KNOW ALL MEN BY THESE PRESENTS, that I, Robin Gunn Wrenn, am the President of Dixie Lee Farms, Inc., a Virginia corporation (the "Owner"). Owner owns in fee that certain real property located in the County of Lunenburg, Virginia (the "County") identified as Tax Map Nos. 046-0A-0-20, 058-0A-0-54, 058-0A-0-63, 058-0A-0-68, 058-0A-0-69, 059-0A-0-27 and 059-0A-0-56B (the "Property"). On or about February 26, 2021, Owner executed an Option to lease agreement (the "Option Agreement"), with Virginia Electric and Power Company, a Virginia public service corporation ("VEPCO"), whereby Owner granted VEPCO the option to lease the Property upon terms and conditions set forth in the Option Agreement. VEPCO proposes to develop and operate a utility-scale solar facility (the "Solar Facility") on a portion of the Property. VEPCO is required to obtain a conditional use permit ("CUP") from the County Board of Supervisors in order to develop, construct and operate the Solar Facility, and/or related facilities on the Property.

Owner of the Property, having full right and authority to do so, do hereby makes, constitutes, and appoints Robin L. Lucey, Business Development Manager, VEPCO, and M. Ann Neil Cosby, Esq., McGuireWoods, LLP, (collectively, the "Appointees"), either of whom may act, as the true and lawful attorneys in fact for the Owner in connection with the filing and approval of the CUP. The Appointees shall have full power and authority to do and perform as may be necessary to prepare and file zoning application documents (the "Application") and such other supporting information (including but not limited to conditions of development) on behalf of the Owner, to seek and obtain approval of the CUP and to agree to any and all terms and conditions as necessary for the use of the Property as requested in the Application.

IN WITNESS WHEREOF, I have hereunto set my hand this At day of february 2000

By:

Dun When, hes Name: Title:

STATE OF Virginia \_\_\_\_ \_\_\_\_\_, to-wit: COUNTY OF Lunenburg

The foregoing instrument was acknowledged before me this as day of <u>February</u>, 2022, by <u>Robh Gunn Wrenzs</u> <u>President</u> of <u>Dikile Lee Farms Inc.</u>

Inda B Bag Notary Public

My Commission Expires: 09130130303	MELINDA B. BAGLEY
Notary Registration Number: 194836	NOTARY PUBLIC Commonwealth of Virginia Reg. #154836

KNOW ALL MEN BY THESE PRESENTS, that we, Richard T. Hite and Richard T. Hite Jr., are the owners in fee (the "Owner") of that certain real property located in the County of Lunenburg, Virginia (the "County") identified as Tax Map No. 047-04-0-13 (the "Property"). On or about 2/14/2022, Owner executed an Option to lease agreement (the "Option Agreement"), with Virginia Electric and Power Company, a Virginia public service corporation ("VEPCO"), whereby Owner granted VEPCO the option to lease the Property upon terms and conditions set forth in the Option Agreement. VEPCO proposes to develop and operate a utility-scale solar facility (the "Solar Facility") on a portion of the Property. VEPCO is required to obtain a conditional use permit ("CUP") from the County Board of Supervisors in order to develop, construct and operate the Solar Facility, and/or related facilities on the Property.

Owner of the Property, having full right and authority to do so, do hereby makes, constitutes, and appoints Robin L. Lucey, Business Development Manager, VEPCO, and M. Ann Neil Cosby, Esq., McGuireWoods, LLP, (collectively, the "Appointees"), either of whom may act, as the true and lawful attorneys in fact for the Owner in connection with the filing and approval of the CUP. The Appointees shall have full power and authority to do and perform as may be necessary to prepare and file zoning application documents (the "Application") and such other supporting information (including but not limited to conditions of development) on behalf of the Owner, to seek and obtain approval of the CUP and to agree to any and all terms and conditions as necessary for the use of the Property as requested in the Application.

IN WITNESS WHEREOF, Owner has hereunto signed Special Limited Power of Attorney as of the date(s) set forth below.

By:		
Name: Title:		
STATE OF Virginia		
COUNTY OF <u>Lunenburg</u> , to-wit:		
The foregoing instrument was acknowledged before me this <u>February</u> , 2022, by <u>Richard T. Hite Jr.</u> , as	<u>I⊣</u> <sup>4</sup> day of	
Notary Public		
My Commission Expires: 09 30 2023	7 PUBLIC alth of Virginia	
Notary Registration Number: 154836	154830	

By:	
Auchard T, H, Name:	ite
Title:	
STATE OF Vinginia	
COUNTY OF <u>Lunenburg</u> , to-wit:	
The foregoing instrument was acknowledged before <u>February</u> , 2022, by <u>kiduard T. Hite</u> , as	ore me this <u>14</u> day of
Notary Public	Bagla
My Commission Expires: 09/30/2023	NOTARY PUBLIC
Notary Registration Number:	- Pag. #154836

KNOW ALL MEN BY THESE PRESENTS, that I, Johnny K. Long, am the owner in fee (the "Owner") of that certain real property located in the County of Lunenburg, Virginia (the "County") identified as Tax Map Nos. 047-0A-0-38, 047-04-0-B1, 047-04-0-B1B, 058-0A-0-66A, and 058-0A-0-67 (the "Property"). On or about October 26, 2021, Owner executed an Option to lease agreement (the "Option Agreement"), with Virginia Electric and Power Company, a Virginia public service corporation ("VEPCO"), whereby Owner granted VEPCO the option to lease the Property upon terms and conditions set forth in the Option Agreement. VEPCO proposes to develop and operate a utility-scale solar facility (the "Solar Facility") on a portion of the Property. VEPCO is required to obtain a conditional use permit ("CUP") from the County Board of Supervisors in order to develop, construct and operate the Solar Facility, and/or related facilities on the Property.

Owner of the Property, having full right and authority to do so, do hereby makes, constitutes, and appoints Robin L. Lucey, Business Development Manager, VEPCO, and M. Ann Neil Cosby, Esq., McGuireWoods, LLP, (collectively, the "Appointees"), either of whom may act, as the true and lawful attorneys in fact for the Owner in connection with the filing and approval of the CUP. The Appointees shall have full power and authority to do and perform as may be necessary to prepare and file zoning application documents (the "Application") and such other supporting information (including but not limited to conditions of development) on behalf of the Owner, to seek and obtain approval of the CUP and to agree to any and all terms and conditions as necessary for the use of the Property as requested in the Application.

	By:		
	Name:	K. Long	
STATE OF_Virginia			
COUNTY OF _ Lunenburg	, to	⊢wit:	
The foregoing instrumen <u>February</u> , 2022, by Johny 1	t was acknowledge <u>&lt; Long</u> , as	ed before me this <u>23</u> day o	of —
	Katt Ara Notary Public	unt Coffee BRADE	
My Commission Expires: <u>Marc</u>	h 31, 2023		
Notary Registration Number:	154801		

IN WITNESS WHEREOF, I have hereunto set my hand this 23 day of <u>Feb</u>.

KNOW ALL MEN BY THESE PRESENTS, that we, Stephen P. Lindberg and Wendy A. Lindberg, are the owners in fee (the "Owner") of that certain real property located in the County of Lunenburg, Virginia (the "County") identified as Tax Map No. 059-0A-0-1A (the "Property"). On or about December 16, 2021, Owner executed an Option to lease agreement (the "Option Agreement"), with Virginia Electric and Power Company, a Virginia public service corporation ("VEPCO"), whereby Owner granted VEPCO the option to lease the Property upon terms and conditions set forth in the Option Agreement. VEPCO proposes to develop and operate a utility-scale solar facility (the "Solar Facility") on a portion of the Property. VEPCO is required to obtain a conditional use permit ("CUP") from the County Board of Supervisors in order to develop, construct and operate the Solar Facility, and/or related facilities on the Property.

Owner of the Property, having full right and authority to do so, do hereby makes, constitutes, and appoints Robin L. Lucey, Business Development Manager, VEPCO, and M. Ann Neil Cosby, Esq., McGuireWoods, LLP, (collectively, the "Appointees"), either of whom may act, as the true and lawful attorneys in fact for the Owner in connection with the filing and approval of the CUP. The Appointees shall have full power and authority to do and perform as may be necessary to prepare and file zoning application documents (the "Application") and such other supporting information (including but not limited to conditions of development) on behalf of the Owner, to seek and obtain approval of the CUP and to agree to any and all terms and conditions as necessary for the use of the Property as requested in the Application.

IN WITNESS WHEREOF, Owner has hereunto signed Special Limited Power of Attorney as of the date(s) set forth below.

MERRY F. BRAY NOTARY PUBLIC REG. #292000 COMMONWEALTH OF VIRGINIA MY COMMISSION EXPIRES SEPT. 30, 2022	By: Mendy Albiston Lindberg Name: Title: OWNER
STATE OF	
COUNTY OF Chesterfle	, to-wit:
February, 2022, by We	nent was acknowledged before me this 23 day o why BIBISTON as CWNER UNDBUCE
	$\mathcal{T}$
	Notary Public
My Commission Expires: $\underline{7}$	-30 -2020
Notary Registration Number: _	292000

MERRY F. BRAY NOTARY PUBLIC REG. #292000 COMMONWEALTH OF VIRGINIA MY COMMISSION EXPIRES SEPT. 30, 2022	By: Mythen P. Sterefter STEPHEN P. LINDBERG
	The Owner
STATE OF VA	
COUNTY OF Chistoffed	, to-wit:
The foregoing instrume	ent was acknowledged before me this 23 day of
	( )
2	Notary Public
~	
My Commission Expires:	30-2022
Notary Registration Number:	292000

÷.

KNOW ALL MEN BY THESE PRESENTS, that I, Ronald E. Long, am the owner in fee (the "Owner") of that certain real property located in the County of Lunenburg, Virginia (the "County") identified as Tax Map No. 059-0A-0-1 (the "Property"). On or about January 31, 2022, Owner executed an Option to lease agreement (the "Option Agreement"), with Virginia Electric and Power Company, a Virginia public service corporation ("VEPCO"), whereby Owner granted VEPCO the option to lease the Property upon terms and conditions set forth in the Option Agreement. VEPCO proposes to develop and operate a utility-scale solar facility (the "Solar Facility") on a portion of the Property. VEPCO is required to obtain a conditional use permit ("CUP") from the County Board of Supervisors in order to develop, construct and operate the Solar Facility, and/or related facilities on the Property.

Owner of the Property, having full right and authority to do so, do hereby makes, constitutes, and appoints Robin L. Lucey, Business Development Manager, VEPCO, and M. Ann Neil Cosby, Esq., McGuireWoods, LLP, (collectively, the "Appointees"), either of whom may act, as the true and lawful attorneys in fact for the Owner in connection with the filing and approval of the CUP. The Appointees shall have full power and authority to do and perform as may be necessary to prepare and file zoning application documents (the "Application") and such other supporting information (including but not limited to conditions of development) on behalf of the Owner, to seek and obtain approval of the CUP and to agree to any and all terms and conditions as necessary for the use of the Property as requested in the Application.

IN WITNESS WHEREOF, I have hereunto set my hand this 23 day of Roman

By:

Rouald & Long Name: Ronald E. Long Title: Owner

STATE OF UA barry , to-wit: COUNTY OF ceren.

The foregoing instrument was acknowledged before me this <u>23</u> day of <u>February</u>, 2022, by <u>honald E.Long</u>, as <u>Owner</u>

Hylemor Notary Public 8/31/2024 My Commission Expires: \_\_ 



KNOW ALL MEN BY THESE PRESENTS, that we, Robin Gunn Wrenn and Mark Edwin Wrenn, are the owners in fee (the "Owner") of that certain real property located in the County of Lunenburg, Virginia (the "County") identified as Tax Map Nos. 046-06-0-1 and 046-06-0-2 (the "Property"). On or about January 31, 2022, Owner executed an Option to lease agreement (the "Option Agreement"), with Virginia Electric and Power Company, a Virginia public service corporation ("VEPCO"), whereby Owner granted VEPCO the option to lease the Property upon terms and conditions set forth in the Option Agreement. VEPCO proposes to develop and operate a utility-scale solar facility (the "Solar Facility") on a portion of the Property. VEPCO is required to obtain a conditional use permit ("CUP") from the County Board of Supervisors in order to develop, construct and operate the Solar Facility, and/or related facilities on the Property.

Owner of the Property, having full right and authority to do so, do hereby makes, constitutes, and appoints Robin L. Lucey, Business Development Manager, VEPCO, and M. Ann Neil Cosby, Esq., McGuireWoods, LLP, (collectively, the "Appointees"), either of whom may act, as the true and lawful attorneys in fact for the Owner in connection with the filing and approval of the CUP. The Appointees shall have full power and authority to do and perform as may be necessary to prepare and file zoning application documents (the "Application") and such other supporting information (including but not limited to conditions of development) on behalf of the Owner, to seek and obtain approval of the CUP and to agree to any and all terms and conditions as necessary for the use of the Property as requested in the Application.

IN WITNESS WHEREOF, Owner has hereunto signed Special Limited Power of Attorney as of the date(s) set forth below.

By:	
Robri A Name: Title:	Un Wrenn)
STATE OF Vivalhia	
COUNTY OF, to	-wit:
The foregoing instrument was acknowledge <u>February</u> , 2022, by <u>Robh Gunn Wreng</u> as-	ed before me this <u>a</u> day of
Notary Public	2 B. Bally
My Commission Expires: 0930 2023	MELINDA B. BAGLEY
Notary Registration Number: 154836	NOTARY PUBLIC Commonwealth of Virginia Reg. #154836

By:

k Edwin When Name:

Title: Owner

STATE OF North Carolina COUNTY OF Wake , to-wit:

The foregoing instrument was acknowledged before me this <u>2</u> day of <u>March</u>, 2022, by <u>Mark Edwin WY</u>, as <u>Owner</u>

e Winter Notary Public

3/19/2022 My Commission Expires:

Notary Registration Number: 201708300151



KNOW ALL MEN BY THESE PRESENTS, that we, James M. Campbell and Wanda S. Campbell, are the owners in fee (the "Owner") of that certain real property located in the County of Lunenburg, Virginia (the "County") identified as Tax Map No. 058-0A-0-5A (the "Property"). On or about November 29, 2021, Owner executed an Option to lease agreement (the "Option Agreement"), with Virginia Electric and Power Company, a Virginia public service corporation ("VEPCO"), whereby Owner granted VEPCO the option to lease the Property upon terms and conditions set forth in the Option Agreement. VEPCO proposes to develop and operate a utility-scale solar facility (the "Solar Facility") on a portion of the Property. VEPCO is required to obtain a conditional use permit ("CUP") from the County Board of Supervisors in order to develop, construct and operate the Solar Facility, and/or related facilities on the Property.

Owner of the Property, having full right and authority to do so, do hereby makes, constitutes, and appoints Robin L. Lucey, Business Development Manager, VEPCO, and M. Ann Neil Cosby, Esq., McGuireWoods, LLP, (collectively, the "Appointees"), either of whom may act, as the true and lawful attorneys in fact for the Owner in connection with the filing and approval of the CUP. The Appointees shall have full power and authority to do and perform as may be necessary to prepare and file zoning application documents (the "Application") and such other supporting information (including but not limited to conditions of development) on behalf of the Owner, to seek and obtain approval of the CUP and to agree to any and all terms and conditions as necessary for the use of the Property as requested in the Application.

1

IN WITNESS WHEREOF, Owner has hereunto signed Special Limited Power of Attorney as of the date(s) set forth below.

By:
Name: James M. Campbell Title: Owner
STATE OF <u>Virginia</u>
COUNTY OF <u>Lunenburg</u> , to-wit:
The foregoing instrument was acknowledged before me this <u>18</u> <sup>th</sup> day of <u>February</u> , 2022, by <u>James M. Campbell</u> , as <u>Property owner</u>
EXPIRED & CULLATING Brame Brance
My Commussion Expires: <u>8/31/2024</u>
Notary Registration Number: 7067613

Name: Wanda S. Campbell Name: Wanda S. campbell Title: Owner
STATE OF Uirginia
COUNTY OF <u>Lunenburg</u> , to-wit:
The foregoing instrument was acknowledged before me this <u>18</u> <sup>H</sup> day of <u>February</u> , 2022, by <u>Wanda 3. Camphell</u> , as <u>Property Owner</u>
NOTARY PUBLIC REG # 7067613 MY COMMISSION STATE MY COMMISSION STATE MY COMMISSION STATE STA
Notary Registration Number:7067613

By:

.

# **TAB E** Project Narrative

### **PROJECT NARRATIVE<sup>1</sup>**

### A. Applicant & Owner/Operator Information

Virginia Electric and Power Company (d/b/a Dominion Energy Virginia)("Dominion") is proposing an 80 MWac utility-scale solar facility known as "Laurel Branch Solar" (the "Project") in Lunenburg County, Virginia (the "County"). The Project will be located on nineteen (19) parcels which comprise approximately 1,969 acres in total (the "Property") of which approximately 720 acres will be disturbed and approximately 270 acres will be used for solar panels.<sup>2</sup> The Project site is generally identified on the "Laurel Branch Solar Project Conditional Use Permit Site Plan" (the "Preliminary Site Plan") attached as TAB G. The Project will interconnect to an existing transmission line via a Project substation and a switchyard that Dominion will own and operate in perpetuity. Dominion will own and operate the proposed Project as part of its energy generation system.

### B. Dominion's Renewable Energy Goals

Over the next 15 years, Dominion plans to add about 16,000 MWs of solar generating capacity as part of Virginia's plan for 100% zero-carbon electricity by 2045 and the company's goal to achieve net zero emissions from its electric and gas infrastructure by 2050.

In order to meet these ambitious renewable energy and sustainability targets, Dominion is exploring all types of renewable energy opportunities. One such project is the proposed Laurel Branch Solar Facility, which will be up to an 80 MW solar facility in the County.

In addition to supporting a clean and sustainable energy future in Virginia, solar projects like Laurel Branch provide many benefits to the local community. Projects often use Virginia and locally based suppliers and labor, help create clean energy jobs, and increase local tax revenues.

## C. Project Description

The Property is located to the southwest of the Town of Kenbridge.<sup>3</sup> The Property is currently used for timber and agricultural tracts. The majority of the Property is located between Plank Road and Sneads Store Road as well as along Oral Oaks Road and Laurel Branch Road. Where parcels are not immediately adjacent to the other, overhead electric lines will provide connections between the parcels.

Approximately 499 acres will be within the Project fence line (i.e., the areas utilized as module array locations). Existing vegetation and topography on the site will be utilized for visual screening and to maintain the rural character of the area. Two existing transmission lines run through the Property, joining on the north side of Plank Road near Oral Oaks Road. The Property is zoned A-1 (Agricultural) and all the parcels surrounding the Project site are generally zoned Agricultural. Large-scale solar facilities and major utilities are permitted in the Agricultural district by CUP. The Comprehensive Plan identifies the area for Agricultural uses.

The Project will consist of arrays of solar modules mounted on single-axis tracker or fixed tilt racking that collect sunlight and convert it to electricity. The number of modules will vary based on final design and procurement, but the maximum number of solar panels are approximated at 190,998. Low voltage electrical cables link the modules and collect the electricity before sending it to the inverters where the direct current (DC) energy is converted to alternating current (AC) energy. The electricity is

<sup>&</sup>lt;sup>1</sup> This Project Narrative includes applicable information required in Sections 4 &5 of the Ordinance for Solar Energy Facilities, adopted September 9, 2021 (the "Solar Ordinance").

 $<sup>^{2}</sup>$  The acreage is within the maximums established in the Solar Ordinance, Section 6, item 13.

<sup>&</sup>lt;sup>3</sup> Portions of the Property are located within a mile of the Town of Kenbridge.

then directed to transformers which step up the voltage so the electricity can be delivered to a new utility owned switchyard (the "Switchyard") to be built on the Property. Virginia Electric and Power Company (d/b/a Dominion Energy Virginia) will own and operate the Switchyard as a separate authorized use, in perpetuity.

Multiple points of access to the Project are anticipated. Many of the proposed entrances will use existing farm roads or timber roads. The access locations are detailed in the Traffic Study in TAB H. The general array layout, points of access, and the location of related facilities are shown on the Preliminary Site Plan in TAB G.

In addition, the Project will be developed in accordance with the conditions set forth in the siting agreement.

#### D. Project Design & Operation

The Project has been carefully sited and designed to ensure compatibility and harmony with the neighboring agricultural, timber, rural residential land uses. There are other large tracts adjacent to the Property that are also used for timbering activities. To minimize visibility from other properties, the Project site will include substantial setbacks and will be extensively screened by existing timber tracts and planted buffers (a minimum of 50 feet of vegetation will be provided within the setbacks) where necessary. A landscaped strip at least 50 feet wide is required within the setback around the entire perimeter of the Property. Landscaping will be existing or installed vegetation as deemed necessary during CUP approval, and will be comprised of native (non-invasive, pollinator-friendly and wildlife friendly) plant materials at least three (3) feet tall at the time of planting and expected to grow to a minimum height of eight (8) feet within three years (or as otherwise approved by the Board). The Project will include minimum setbacks of 200 feet from adjacent property lines and the centerline of all adjoining rights-of-way. A minimum setback of 400 feet will be maintained from adjacent residential structures.<sup>4</sup> Areas between module array segments will be fenced separately allowing the open area between the fences to serve as wildlife corridors that will allow for the movement of migratory animals and other wildlife. These areas are also shown on the Preliminary Site Plan at TAB G.

Once constructed, the Project will be monitored 24/7 via surveillance cameras and electrical system monitoring equipment. The Project will be constructed over an approximate 18-month period with a peak of 150 employees on the site during module installation. It is anticipated that construction will commence in 2024 and the Project will be operational by the end of 2025. Opportunities will be provided for local labor where practicable. Once operational, maintenance crews of 2-3 people will visit the Project site as necessary to mow and perform other maintenance activities. The Project will place little to no burden on the existing transportation infrastructure once constructed. Furthermore, the Project will not require water or sewer, trash collection, or increase the student population of area schools.

Dominion is leasing the various properties that comprise the Project site for an approximate period of 38 years, which includes a Construction Term of up to 2 years, an Operations Term of 35 years, and a Restoration Term of up to 1 year. At the end of its useful life, the Project will be decommissioned in accordance with an approved decommissioning plan and all County requirements.<sup>5</sup>

<sup>&</sup>lt;sup>4</sup> Setbacks will not apply to internal property lines that are part of the Project site, including the Switchyard site. Access roads, stormwater management facilities and interconnection facilities are permitted in the setback(s) provided they are generally perpendicular to the property line, where applicable.

<sup>&</sup>lt;sup>5</sup> The Switchyard will not be decommissioned but will remain part of Dominion's electrical system.

#### E. Location, appearance and operational requirements.<sup>6</sup>

All signage on the Property will comply with the County Sign Ordinance and all noise will comply with the County Noise Ordinance. All lighting will be limited to the minimum necessary for security purposes and fixtures will be dark sky compliant. The maximum height of the lowest edge of photovoltaic panels will be ten (10) feet as measured from the finished grade and will not exceed a height of fifteen (15) feet as measured from the highest natural grade below each solar panel (provided that the height limitation will not apply to utility poles and/or the interconnection to the overhead electric utility grid); however, as VEPCO is required to negotiate a siting agreement with the County Board of Supervisors, that agreement may permit deviations from underlying zoning requirements if approved following a public hearing.<sup>7</sup>

Groundcover on the site will consist of pollinator plants where practicable, and grasses, forbs, and wildflowers native to the County. No invasive plants listed by DCR will be used. All groundcover will be maintained as set forth in the Landscaping Plan, which is included in the Preliminary Site Plan, TAB G. A performance bond will be posted to ensure maintenance. If pesticides and fertilizers are applied to the Property, the operator will notify the County prior to application. The Project areas will be enclosed by security fencing not less than six (6) feet in height and equipped with barbed wire on top of the fence. Fencing will be installed on the interior of the vegetative buffer and provided in sections to provide access corridors for wildlife.

The County's emergency services providers will be provided materials, education, and/or training on how to safely respond to any on-site emergencies and a key or code to access the property in case of an on- site emergency.

The Project is not located within any designated growth area. Portions of parcels 047-04-0-6, 047-04-0-B1, and 047-04-0-B1B are within a mile from the Town of Kenbridge; however, as VEPCO is required to negotiate a siting agreement with the County Board of Supervisors, that agreement may permit deviations from underlying zoning requirements if approved following a public hearing.<sup>8</sup>

To Dominion's knowledge, the Project is not closer than one (1) mile from any existing mediumor large-scale solar facilities. Two existing transmission lines run through the Property, joining on the north side of Plank Road near Oral Oaks Road. Based on current documentation and understanding of the area, approval of the Project will not result in more than 5% of the land in a five-mile radius of any existing large scale solar energy facility being used for large-scale solar energy projects. As shown on the Preliminary Site Plan (TAB G), the location and design of the Project will minimize impacts on public viewsheds. Only panels with anti-glare technology, anti-reflective coatings, and other available mitigation techniques, all that meet or exceed industry standards will be used to reduce glint and glare (as will be documented). The majority of the Property will not be located on prime farmland as most of the Property is established and managed silviculture.

Prior to operation, VEPCO will provide a final decommissioning and reclamation plan to the County per the Solar Ordinance, and, if necessary, will provide a security in the amount of the estimated cost of the decommissioning unless an alternative security is provided (including the acceptance of VEPCO's investment-grade credit rating).

<sup>&</sup>lt;sup>6</sup> This section addresses the requirements in Section 5 of the Solar Ordinance.

<sup>&</sup>lt;sup>7</sup> See VA. Code § 15.2-2316.9.

<sup>&</sup>lt;sup>8</sup> See VA. Code § 15.2-2316.9.

# TAB F Environmental Inventory and Impact Statement

# Environmental Inventory and Impact Statement

Laurel Branch Solar Project

March 3, 2022

**Prepared for** 

Lunenburg County, Virginia

## **Prepared by**



4101 Cox Road, Suite 120 Glen Allen, VA 23060

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# List of Attachments

Attachment A: Wetland Determination Memo Attachment B: Threatened and Endangered Species Determination Memo Attachment C: Cultural Resources Desktop Review Memo Attachment D: Visual Impact Assessment

# Acronyms and Abbreviations

3D	three-dimensional
CUP	Conditional Use Permit
GIS	geographic information system
GPS	global positioning system
КОР	key observation point
MW	megawatts
Project Area	The approximately 1,969 acres of privately-owned land where the proposed Project is located
Project	Laurel Branch Solar Project

## **1.0 INTRODUCTION AND PROJECT DESCRIPTION**

Dominion Energy Virginia (Dominion) is proposing to develop a commercial solar energy project, Laurel Branch Solar Project (Project), on private land encompassing approximately 1,969 acres. The Project study area includes the parcels that were actively under consideration by Dominion. The Project is located in Lunenburg County, Virginia, as shown on the Orthoimagery and Topographic Project Location Maps (Figure 1 and Figure 2).

## **1.1 Project Description**

The scope of the Project will consist of all work to construct, commission, energize, train operation staff, and decommission of the solar power plant and associated infrastructure, including but not limited to the following:

- Approximately 191,000 Bifacial Monocrystalline modules;
- Approximately 100 inverter units;
- Approximately 1,976 trackers;
- Current facility capacity is 80 megawatts alternating current; and
- Internal infrastructure including permanent gravel access roads and security fencing.

A desktop environmental inventory was conducted to identify environmental, wildlife, and cultural resources within and within applicable buffers off of the Project survey area. These resources include wetlands, surface water, floodplains, air quality, federal and state listed threatened and endangered species, and architectural and archaeological resources. Additionally, a preliminary assessment was conducted to evaluate the impact of the Project on environmental, wildlife, and cultural resources within a 2.5-mile radius of the Project survey area. This impact assessment was based on preliminary site plans and anticipated avoidance and minimization measures that may be implemented.

# 2.0 ENVIRONMENTAL IMPACTS NARRATIVE

## 2.1 Existing Conditions

A desktop wetland determination memo was prepared in February 2022 to summarize the findings of publicly available desktop resources within the Project study area. The desktop wetland determination identified 125 potential streams totaling approximately 123,817 linear feet and 37 potential wetlands, and 21 potential freshwater ponds totaling approximately 95.2 acres. Based on desktop research, the floodplain data for the Project were obtained from Federal Emergency Management Agency Flood Insurance Rate Map Number 51111C0175B, effective July 20, 2009 (FEMA 2021). According to these data, the majority of the site is located within Zone X, area of minimal flood hazard. Bears Element Creek on the western Project study area, Crooked Creek in the central Project study area, and Flat Rock Creek on the eastern Project study area boundaries are mapped as Zone A, with a one percent annual chance flood hazard. The Project is located within Lunenburg County, which is not one of Virginia's 29 coastal counties deemed "Tidewater Virginia". Therefore, the Project is not subject to the Chesapeake Bay Preservation Act Resource Protection Area or Resource Management Area regulatory buffers, as outline in 9 Virginia Administrative Code 25-830-80. Additional information, including references, on wetlands, surface waters, and groundwater can be found in Attachment A: Wetland Determination Memo. Wetlands, waterbodies, and floodplains have not been inventoried outside of the Project survey area; however, off-site impacts to these potential features will be addressed under the direct and indirect impacts section.

Primary air quality standards protect the public health, including the health of "sensitive populations, such as people with asthma, children, and older adults." Secondary air quality standards protect public welfare by promoting ecosystems health and preventing decreased visibility and damage to crops and buildings. The EPA has set national ambient air quality standards (NAAQS) for the following six criteria pollutants: ozone (O3), particulate matter (PM2.5, PM10), nitrogen dioxide (NO2), carbon monoxide (CO), sulfur dioxide (SO2), and lead (Pb). The AirNow Interactive Map of Air Quality (AirNow 2022) was used to identify nearby monitoring locations and determine the current estimated air quality index (AQI). According to the AirNow map, the nearest Ozone monitoring location to the Project survey area is the Prince Edward County EPA Office of Atmospheric Programs. This air quality monitoring station identified that the ozone daily AQI level was considered in good standing (29) at the issuance of this report. There were no results for the five other criteria pollutants.

# 2.2 Direct and Indirect Impacts

The desktop wetland determination identified 125 potential streams, and 58 potential wetlands and/or waterbodies within the Project study area (Figure 3). The Project is currently designed to avoid and minimize impacts to wetlands and streams as they are currently desktop mapped within the Project Area to the extent practicable. These features have not yet been confirmed by the USACE or VDEQ and are subject to change. Pending any changes to mapped features, impacts to jurisdictional features will be permitted through the proper regulatory agency. Wetlands, waterbodies, and floodplains have not been inventoried outside of the Project survey area; however, there are no anticipated direct impacts to any features outside of the Project survey area. Through the use of stormwater and erosion and sediment control best management practices during construction, as well as routine stormwater inspections, no indirect impacts to adjacent water resources are anticipated from the Project.

The Project may result in a minor centralized increase of air emissions during construction; however, construction air emissions would be temporary. To reduce temporary impacts to air quality, the construction contractors may water down construction areas to control dust when necessary. Emissions from fuel-burning internal combustion engines (e.g. heavy equipment and earthmoving machinery) could temporarily increase the levels of some of the criteria pollutants, including CO, NO<sub>2</sub>, O<sub>3</sub>, PM<sub>10</sub>, and non-criteria pollutants such as volatile organic compounds. To reduce the emission of criteria pollutants, fuel-burning equipment running times should be kept to a minimum and engines should be properly maintained. Additional best management practices for construction include using low or ultra-low sulfur fuel (including biodiesel) and using electric-powered tools (instead of gas-

powered tools) wherever feasible. The operations and maintenance of the Project are not anticipated to have any long-term effects on air quality or increased air emissions.

# 3.0 WILDLIFE IMPACTS NARRATIVE

## 3.1 Existing Conditions

A desktop threatened and endangered species determination memo was prepared in February 2022 to summarize the findings of publicly available desktop resources within the Project study area.

According to the threatened and endangered species determination memo, the United States Fish and Wildlife Service (USFWS) Information Planning and Consultation (IPaC) System indicated that the northern long-eared bat (*Myotis septentrionalis*), which is listed as both federally threatened and state threatened, is expected to occur within the Project study area.

The bald eagle (*Haliaeetus leucocephalus*) is protected under the Bald and Golden Eagle Protection Act. According to the Center for Conservation Biology (CCB) Bald Eagle Nest Locator, the closest known bald eagle nest is approximately 15 miles to the southeast of the proposed Project study area. A field assessment is recommended to confirm the presence and/or absence of bald eagle nests on the Project study area. If bald eagle nests are identified during the recommended field assessments and work is anticipated to be conducted during the breeding season (October 1 through May 15), a 660-foot buffer is recommended around active nests. The buffer may be reduced to 330 feet for special circumstances.

The USFWS Bald Eagle Conservation Area (BECA) Map did not indicate a bald eagle concentration area within the Project study area. The closest bald eagle concentration is approximately 58 miles southwest of the Project study area.

No federally listed critical habitat was documented on the USFWS Critical Habitat for Threatened and Endangered Species Mapper as occurring within or in the vicinity of the proposed Project study area. The Project study area is approximately 8 miles south of the closest critical habitat for Yellow lance (*Elliptio lanceolata*).

The Virginia Department of Wildlife Resources (VDWR) northern long-eared bat (NLEB) mapping application shows that there are no known NLEB winter hibernacula or roost trees in the vicinity of the Project. The nearest winter hibernacula and roosting habitat is located approximately 99 miles northwest of the Project study area.

The VDWR mapping system of the little brown bat (*Myotis lucifugus*) and tri-colored bat (*Perimyotis subflavus*) shows that the nearest winter hibernacula and roosting habitat are located approximately 80 miles northwest of the Project study area.

The VDWR Virginia Fish and Wildlife Information Service (VaFWIS) indicates no state threatened or endangered species with confirmed occurrences within the Project study area and a 2-mile radius from the Project study area boundary. Please note that the Virginia Department of Game and Inland Fisheries has recently changed its name to the VDWR, but the VaFWIS database search results still show the outdated department name. The Virginia Department of Conservation and Resources Natural Heritage Data Explorer identified two state threatened species, loggerhead shrike (*Lanius ludovicianus*) and Atlantic pigtoe (*Fusconaia masoni*), as possibly occurring within the Project study area watersheds, Meherrin River-Mason Creek (12-digit Hydrologic Unit Code [HUC] 030102040301), Meherrin River – Crooked Creek (HUC 030102040302), and Flat Rock Creek (HUC 030102040303).

Additional information, including references, on biological resources is included in Attachment B: Threatened and Endangered Species Determination Memo.

# 3.2 Direct and Indirect Impacts

The Desktop Threatened and Endangered Species Determination identified several federal and state listed species that have the potential to occur within the vicinity of the Project study area. Upon a review of the information gathered from publicly available resources, the following actions or avoidance measures are recommended for the Project to ensure potential impacts to listed wildlife species that have potential to occur are avoided:

- Based on the results of the environmental field assessment, potential impacts to threatened and endangered species and their habitats can be reduced by avoiding and minimizing Project impacts to wetlands, forested areas, streams, and riparian corridors; and
- Informal consultation with state and federal agencies is recommended after the completion of the environmental field assessments to better determine the need for species-specific onsite surveys and the need for avoidance or mitigation measures.

# 4.0 CULTURAL IMPACTS NARRATIVE

## 4.1 Existing Conditions

A cultural resources desktop review memo was prepared in February 2022 to summarize the findings of publicly available desktop resources within the Project study area. This assessment reviewed the Project survey area and a 0.5-mile radius around the Project survey area.

According to the cultural resources memo, a review of Virginia Department of Historic Resources (VDHR) Virginia Cultural Resources Information System (VCRIS) records identified 13 previously recorded architectural resources within a 0.5-mile radius of the Project study area. Among the resources are 10 dwellings, a wagon shed, a church/chapel, and a school. The resources range in date from the late-eighteenth century to the mid-twentieth century. VDHR #055-0003, Flat Rock, a circa 1780 farmhouse, is additionally listed in the National Register of Historic Places (NRHP; reference number 79003051) and the Virginia Landmarks Register. VDHR #055-5132 (Good Hope Christadelphian Chapel) has been determined to be eligible for inclusion in the NRHP.

Two resources are located partially within the Project study area. These resources include: VDHR #055-5132 (Good Hope Christadelphian Chapel) and VDHR #055-5138 (Samuel A. Wallace, Jr. House). As mentioned above, VDHR #055-5132 (Good Hope Christadelphian Chapel) has been determined to be eligible for inclusion in the NRHP and VDHR #055-5138 has been determined to not be eligible for inclusion in the NRHP.

The Project study area excludes the majority of VDHR #055-5132 and VDHR #055-5138. Likewise, VDHR #055-0117 is located within a parcel which is excluded from the Project study area.

Additional information on cultural resources can be found in Attachment C: Cultural Resources Desktop Review Memo.

In accordance with the Lunenburg County solar ordinance, a supplemental desktop review was conducted for resources in a 2-mile radius from the previously assessed area in the January 2022 cultural resources desktop review memo to assess a total 2.5-mile radius around the Project survey area. The supplemental desktop review of the VDHR VCRIS for resources identified an additional 23 architectural resources and one historic district, Broad Branch Creek Rural Historic District (VCRIS, 2022). Archaeological resources were not assessed during the supplemental desktop review.

## 4.2 Direct and Indirect Impacts

Preparation of a Phase IA cultural resources assessment (Phase IA), including a research design to guide a subsequent Phase I identification survey, is recommended for the Project study area. The Phase IA should include further consideration of site soils, historic maps, and existing field conditions and result in the development of a stratified testing strategy for identifying archaeological resources within the project area. The completed Phase IA should be submitted to the Virginia Department of Environmental Quality and VDHR for review and comment prior to initiation of Phase I identification survey of the site in accordance with the recommended testing strategy. There are no anticipated direct impacts to cultural resources outside of the 0.5-mile radius of the Project survey area, including the architectural resources and mapped historic district. Archaeological resources outside of the 0.5-mile radius of the Project survey area were not evaluated as there are no anticipated ground disturbing activities that would directly or indirectly impact these resources.

Additionally, a visual impact assessment has been conducted to determine visual impacts from potentially sensitive visual resources within the surrounding community. It was determined that visual impacts would vary depending on several factors, such as the distance of the viewer from the Project, whether the viewer is stationary or in motion, and whether views toward the Project are unobstructed or screened by vegetation, topography, or existing structures. Project views can be very different from one location to another, including in proximity, because of the rolling terrain and dense vegetation. In all cases, the Project would be located 200 feet or more from public roadways, limiting viewing opportunities.

Additional information on visual impacts can be found in Attachment D: Visual Impact Assessment.

# 5.0 **REFERENCES**

AirNow. 2022. AirNow Interactive Map of Air Quality. Available online at:

https://gispub.epa.gov/airnow/?xmin=-

8772280.263742598&ymin=4344250.063163923&xmax=-

8623564.381510958&ymax=4438305.776892184&clayer=ozonepm&mlayer=none

VCRIS (Virginia Cultural Resources Information System) 2022. VCRIS Mapping Tool. Available online at: https://www.dhr.virginia.gov/v/cris/

# **FIGURES**

Figure 1: Orthoimagery Project Location Map

Figure 2: Topographic Project Location Map

Figure 3: Wetlands and Other Waters Map



Anticipated Parcel Carve Out

1,000 2,000 0

Feet Laurel Branch Solar Project

Lunenburg County, Virginia

Source: ESRI/Vivid Imagery (2020) R:\PROJECTS\LAUREL\_BRANCH\_1058-0025\SITE\MAPS\LB\_Option\_A\_Figure\_1\_Location\_Aerial.mxd

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# ATTACHMENT A: WETLAND DETERMINATION MEMO

# Desktop Wetland Determination Report

Laurel Branch Solar Project

March 3, 2022

**Prepared for** 



600 E Canal Street Richmond, VA 23219

#### **Prepared by**



4101 Cox Road, Suite 120 Glen Allen, VA 23060

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Figure 1: Orthoimagery Project Location Map Figure 2: Topographic Project Location Map Figure 3: Wetlands and Other Waters Map Figure 4: Flood Hazard Map Figure 5: NRCS Soils Map

## **Acronyms and Abbreviations**

3D	three-dimensional
CUP	Conditional Use Permit
GIS	geographic information system
GPS	global positioning system
КОР	key observation point
MW	megawatts
Project Area	The approximately 1,969 acres of privately-owned land where the proposed Project is located
Project	Laurel Branch Solar Project

## **1.0 INTRODUCTION AND PROJECT DESCRIPTION**

Dominion Energy Virginia (Dominion) is proposing to develop a commercial solar energy project, Laurel Branch Solar Project (Project), on private land encompassing approximately 1,969 acres (based on the current project boundary). The Project study area includes the parcels that were actively under consideration by Dominion. The Project is in Lunenburg County, Virginia (VA), as shown on the Orthoimagery and Topographic Project Location Maps (Figure 1 and Figure 2).

Tetra Tech, on behalf of Dominion, prepared this Desktop Wetland Determination Memo summarizing the findings of publicly available desktop resources for the Project study area (Figures 3 through 5) for the presence of potential wetland and surface water feature constraints. Tetra Tech made preliminary wetland determinations utilizing methods detailed in the United States Army Corps of Engineers' (USACE) *Wetland Delineation Manual (1987 Manual*; Environmental Laboratory 1987).

## 2.0 METHODOLOGY

The primary objective of the desktop wetland determination and delineation is to identify the potential wetlands and surface waters on or adjacent to the Project study area. Information from Google Earth Pro<sup>®</sup>, United States Department of Agriculture Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2019), United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI; USFWS 2021), United States Geological Survey (USGS) National Hydrography Dataset (NHD; USGS 2021), and Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs; FEMA 2021) was consulted to create Figure 3 (Wetlands and Other Waters Map), Figure 4 (Flood Hazard Map), and Figure 5 (NRCS Soils Map). These maps were reviewed by a Tetra Tech Natural Resource Specialist who identified and classified wetlands and other surface waters within the Project study area. The Tetra Tech-identified wetlands and surface waters are summarized in Table 1 and depicted on Figure 3.

## 3.0 FINDINGS AND RECOMMENDATIONS

The desktop wetland determination identified two large wetland-stream systems and several smaller systems, which appear to be associated with the Bears Element Creek, Crooked Creek, and Flat Rock Creek. The NWI and NHD mapping applications identified 15 potential streams within the Project study area totaling approximately 34,248 linear feet. The NWI and NHD mapping applications identified 11 potential freshwater ponds and 15 potential wetlands totaling approximately 55 acres within the Project study area. Of the approximate 55 acres of NWI mapped wetlands, 1 wetland was classified as palustrine emergent (PEM), 13 wetlands were classified as palustrine forested (PFO), and 1 wetland was classified as palustrine scrub-shrub (PSS) (USFWS 2021). In addition to the NWI and NHD mapped features, Tetra Tech identified an additional 110 potential streams totaling approximately 89,569 linear feet, 22 potential wetlands totaling approximately 33.8 acres, and 10 potential freshwater ponds totaling approximately 6.4 acres using the USGS topographic map, Google

Earth Pro orthoimagery, and NRCS Soils database. These desktops identified features can all be found on Figure 3.

## 3.1 Findings

The Desktop Aquatic Resources Table (Table 1) summarizes the stream and wetland information for all features identified during the desktop wetland determination. The desktop wetland determination identified 125 potential streams totaling approximately 123,817 linear feet and 37 potential wetlands and 21 potential freshwater ponds totaling approximately 95.2 acres (Figure 3).

Based on desktop research, the floodplain data for the Project were obtained from FEMA FIRM Numbers 51111C0175B, effective July 20, 2009 (FEMA 2021). According to these data, the majority of the site is located within Zone X, area of minimal flood hazard. Bears Element Creek on the western Project study area, Crooked Creek in the central Project study area, and Flat Rock Creek on the eastern Project study area boundaries are mapped as Zone A, with a 1 percent annual chance flood hazard (Figure 4).

The Project is located within Lunenburg County, which is not one of Virginia's 29 coastal counties deemed "Tidewater Virginia." Therefore, the Project is not subject to the Chesapeake Bay Preservation Act (CBPA) Resource Protection Area or Resource Management Area regulatory buffers, as outlined in 9 Virginia Administrative Code 25-830-80.

## 3.2 Recommendations

The desktop wetland determination identified 125 potential streams, and 58 potential wetlands and/or waterbodies within the Project study area. Figure 3 illustrates the wetland and stream locations in relation to the Project study area and the Project boundary. Upon a review of the information gathered from the cursory desktop surveys of the proposed Project study area, Tetra Tech recommends the following actions to expedite permit timelines:

- Conduct a formal wetland and stream delineation for the proposed Project utilizing methods detailed in the USACE's *1987 Manual* (Environmental Laboratory 1987); and
- Submit an request for a jurisdictional determination with the USACE based on the results of the formal delineation.

This Desktop Wetland Determination Memo represents our best professional judgment and is based on publicly available desktop resources for the Project study area. All designations, classifications, and boundaries should be considered preliminary and should not be considered to be final. Using boundaries of features provided in this memo (and associated shapefiles) should only be utilized for preliminary Project design and may be changed upon the completion of formal delineations.

## 4.0 **REFERENCES**

- FEMA (Federal Emergency Management Agency). 2021. National Flood Hazard Layer. U.S. Department of Homeland Security, FEMA, Generated January 3, 2022. Available at: <u>https://www.fema.gov/flood-maps/national-flood-hazard-layer</u>
- NRCS (Natural Resources Conservation Service, United States Department of Agriculture). 2019. *Web Soil Survey*. Updated July 31, 2019. Available at: https://websoilsurvey.sc.egov.usda.gov/
- Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual*, Wetlands Research Program Technical Report Y-87-1. Vicksburg, MS: U.S. Army Corps of Engineers Waterways Experiment Station.
- USFWS (United States Fish and Wildlife Service). 2021. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Updated May 1, 2021. Available at: <u>https://www.fws.gov/wetlands/data/Mapper.html</u>
- USGS (U.S. Geological Survey). 2020. *National Hydrography Dataset Best Resolution for Virginia*. Available online at: <u>https://viewer.nationalmap.gov/basic/?basemap=b1&category=nhd&title=NHD%20View</u>.

# TABLES

Location ID	Area Description
Stream 1	Bears Element Creek, perennial stream (R5UBH)
Stream 2	Crooked Creek, perennial stream (R5UBH)
Stream 3	Unnamed tributary to Crooked Creek, appears to be intermittent stream (R4SBC)
Stream 4	Unnamed tributary to Crooked Creek, appears to be intermittent stream (R4SBC)
Stream 5	Unnamed tributary to Flat Rock Creek, appears to be perennial stream (R5UBH)
Stream 6	Unnamed tributary to Flat Rock Creek, appears to be perennial stream (R5UBH)
Stream 7	Unnamed tributary to Flat Rock Creek, appears to be perennial stream (R5UBH)
Stream 8	Unnamed tributary to Flat Rock Creek, appears to be perennial stream (R5UBH)
Stream 9	Unnamed tributary to Flat Rock Creek, appears to be perennial stream (R5UBH)
Stream 10	Unnamed tributary to Flat Rock Creek, appears to be intermittent stream (R4SBC)
Stream 11	Unnamed tributary to Flat Rock Creek, appears to be intermittent stream (R4SBC)
Stream 12	Unnamed tributary to Flat Rock Creek, appears to be intermittent stream (R4SBC)
Stream 13	Unnamed tributary to Flat Rock Creek, appears to be intermittent stream (R4SBC)
Stream 14	Unnamed tributary to Flat Rock Creek, appears to be intermittent stream (R4SBC)
Stream 15	Unnamed tributary to Flat Rock Creek, appears to be intermittent stream (R4SBC)
Stream 16	Tetra Tech mapped stream.
Stream 17	Tetra Tech mapped stream.
Stream 18	Tetra Tech mapped stream.
Stream 19	Tetra Tech mapped stream.
Stream 20	Tetra Tech mapped stream.
Stream 21	Tetra Tech mapped stream.
Stream 22	Tetra Tech mapped stream.
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Stream 25	Tetra Tech mapped stream.
Stream 26	Tetra Tech mapped stream.
Stream 27	Tetra Tech mapped stream.
Stream 28	Tetra Tech mapped stream.
Stream 29	Tetra Tech mapped stream.
Stream 30	Tetra Tech mapped stream.
Stream 31	Tetra Tech mapped stream.
Stream 32	Tetra Tech mapped stream.
Stream 33	Tetra Tech mapped stream.
Stream 34	Tetra Tech mapped stream.
Stream 35	Tetra Tech mapped stream.
Stream 36	Tetra Tech mapped stream.
Stream 37	Tetra Tech mapped stream.
Stream 38	Tetra Tech mapped stream.
Stream 39	Tetra Tech mapped stream.
Stream 40	Tetra Tech mapped stream.
Stream 41	Tetra Tech mapped stream.
Stream 42	Tetra Tech mapped stream.
Stream 43	Tetra Tech mapped stream.
Stream 44	Tetra Tech mapped stream.

### Table 1: Desktop Aquatic Resources Table

Location ID	Area Description
Stream 45	Tetra Tech mapped stream.
Stream 46	Tetra Tech mapped stream.
Stream 47	Tetra Tech mapped stream.
Stream 48	Tetra Tech mapped stream.
Stream 49	Tetra Tech mapped stream.
Stream 50	Tetra Tech mapped stream.
Stream 51	Tetra Tech mapped stream.
Stream 52	Tetra Tech mapped stream.
Stream 53	Tetra Tech mapped stream.
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Stream 63	Tetra Tech mapped stream.
Stream 64	Tetra Tech mapped stream.
Stream 65	Tetra Tech mapped stream.
Stream 66	Tetra Tech mapped stream.
Stream 67	Tetra Tech mapped stream.
Stream 68	Tetra Tech mapped stream.
Stream 69	Tetra Tech mapped stream.
Stream 70	Tetra Tech mapped stream.
Stream 71	Tetra Tech mapped stream.
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Stream 89	Tetra Tech mapped stream.
Stream 90	Tetra Tech mapped stream.

Location ID	Area Description
Stream 91	Tetra Tech mapped stream.
Stream 92	Tetra Tech mapped stream.
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Stream 95	Tetra Tech mapped stream.
Stream 96	Tetra Tech mapped stream.
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Stream 102	Tetra Tech mapped stream.
Stream 103	Tetra Tech mapped stream.
Stream 104	Tetra Tech mapped stream.
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Stream 112	Tetra Tech mapped stream.
Stream 113	Tetra Tech mapped stream.
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Stream 115	Tetra Tech mapped stream.
Stream 116	Tetra Tech mapped stream.
Stream 117	Tetra Tech mapped stream.
Stream 118	Tetra Tech mapped stream.
Stream 119	Tetra Tech mapped stream.
Stream 120	Tetra Tech mapped stream.
Stream 121	Tetra Tech mapped stream.
Stream 122	Tetra Tech mapped stream.
Stream 123	Tetra Tech mapped stream.
Stream 124	Tetra Tech mapped stream.
Stream 125	Tetra Tech mapped stream.
Wetland 1	NWI mapped freshwater forested/shrub wetland (PFO1C) with hydrological connection to Bears Element Creek
Wetland 2	NWI mapped freshwater forested/shrub wetland (PFO1C) with hydrological connection to Bears Element Creek
Wetland 3	NWI mapped freshwater forested/shrub wetland (PFO1A) with hydrological connection to Bears Element Creek
Wetland 4	NWI mapped freshwater forested/shrub wetland (PFO1A) with hydrological connection to Crooked Creek
Wetland 5	NWI mapped freshwater forested/shrub wetland (PFO1C) with hydrological connection to Bears Element Creek
Wetland 6	NWI mapped freshwater forested/shrub wetland (PFO1A) with hydrological connection to Crooked Creek

Wetland 7         NVII mapped freshwater forested/shrub wetland (PFO1A) with hydrological connection to Crooked Creek           Wetland 8         NVII mapped freshwater forested/shrub wetland (PFO1A) with hydrological connection to Era Rock Creek           Wetland 10         NVII mapped freshwater forested/shrub wetland (PFO1Ch) with hydrological connection to Crooked Creek           Wetland 11         NVII mapped freshwater forested/shrub wetland (PEM1Ah) with hydrological connection to Crooked Creek           Wetland 11         NVII mapped freshwater forested/shrub wetland (PFO1A) with hydrological connection to Crooked Creek           Wetland 12         NVII mapped freshwater forested/shrub wetland (PFO1A) with hydrological connection to Flat Rock Creek           Wetland 13         NVII mapped freshwater forested/shrub wetland (PFO1Ch) with hydrological connection to Flat Rock Creek           Wetland 13         NVII mapped freshwater forested/shrub wetland (PFO1Ch) with hydrological connection to Flat Rock Creek           Wetland 14         NVII mapped reshwater forested/shrub wetland (PFO1Ch) with hydrological connection to Flat Rock Creek           Wetland 15         NVII mapped wetland.           Wetland 16         Tetra Tech mapped wetland.           Wetland 17         Tetra Tech mapped wetland.           Wetland 20         Tetra Tech mapped wetland.           Wetland 21         Tetra Tech mapped wetland.           Wetland 22         Tetra Tech mapped wetland.	Location ID	Area Description
Wetland 8         NVII mapped freshwater forested/shrub wetland (PFO1A) with hydrological connection to Crooked Creek           Wetland 9         NVII mapped freshwater forested/shrub wetland (PFO1Ch) with hydrological connection to Flat Rock Creek           Wetland 10         NVII mapped freshwater forested/shrub wetland (PEM1Ah) with hydrological connection to Crooked Creek           Wetland 11         NVII mapped freshwater forested/shrub wetland (PSO1A) with hydrological connection to Flat Rock Creek           Wetland 12         NVII mapped freshwater forested/shrub wetland (PFO1A) with hydrological connection to Flat Rock Creek           Wetland 13         NVII mapped freshwater forested/shrub wetland (PFO1Ch) with hydrological connection to Flat Rock Creek           Wetland 14         NVII mapped freshwater forested/shrub wetland (PFO1Ch) with hydrological connection to Flat Rock Creek           Wetland 15         connection to Flat Rock Creek           Wetland 16         Tetra Tech mapped wetland.           Wetland 17         Tetra Tech mapped wetland.           Wetland 18         Tetra Tech mapped wetland.           Wetland 20         Tetra Tech mapped wetland.           Wetland 21         Tetra Tech mapped wetland.           Wetland 22         Tetra Tech mapped wetland.           Wetland 24         Tetra Tech mapped wetland.           Wetland 25         Tetra Tech mapped wetland.           Wetland 26         Tetra Tech ma	Wetland 7	NWI mapped freshwater forested/shrub wetland (PFO1A) with hydrological connection to Crooked Creek
Wetland 9         NWI mapped freshwater forested/shrub wetland (PFO1Ch) with hydrological connection to Fiat Rock Creek           Wetland 10         NWI mapped freshwater forested/shrub wetland (PSS1C) with hydrological connection to Fiat Rock Creek           Wetland 12         NWI mapped freshwater forested/shrub wetland (PFO1A) with hydrological connection to Fiat Rock Creek           Wetland 13         NWI mapped freshwater forested/shrub wetland (PFO1Ch) with hydrological connection to Fiat Rock Creek           Wetland 14         NWI mapped freshwater forested/shrub wetland (PFO1Ch) with hydrological connection to Fiat Rock Creek           Wetland 15         NWI mapped freshwater forested/shrub wetland (PFO1Ch) with hydrological connection to Fiat Rock Creek           Wetland 16         Tetra Tech mapped wetland.           Wetland 17         Tetra Tech mapped wetland.           Wetland 18         Tetra Tech mapped wetland.           Wetland 19         Tetra Tech mapped wetland.           Wetland 20         Tetra Tech mapped wetland.           Wetland 21         Tetra Tech mapped wetland.           Wetland 22         Tetra Tech mapped wetland.           Wetland 23         Tetra Tech mapped wetland.           Wetland 24         Tetra Tech mapped wetland.           Wetland 25         Tetra Tech mapped wetland.           Wetland 26         Tetra Tech mapped wetland.           Wetland 31         T	Wetland 8	NWI mapped freshwater forested/shrub wetland (PFO1A) with hydrological connection to Crooked Creek
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Waterbody 8 NWI mapped freshwater pond	Waterbody 7	NWI mapped freshwater pond
	Waterbody 8	NWI mapped freshwater pond

Location ID	Area Description
Waterbody 9	NWI mapped freshwater pond
Waterbody 10	NWI mapped freshwater pond
Waterbody 11	NWI mapped freshwater pond
Waterbody 12	TT mapped waterbody.
Waterbody 13	TT mapped waterbody.
Waterbody 14	TT mapped waterbody.
Waterbody 15	TT mapped waterbody.
Waterbody 16	TT mapped waterbody.
Waterbody 17	TT mapped waterbody.
Waterbody 18	TT mapped waterbody.
Waterbody 19	TT mapped waterbody.
Waterbody 20	TT mapped waterbody.
Waterbody 21	TT mapped waterbody.

## **FIGURES**

Figure 1: Orthoimagery Project Location Map Figure 2: Topographic Project Location Map Figure 3: Wetlands and Other Waters Map Figure 4: Flood Hazard Map Figure 5: NRCS Soils Map



Anticipated Parcel Carve Out

1,000 2,000 0

Feet Laurel Branch Solar Project

Lunenburg County, Virginia

Source: ESRI/Vivid Imagery (2020) R:\PROJECTS\LAUREL\_BRANCH\_1058-0025\SITE\MAPS\LB\_Option\_A\_Figure\_1\_Location\_Aerial.mxd

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1% Annual Chance Flood Hazard

FIRM Panel

0 1,000 2,000 Feet

## Figure 4 Flood Hazard Map

Laurel Branch Solar Project Lunenburg County, Virginia

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Source: FEMA (2009)
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- 10C2: Helena sandy loam, 6 to 10 percent slopes, er
- 11B2: Herndon loam, 2 to 7 percent slopes, eroded 11C2: Herndon loam, 7 to 15 percent slopes, eroded
- 12B: Iredell Ioam, 1 to 6 percent slopes
- 12C2: Iredell loam, 6 to 12 percent slopes, eroded
- 13C2: Lignum loam, 6 to 10 percent slopes, eroded
- 18B: Orange loam, 1 to 7 percent slopes
- 1B2: Appling sandy loam, 2 to 7 percent slopes, moderately eroded
- 1C2: Appling sandy loam, 7 to 15 percent slopes, moderately eroded 23D2: Wedowee sandy loam, 15 to 30 percent slopes, eroded

24B: Worsham loam, 0 to 4 percent slopes
2C: Ashlar loamy coarse sand, 7 to 15 percent slopes
2D: Ashlar loamy coarse sand, 15 to 25 percent slopes
4B: Caroline sandy loam, 1 to 7 percent slopes
5B2: Cecil sandy loam, 2 to 7 percent slopes, eroded
5C2: Cecil sandy loam, 7 to 15 percent slopes, eroded
6: Chewacla, Toccoa, and Augusta loams, frequently flooded
8B2: Georgeville loam, 2 to 7 percent slopes, eroded
8C2: Georgeville loam, 7 to 15 percent slopes, eroded
W: Water



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# ATTACHMENT B: THREATENED AND ENDANGERED SPECIES DETERMINATION MEMO

# Desktop Threatened and Endangered Species Determination Report

Laurel Branch Solar Project

March 3, 2022

**Prepared for** 



600 E Canal Street Richmond, VA 23219

#### Prepared by



4101 Cox Road, Suite 120 Glen Allen, VA 23060

## **Table of Contents**

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## **List of Attachments**

Attachment A: USFWS Ipac and Federally Listed Species Informal Review Attachment B: State Listed Species Informal Review

## **Acronyms and Abbreviations**

3D	three-dimensional
CUP	Conditional Use Permit
GIS	geographic information system
GPS	global positioning system
КОР	key observation point
MW	megawatts
Project Area	The approximately 1,969 acres of privately-owned land where the proposed Project is located
Project	Laurel Branch Solar Project

## **1.0 INTRODUCTION AND PROJECT DESCRIPTION**

Dominion Energy Virginia (Dominion) is proposing to develop a commercial solar energy project, Laurel Branch Solar Project (Project), on private land encompassing approximately 1,969 acres (based on the current project boundary). The Project study area includes the parcels that were actively under consideration by Dominion. The Project is located in Lunenburg County, Virginia (VA), as shown on the Orthoimagery and Topographic Project Location Maps (Figure 1 and Figure 2).

Tetra Tech, on behalf of Dominion, prepared this Desktop Threatened and Endangered Species Determination Memo summarizing the findings of publicly available desktop resources for the Project study area. Additional resources were evaluated to make preliminary determinations for habitat suitability, including the National Hydrography Dataset (NHD) and the United States Fish and Wildlife Service (USFWS) National Wetland Inventory (Figure 3). Additionally, Tetra Tech utilized publicly available desktop resources to identify additional areas of potential wetlands and surface waters that may also provide suitable habitat for listed species. These potential features are also included on Figure 3.

## 2.0 METHODOLOGY

The primary objective of the Desktop Threatened and Endangered Species Determination is to identify the potential for the Project to impact federal and state protected species and designated critical habitat. The following state and federal natural resource databases were reviewed:

- USFWS Information for Planning and Consultation (IPaC; USFWS 2021a);
- USFWS Critical Habitat for Threated and Endangered Species Map (USFWS 2021b);
- USFWS Bald Eagle Concentration Area (BECA) Map (USFWS 2021c);
- Center for Conservation Biology (CCB) Bald Eagle Nest Locator for Virginia (CCB 2021);
- Virginia Department of Wildlife Resources (VDWR) Northern-Long Eared Bat (NLEB; *Myotis septentrionalis*) Winter Habitat and Roost Trees Map (VDWR 2021a);
- VDWR Little Brown Bat and Tri-colored Bat Winter Habitat and Roosts (VDWR 2021b);
- VDWR Virginia Fish and Wildlife Information Services (VaFWIS) (VDWR 2021c); and
- Virginia Department of Conservation and Recreation (VDCR) Natural Heritage Data Explorer (NHDE) (VDCR 2021).

## 3.0 FINDINGS AND RECOMMENDATIONS

Tetra Tech prepared this Desktop Threatened and Endangered Species Determination Memo for Dominion based on evaluations made by qualified biologists that are experienced within the region. The Threatened and Endangered Species List for the Project study area (Table 1) summarizes federal and state listed species within and adjacent to the Project study area. Federal resources reviewed, including the IPaC System, USFWS Critical Habitat for Threated and Endangered Species Map, CCB Bald Eagle Nest Locator, and the BECA map are found in Attachment A. State resources evaluated, which include the NLEB Winter Habitat & Roost Tree Application Map, VDWR VaFWIS, VDCR NHDE, and the Little Brown and Tri-Colored Bat Winter Habitat & Roost Tree Application Map, are found in Attachment B.

## 3.1 Findings

The IPaC System (USFWS 2021a) indicated that the Northern long-eared bat (*Myotis septentrionalis*), which is listed as both federally threatened and state threatened, is expected to occur within the Project study area.

The bald eagle (*Haliaeetus leucocephalus*) is protected under the Bald and Golden Eagle Protection Act. According to the CCB Bald Eagle Nest Locator, the closest known bald eagle nest is approximately 15.42 miles to the southeast of the proposed Project study area. A field assessment is recommended to confirm the presence and/or absence of bald eagle nests on the Project study area. If bald eagle nests are identified during the recommended field assessments and work is anticipated to be conducted during the breeding season (October 1 through May 15), a 660-foot buffer is recommended around active nests. The buffer may be reduced to 330 feet for special circumstances.

The USFWS BECA Map did not indicate a bald eagle concentration area within the Project study area. The closest Bald Eagle concentration is approximately 58 miles southwest of the Project area.

No federally listed critical habitat was documented on the USFWS Critical Habitat for Threatened and Endangered Species Mapper as occurring within or in the vicinity of the proposed Project study area. The Project study area is approximately 8 miles south of the closest critical habitat for Yellow lance (*Elliptio lanceolata*).

The VDWR NLEB mapping application shows that there are no known NLEB winter hibernacula or roost trees in the vicinity of the Project. The nearest winter hibernacula and roosting habitat is located approximately 99 miles northwest of the Project study area.

The VDWR mapping system of the little brown bat (*Myotis lucifugus*) and tri-colored bat (*Perimyotis subflavus*) shows that the nearest winter hibernacula and roosting habitat are located approximately 80 miles northwest of the Project study area.

The VDWR VaFWIS indicates no state threatened or endangered species with confirmed occurrences within the Project study area and a ±2-mile radius from the Project study area boundary. Please note that the Virginia Department of Game and Inland Fisheries has recently changed its name to the VDWR, but the VaFWIS database search results still show the outdated department name.

The VDCR NHDE identified two state threatened species, loggerhead shrike (*Lanius ludovicianus*) and Atlantic pigtoe (*Fusconaia masoni*), as possibly occurring within the Project study area watersheds, Meherrin River - Mason Creek (12-digit Hydrologic Unit Code [HUC] 030102040301), Meherrin River - Crooked Creek (HUC 030102040302), and Flat Rock Creek (HUC 030102040303).

Project
Solar
Branch
Laurel

# Threatened and Endangered Species List for the Project Study Area Table 1.

Common Name	Scientific Name	Status <sup>1</sup>	Potential to Occur at Project study area	Habitat Description	Database <sup>2</sup>
Birds					
Loggerhead Shrike	Lanius ludovicianus	ST	Medium	Agricultural fields, open pastures, riparian areas, and prairies characterized by barbed wire fences and/or vegetation typically with spines or thorns.	NHDE
Bivalves					
Atlantic pigtoe	Fusconaia masoni	FP, ST	Medium	Small creeks to large rivers with excellent water quality and coarse sand to gravel substrate.	NHDE
Mammals					
Northern long-eared bat	Myotis septentrionalis	FT, ST	Medium	Underneath bark, in cavities or in crevices of both live trees and snaos (dead trees)	IPaC

Notes:

FT: Federally Threatened; ST: State Threatened
 IPaC: Information for Planning and Consultation; VaFWIS: VDWR Virginia Fish and Wildlife Information Services; NHDE: VDCR Natural Heritage Data Explorer

## 3.2 Recommendations

The Desktop Threatened and Endangered Species Determination identified several federal and state listed species that have the potential to occur within and in the vicinity of the Project study area. Upon a review of the information gathered from publicly available resources, Tetra Tech recommends the following actions or avoidance measures;

- Conduct an environmental field assessment to determine habitat suitability for listed species potentially present within Project study area;
- Conduct a pedestrian bald eagle nest survey, concurrent with the habitat suitability field assessment, by visually inspecting canopy trees within the study area were for the presence of large stick nests;
- Based on the results of the environmental field assessment, potential impacts to threatened and endangered species and their habitats can be reduced by avoiding and minimizing Project impacts to wetlands, forested areas, streams, and riparian corridors; and
- Informal consultation with state and federal agencies is recommended after the completion of the environmental field assessment to better determine the need for species-specific onsite surveys and the need for avoidance or mitigation measures. Tetra Tech will coordinate with VDCR once the final project boundary is determined to obtain an accurate species list for the Project-specific area.

This Desktop Threatened and Endangered Species Determination Memo represents our best professional judgment and is based on publicly available desktop resources for the Project study area.

## 4.0 **REFERENCES**

- CCB (The Center for Conservation Biology) 2021. CCB Mapping Portal. Accessed December 1, 2021. Available online at: <u>https://www.ccbbirds.org/maps/</u>
- USFWS. 2021a. USFWS Information Planning and Conservation System. Accessed December 26, 2021. Available online at: <u>https://ecos.fws.gov/ipac/</u>
- USFWS. 2021b. Critical Habitat for Threated and Endangered Species Map. Accessed December 1, 2021. Available online at:

https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf 75b8dbfb77

- USFWS (United States Fish and Wildlife Service). 2021c. Bald Eagle Concentration Areas Mapping Portal. Accessed December 1, 2021. Available online at: <u>http://fws.maps.arcgis.com/apps/Viewer/index.html?appid=0e5ca36a4056471db1b12c1b406</u> <u>5f3cb#</u>
- VDCR (Virginia Department of Conservation and Resources). 2021. Natural Heritage Data Explorer (NHDE). Accessed December 5, 2021 Available online at: <u>https://vanhde.org/species-search</u>
- VDWR (Virginia Department of Wildlife Resources). 2021a. NLEB Winter Habitat & Roost Tree Application. Accessed December 1, 2021. Available online at: <u>https://dgif-</u>

virginia.maps.arcgis.com/apps/webappviewer/index.html?id=32ea4ee4935942c092e41ddcd1 9e5ec5

- VDWR. 2021b. Little Brown Bat and Tri-Colored Bat Winter Habitat and Roosts Application. Accessed December 1, 2021. Available online at: <u>https://dwr.virginia.gov/wildlife/bats/little-brown-bat-tri-colored-bat-winter-habitat-roosts-application/</u>
- VDWR. 2021c. Virginia Fish and Wildlife Information Service (VaFWIS). Accessed January 3, 2022. Available online at: <u>https://vafwis.dgif.virginia.gov/fwis/</u>

## FIGURES

Figure 1: Orthoimagery Project Location Map Figure 2: Topographic Project Location Map Figure 3: Wetlands and Other Waters Map



Anticipated Parcel Carve Out

1,000 2,000 0

Feet Laurel Branch Solar Project

Lunenburg County, Virginia

Source: ESRI/Vivid Imagery (2020) R:\PROJECTS\LAUREL\_BRANCH\_1058-0025\SITE\MAPS\LB\_Option\_A\_Figure\_1\_Location\_Aerial.mxd

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# ATTACHMENT A: USFWS IPAC AND FEDERALLY LISTED SPECIES INFORMAL REVIEW



## United States Department of the Interior

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



/virginiafield/

In Reply Refer To: Consultation Code: 05E2VA00-2022-SLI-1525 Event Code: 05E2VA00-2022-E-05047 Project Name: Laurel Branch Solar Project January 05, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location 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 htt www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

http://

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:	05E2VA00-2022-SLI-1525
Event Code:	Some(05E2VA00-2022-E-05047)
Project Name:	Laurel Branch Solar Project
Project Type:	Guidance
Project Description:	Environmental due diligence
Project Location:	

Approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/@36.91588855000006,-78.17886454581142,14z</u>



Counties: Lunenburg County, Virginia

# **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 Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

# Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/9045</u>	Threatened
Insects NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/9743</u>	Candidate

# **Critical habitats**

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

# USFWS National Wildlife Refuge Lands And Fish Hatcheries

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

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

## Critical Habitat for Threatened & Endangered Species [USFWS]



A specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

Southside PDC, VITA, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS | U.S. Fish and Wildlife Service | The data found in this file were developed by the U.S. Fish & Wildlife Service field offices. For more information please refer to the species level metadata found with the individual shapefiles. The ECOS Joint Development Team is responsible for creating and serving this conglomerate file. No data alterations are made by ECOS.

# VA Bald Eagle Concentration



Esri, HERE, Garmin, FAO, USGS, NGA, EPA, NPS



# **CCB** Mapping Portal



Layers: VA Eagle Nest Locator, VA Eagle Nest Buffers, Eagle Roosts, Eagle Roost Polygons, Eagle Roost Buffers

Map Center [longitude, latitude]: [-78.06198120117188, 36.97183825093165]

### **Map Link:**

https://www.ccbbirds.org/maps/#layer=VA+Eagle+Nest+Locator&layer=VA+Eagle+Nest+Buffers&layer=Eagle+ Roosts&layer=Eagle+Roost+Polygons&layer=Eagle+Roost+Buffers&zoom=11&lat=36.97183825093165&lng=-78 .06198120117188&legend=legend\_tab\_59557df6-c07b-11e5a485-0e31c9be1b51&base=Street+Map+%280SM%2FCarto%29

### Report Generated On: 12/01/2021

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

Report generated by <u>The Center for Conservation Biology Mapping Portal</u>.

To learn more about CCB visit ccbbirds.org or contact us at info@ccbbirds.org

# ATTACHMENT B: STATE LISTED SPECIES INFORMAL REVIEW

NLEB Locations and Roost Trees



NLEB Hibernaculum 5.5 Mile Buffer

NLEB Hibernaculum Half Mile Buffer

VA Dept. Game & Inland Fisheries Esri, HERE, Garmin, FAO, USGS, NGA, EPA, NPS

50 km

0 12.5 25 Esri, HERE, Garmin, FAO, USGS, NGA, EPA, NPS





Dept. Game and Inland Fisheries Esri, HERE, Garmin, FAO, USGS, NGA, EPA, NPS

**Fish and Wildlife Information Service** 

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Commonwealth of Virginia Governor

Virginia Department of Game and Inland Fisheries

Home » By Coordinates » VaFWIS GeographicSelect Options

### Options

**Species Information** 

By Name

By Land

Management

References

**Geographic Search** 

Ву Мар

By Coordinates

By Place Name

**Database Search** 

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### Show This Page as Printer Friendly

### VaFWIS Initial Project Assessment Report Compiled on 1/5/2022, 11:27:33 PM

Known or likely to occur within a 2 mile buffer around polygon; center 36,54,56.0 -78,10,26.0 in 111 Lunenburg County, VA

View Map of						
Site Location						

395 Known or Likely Species ordered by Status Concern for Conservation (displaying first 21) (21 species with Status\* or Tier I\*\* or Tier II\*\* )

BOVA Code	Status*	<u>Tier**</u>	Common Name	Scientific Name	Confirmed	Database(s)
060003	FESE	la	<u>Wedgemussel, dwarf</u>	Alasmidonta heterodon		BOVA
010214	FESE	lla	Logperch, Roanoke	Percina rex		BOVA
050022	FTST	la	Bat, northern long-eared	Myotis septentrionalis		BOVA
060173	FTST	la	<u>Pigtoe, Atlantic</u>	Fusconaia masoni		BOVA,Habitat
060029	FTST	lla	<u>Lance, yellow</u>	Elliptio lanceolata		BOVA
050020	SE	la	<u>Bat, little brown</u>	Myotis lucifugus		BOVA
050027	SE	la	Bat, tri-colored	Perimyotis subf <b>l</b> avus		BOVA
060006	SE	lb	Floater, brook	Alasmidonta varicosa		BOVA
040293	ST	la	<u>Shrike, loggerhead</u>	Lanius Iudovicianus		BOVA
040385	ST	la	<u>Sparrow, Bachman's</u>	Peucaea aestiva <b>l</b> is		BOVA
060081	ST	lla	Floater, green	Lasmigona subviridis		BOVA
010070	ST	llc	Shiner, whitemouth	Notropis a <b>l</b> borus		BOVA
040292	ST		Shrike, migrant loggerhead	Lanius Iudovicianus migrans		BOVA
030063	CC	Illa	Turtle, spotted	Clemmys guttata		BOVA
010174		la	<u>Bass, Roanoke</u>	Ambloplites cavifrons		BOVA,Habitat
020002		lla	Treefrog, barking	Hy <b>l</b> a gratiosa		BOVA
040052		lla	Duck, American black	Anas rubripes		BOVA
040320		lla	<u>Warbler, cerulean</u>	Setophaga cerulea		BOVA
040140		lla	Woodcock, American	Scolopax minor		BOVA
060071		lla	Lampmussel, yellow	Lampsilis cariosa		BOVA
040105		llb	<u>Rail, king</u>	Rallus elegans		BOVA

### To view All 395 species View 395

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

\*\*I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need

Virginia Widlife Action Plan Conservation Opportunity Ranking: a - On the ground management strategies/actions exist and can be feasibly implemented.; b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.; c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

Bat Colonies or Hibernacula: Not Known

Anadromous Fish Use Streams