and Golden Eagle Protection Act.

² LE- Listed Endangered; LT- Listed Threatened.

³ A – Appomattox County; N – Nelson County.

Potentially suitable habitat is present in the study area for bald eagle, Atlantic pigtoe, and James spinymussel. The potential habitat for bald eagle is limited to foraging opportunities within the James River. No forested areas are present within the study area that could serve as nesting sites for bald eagle. In addition, no tree clearing within the existing transmission line and/or substation sites is proposed as part of the proposed project. The proposed project is not anticipated to reduce bald eagle foraging opportunities associated with the James River. The potential habitat for James spinymussel and Atlantic pigtoe is limited to the James River.

Table 2. State Protected Species.

Common Name	Scientific Name	State Status ¹	County Listed ²	Potential Habitat Present
Green floater	<i>Lasmigonia subviridis</i>	LT	A, N	Yes
Torrey's mountain-mint	<i>Pycnanthemum torreyi</i>	PT	A, N	No
Yellow lance	<i>Elliptio lanceolate</i>	LT	N	Yes
Northern long-eared myotis	<i>Myotis septentrionalis</i>	LT	N	No
Tricolored bat (=eastern pipistrelle)	<i>Perimyotis subflavus</i>	LE	N	No

¹ LE- Listed Endangered; LT- Listed Threatened; Proposed Threatened.

² A – Appomattox County; N – Nelson County.

Potentially suitable habitat is present in the study area for two other freshwater mussels, green floater and yellow lance in the James River. . Since no alterations to the river banks or work within the river is proposed it is not anticipated that the proposed project will have any effect on potential habitat for these any freshwater mussels. Therefore, the proposed project will not have any effect on federal or state protected species with potentially suitable habitat in the study area.

No federal or state listed protected (endangered and/or threatened) species were documented during the field evaluation conducted on 30 November through 2 December 2020. Surveys for mussels were

Ms. Briana Eddy
Booth & Associates, LLC
15 January 2021

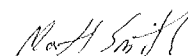
Page 3 – Gladstone to Tower Hill Transmission Line Maintenance, Appomattox and Nelson counties, VA

not conducted because there are no potential impacts to mussel habitat. Species potentially occurring within the study area (and within a 100-foot buffer) are based on USFWS and DCR data bases and reports (Attachments 1 and 2).

Please contact us with any questions or items you wish to discuss. We appreciate the opportunity to assist you with this project.

Sincerely,

CZR INCORPORATED



Matt Smith
Senior Environmental Scientist
Wilmington, NC

CP# 2342

CC: Sam Cooper, CZR Incorporated
Julia Berger, CZR Incorporated

Attachments:

1. Department of Conservation and Recreation's Division of Natural Heritage comment letters
2. U.S. Fish and Wildlife ECOS Reports

Matthew J. Strickler
Secretary of Natural Resources

Clyde E. Cristman
Director



COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

Attachment 2.J.3
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*

January 4, 2021

Nathan Cooksey
Both and Associates, Inc.
5811 Glenwood Avenue, Suite 109
Raleigh, NC 27612

Re: 521, Gladstone Substation Rebuild

Dear Mr. Cooksey:

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 Biotics, natural heritage resources have not been documented within the submitted project boundary including a 100 foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

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 state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

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 \$90.00 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.

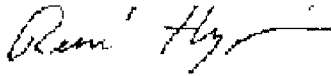
600 East Main Street, 24th Floor | Richmond, Virginia 23219 | 804-786-6124

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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 <http://vafwis.org/fwis/> or contact Ernie Aschenbach at 804-367-2733 or Ernie.Aschenbach@dwr.virginia.gov.

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.

Sincerely,

A handwritten signature in black ink, appearing to read "René Hypes", with a stylized flourish at the end.

S. René Hypes
Natural Heritage Project Review Coordinator

Matthew J. Strickler
Secretary of Natural Resources

Clyde E. Cristman
Director



COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

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*Deputy Director of
Government and Community Relations*

Thomas L. Smith
*Deputy Director of
Operations*

January 4, 2021

Nathan Cooksey
Booth and Associates, Inc.
5811 Glenwood Avenue, Suite 109
Raleigh, NC 27612

Re: 516, Tower Hill Substation Rebuild

Dear Mr. Cooksey:

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 Biotics, natural heritage resources have not been documented within the submitted project boundary including a 100 foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

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 state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

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.

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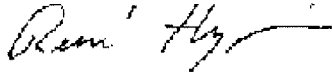
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Should you have any questions or concerns, feel free to contact me at 804-371-2708. Thank you for the opportunity to comment on this project.

Sincerely,

A handwritten signature in black ink, appearing to read "René Hypes", with a stylized flourish extending to the right.

S. René Hypes
Natural Heritage Project Review Coordinator

Matthew J. Strickler
Secretary of Natural Resources

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Nathan Burrell
*Deputy Director of
Government and Community Relations*

Thomas L. Smith
*Deputy Director of
Operations*

January 7, 2021

Nathan Cooksey
Booth and Associates, Inc.
5811 Glenwood Avenue, Suite 109
Raleigh, NC 27612

Re: 1006, Gladstone – Tower Hill Transmission Rebuild

Dear Mr. Cooksey:

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 Biotics, natural heritage resources have not been documented within the submitted project boundary including a 100 foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

Furthermore, if tree removal is proposed for the project, it will fragment Ecological Cores (**C3, C4 and C5**) as identified in the Virginia Natural Landscape Assessment (<https://www.dcr.virginia.gov/natural-heritage/vaconvisvnl>), 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.

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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).

DCR 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 (<http://www.dcr.virginia.gov/natural-heritage/document/nh-invasive-plant-list-2014.pdf>) and methods for treating the invasives. DCR also recommends the ROW restoration and maintenance practices planned include appropriate revegetation using native species in a mix of grasses and forbs, robust monitoring and an adaptive management plan to provide guidance if initial revegetation efforts are unsuccessful or if invasive species outbreaks occur.

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 state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

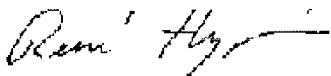
New and updated information is continually added to Biotics. Please re-submit a completed order form and project map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

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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 <http://vafwis.org/fwis/> or contact Ernie Aschenbach at 804-367-2733 or Ernie.Aschenbach@dwr.virginia.gov. According to the information currently in our files, the James 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 including a 100-foot buffer. 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.

Sincerely,



S. René Hypes
Natural Heritage Project Review Coordinator

Cc: Ernie Aschenbach, VDWR

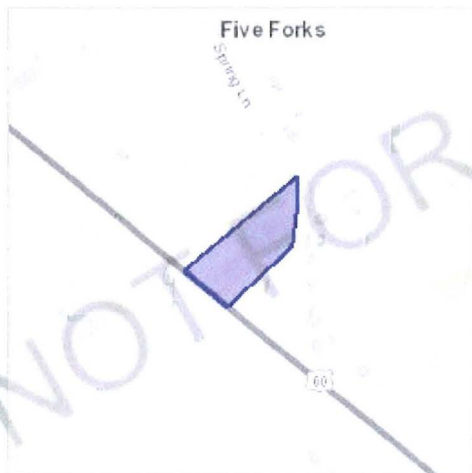
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Nelson County, Virginia



Local office

Virginia Ecological Services Field Office

☎ (804) 693-6694

📠 (804) 693-9032

6669 Short Lane

Gloucester, VA 23061-4410

<http://www.fws.gov/northeast/virginiafield/>

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

CP# 2342 Attachment 2
January 2021
Page 2 of 23

Northern Long-eared Bat *Myotis septentrionalis*

Threatened

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9045>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

THERE ARE NO MIGRATORY BIRDS OF CONSERVATION CONCERN EXPECTED TO OCCUR AT THIS LOCATION.

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

<https://ecos.fws.gov/ipac/location/ARGLV2IEDNCYDCW3DOHHSPGQDA/resources>

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review.

Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) 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 AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

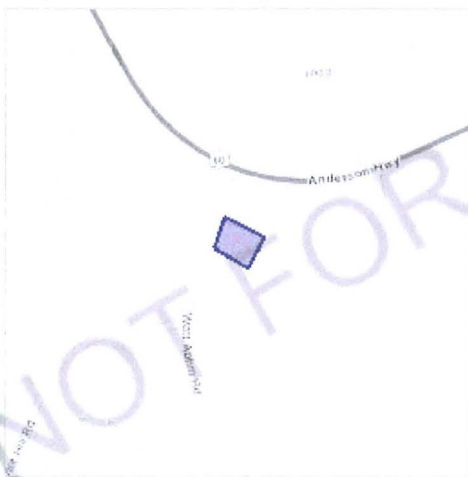
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Appomattox County, Virginia



Local office

Virginia Ecological Services Field Office

☎ (804) 693-6694

📠 (804) 693-9032

6669 Short Lane

Gloucester, VA 23061-4410

<http://www.fws.gov/northeast/virginiafield/>

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

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Gray Bat *Myotis grisescens***Endangered**

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/6329>**Northern Long-eared Bat *Myotis septentrionalis*****Threatened**

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9045>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

THERE ARE NO MIGRATORY BIRDS OF CONSERVATION CONCERN EXPECTED TO OCCUR AT THIS LOCATION.

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to

occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern \(BCC\)](#) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) 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 AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC**U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Project information

NAME

Tower Hill Transmission

LOCATION

Appomattox and Nelson counties, Virginia



Local office

Virginia Ecological Services Field Office

☎ (804) 693-6694

📠 (804) 693-9032

6669 Short Lane
Gloucester, VA 23061-4410

<http://www.fws.gov/northeast/virginiafield/>

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

Gray Bat *Myotis grisescens*

Endangered

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/6329>Northern Long-eared Bat *Myotis septentrionalis*

Threatened

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9045>

Flowering Plants

NAME

STATUS

Small Whorled Pogonia *Isotria medeoloides*

Threatened

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/1890>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the **PROBABILITY OF PRESENCE SUMMARY** at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle *Haliaeetus leucocephalus*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Breeds Sep 1 to Jul 31

Eastern Whip-poor-will *Antrostomus vociferus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 1 to Aug 20

Prairie Warbler *Dendroica discolor*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 1 to Jul 31

Prothonotary Warbler *Protonotaria citrea*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Apr 1 to Jul 31

Rusty Blackbird *Euphagus carolinus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wood Thrush *Hylocichla mustelina*

Breeds May 10 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ()

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (l)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

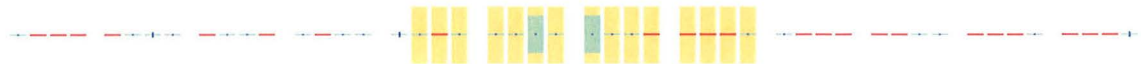
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Wood Thrush
BCC Rangewide
(CON) (This is a Bird
of Conservation
Concern (BCC)
throughout its range
in the continental
USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

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The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

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What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
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3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

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What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) 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 AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

[PFO1A](#)

[PFO1C](#)

RIVERINE

[R2UBH](#)

[R5UBH](#)

[R4SBC](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted.

Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.