Virginia Localities Solar Ordinances and Native Vegetation

Locality requirements for native and pollinator-friendly plant species at utility-scale solar energy facilities in Virginia

December 2023

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Introduction & Background

Solar ordinances/policies establish the municipality's requirements and standards for construction, operation, and decommissioning solar energy facilities to regulate solar energy in their locality. Some localities have established vegetation requirements and/or a vegetation management plan within their solar ordinance to meet stormwater and erosion/sedimentation control guidelines and prevent the spread of noxious and invasive plant species.

This document seeks to summarize Virginia locality's ordinances as it relates to vegetation standards at utility-scale solar energy facilities, specifically examining the requirements for native and/or pollinator-friendly vegetation at these facilities.

Virginia Locality Ordinance's Vegetation Requirements at Utility-Scale Solar Facilities

Accomack County

General Business District Solar Ordinance

Industrial District Solar Ordinance

Accomack County requires a minimum of 50% of plants to be native in the General Business District, "B-1", and the Industrial District, "I". Accomack County's ordinance also requires:

a. At least one tree for each 50 linear feet, or portion thereof that is greater than ten feet in length.
b. At least one shrub for each ten linear feet, or portion thereof that is

c. greater than five feet in length.
d. At least one large deciduous tree for every 10,000 square feet of lot area, or portion thereof that is greater than 5,000 square feet. Large trees shall be installed outside of the landscape areas required in [subsections] (1), (2), and (3) above.

There is no language pertaining to pollinator-friendly plant species at solar facilities.

Albemarle County

Albemarle County currently does not have any requirements pertaining to native or pollinator plant species at utility-scale solar sites in their ordinance. They currently do not have a utility-scale solar ordinance.

City of Alexandria

The City of Alexandria currently does not have any requirements pertaining to native or pollinator plant species at utility-scale solar sites. They currently do not have a utility-scale solar ordinance.

Alleghany County

Solar Ordinance

Alleghany County requires pollinator-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers in setbacks and vegetative buffering at utility-scale solar facilities. The solar ordinance specifically requires:

"A vegetative buffer sufficient to mitigate the visual impact of the facility is required. The buffer must consist of a landscaping strip at least 15 feet wide, located within the setbacks required in subsection (4) above, and must run around the entire perimeter of the project area. The buffer must consist of existing vegetation and, if deemed necessary for the issuance of a special use

permit, an installed landscaped strip consisting of multiple rows of staggered trees and other vegetation. This buffer should be made up of plant materials at least three feet tall at the time of planting and that are reasonably expected to grow to a minimum height of eight feet within three years. Non-invasive plant species and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs and wildflowers must be used in the vegetative buffer. Fencing must be installed on the interior of the buffer. Existing trees and vegetation may be maintained within such buffer areas except where dead, diseased or as necessary for development or to promote healthy growth, and such trees and vegetation may supplement or satisfy landscaping requirements as applicable. If existing trees and vegetation are disturbed, new plantings shall be provided for the buffer. The buffer must be maintained for the life of the facility.

The project area must be seeded with appropriate pollinator-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers. The project area must be seeded promptly following completion of construction in such a manner as to reduce invasive weed growth and sediment in the project area. The owners and operators also are required to install pollinator-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers in the setbacks and vegetative buffering."

Amelia County

Amelia County currently requires a combination of non-invasive species, pollinator species, and native plants, shrubs, trees, grasses, forbs, and wildflowers in the event that existing vegetation or landforms providing screening are inadequate or disturbed at utility-scale solar facilities. They also require berms with appropriate pollinator-friendly native plants, shrubs, trees, forbs, and wildflowers. Their requirements for vegetation in their solar ordinance states:

"Buffer zone; screening and fencing for utility-scale solar energy systems. The facilities, including security fencing that is not ornamental, shall be screened from

the ground-level view of adjacent properties or a public street in the buffer zone. Screening may also be required in other locations to screen specific uses or structures. The Board of Supervisors may waive or alter the screening and/or buffer creation requirements when the applicant proposes to use existing wetlands or woodlands to satisfy the screening requirement. The wetlands or woodlands shall be permanently protected as a designated buffer and the overall buffer shall measure at least 150 feet. Screening methods may include:

(1)

Existing screening. Existing vegetation, topography, buildings, open space, or other elements located on the site may be considered as part of the required screening. Existing trees and vegetation may be retained within the buffer area except where dead, diseased, or as necessary for development or to promote healthy growth.

(2)

Vegetative screening. In the event existing vegetation or landforms providing the screening are inadequate or disturbed, new plantings shall be provided in a landscaped strip at least 50 feet wide. Landscaping intended for screening shall consist of a combination of noninvasive species, pollinator species, and native plants, shrubs, trees, grasses, forbs, and wildflowers. Trees intended for screening shall consist of a combination of evergreen and deciduous trees that are five to six feet in height at time of planting. A triple row of trees shall be placed on average at 15 feet on center. A list of appropriate plant materials shall be available at the Planning Office. Species listed on DCR's Invasive Plant Species list shall not be used.

(3)

Berming. Berms shall generally be constructed with a 3:1 side slope to rise ratio, four to six feet above the adjacent grade, with a three-foot-wide top with appropriate pollinator-friendly native plants, shrubs, trees, forbs, and wildflowers. The outside edges of the berm shall be sculpted such that there are vertical and horizontal undulations to give variations in appearance. When completed, the berm should not have a uniform appearance like a dike.

(5)

All buffers must be established prior to the County issuing final permits to operate the facility. In the event an existing buffer is eliminated during operation of the facility, the buffer shall be replanted during the next planting season in accordance with best practices for buffer survival. All buffer areas surrounding the solar energy facility will be inspected annually by the applicant. For any new buffers established pursuant to these conditions, any dead or diseased vegetation shall be removed and replaced during the next available planting season in

accordance with best practices for buffer survival. Where existing trees and vegetation are maintained as the vegetative buffer, dead or diseased trees shall be removed, and when such removal compromises the effect of the buffer, new vegetation shall be established in its place.

(2)

Site plan requirements. In addition to all Virginia site plan requirements and site plan requirements of the Zoning Administrator, the applicant shall provide the following plans for review and approval for the solar facility prior to the issuance of a building permit:

(e)

Landscaping plan. The applicant shall submit a final landscaping plan for review and approval by the Zoning Administrator. The owner or operator shall construct, maintain, and operate the facility in compliance with the approved plan. A separate security shall be posted for the ongoing maintenance of the project's land cover and vegetative buffers in an amount deemed sufficient by the Zoning Administrator. Failure to maintain the landscaping in accordance with the plan may result in the issuance of a notice of violation by the Zoning Administrator. The applicant (or the operator) shall promptly communicate with the Zoning Administrator within 30 days of the date of the notice of violation and submit a plan in writing satisfactory to the Zoning Administrator to remedy such violation no later than 180 days after the date of the notice of violation. Failure to remedy the violation before the end of the 180-day cure period may result in revocation of the SEP.

[1]

Ground cover shall be native vegetation where compatible with site conditions and, in all cases, shall be approved by the Zoning Administrator.

[2]

Screening vegetation shall include pollinator plants where compatible with site conditions and, in all cases, shall be approved by the Zoning Administrator."

Amherst County

Solar Ordinance

Amherst County currently requires pollinator-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers in the setbacks and vegetative buffering of utility-scale solar facilities. Their requirements for vegetation in their solar ordinance states:

"A vegetative buffer sufficient to mitigate the visual impact of the facility is required. The buffer must consist of a landscaping strip at least fifteen (15) feet wide, located within the setbacks required in subsection 3 above, and must run around the entire perimeter of the project area. The buffer must consist of existing vegetation and, if deemed necessary for the issuance of a special exception, an installed landscaped strip consisting of multiple rows of staggered trees and other vegetation. This buffer should be made up of plant materials at least three (3) feet tall at the time of planting and that are reasonably expected to grow to a minimum height of eight (8) feet within three (3) years. Non-invasive plant species and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs and wildflowers must be used in the vegetative buffer. Fencing must be installed on the interior of the buffer. Existing trees and vegetation may be maintained within such buffer areas except where dead, diseased or as necessary for development or to promote healthy growth, and such trees and vegetation may supplement or satisfy landscaping requirements as applicable. If existing trees and vegetation are disturbed, new plantings shall be provided for the buffer. The buffer must be maintained for the life of the facility.

The project area must be seeded with appropriate pollinator-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers. The project area must be seeded promptly following completion of construction in such a manner as to reduce invasive weed growth and sediment in the project area. The owners and operators also are required to install pollinator-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers in the setbacks and vegetative buffering."

Appomattox County

Solar Ordinance

Appomattox County currently requires native trees, shrubs, and other vegetation considered native to the area in the vegetative buffer, but does not require

pollinator-friendly vegetation at utility-scale solar facilities. Their solar ordinance requires:

"A vegetative buffer sufficient to mitigate the visual impact of the facility is required along all areas adjacent to public roadways. The buffer shall consist of a one hundred (100) foot wide landscaped strip to include trees, shrubs and other vegetation considered native to the area. The landscaped strip may be located within the setback area and should run around or near the perimeter fence. Tree plantings in the buffer strip shall be a minimum of five (5) feet in height at the time of planting, no more than fifteen (15) feet between trees. Trees may be staggered. Existing trees and vegetation may be maintained within the buffer areas and may supplement and satisfy landscaping requirements. An alternative to tree plantings is to construct an earthen berm, minimum height of six (6) feet high. Berm must be stabilized with native grasses and/or plantings. The landscaped buffer must be maintained in good condition for the life of the project."

Arlington County

Arlington County does not currently require native or pollinator-friendly vegetation for utility-scale solar facilities. Their zoning ordinance does not mention utility-scale solar facilities.

Augusta County

Augusta County does not currently require native or pollinator-friendly plant species in their solar ordinance. They require a buffer yard that can be landscaped in one of two ways which includes either a privacy fence or a twenty foot wide strip of land with 2 evergreen trees, 2 canopy trees, 2 understory trees and 24 shrubs planted per fifty linear feet of buffer. The trees shall be a minimum

of six feet at the time of planting and the shrubs shall be a minimum of eighteen inches at the time of planting. Augusta County also requires:

"The placement of required plants and structures shall be the decision of the applicant; however, they shall be located so as to achieve the maximum level of protection. Plant material shall meet the buffer requirements every fifty feet (50'). Buffer areas not retained in native habitat shall be seeded or sodded with lawn and maintained at a height of no more than 15 inches, established with ground cover, or mulched with organic mulch. Inorganic ground cover shall not exceed fifty percent (50%) of the total required area of the buffer."

Bath County

Bath County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently do not have a utility-scale solar ordinance.

Bedford County

Bedford County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently do not have a utility-scale solar ordinance.

Bland County

Bland County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently do not have a utility-scale solar ordinance.

Botetourt County

Botetourt County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently do not have a utility-scale solar ordinance.

City of Bristol

The City of Bristol does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently do not have a utility-scale solar ordinance.

Brunswick County

Solar Ordinance

Brunswick County currently requires native vegetation on the ground cover as determined by the Virginia Department of Conservation and Recreation, but they do not currently require pollinator-friendly vegetation at utility-scale solar facilities. Their solar ordinance states:

“Ground cover on the site shall be native vegetation as determined by the Virginia Department of Conservation and recreation solar site native plant finder and maintained in accordance with the landscaping maintenance plan in accordance with established performance measures. A performance bond in the amount of anticipated landscaping maintenance costs shall be posted and maintained. Failure to maintain the landscaping shall result in revocation of the CUP and commencement of the facility's decommissioning. Incorporation of native plant and grass species that require no pesticides, herbicides, and fertilizers or the use of pesticides and fertilizers with low toxicity, persistence, and bioavailability is recommended. The operator shall notify the county prior to application of pesticides and fertilizers. The county reserves the right to request soil and water testing.”

Buchanan County

Buchanan County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently have not adopted a utility-scale solar ordinance.

Buckingham County

Solar Ordinance pp. 413-429

Buckingham County currently requires native and pollinator-friendly vegetation at utility-scale solar facilities. They adopted a utility-scale solar ordinance as of 1/1/2024, which was approved on their 12/11/2023 Board of Supervisors meeting. Their solar ordinance regarding vegetation states:

“F. Landscaping and Screening Plan that identifies required and/or proposed vegetative buffering, including the use of existing and newly installed vegetation to screen the Solar Facility. The plan should address any proposed use of pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers in the project area.

C. Landscaping and Buffering

I. Within the one hundred (100) foot setback, there shall be maintained at least a fifty (50) foot buffer of vegetation and timber, existing or newly planted, with the intent to substantially obscure from view the Solar Equipment and security fence from the property line.

ii. All buffer areas will be maintained with the advice and support of a professional arborist or forester for the duration of the project's operational life. Such maintenance may include thinning, trimming, seeding or other modifications to the buffer to ensure the health of the vegetated buffer areas, public safety, and the energy efficiency of the Project. In the event the health of the vegetation within the buffer area is

compromised and no longer substantially obscures from view the Solar Equipment and security fence, the Applicant will plant a new buffer or supplement the remaining buffer, including timber, evergreens, cedars or other vegetation as determined by the Applicant with the advice of a professional arborist or Forrester.

iii. Along existing public right-of-way (ROW) where there is existing timber, the Applicant shall retain at least a fifty (50) foot buffer of existing vegetation and timber . with the intent to substantially obscure from view the Solar Equipment and security fence from the public right-of-way. Along existing public rights-of-way where there is not at least 50' of vegetation and timber remaining to substantially obscure from view the Solar Equipment and security fence, the Applicant will create a buffer of at least fifty (50) feet. The new buffer will include timber, evergreens, cedars or other vegetation as determined by the Applicant with the advice of a professional arborist and subject to the prior written approval of the Zoning Administrator prior to the issuance of a building permit. All plantings installed in the buffer shall have an anticipated five-year height of six (6) to eight (8) feet after planting and an anticipated mature height of at least twenty (20) feet. Any new plantings shall be planted during the appropriate time of year after the completion of construction of the Project. The buffer may be included in the setback area.

iv. Due consideration will be given to using Pollinator Habitats where appropriate.

VEGETATIVE MANAGEMENT PLAN

I. The applicant shall develop a comprehensive and detailed vegetative management plan with the intended effect to revegetate the Project Area with ground cover.

ii. The Applicant will perform appropriate soil tests in areas across the Project Area to achieve an appropriate sample size of Project Area. These soil tests will be used to inform and develop the comprehensive and detailed vegetative management plan.

iii. The vegetative management plan may include the optimal seed types, fertilizer rates, and liming rates (if necessary) to be used for temporary and permanent stabilization.
iv. The plan will be used to insure that the Applicant will maintain ground cover in good condition throughout the operation of the Project.
v. Where grubbing is not required for the construction or operation of the solar farm, or for the installation of erosion control and storm water management features; existing stumps shall remain in place.
vi. The Applicant will consider implementation of Pollinator Habitats in the vegetative management plan where appropriate and in accordance with applicable laws and regulations.
vii. The ground between the panels and in areas not otherwise covered by gravel or infrastructure shall be managed with a vegetative cover that retards runoff and prevents the soil from blowing or washing away from the site. This cover may be managed with mowing, grazing, or herbicide use, provided that the herbicides are used within the label restrictions and are non-residual in type."

City of Buena Vista

The City of Buena Vista does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently have not adopted a utility-scale solar ordinance.

Campbell County

Solar Guidance Document

Campbell County adopted a guidance document for solar energy projects and storage systems which currently requires the use of pollinator-friendly/native grass species to be planted as part of required permanent stabilization plans.

Caroline County

Solar Ordinance

Caroline County currently requires native and pollinator-friendly vegetation to be incorporated into the landscape plans and natural areas to the extent possible at utility-scale solar sites. Their solar ordinance states:

"Native vegetation and pollinator species shall be incorporated into landscape plans and natural areas to the extent possible. The planting of non-native plant species is discouraged. If non-native species must be utilized, such planting shall not constitute more than twenty-five (25) percent of all new plantings, unless the Landscape Design Professional determines that additional non-native plantings are necessary to meet the desired buffering standards. Invasive species controls shall be incorporated into all plans."

Carroll County

Carroll County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently have not adopted a utility-scale solar ordinance.

Charles City County

Charles City County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently have not adopted a utility-scale solar ordinance.

Charlotte County

Charlotte County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. Their solar ordinance states:

"Utility Scale Solar Energy Systems shall be enclosed by security fencing not less than six (6) feet in height equipped with an appropriate anti-climbing device. The entire facility, including fencing, shall be screened from ground-level view of adjacent properties by a landscaped buffer zone at least 25 feet wide consisting of an evergreen and deciduous mix as approved by the Zoning Administrator, unless otherwise prescribed by the Board of Supervisors as a condition of approval for a Conditional Use Permit. Existing mature tree growth and natural land forms on the site shall be preserved to the maximum extent possible and may be used in whole or in part to provide the required screening if they provide adequate screening from public view as determined by the Zoning Administrator. In the event that existing vegetation or land forms providing screening are disturbed, new plantings shall be provided which accomplish the same."

City of Charlottesville

The City of Charlottesville does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities in their solar ordinance. The only mention rooftop solar energy systems in their zoning ordinance.

City of Chesapeake

Solar Energy Policy - enacted August 9th, 2022

The City of Chesapeake currently requires that utility-scale solar site's groundcover amid and surrounding solar arrays to consist of a variety of native groundcovers, including warm season grasses, wildflowers, and native plants that benefit birds, bees, and other insects, as well as support local agricultural production by providing essential foliage for pollinators vital to crop production. The city also recommends that utility-scale solar facilities reach the minimum score necessary to be Certified VA PollinatorSmart on the Virginia Solar Site Pollinator/Bird Habitat Scorecard. Their solar energy policy regarding vegetation states:

“b. The City of Chesapeake desires to protect, maintain, and improve the quality of the natural environmental systems – air, water, natural habitats, and wetlands.
i. Site groundcover amid and surrounding the solar arrays should consist of a variety of native groundcovers, including warm season grasses, wildflowers, and native plants that benefit birds, bees, and other insects, as well as support local agricultural production by providing essential foliage for pollinators vital to crop production. Turf grass and gravel as groundcover should be avoided.

- Reaching the minimum score necessary to be Certified VA PollinatorSmart on the Virginia Solar Site Pollinator/Bird Habitat Scorecard is recommended.

ii. Groundcover should be expeditiously established following completion of construction activities to minimize erosion and soil loss.
iii. Use of synthetic herbicides to control and maintain groundcover should be avoided.
iv. Wildlife movement should be considered in the layout and design of a site. Breaks in fencing and equipment should be provided where appropriate.
v. Development on wetlands, forested areas, and other valuable habitats should be avoided or minimized to the greatest extent possible.

d. The City of Chesapeake desires to preserve rural viewsheds and reduce the visual impact of utility solar energy facilities. A combination of setbacks, berms, and vegetative buffers, as appropriate, should be applied around exterior property lines.
i. Utility solar energy facilities should generally not be visible from and along public rights-of-way and residentially-zoned or used property, and blend in with landscaping and surrounding uses.
ii. Unless otherwise modified by City Council, utility solar energy facilities should comply with the following minimum setbacks:

- Residentially-zoned or used property: 300 feet
- All other exterior property lines: 150 feet

iii. Berms, when appropriate, should be located outside the fence line and planted with appropriate groundcover.

iv. Vegetative buffers should include predominately native evergreen species to provide visual interest and wildlife habitat.

11. Groundcover: The applicant/owner shall plant and maintain vegetative groundcover amid and surrounding the solar arrays. This groundcover shall consist of native species of warm season grasses and pollinator plants to benefit birds, bees, and other insects and support local agricultural production by providing essential flora for pollinators vital to local crop production. Said plant materials shall be subject to the review and approval of the City's Landscape Coordinator and shall be planted prior to the issuance of the Certificate of Occupancy.

12. Virginia Pollinator-Smart: Pursuant to the adopted City of Chesapeake Solar Energy Policy dated June 27, 2019, the applicant/owner agrees to achieve the minimum score necessary for the site to be Certified VA Pollinator-Smart according to the most current version of the Virginia Pollinator-Smart/Bird Habitat Scorecard, subject to the review and approval of the City's Landscape Coordinator. Virginia Pollinator-Smart criteria shall be met prior to issuance of the Certificate of Occupancy."

Chesterfield County

Chesterfield County does not currently require pollinator-friendly vegetation in their solar ordinance for utility-scale solar facilities, but may require vegetation in a 100 foot wide buffer to be native as outlined on Chesterfield County's Approved Plant Material List. Not all plants on this list are native, however.

Clarke County

Clarke County currently requires native trees and shrubs at utility-scale solar facilities. Their zoning ordinance regarding vegetation at utility-scale solar facilities states:

“G. Plant Material Type and Location Specifications

1. Schedule. All plans shall contain a schedule of plants proposed, indicating the number proposed, caliper or gallon size, and both common and botanical names.

2. Condition. All plant material shall comply with the American Standard for Nursery Stock (ANSI Z60.1-1996). All plants shall be well formed, vigorous, healthy and free of disease, sunscald, windburn and insects or their eggs.

3. Diversity. No single species of tree or shrub shall comprise more than 1/3 of the total number of trees or shrubs to be planted.

4. Sight Distance. No tree, shrub, hedge or existing vegetation shall be planted or maintained in a way that interferes with prescribed sight distances.

5. Plantings Located Under Utility Lines. Small Canopy Trees shall be substituted for Large Canopy Trees where buffer areas are located under and parallel to overhead utility lines.

6. Planting. All plant material shall be installed in accordance with good trade practices. Trees shall be planted at least ten feet apart unless otherwise approved in an alternative landscaping plan. All trees and shrubs shall be native to the region if possible. Nonnative species are allowed if they will grow in this region’s environmental conditions and are non-invasive.

7. Revegetation of Disturbed Areas. Disturbed areas not covered by paving, stone, or other solid materials shall be revegetated with plant species that are compatible with the natural vegetation and tree cover and that have low water and nutrient requirements. Xeriscape practices (use of native plant materials and landscape materials that have low water and nutrient requirements) is encouraged. The landscape plan shall state the degree to which xeriscape practices are being applied.

8. Specifications for Trees and Shrubs. The specifications for all canopy trees, evergreen trees, and shrubs shall be as enumerated in Table 7.2.4[5] below.

TABLE 7.2.4[5] – SPECIFICATIONS FOR TREES AND SHRUBS

Tree/Shrub Type	Specifications
Large Canopy Trees	Mature Height – Over 45 feet
	Typical of but not limited to -- Maples or Oaks
	PROHIBITED SPECIES -- Female Ginkgo (Ginkgo biloba), Silver Maple (Acer saccharinum), or Tree of Heaven (Ailanthus altissima)
Medium Canopy Trees	Mature Height – 30-45 feet Spread – 30 feet
	Typical of but not limited to -- Honeylocusts (Gleditsia triacanthos),Blackgums (Nyssa sylvatica) or American Hophornbeams (Ostrya virginiana)
Small Canopy Trees	Mature Height – Up to 30 feet Spread – Equal
	Typical of but not limited to -- Flowering Crabapple (Malus sp.) or Redbud (Cercis canadensis)
	PROHIBITED SPECIES -- Bradford Pear (Pyrus calleryana)

Tree/Shrub Type	Specifications
Evergreen Trees	Mature Height – Minimum of 10 feet
	Typical of but not limited to -- American Arborvitae (Thujaoccidentalis) or American Holly (Ilex opaca).
	PROHIBITED SPECIES – Leyland cypress
Shrubs	Mature Height – Minimum of 3 feet
	Typical of but not limited to -- Inkberry (Ilex glabra), Sweetshrub (Claycanthis floridus), and Cherrylaurel (Prunus caroliniana)
	Special Requirements -- Include evergreen varieties for at least 50% of the shrubs planted.

City of Colonial Heights

The City of Colonial Heights does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently have not adopted a utility-scale solar ordinance.

City of Covington

The City of Covington does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently have not adopted a utility-scale solar ordinance.

Craig County

Craig County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently have not adopted a solar ordinance.

Culpeper County

Solar Ordinance

Culpeper County currently requires a minimum of a double row of evergreens to be planted within any required setback and/or buffer area in areas where there is not at least 50 feet of native timber buffer remaining on the project parcel in their utility-scale solar ordinance and the use of native timber and natural screening is preferable. Their ordinance also states, “Such evergreens shall be planted, at a minimum, on fifteen (15) foot centers, with rows offset. The evergreens installed shall have an anticipated mature height of thirty (3) to forty (40) feet. The composition of this landscape buffer may be a mixture of evergreens and/or deciduous trees as deemed appropriate by the Board of Supervisors. These evergreens shall be planted during the appropriate time of year, subsequent to

the completion of construction. (This required may be reduced or waived if agreed to, in writing, by the owner of the adjacent residence, including residences across a public right of way.)"
Their solar ordinance also require a vegetation management plan for ground cover within the fence lines of the facility, which include primarily native grasses, associated low-growing species, and measures to prevent and control invasive species and noxious weeds for utility-scale solar facilities.

Cumberland County

Solar Ordinance

Cumberland County currently requires a vegetative buffer yard at utility-scale solar facilities that meets one or more of the following requirements:
"Forty (40) feet wide with:

i. Four (4) canopy trees per one hundred (100) linear feet
ii. Six (6) understory trees per one hundred (100) linear feet
iii. Eleven (11) evergreen trees per one hundred (100) linear feet

The use of existing, healthy, well-formed canopy trees, understory trees, evergreen trees, and shrubs shall be maximized wherever practical to comply with these vegetative buffer."

Cumberland County's solar ordinance also currently requires the use of native grasses or any non-invasive species to stabilize the site for the duration of the solar facility's use, but does not currently require pollinator-friendly vegetation.

City of Danville

The City of Danville does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently have not adopted a solar ordinance for utility-scale solar energy systems.

Dickenson County

Dickenson County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently have not adopted a solar ordinance.

Dinwiddie County

Dinwiddie County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. Their solar ordinance states that:

“A continuous vegetative buffer shall be present and maintained at all times around the perimeter of the exterior of the fencing which is required around the perimeter of the solar farms. Layout of the vegetative buffer shall be depicted on the site plan. The vegetative buffer shall be composed of trees or shrubs of a type which at planting shall be a minimum of four feet in height and which shall be maintained at maturity at a height of not less than six feet in height and screen the project site from surrounding properties during all seasons.
The trees or shrubs shall be spaced no more than ten feet apart (from the base of tree or shrub to the base of tree or shrub). The vegetative buffer shall be carefully planted and shall be maintained in good condition. Failure to maintain the vegetative buffer shall constitute a violation of this division. Existing vegetation may be used as a vegetative buffer where adequate to screen the project and may be supplemented with plantings as described in this section. Existing vegetation used as a vegetative buffer shall be depicted and labeled on the site plan.”

City of Emporia

The City of Emporia does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently have not adopted a utility-scale solar ordinance.

Essex County

Solar Ordinance

Essex County currently requires native vegetation on the ground cover where compatible with soil conditions and recommends native plant species that require no pesticides, herbicides, and fertilizers or the use of pesticides and fertilizers with low toxicity, persistence, and bioavailability. They currently do not required pollinator-friendly vegetation at utility-scale solar facilities. Their solar ordinance states:

"(6) *Landscape buffer.*

a. Utility-scale solar facilities, including fencing, shall be significantly screened from the ground-level view of adjacent properties by a buffer zone at least 100 feet wide that shall be landscaped with a minimum of two staggered rows of eight (8)-foot tall evergreen trees. The remainder of the buffer shall be planted with staggered rows of evergreen tree plugs except to the extent that existing vegetation or natural land forms on the site provide such screening as determined by Essex County. In the event that existing vegetation or landforms providing the screening are disturbed, new plantings shall be provided that accomplish the same. Opaque architectural fencing may be used to supplement other screening methods but shall not be the primary method.

b. Large-scale and PPA solar facilities shall be significantly screened from the ground-level view of adjacent properties by a buffer zone at least half the required setback that shall be landscaped with plant materials consisting of an evergreen and deciduous mix (as approved by County staff), except to the extent that existing vegetation or natural landforms on the site provide such screening as determined by the zoning administrator. In the event, existing vegetation or landforms providing the screening are disturbed, new plantings shall be provided which accomplish the same. Opaque architectural fencing may be used to supplement other screening methods but shall not be the primary method.

(8) Ground cover on the site shall be native vegetation where compatible with soil conditions and maintained in accordance with the landscaping

maintenance plan and established performance measures. A performance bond reflecting the costs of anticipated landscaping maintenance shall be posted and maintained. Failure to maintain the landscaping shall result in revocation of the conditional use permit and the facility's decommissioning. Incorporation of native plant species that require no pesticides, herbicides, and fertilizers or the use of pesticides and fertilizers with low toxicity, persistence, and bioavailability is recommended. The operator shall notify the County prior to application of pesticides and fertilizers. The County reserves the right to request soil and water testing."

Fairfax County

Fairfax County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. Their solar ordinance does not mention vegetation requirements.

City of Fairfax

The City of Fairfax does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They do not currently have an ordinance for utility-scale solar facilities.

City of Falls Church

The City of Falls Church does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently do not have an ordinance for utility-scale solar facilities, only for residential systems.

Fauquier County

Solar Ordinance

Fauquier County currently requires non-invasive plant species, pollinator–friendly

and wildlife-friendly native plants, shrubs and trees to be used at utility-scale solar facilities. Their solar ordinance also states:

“A vegetated buffer shall be required that consists of a landscaped strip at least 50 feet wide measured from each boundary line of the project around the entire perimeter. The project shall be landscaped and maintained with a buffer of plant materials that are mature enough to effectively screen the view, to eight feet above ground level, of the solar panels from adjacent properties all year around. Screening shall be fully established within five years and effectively maintained for the life of the project. Non-invasive plant species, pollinator–friendly and wildlife-friendly native plants, shrubs and trees shall be used.

The entire project, including the area underneath the solar panels, shall be vegetated. Panels shall be adequately spaced to ensure sufficient sunlight penetration to promote growth of vegetation. A plan shall be submitted for maintenance of the vegetation, except for access roads and accessory structures.

When a buffer is not required based on the results of a viewshed analysis, buffer requirements may be waived or modified when the adjoining property is subject to an active agricultural use and the adjoining property owner(s) agree that no buffer is necessary or a reduced buffer is acceptable.”

Floyd County

Floyd County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They do not currently have an ordinance for utility-scale solar energy systems.

Fluvanna County

Fluvanna County does not currently require native or pollinator-friendly

vegetation at utility-scale solar facilities. They do not currently have an ordinance for utility-scale solar energy systems.

Franklin County

Solar Ordinance - enacted July 19th, 2022

Franklin County currently requires non-invasive plant species and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers in the vegetative buffer following Virginia Pollinator-Smart Program best practices at utility-scale solar facilities, as well as overseeding setbacks and buffers with appropriate pollinator-friendly native plants, shrubs, trees, grasses, forbs and wildflowers following Virginia Pollinator-Smart Program best practices at the beginning of the next planting season of the facility. Their solar ordinance states:

"A vegetative buffer sufficient to mitigate the visual impact of the facility as approved by the Zoning Administrator is required. The buffer shall consist of a landscaping strip at least 30 feet wide, shall be located within the setbacks required under subsection (3) above, and shall run around the entirety of the area proposed for development. The buffer shall consist of existing vegetation and as needed, an installed landscaped strip consisting of multiple rows of staggered trees and other vegetation. This buffer should include vegetation a minimum of 6 feet high at planting and reasonably expected to grow to full maturity within three years. The Planning Commission or Board of Supervisors may require increased setbacks and additional or taller vegetative buffering in situations where the height of structures or topography affects the visual impact of the facility. Non-invasive plant species and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs and wildflowers must be used in the vegetative buffer following Virginia Pollinator-Smart Program best practices. Screening and/or buffer creation requirements may be waived or altered for alternative designs such as landscaped berms, existing wetlands or woodlands, if the berms, wetlands or woodlands are permanently protected and maintained for use as a buffer. Existing trees and vegetation must be maintained within such buffer

areas except where dead, diseased or as necessary for development or to promote healthy growth, and such trees and vegetation may 5 supplement or satisfy landscaping requirements as applicable and approved by the Zoning Administrator. If existing trees and vegetation are disturbed, new plantings shall be provided for the buffer at least SIX (6) feet tall at planting. The vegetative buffer shall be maintained for the life of the facility.

The facility area shall be seeded promptly with pollinator-friendly vegetation following completion of construction in such a manner as to reduce invasive weed growth and trap sediment within the facility area. At the beginning of the next planting season the facility area, setbacks and buffers will be overseeded with appropriate pollinator-friendly native plants, shrubs, trees, grasses, forbs and wildflowers following Virginia Pollinator-Smart Program best practices. Once these pollinator habits are established, maintenance of the site shall follow Virginia Pollinator-Smart Program best practices unless Agrivoltaics (APV) are employed."

City of Franklin

The City of Franklin does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They do not currently have an ordinance for utility-scale solar facilities.

Frederick County

Frederick County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. There is no language regarding vegetation for utility-scale solar facilities in their zoning ordinance.

City of Fredericksburg

The City of Fredericksburg does not currently require native or pollinator-friendly

vegetation at utility-scale solar facilities. There is no language about vegetation for utility-scale solar facilities in their code of ordinances.

City of Galax

The City of Galax does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently have not adopted a utility-scale solar ordinance.

Giles County

Giles County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They currently have not adopted a utility-scale solar ordinance.

Gloucester County

Gloucester County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities, however, they require a report on potential impacts on pollinators and pollinator habitats at the site, including but not necessarily limited to the submission of a completed solar site pollinator habitat assessment for their environmental and cultural resources review for all solar energy facilities requiring a Conditional Use Permit. Gloucester County's solar ordinance regarding vegetative buffering states:

"The use of existing vegetation shall be allowed in place of required new plant material provided the vegetation to be used adequately screens the solar panels from view from the right of way and adjacent parcels, is a minimum of twenty-five (25) feet in width, and is located entirely on the applicant's property. The applicant shall submit a landscape plan drawn by a professional landscape architect showing the location, size, and type of the existing plant material in the buffer area that is being used to meet the screening requirement. The plan shall

include supplemental plantings wherever needed to ensure year-round screening. Should the buffer be damaged or destroyed at any time during the operation of the solar energy facility, additional vegetation shall be planted to restore the required vegetative buffer based on the approved or an amended plan.

Where adequate vegetative screening does not exist, buffers shall consist of a continuous landscaping strip of not less than twenty-five (25) feet in width planted with a mix of large deciduous trees, large evergreen trees, and shrubs forming a continuous screen. At least seventy-five (75) percent of the plantings shall be evergreen. The required screening shall be placed within the twenty-five (25) feet closest to the perimeter of the site area. The applicant shall submit a landscape plan drawn by a professional landscape architect showing the location, size, and type of the plant material in the buffer area that is being used to meet the screening requirement and demonstrate compliance with this section.

The zoning administrator shall require a surety prior to site plan approval in an amount sufficient and with conditions satisfactory to secure to the county compliance with the landscaping requirements set forth above. The landscaping surety will be held for the life of the project and will be released upon completion of decommissioning.

The buffer shall be maintained for the life of the facility. Dead, diseased, or dying plants shall be replaced within the next planting season unless the remaining healthy vegetation provides the required screening."

Goochland County

Goochland County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. There is currently no language about vegetation at utility-scale solar facilities in their zoning ordinance, but they've drafted a solar ordinance that has not been updated in their Zoning Ordinance online yet.

Grayson County

Grayson County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. There is no language about vegetation at utility-scale solar facilities in their zoning ordinance.

Greene County

Greene County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. There is no language about vegetation at utility-scale solar facilities in their zoning ordinance.

Greensville County

Zoning Ordinance, (p. 223)

Greensville County currently requires native vegetation on the groundcover of utility-scale solar systems. Their zoning ordinance regarding vegetation at utility-scale solar systems states:

“The facilities, including fencing, shall be significantly screened from the ground-level view of adjacent properties by a buffer zone at least 100 feet wide that shall be landscaped with plant materials consisting of an evergreen and deciduous mix (as approved by County staff), except to the extent that existing vegetation or natural land forms on the site provide such screening as determined by the zoning administrator. In the event, existing vegetation or land forms providing the screening are disturbed, new plantings shall be provided which accomplish the same. Opaque architectural fencing may be used to supplement other screening methods but shall not be the primary method.

Ground cover on the site shall be native vegetation and maintained in accordance with the Landscaping Maintenance Plan in accordance with

established performance measures. A performance bond reflecting the costs of anticipated landscaping maintenance shall be posted and maintained. Failure to maintain the landscaping shall result in revocation of the SUP and the facility's decommissioning. Incorporation of native plant species that require no pesticides, herbicides, and fertilizers or the use of pesticides and fertilizers with low toxicity, persistence, and bioavailability is recommended. The operator shall notify the County prior to application of pesticides and fertilizers. The County reserves the right to request soil and water testing."

Halifax County

Solar Ordinance

Halifax County currently requires non-invasive plant species and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs and wildflowers in the setbacks and vegetative buffer, as well as seeding of the project area with appropriate pollinator-friendly native plants, shrubs, trees, grasses, forbs and wildflowers at utility-scale solar sites as required by the zoning administrator. Their vegetation requirements for utility-scale solar sites in their zoning ordinance states:

"A vegetated buffer sufficient to mitigate the visual impact of the facility is required. The buffer shall consist of a landscaped strip at least 15 feet wide, shall be located within the setbacks required under subsection (d), and shall run around the entire perimeter of the property. The buffer shall consist of existing vegetation and, if deemed necessary for the issuance of a conditional use permit, an installed landscaped strip consisting of multiple rows of staggered trees and other vegetation. This buffer should be made up of plant materials at least three feet tall at the time of planting and that are reasonably expected to grow to a minimum height of eight feet within three years. The planning commission or board of supervisors may require increased setbacks and additional or taller vegetative buffering in situations where the height of structures or the topography affects the visual impact of the facility. Non-invasive plant species and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses,

forbs and wildflowers must be used in the vegetative buffer. Fencing must be installed on the interior of the buffer. Until such time as the vegetative buffer completely screens the solar energy facility from the view of adjacent property owners, the owner and/or operator shall use green privacy slats in the required fencing. A recommendation that the screening and/or buffer creation requirements be waived or altered may be made by the planning commission when the applicant proposes to use existing wetlands or woodlands, as long as the wetlands or woodlands are permanently protected for use as a buffer. Existing trees and vegetation may be maintained within such buffer areas except where dead, diseased or as necessary for development or to promote healthy growth, and such trees and vegetation may supplement or satisfy landscaping requirements as applicable. If existing trees and vegetation are disturbed, new plantings shall be provided for the buffer. The buffer shall be maintained for the life of the facility.

The project area will be seeded with appropriate pollinator-friendly native plants, shrubs, trees, grasses, forbs and wildflowers as required by the zoning administrator. The project area will be seeded promptly following completion of construction in such a manner as to reduce invasive weed growth and sediment in the project area. The owners and operators also are required to install pollinator-friendly native plants, shrubs, trees, grasses, forbs and wildflowers in the setbacks and vegetative buffering.”

City of Hampton

The City of Hampton does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. There is no language about vegetation at utility-scale solar facilities in their zoning ordinance.

Hanover County

Solar Policy

Hanover County currently requires native vegetation where supplemental planting is required at solar facility's Batter Energy Storage Systems. They also currently require pollinator and other ecologically friendly and beneficial ground covers on 30% of the total site area at utility-scale solar facilities. Their vegetation requires for utility-scale solar sites in their solar policy states:

"**Solar Facilities - Battery Energy Storage Systems (BESS):**
Where appropriate, vegetated screening and buffering shall be required to minimize the visual impacts:
• The use of naturally vegetated buffers is encouraged.
• Additional vegetated screening meeting the intent of this policy may be required to reduce or eliminate visual impacts where little or no existing vegetation is located.
• Where supplemental planting is required, native species are to be used.
• Preserve natural vegetation.

Site Design Standards
Utility and Small-Scale Solar Energy Facilities:
Buffer Standards
a.50-150' Buffer Width
- • No clearing or grading allowed within buffer
- • No removal of healthy vegetation allowed within the buffer
- • A Tree Protection Plan, which includes fencing, signage and inspections as laid out in the Planting Standards, is required for all existing vegetation being utilized to meet any buffer requirements

b. Buffer Planting Supplementation
- • Forested Buffers need no supplementation provided:
  - i. The buffer area is covered with at least 75% of natural established vegetation

ii. The existing plant material is mature and in healthy condition
iii. The existing plant material consists of a mix of evergreen and deciduous trees
iv. Any existing trees used to satisfy this requirement must have the entirety of their canopies located within the buffer area
v. There is an established understory of small trees and shrubs, both evergreen and deciduous, to provide significant buffering at the lower forested area

• Supplementation for buffers that do not meet all or some of the requirements listed above:

i. Forested Buffers with no understory buffering as listed in (v) – to be established along the inside or outside buffer line in a staggered pattern and placement, as follows per every 100’ of buffer length –

- 3 small deciduous understory trees
- 3 small evergreen trees
- 5 large shrubs
- 10 small to medium shrubs

ii. Forested Buffers with no evergreen tree component – to be established along the inside or outside buffer line in a staggered pattern and placement, as follows per every 100’ of buffer length

- 4 large evergreen trees
- 6 small evergreen trees

iii. Forested Buffers with no deciduous tree component

- This does not represent an established mature buffer. Forested areas with only evergreen trees are considered pioneer growth and will need to meet the full buffer supplementation requirements outlined below. The existing evergreen trees can be used to meet this requirement.

iv. Buffer Supplementation for buffers with immature, inadequate or unhealthy existing vegetation – with a staggered pattern and placement, as follows per every 100’ of buffer length

- Plantings should be clustered within the buffer with no vegetative gaps of 10 or more linear feet or the existing stand of trees have no branches or understory growth lower than six feet from the ground
- Clusters to be of no more than 50’ in width
- 2 Large Deciduous Trees
- 4 Small Deciduous Trees
- 6 Large Evergreen Trees
- 8 Small Evergreen Trees
- 7 large shrubs
- 15 Small to medium shrubs o Existing healthy vegetation can be used to meet this requirement.
  *Tree sizes would be regulated based on Section 26-265. Standards for trees and shrubs used in buffers.

• Maintain Existing Mature Vegetation. The preservation of existing trees and shrubs within required buffers shall be maximized. All trees located within a buffer shall be retained unless removal is necessary to accommodate vehicular access and/or utilities that run generally perpendicular through the buffer.
• Surety for Landscaping. Prior to the approval of a plan of development, surety shall be provided for any landscaping plantings or improvements proposed for buffers or screening.
• Landscape Maintenance: A landscape maintenance schedule shall be included as part of the landscape plan to ensure planted materials remain viable. A landscape maintenance plan shall be required which outlines measures for the regular trimming and mowing of the site.
• Site Stabilization: Pollinator and other ecologically friendly and beneficial ground covers that promote wildlife habitats and forage are required to be planted on 30 percent of the total site area.

City of Harrisonburg

The City of Harrisonburg does not currently require native or pollinator-friendly

vegetation at utility-scale solar facilities. They currently do not have a utility-scale solar ordinance.

Henrico County

Henrico County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. There is no language about vegetation at utility-scale solar facilities in their zoning ordinance.

Henry County

Solar Ordinance

Henry County currently requires non-invasive plant species and wildlife-friendly native plants, shrubs, trees and grasses to be used in the vegetative buffer and setbacks of utility-scale solar facilities, as well as for it to be seeded with appropriate pollinator-friendly native plants, shrubs, trees, grasses, forbs and wildflowers. Their vegetation requirements for utility-scale solar sites in their zoning ordinance states:

“A vegetated buffer sufficient to mitigate the visual impact of the facility is required. The buffer shall consist of a landscaped strip at least twenty (20) feet wide, shall be located within the setbacks required under subsection (d), and shall run around the entire perimeter of the property. The buffer shall consist of existing vegetation and, if deemed necessary for the issuance of a special use permit, an installed landscaped strip consisting of multiple rows of staggered trees and other vegetation. This buffer should be made up of plant materials at least six (6) feet tall at the time of planting and that are reasonably expected to grow to a minimum height of ten (10) feet within three (3) years. The Board of Zoning Appeals may require increased setbacks and additional or taller vegetative buffering in situations where the height of structures or the topography affects the visual impact of the facility. Non-invasive plant species and wildlife-friendly native plants, shrubs, trees and grasses must be used in the vegetative buffer. Fencing must be installed on the interior of the buffer. A

recommendation that the screening and/or buffer creation requirements be waived or altered may be made by the Board of Zoning Appeals when the applicant proposes to use existing wetlands or woodlands, as long as the wetlands or woodlands are permanently protected for use as a buffer. Existing trees and vegetation may be maintained within such buffer areas except where dead, diseased or as necessary for development or to promote healthy growth, and such trees and vegetation may supplement or satisfy landscaping requirements as applicable. If existing trees and vegetation are disturbed, new plantings shall be provided for the buffer. The buffer shall be maintained for the life of the facility.

(g) The project area will be seeded with appropriate pollinator-friendly native plants, shrubs, trees, grasses, forbs and wildflowers. The project area will be seeded promptly following completion of construction in such a manner as to reduce invasive weed growth and sediment in the project area. The owners and operator also are required to install pollinator-friendly native plants, shrubs, trees, grasses, forbs and wildflowers in the setbacks and vegetative buffering."

Highland County

Highland County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities in their zoning ordinance. Their vegetation requirements for utility-scale solar sites in their zoning ordinance states:

"A buffer yard shall be provided and maintained adjacent to any property line, except those property lines interior to the solar energy system, and landscaped in one (1) of two (2) ways. If a property ceases being used for the solar energy system, buffering will be required along all property lines adjacent to the property which has been removed.

> Alternative A. A ten foot (10') wide strip of land with a six foot (6') opaque privacy fence, wall, berm or combination thereof. Opaque privacy fences shall be construction of good quality materials such

as vinyl, pressure treated lumber, brick, stone, or similar materials approved by Zoning Administrator. For the purposes of this chapter tarps, car covers tents, fabric, chain link fences with slats, or similar materials shall not be deemed to satisfy the requirements of opaque fencing.

Alternative B. A twenty foot (20') wide strip of land with 2 white pine or spruce trees, 2 canopy trees, 2 understory trees and 24 shrubs planted per fifty linear feet (50') of buffer. The trees shall be a minimum of six feet (6') at the time of planning and the shrubs shall be a minimum of eighteen inches (18") at the time of planting.

1. The applicant is free to choose from Alternatives A or B. Buffers planted below overhead utility lines shall apply any of the allowed buffer alternatives, except that understory trees shall replace any canopy trees at a rate of two (2) understory trees per required canopy tree.
2. Plant and structure location within buffer. The placement of required plants and structures shall be the decision of the applicant; however, they shall be located so as to achieve the maximum level of protection. Plant material shall meet the buffer requirements every fifty feet (50'). Buffer areas not retained in native habitat shall be seeded or sodded with lawn and maintained at a height of no more than 15 inches, established with ground cover, or mulched with organic mulch. Inorganic ground cover shall not exceed fifty percent (50%) of the total required area of the buffer.
3. Where a fence or wall is used as part of a buffer, the decorative side of the fence or wall shall be faced to the adjacent property."

City of Hopewell

The City of Hopewell does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities in their zoning ordinance. They do not currently have a utility-scale solar ordinance.

Isle of Wight County

Isle of Wight County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities in their zoning ordinance. Their zoning ordinance also encourages native plants as defined by DCR, desires materials indigenous to the region, and prohibits invasive species in their Landscaping and Screening Standards in their zoning ordinance. Their zoning ordinance states that utility-scale solar facilities must meet these standards for landscaping:

“i. Along public roadways, a minimum fifty-foot wide bufferyard shall be installed or retained consisting of a three (3), staggered rows of trees and shrubs installed a maximum of eight (8) feet on center in order to create an effective visual screen as approved by the Zoning Administrator;

ii. Where solar facility properties abut residential parcels, a fifty-foot wide bufferyard shall be installed or retained consisting of a three (3), staggered rows of large and small canopy trees and medium shrubs installed a maximum of eight (8) feet on center in order to create an effective visual screen as approved by the Zoning Administrator;

iv. Existing vegetation that meets the minimum landscaping specifications may be used to meet required landscaping;

v. No silvicultural activities or removal of required landscaping materials shall occur in the required bufferyards except as approved by the Zoning Administrator; and

vi. If the land area being leased was under crop cultivation prior to lease, it shall be maintained and cut annually during the growing season prior to August 1 until site construction begins.

Sec. 8-1003. - Landscaping and screening requirements and design guidelines.

4. Native plants, as identified by the Virginia Department of Conservation and Recreation (DCR), and materials indigenous to the region are desirable and are encouraged, particularly because of their adaptation to local climate, disease resistance, soils, hydrology, and adverse weather conditions. As a resource for developing landscaping plans, the zoning administrator shall maintain and make available to the public a list of desirable native trees, shrubs and perennials based on their adaptability to the climate of eastern Virginia.

5. Invasive species, as identified by the Virginia Department of Conservation and Recreation (DCR), shall be prohibited."

James City County

James City County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities in their zoning ordinance. There is no language regarding utility-scale solar facilities in their zoning ordinance.

King and Queen County

King and Queen County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities in their code of ordinances. There is no language regarding utility-scale solar facilities other than taxation in their code of ordinances.

King George County

King George County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities in their zoning ordinance. There is no language regarding vegetation at utility-scale solar facilities in their ordinance.

King William County

King William County currently requires the ground cover of utility-scale solar facilities to consist of non-invasive native species. They do not currently require pollinator-friendly vegetation. Their solar ordinance regarding vegetation states:

"(e) The facilities, including fencing, shall be significantly screened from the ground-level view of adjacent properties by a buffer zone at least 100 feet wide that shall be landscaped with plant materials consisting of an evergreen and deciduous mix (as approved by county staff), except to the extent that existing vegetation or natural land forms on the site provide such screening as determined by the zoning administrator. In the event existing vegetation or land forms providing the screening are disturbed, new plantings shall be provided which accomplish the same. Opaque architectural fencing may be used to supplement other screening methods but shall not be the primary method.

(g) Ground cover on the site shall consist of non-invasive native species and maintained in accordance with the landscaping maintenance plan in accordance with established requirements of article XI of this chapter. A performance bond reflecting the costs of anticipated landscaping maintenance shall be posted and maintained. Failure to maintain the landscaping shall result in revocation of the CUP and the facility's decommissioning. The project site design shall include the installation and establishment of ground cover meeting the beneficial habitat standard consistent with Code of Virginia 9VAC15-60-40, or successor statues and guidance as set by the Virginia Board of Water and Soil Resources. The applicant shall submit a financial guarantee in the form of a letter of credit, cash deposit or bond in favor of the community equal to 125 percent of the costs to meet the beneficial habitat standard. The financial guarantee shall remain in effect until vegetation is sufficiently established."

Lancaster County

Solar Ordinance

Lancaster County does not currently require pollinator-friendly vegetation, but their zoning ordinance does require that the vegetated buffer consist of native plants to the maximum extent practical and feature specimens not listed on the

Department of Conservation and Recreation Invasive Plant List. The ordinance states:

“Unless otherwise approved by the Board of Supervisors, a vegetated buffer a minimum of 40 feet in width is required within the setback area (outside of any public right of way). The buffer shall be required around the entire project area (except that a buffer is not required along internal parcel boundaries, if the project involves more than one parcel or owner). The buffer must be identified on a Landscaping Plan submitted at the time of application. This buffer shall consist of native plants to the maximum extent practical and feature specimens not listed on the Department of Conservation and Recreation Invasive Plant List. The planting schedule shall include at least four rows of medium to large evergreen shrubs (ex: myrica cerifera (morella cerifera)) spaced no further than three feet apart in the row. The rows should be no more than ten feet apart and no closer than eight feet. Evergreen trees (ex: juniperus virginiana) shall be included in this planting area and spaced ten feet apart within each planting row. The specimens spaced within the planting rows or line shall be staggered from the adjacent rows in order to enhance the visual screening effect. The trees must be a minimum of four feet tall at planting and reach a height of ten feet within two years. Shrubs shall be at least 12 inches tall at planting. Existing vegetation, or forest area, which meets or exceeds the buffer requirements, may be accepted in lieu of planting upon the written consent of the Zoning Administrator and shall be part of the Special Exception application for Board of Supervisors approval or modification.

In areas where the nearest off project site or non-leased area, dwelling, or occupied structure is 1,000 linear feet away or greater, the applicant may submit a plan for natural buffer establishment. This plan would involve the cessation of mowing on a stabilized surface that results in natural recruitment of shrubs and trees within this un-mowed area. The area shall be marked by staking and or signage and be at least 40 feet in width or greater, including curve and turn areas. The annual inspection requirement shall apply and require the naturally recruited vegetation to reach a height of ten feet within 24 months or two

seasons, whichever is greater. This naturally recruited woody vegetation should not be thinned to less than 20 inches DBH every 100 square feet and ground covers and shrubs should not be discouraged.

Vegetation shall be inspected at least one year or one growing season after installation for survival; Individual specimens not surviving shall be replanted within the next available growing season. Vegetation shall be inspected annually by staff for screening effectiveness and will utilize views from the edge of the right of way and adjacent properties, as applicable. A landscaping maintenance plan and landscaping security in a form approved by the County Attorney, shall be required at the time of site plan approval.

Vegetation management. The ground between the panels and in areas not otherwise covered by gravel or infrastructure shall be managed with a vegetative cover that retards runoff and prevents the soil from blowing or washing away from the site. This cover may be managed with mowing, grazing, or herbicide use, provided that the herbicides are used within the label restrictions and are non-residual in type."

Lee County

Lee County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. Lee County does not currently have a solar ordinance in place in their zoning ordinance.

City of Lexington

The City of Lexington does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They do not currently have a utility-scale solar ordinance.

Loudoun County

Solar Ordinance

Loudon County currently requires a minimum of 80% of plant units to be native and 75% of small deciduous trees and shrubs to be pollinator habitat vegetation at utility-scale solar facilities according to their zoning ordinance. They also prohibit the use of invasive species. The zoning ordinance declares that utility-scale solar facilities must meet the Landscaping/Buffering/Screening requirements of Section 7.04 in their zoning ordinance. Their zoning/solar ordinance regarding vegetation states:

"B. **Plant Unit Requirements**. The plant types used to meet the Plant Unit requirements for each Buffer or Road Corridor Buffer must meet the following:
1. The number of Plant Units that a plant type is considered to be equivalent to is determined in accordance with Table 7.04.07-1, Plant Unit Equivalents;

Table 7.04.07-1. Plant Unit Equivalents	
Plant Type	**Plant Units per 1 Plant Type**
Large Deciduous Tree	10
Evergreen Tree	6
Small Deciduous Tree	5
Shrub	2
Grass, Sedge, or Rush	1
Herbaceous Perennial, Fern, or Vine	0.25

2. **Plant Unit Composition Requirements**. Provided Plant Units must meet the following percentages:

a. No more than 50% of the required plant units are permitted to be large deciduous trees. Exception. The Road Corridor Buffer Type 1 may be planted with 100% large deciduous trees;

b. No more than 50% of the required plant units are permitted to be evergreen trees. A minimum of 10% of the required plant units for a Type C Buffer must be evergreen trees;

c. No more than 60% of the required plant units are permitted to be small deciduous trees;

d. No more than 30% of the required plant units are permitted to be shrubs. When shrubs are used, a minimum of 30% must be evergreen;

e. The use of ornamental grasses and/or perennials is encouraged and may constitute a maximum of 25% of the required plant units;

f. **Native Plant and Pollinator Habitat Requirements**. To support native plant and pollinator habitats, Plant units must be provided as follows:

1. **Native Plant Requirement**. A minimum of 80% of plant units must consist of Native Plant species;

2. **Pollinator Habitat Requirement.** A minimum of 75% of the small deciduous trees and shrubs provided must produce conspicuous flowers at some point during their growing season; and

3. **Invasive Plant Prohibition**. Planting any Invasive Plant species is prohibited; and

g. Maximum percentages apply solely in determining the quantity of a given plant type that can be counted towards meeting a Plant Unit requirement, and do not preclude the installation of additional plant material from that plant type; and

3. Walls, fences, and/or berms are not counted toward required plant units.

D. **Landscape Installation**. The installation of all required plant material must be in accordance with the FSM.

1. At the time of planting, all trees and shrubs must meet the requirements of the American National Standards Institute, American Standard for Nursery Stock, ANSI Z60.1-2014.

2. The minimum sizes required for each plant type are provided in Table 7.04.07-2.

Table 7.04.07-2. Required Minimum Sizes for Plant Types

Plant Type	Minimum Size
Large Deciduous Tree	Minimum caliper of 1 inch
Small Deciduous Tree	Minimum caliper of 1 inch
Evergreen Tree	Minimum of 6 feet in height
Shrub	Minimum height of 18 inches
Grass, Sedge, or Rush	Minimum 1 gallon container
Herbaceous Perennial, Fern, or Vine	Minimum 1 gallon container

E. **Maintenance.** The owner, or the owner's agent, is responsible for the maintenance, repair and replacement of all plant material required by Section 7.04.

1. All plant material must be tended and maintained in a healthy growing condition, replaced when necessary, and kept free of refuse and debris.
2. Fences and walls must be maintained in good repair.
3. Openings within fences and walls may be required by the Zoning Administrator for accessibility to an area for necessary maintenance."

Louisa County

Solar Ordinance - enacted August 1st, 2022

Louisa County currently requires the planting of non-invasive plant species and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs and wildflowers shall occur in the vegetative buffer following Virginia Pollinator-Smart Program best practices, as well as seeding with appropriate pollinator-friendly native plants, shrubs, trees, grasses, and wildflowers and in such a manner as to reduce invasive weed growth and trap sediment within the the pollinator-smart designated area of the project area following completion of construction at utility-scale solar facilities. Their zoning ordinance regarding vegetation at utility-scale solar facilities states:

"Vegetative buffers sufficient to mitigate the visual impact of the facility is required as follows:

a. The buffer shall consist of a landscaping strip at least 150 feet wide, shall be located within the setbacks required and shall circle the entire perimeter of the property.
b. Within the buffer area and 75 from adjacent property lines there shall be sufficient existing vegetation and trees to create an opaque visual barrier to screen the project area from view. If no such barrier exists then the applicant shall establish this landscaped strip consisting of three rows of staggered evergreens ten feet apart and on 15-foot centers. Such trees shall be at least five feet tall at the time of planting and expected to grow to a minimum height of ten feet within three years.
c. The planning commission or board of supervisors may require increased setbacks and additional or taller vegetative buffering in situations where the

height of structures or topography affects the visual impact of the facility. Planting of non-invasive plant species and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs and wildflowers shall occur in the vegetative buffer following Virginia Pollinator-Smart Program best practices.

d. On-going maintenance of existing trees and vegetation in the buffer is a requirement for the life of the facility. The removal of dead or diseased trees necessary to promote healthy growth or other trees which may impact operations as approved in advance by the zoning administrator. Trees removed from the buffer shall be replaced by planting a similar tree in the buffer at least five-foot tall.
e. Following completion of construction the pollinator-smart designated area of the project area shall receive prompt seeding with appropriate pollinator-friendly native plants, shrubs, trees, grasses, and wildflowers and in such a manner as to reduce invasive weed growth and trap sediment within the project area. At the beginning of the next planting season overseed the project area, setbacks and buffers with appropriate pollinator-friendly native plants, shrubs, trees, grasses, forbs and wildflowers, following Virginia Pollinator-Smart Program best practices or any such other program as approved by county staff in consultation with the Department of Environmental Quality native plant finder system. Once established, mowing of the pollinator habitats shall occur after the end of every migratory season in order to reseed these areas. The intent of this provision is to ensure at least ten percent of the total acreage of the facility is cultivated in such a manner to encourage pollinator habitats in order to help maintain the rural, agricultural nature of the county.
f. The planning commission may recommend waiving or altering the vegetative screening and/or buffer requirements when the applicant proposes to preserve existing wetlands or woodlands, as long as the wetlands or woodlands receive protection and it serves as a buffer."

Lunenburg County

Solar Ordinance, pp. 14, 17

Lunenburg County does currently require pollinator plants, grasses, forbs, and wildflowers native to the County in the groundcover of utility-scale solar facilities, as well as non-invasive plant species and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers in the vegetative buffer. Their solar ordinance states that:

"Groundcover.

a. Groundcover on the site shall consist of pollinator plants, grasses, forbs, and wildflowers native to the County.

b. Groundcover shall be maintained in accordance with established performance measures noted in the landscaping plan. A performance bond reflecting the costs of anticipated maintenance shall be posted and maintained.

c. Failure to maintain the ground cover shall result in revocation of the CUP and the facility's decommissioning.

d. The operator shall notify the County prior to application of pesticides and fertilizers. The County reserves the right to request soil and water testing.

e. A list of appropriate plant materials shall be available at the Planning Office. Species listed on DCR's Invasive Plant Species list shall not be used.

Vegetated Buffer. A vegetated buffer sufficient to mitigate the visual impact of the facility is required.

a. The buffer shall consist of a landscaped strip at least 50 feet wide, shall be located within the setbacks required under this Section, and shall run around the entire perimeter of the property.

b. The buffer shall consist of existing vegetation and, if deemed necessary for the issuance of a Conditional Use Permit, an installed landscaped strip consisting of multiple rows of staggered trees and other vegetation. This buffer should be made up of plant materials at least three feet tall, at the time of

planting, and that are expected to grow to a minimum height of eight feet within three years.

c. Landscaping intended for screening shall consist of plants, shrubs, trees, grasses, forbs, and wildflowers native to the County. If a sufficient quantity of native plants cannot be procured, non-invasive plants may be used. A list of appropriate plant materials shall be available at the Planning Office. Species listed on the DCR Virginia Invasive Plant Species List shall not be used.

d. The Planning Commission or Board of Supervisors may require increased setbacks and additional or taller vegetative buffering in situations where the height of structures or the topography affects the visual impact of the facility.

e. Non-invasive plant species and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers must be used in the vegetative buffer.

f. A recommendation that the screening and/or buffer creation requirements be waived or altered may be made by the Planning Commission when the applicant proposes to use existing wetlands or woodlands. The wetlands or woodlands shall be permanently protected for use as a buffer.

g. Existing trees and vegetation may be maintained within such buffer areas except where dead, diseased or as necessary for development or to promote healthy growth, and such trees and vegetation may supplement or satisfy landscaping requirements as applicable. If existing trees and vegetation are disturbed, new plantings shall be provided for the buffer.

h. The buffer shall be maintained for the life of the facility.

i. An earthen berm may be utilized to comply with the intent of this Section 5, D5 to screen or mitigate the visual impact of the solar facilities from public view."

City of Lynchburg

The City of Lynchburg does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. They do not currently have a utility-scale solar ordinance.

Madison County

Solar Ordinance

Madison County currently requires at least 50 feet of a native timber buffer, but in areas where there is not at least 50 feet of a native timber buffer, they require a barrier consisting of a minimum of a double row of evergreens (with a beginning height of at least six (6) feet and anticipated mature height of 30 to 40 feet) to be planted during the appropriate time of year, subsequent to the completion of construction at utility-scale solar facilities. Madison County does not currently require pollinator-friendly vegetation at utility-scale solar facilities. Their zoning ordinance regarding vegetation for solar energy facilities states:

"All site features, including landscaping, fencing, etc., shall be properly maintained throughout the life of the permit.

A vegetative buffer shall be installed and maintained around the entire circumference of the facility and its components to reduce the visual impact on the surrounding property owners. In areas where there is not at least 50 feet of a native timber buffer, a barrier consisting of a minimum of a double row of evergreens (with a beginning height of at least six (6) feet and anticipated mature height of 30 to 40 feet) shall be planted during the appropriate time of year, subsequent to the completion of construction. The Applicant shall replace any dead or diseased trees in the buffer. All landscaping shall be approved by the County."

City of Manassas

The City of Manassas does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. Utility-scale solar facilities are not currently mentioned in the city's zoning ordinance.

City of Manassas Park

The City of Manassas Park does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. Utility-scale solar facilities are not currently mentioned in the city's zoning ordinance.

City of Martinsville

The City of Martinsville does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. Utility-scale solar facilities are not currently mentioned in the city's zoning ordinance.

Mathews County

Mathews County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. Utility-scale solar facilities are not currently mentioned in the county's zoning ordinance.

Mecklenburg County

Solar Ordinance, p. 6

Mecklenburg County currently requires native vegetation and maintenance in accordance with established performance measures or SEP conditions on the ground cover of utility-scale solar sites. They do not currently require pollinator-friendly vegetation at utility-scale solar sites. Their solar ordinance regarding vegetation states:

"The facilities, including fencing, shall be significantly screened from the ground-level view of adjacent properties by a buffer zone at least 100 feet wide extending from the property line that shall be landscaped with plant materials consisting of an evergreen and deciduous mix (as approved by County staff), except to the extent that existing vegetation or natural land forms on the site

provide such screening as determined by the Zoning Administrator. In the event, existing vegetation or land forms providing the screening are disturbed, new plantings shall be provided which accomplish the same. Opaque architectural fencing may be used to supplement other screening methods, but shall not be the primary method.

Ground cover on the site shall be native vegetation and maintained in accordance with established performance measures or SEP conditions."

Middlesex County

Middlesex County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities, however, their zoning ordinance mentions that the planting of pollinators in setback areas, that are usually planted with turf grass, are encouraged. The county's solar ordinance related to vegetation states:

"The facilities, including fencing, shall be screened from the ground-level of adjacent properties and right of ways. In setback areas around the facility, a twenty-five-foot buffer will be maintained, consisting of either existing or new vegetation to screen the facility. Entrances to the facility do not require screening. Opaque architectural fencing shall be used where entrance gates are located or the entrance to the secured area shall be offset from the public highway sufficiently to obscure the view of the security gate. The location and layout of this vegetative buffer will be detailed in the landscaping Plan which will be approved as part of the Special Exception permit.

Landscaping Plan. An application for a Special Exception shall include a Landscaping Plan for the Facility depicting buffering areas, materials, and vegetation to be included in the buffer area. The Landscaping Plan shall include a mix of vegetation to buffer the Facility. The buffer shall have an anticipated five-year height of six (6) to eight (8) feet after planting and an anticipated mature height of thirty (30) to forty (40) feet. Planting of pollinators in setback areas, that

are usually planted with turf grass, are encouraged. The Board of Supervisors and County staff will review the Landscaping Plan during the Special Exception Permit approval process and determine its sufficiency. Upon approval, compliance with the Landscaping Plan will become a part of the Special Exception Permit conditions."

Montgomery County

Montgomery County does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. There is currently no language specific to utility-scale solar requirements in the county's zoning ordinance, however, they have **drafted** a solar ordinance that would require pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers following the Virginia Pollinator-Smart Program best practices at utility-scale solar facilities. They have plans to review the amendments at a later date. More information can be found here.

Nelson County

Solar Ordinance

Nelson County requires non-invasive plant species and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs and wildflowers to be used in the vegetative buffer, however, if existing vegetation is able to meet the 20 foot wide vegetative buffer requirement, they do not require native and pollinator-friendly plant species. Their solar ordinance states:

"Buffering.

A twenty-foot-wide vegetative buffer yard for the purpose of screening shall be provided and maintained adjacent to any residential property line or roadway. If able to demonstrate that existing vegetation can meet this requirement, existing vegetation can be used to satisfy buffer requirements. The buffer location must be indicated on the site plan.

(1) This buffer should be made up of plant materials at least three feet tall at the time of planting and that are reasonably expected to grow to a minimum height of eight feet within three years.
(2) Non-invasive plant species and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs and wildflowers must be used in the vegetative buffer.
(3) The buffer must be maintained for the life of the facility."

City of Newport News

The City of Newport News does not currently require native or pollinator-friendly vegetation at utility-scale solar facilities. There is no mention of utility-scale solar facilities in the city's zoning ordinance.

New Kent County

Solar Ordinance

New Kent County requires that new plantings at solar generation facilities include pollinator-friendly native plants, however, their solar ordinance states:

"The facilities, including fencing, shall be significantly screened from the ground-level view of adjacent properties and transportation rights-of-way. A vegetated buffer zone within the setback area of at least 50 feet in width, measured from the property line, shall be maintained. In areas where there is existing, native vegetation, clearing shall be prohibited in the first 25 feet of the setback, with the exception of entrances or other necessary easements. The remaining 25 foot width shall be planted with one large evergreen tree, two medium evergreen trees, and three small deciduous or ornamental shrubs for every 15 linear feet. If there is no existing vegetation, the planting quantities shall be doubled for every 15 linear feet. If the existing vegetation is inadequate to count towards part of the landscape buffer as determined by the planning department, then supplemental plants shall be provided that meet the previously mentioned requirements and achieves a level of screening that provides a 100 percent

visual barrier from public views. All new plantings shall be native species to include pollinator-friendly native plants. Landscaping tor screening shall be maintained and replaced by the facility's operator, as necessary, throughout the lifespan of the project or facility.

i. New plantings of evergreen trees shall be a minimum of six to eight feet in height and a caliper of at least 2.0 inches. New plantings of deciduous or ornamental shrubs shall have a spread of no less than 24 inches.

ii. A landscape plan shall be developed by the applicant, owner or operator and provided to the county at the same time as a site plan is required. The landscape improvements and installation costs shall be secured by an adequate surety in a form agreed to by the county attorney, including, but not limited to, a letter of credit, cash, or a guarantee by an investment grade entity, posted within 30 days of the project receiving its site plan approval from New Kent County. The estimated cost of the landscape improvements and installation costs shall be prepared by a state licensed landscape architect.

Setbacks.

a. A minimum 100-foot setback, which includes a 50-foot planted buffer as described in (2)e., shall be maintained from an energy storage project or component of the solar generation facility, including security fencing, to any property line and transportation right-of-way.
b. A minimum 150-foot-setback, which includes a 50-foot planted buffer as described in (2)e., shall be maintained from an energy storage project or component of the solar generation facility, including security fencing, to any residentially-zoned property line.
c. A minimum 200-foot setback from all exterior property lines, except from adjoining residentially-zoned properties, shall be required for placement of all inverters associated with a solar generation facility."

City of Norfolk

The City of Norfolk does not currently require native or pollinator-friendly

vegetation at utility-scale solar facilities. The city's zoning ordinance does not contain any language about vegetation at utility-scale solar facilities and currently only mentions small-scale solar facilities.

Northampton County

Northampton County currently requires non-invasive plant species to be used in the buffer of solar energy facilities, but does not currently require native or pollinator-friendly plant species. Their solar ordinance regarding vegetation states:

"1. A vegetated buffer is required that consists of a landscaped strip at least 50 feet wide measured from each boundary line of the SED around the entire perimeter of the SED. Any fencing must be installed on the interior of the buffer. A recommendation that the screening and/or buffer creation requirements be waived may be made by the Planning Commission when the applicant proposes to use existing wetlands or woodlands, as long as the wetlands or woodlands are permanently protected for use as a buffer.
2. SEDs shall be landscaped and maintained with a buffer of plant materials that are mature enough to effectively screen the view, to eight feet above ground level, of the solar panels from adjacent properties all year around. A landscape berm properly prepared to accept plants, up to four feet high, may be used to assist reaching the required screening height. The screening must be fully established within five years and effectively maintained for the life of the SED. Non-invasive plant species must be used. (See www.NPS.gov National Park Service - USFWS *"Plant Invaders of the Mid Atlantic Natural Areas"*.)

3.Existing vegetation may be removed only as authorized during the site plan review process to permit vehicular and utility access during construction of the facility and installation of transmission power lines."

Northumberland County

Northumberland County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is currently no language regarding vegetation requirements at utility-scale solar facilities in their zoning ordinance.

City of Norton

The City of Norton does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is no language regarding utility-scale solar facilities in their zoning ordinance.

Nottoway County

Nottoway County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is no language regarding utility-scale solar facilities in their zoning ordinance. However, the county has drafted a new solar ordinance as of October 2023 that would require the use of pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers at utility-scale solar facilities if approved and amended in the zoning ordinance.

Orange County

Orange County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is no language regarding utility-scale solar facilities in their zoning ordinance.

Page County

Solar Ordinance, (pp. 11-12)

Page County currently requires pollinator-friendly native and non-invasive vegetation on the ground cover, as well as native and non-invasive vegetation in the buffer zone for utility-scale solar facilities. Their solar ordinance regarding vegetation states:

"Utility-scale solar facilities, including fencing, shall be significantly screened from the ground-level view of adjacent properties by a buffer zone at least 100 feet wide that shall be landscaped with native and non-invasive plant materials consisting of an evergreen and deciduous mix (as approved by County staff), except to the extent that existing vegetation or natural landforms on the site provide such screening as determined by Page County. Trees shall be a minimum of 6 feet in height at time of planting and in staggered rows of ten (10) foot on center. In the event, existing vegetation or landforms providing the screening are disturbed, new plantings shall be provided which accomplish the same. The effectiveness of screening shall be maintained as the plant materials mature. Unhealthy and dead plants shall be replaced within one (1) year of being provided written notice by the County of the violation.

For industrial/utility scale solar facilities, ground cover on the site shall be pollinator-friendly native and non-invasive vegetation and maintained in accordance with the Landscaping Maintenance Plan in accordance with established performance measures. A performance bond reflecting the costs of anticipated landscaping maintenance shall be posted and maintained. Failure to maintain the landscaping shall result in revocation of the SUP and the facility's decommissioning. Incorporation of non-invasive plant species that require no pesticides, herbicides, and fertilizers or the use of pesticides and fertilizers with low toxicity, persistence, and bioavailability is recommended. The operator shall notify the County prior to application of pesticides and fertilizers."

Patrick County

Solar Ordinance, p. 33 - enacted September 26, 2022 & updated June 12th, 2023

Patrick County currently requires non-invasive and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs and wildflowers to be used in the vegetative buffer following Virginia Pollinator-Smart Program best practices. Their solar ordinance regarding vegetation states:

"Vegetative buffer. A vegetative buffer sufficient to mitigate the visual impact of the facility as approved by the Building Official is required. The buffer shall consist of a landscaping strip at least 30 feet wide, shall be located within the setbacks required under Section 7, subsection 1(a), and shall run around the entirety of the area proposed for development. The buffer may consist of existing vegetation and as needed, an installed landscaped strip consisting of multiple rows of staggered trees and other vegetation. This buffer should include vegetation a minimum of 6 feet high at planting and reasonably expected to grow to full maturity within three years. The Planning Commission or Board of Supervisors may require increased setbacks and additional or taller vegetative buffering in situations where the height of structures or topography affects the visual impact of the facility. Non-invasive plant species and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs and wildflowers must be used in the vegetative buffer following Virginia Pollinator-Smart Program best practices. Screening and/or buffer creation requirements may be waived or altered for alternative designs such as landscaped berms, existing wetlands or woodlands, if the berms, wetlands or woodlands are permanently protected and maintained for use as a buffer. Existing trees and vegetation must be maintained within such buffer areas and any that are dead or diseased must be replaced. Existing trees or vegetation may supplement or satisfy landscaping requirements as applicable and approved by the Building Official. If existing trees and vegetation are disturbed, new plantings shall be provided for the buffer at least SIX (6) feet tall at planting. The vegetative buffer shall be maintained for the life of the facility."

City of Petersburg

The City of Petersburg does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is no language regarding utility-scale solar facilities in their zoning ordinance.

Pittsylvania County

Solar Ordinance, p.76

Pittsylvania County currently requires evergreen plantings of varieties native or adaptable to the region in the buffers, but does not currently require pollinator-friendly plant species at utility-scale solar facilities. Their zoning ordinance regarding vegetation at utility-scale solar facilities states:

"Buffering as required based on the visual impacts of the project or as required by the Board of Zoning Appeals as a condition of approval for a Special Use Permit. Required buffers shall be placed or preserved between any required fencing and adjoining properties and/or adjacent rights-of-way. Buffering or vegetative screening shall include a minimum 100-foot-wide landscaped area comprised of any existing vegetation supplemented as needed with a staggered row of planted trees and large shrubs. All rows of planted vegetation shall be evergreen plantings of varieties native or adaptable to the region, with one (1) row consisting of a variety expected to reach a minimum height of twenty-five (25) feet and the remaining rows of varieties designed to reach at least fifteen (15) feet in height at maturity. All evergreens shall be a minimum of six (6) feet in height at time of planting."

City of Poquoson

The City of Poquoson does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is no language regarding utility-scale solar facilities in their zoning ordinance.

City of Portsmouth

The City of Portsmouth currently *encourages* the use of native, drought tolerant vegetation, but does not require native or pollinator-friendly plant species at utility-scale solar facilities. Their zoning ordinance regarding vegetation at utility-scale solar facilities states:
“All ground level equipment shall be screened from all off site views in accordance with Sec. 40.2-304 Landscaping and Screening.” - please view Sec. 40.2-304 to verify vegetation requirements.

Powhatan County

Zoning Ordinance

Powhatan County currently *encourages* the use of native vegetation for development, but does not require native or pollinator-friendly plant species in their zoning ordinance. Their zoning ordinance regarding vegetation states:

“(c) *General requirements for landscaping.*

(1) New planting standards.

a. At the time of planting, vegetation included as part of required landscaping shall comply with the size standards.
    1. Deciduous canopy or shade trees shall have a caliper of at least two-and-one-half inches and shall be at least ten feet in height above ground level.
    2. Understory, small maturing, or ornamental trees shall have a caliper of at least one inch and shall be at least eight feet in height above ground level.
    3. Evergreen trees shall be at least six feet in height above ground level.
    4. Shrubs shall be upright in nature and at least 18 inches in height above ground level.

b. Where application of the requirements in this subsection result in a fraction in the number of shrubs to be provided, the minimum number of shrubs or trees to be provided shall be rounded upwards to the next highest whole number.

c. All landscape plant materials shall be of standard quality or better, true to name and type of species or variety.

d. The use of native, drought-tolerant vegetation known to thrive in the Virginia region is strongly encouraged.

e. Required landscaping areas shall be protected from vehicular damage by the installation of curbing, wheel stops, or extra width in the landscaping strip.

(2) *Existing vegetation.* The use of existing healthy, well-formed canopy trees, understory trees, evergreen trees, and shrubs shall be maximized wherever practical to comply with these landscaping standards. The use of existing trees shall be credited towards meeting landscaping standards in accordance with table 83-460(d), Credits for protected trees. Trees, provided the vegetation meets the minimum size standards of this chapter, and is protected before and during development of the site in accordance with section 83-460(e), Tree and vegetation protection during construction, and maintained thereafter in a healthy growing condition.

(3) *Stabilization.* All required landscape planting areas shall be stabilized and maintained with turf, ground covers, mulches, or other approved materials to prevent soil erosion and allow rainwater infiltration.

(4) *Easements.* Nothing except groundcover shall be planted or installed within any underground or overhead utility, drainage or gas easement, or within three feet of a fire protection system, without the consent of the utility provider, easement holder, or the county, as appropriate.

Prince Edward County

Solar Ordinance

Prince Edward County currently requires the use of pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs and wildflowers in the project area and in the setbacks and vegetative buffering. Their requirements in their zoning ordinance regarding vegetation at utility-scale solar facilities states:

"A vegetative buffer sufficient to mitigate the visual impact of the facility is required. The buffer shall consist of a landscaped strip at least 15 feet wide, shall be located within the setbacks required under subsection (d), and shall run around the entire perimeter of the property. The buffer shall consist of existing vegetation and, if deemed necessary for the issuance of a special use permit, an installed landscaped strip consisting of multiple rows of staggered trees and other vegetation. This buffer should be made up of plant materials at least three feet tall at the time of planting and that are reasonably expected to grow to a minimum height of eight feet within three years. The planning commission or board of supervisors may require increased setbacks and additional or taller vegetative buffering in situations where the height of structures or the topography affects the visual impact of the facility. Noninvasive plant species and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs and wildflowers must be used in the vegetative buffer. Fencing must be installed on the interior of the buffer. A recommendation that the screening and/or buffer creation requirement be waived or altered may be made by the planning commission when the applicant proposes to use existing wetlands or woodlands, as long as the wetlands or woodlands are permanently protected for use as a buffer. Existing trees and vegetation may be maintained within such buffer areas except where dead, diseased or as necessary for development or to promote healthy growth, and such trees and vegetation may supplement or satisfy landscaping requirements as applicable. If existing trees and vegetation are disturbed, new plantings shall be provided for the buffer. The buffer shall be maintained for the life of the facility.

Pollinator habitats. The project area will be seeded with appropriate pollinator-friendly native plants, shrubs, trees, grasses, forbs and wildflowers. The project area will be seeded promptly following completion of construction in such a manner as to reduce invasive weed growth and sediment in the project area. The owners and operator also are required to install pollinator-friendly native plants, shrubs, trees, grasses, forbs and wildflowers in the setbacks and vegetative buffering."

Prince George County

Prince George County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is no language regarding vegetation requirements in their zoning ordinance for utility-scale solar facilities.

Prince William County

Prince William County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is no language regarding vegetation requirements in their zoning ordinance for utility-scale solar facilities.

Pulaski County

Pulaski County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is no language regarding utility-scale solar facilities in their Unified Development Ordinance.

City of Radford

The City of Radford does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. In their zoning ordinance, the general provisions for landscaping states:

“(1) Landscaping, trees and plant material shall be planted in a growing condition, according to accepted horticultural practices, and they shall be maintained in a healthy growing condition. Any landscaping, trees and plant material in a condition that does not fulfill the intent of these regulations shall be replaced by the property owner during the next planting season.

(2) A screening fence or wall area shall be maintained by the property owner, in good condition, throughout the period of the use of the lot.

(3) To the extent possible, existing trees, vegetation and unique site features shall be retained and protected. Existing healthy, mature trees, if properly located, shall be fully credited against the requirements of these regulations.

(4) Trees shall be a minimum of six to eight feet in height, with a minimum circumference of 3.50 inches, immediately after planting. Trees shall reach an expected height of 25 to 35 feet at maturity. Trees shall be planted 25 to 35 feet on center depending on species.

(5) Evergreen trees shall be a minimum of six feet in height immediately after planting.

(6) Shrubs and hedges shall be a minimum of one to two feet in height immediately after planting.

(7) Ground cover may include any plant material that reaches an average height of not more than 12 inches. Alternative materials may be used in lieu of grass, provided that they present a finished appearance and provide reasonably complete coverage at the time of planting.

(8) Plants that restrict sight visibility at intersections of streets or driveways, such as tall shrubs or low branching trees should be avoided.

(9) Where lot size, shape, topography or existing structures make it not feasible to comply with the provisions of this section, the zoning administrator may modify these provisions, provided that the alternate proposal will afford a degree of landscaping, screening and buffering equivalent to or exceeding the requirements of these regulations.

Rappahannock County

Rappahannock County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. Their zoning ordinance regarding vegetation for utility-scale solar facilities states:

“Depiction of required screening and buffering in scaled plan and elevation perspectives. Required screening and buffering may be placed within the established yards. The Board may accept an existing vegetation protection easement in lieu of new screening and buffering, in which case the vegetation protection easement must be provided in a form acceptable to the County Attorney and the area must be clearly shown on the site plan and a plat attached to the easement.”

Richmond County

Zoning Ordinance

Richmond County currently requires the use of native vegetation at utility-scale solar facilities, but does not currently require pollinator-friendly plant species. Their zoning ordinance in regards to vegetation at utility-scale solar facilities states:

“ Landscaping plans shall be prepared and/or certified by design professionals practicing within their areas of competence as prescribed by the VA Code.

1. *Contents of the plan.*

a. The landscaping plan shall be drawn to scale and clearly delineate the location, size, and description of existing and proposed plant material. All existing trees on the site ten inches or greater d.b.h. shall be shown on the landscape plan. Where there are groups of trees, stands may be outlined instead. The specific number of trees ten inches or greater d.b.h. to be preserved outside of the construction footprint shall be indicated on the plan. Trees and other

woody vegetation to be removed to create a desired construction footprint shall be clearly delineated on the landscape plan.

b. Any required RPA buffer area shall be clearly delineated and any plant material to be added to establish or supplement the buffer area, as required by this chapter, shall be shown on the landscaping plan.

c. Within the buffer areas, trees and other woody vegetation to be removed for sight lines, vistas, access paths, and best management practices, as provided for in division (J)(3)(d) above, shall be shown on the plan. Vegetation required by this chapter to replace any existing trees within the buffer area shall also be shown on the landscaping plan.

d. Trees and other woody vegetation to be removed for shoreline stabilization projects and any replacement vegetation required by this chapter shall be shown on the landscaping plan.

e. The plan shall depict grade changes or other work adjacent to trees, which would affect them adversely. Specifications shall be provided as to how grade, drainage, and aeration would be maintained around trees to be preserved.

f. The landscaping plan shall include specifications for the protection of existing trees during clearing, grading, and all phases of construction.

g. If the proposed development is a change in use from agricultural or silvicultural to some other use, the plan must demonstrate the reestablishment of vegetation in the buffer area.

2. *Plant specifications.*

a. All plant materials necessary to supplement the buffer area or vegetated areas outside the construction footprint shall be installed according to standard planting practices and procedures.

b. All supplementary or replacement plant materials shall be living and in a healthy condition. Plant materials shall conform to the standards for the most recent edition of the *American Standard for Nursery Stock*, published by the American Association of Nurserymen.

c. Where areas to be preserved, as designated on an approved landscaping plan, are encroached, replacement of existing trees and other vegetation will be achieved at a ratio of three planted trees to one removed. Replacement trees shall be a minimum two inches d.b.h. at the time of planting.

d. Use of native or indigenous species.

3. *Maintenance.*

a. The applicant shall be responsible for the maintenance and replacement of all vegetation as may be required by the provisions of this chapter.

b. In buffer areas and areas outside the construction footprint, plant material shall be tended and maintained in a healthy growing condition and free from refuse and debris. Unhealthy, dying, or dead plant materials shall be replaced during the next planting season, as required by the provisions of this chapter."

City of Richmond

The City of Richmond does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is currently no language regarding utility-scale solar facilities in their zoning ordinance.

Roanoke County

Zoning Ordinance

Roanoke County currently requires that 50% of all plantings should be native at utility-scale solar facilities, but does not currently require pollinator-friendly plant species. Their zoning ordinance regarding vegetation for solar facilities states:

"(A) *General.*

1. All landscape plans shall be prepared by either a registered landscape architect, certified nurseryman, arborist, or professional engineer. At a minimum, fifty (50) percent of all plantings shall be native and every effort should be made to incorporate healthy existing vegetation into the landscaping plan.
2. No vegetation greater than thirty (30) inches in height shall be allowed in the clear sight triangle.
3. For each tree removed from the disturbed area with a trunk diameter of twenty-four (24) inches or greater at five (5) feet above ground level, shall be replaced with one (1) of similar species or characteristics unless otherwise approved by the administrator.

(B) *Buffer Yards*.

1. Buffer yards shall be reserved solely for screening and landscaping. No proposed building, building addition, structure, parking area or any other type of physical land improvement shall be located in a buffer yard. Not withstanding the above, a driveway entrance or a public road may cross a buffer yard if it is necessary for safe and convenient access to the building site. In addition, buffer yards may be used for greenways.
2. When a proposed buffer yard has a variation in elevation of greater than six (6) vertical feet at any point, the required screening or landscaping within the yard shall be placed to maximize the effectiveness of the screening or landscaping, as determined by the administrator.
3. The maximum slope of any required buffer yard shall be 3:1 (horizontal:vertical). Sufficient vegetation and ground cover shall be established and maintained on any slope to ensure stabilization and re-vegetation. In areas where extreme slopes exist, retaining walls no greater than four (4) feet in height may be used. If more than one (1) retaining wall is used, a planting area at least six (6) feet wide with a slope no greater than 3:1 must be left between the retaining walls.

4. Existing vegetation within buffer yards shall be considered as a substitute for otherwise required screening, if in the opinion of the administrator, the type, size, and density of the existing vegetation complies with the following standards and the intent of this section. Any existing trees to be incorporated into the landscape must be adequately protected during construction to insure their survival (fencing around the drip line perimeter).
5. Where deemed appropriate by the county zoning administrator, buffer yards may be allocated for the present or future use as a greenway.

(C) *Screening.*

1. Screening shall be visually opaque, and constructed of a durable material. It shall be installed within a required buffer yard and shall be continuously maintained so as to meet the intent of this section.
2. Acceptable screening materials include stockade fences, decorative masonry walls, brick walls, earth berms, and/or a mix of evergreen/deciduous vegetation. See the Roanoke County Design Handbook for examples of these screening materials. Alternative materials may be approved, if in the opinion of the administrator, their characteristics and design meet the intent and standards of this section.

(E) *Landscaping.*

1. Existing vegetation shall be considered as a substitute for otherwise required landscaping, if in the opinion of the administrator, the type, size, and density of the existing vegetation complies with the following standards and the intent of this section. Any existing vegetation to be preserved and incorporated into the landscape must be adequately protected during construction to insure their survival, as specified in the protection and preservation methods section (Section 30-92-4(E)).
2. All plant material must meet American Association of Nurserymen Specifications for No. 1 grade. Native plantings are encouraged when compatible with the surrounding land use. Every effort should be made to incorporate healthy existing trees into the landscape and avoid the use of

highly invasive species. (See Recommended Native/Naturalized Plant List in the Roanoke County Design Handbook.)

3. All plant species chosen shall be suitable for planting and growth within the proposed environment and shall meet the size requirements in the following table. Plants used for screening purposes shall be planted in accordance with the on-center requirements of the table. If spacing requirements are not specified, required landscaping shall be arranged within a buffer yard to achieve the intent of this section.

Size/Spacing/Number/Minimums

	Height At Planting	Final Height	Screening and Spacing Requirements
Small shrubs	12"	2' minimum	2' on center
Large shrubs (evergreen or deciduous)	24"	6' minimum	5' on center
Small evergreen trees	5'	15' minimum	15' on center
Large evergreen trees	6—8'	50' minimum	20' on center
Small deciduous trees	1½" caliper	15' minimum	15' on center
Large deciduous trees	2" caliper	50' minimum	30' on center

City of Roanoke

The City of Roanoke does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. Their zoning ordinance regarding vegetation at utility-scale solar facilities states:

"Solar energy systems shall provide and maintain an 8' wide landscaping strip consisting of either existing vegetation or an evergreen tree screen, as defined further in Section 36.2-649, between the Solar energy system and any adjacent right-of-way or any adjacent residential or multi-purpose district. The trees shall meet the minimum planting size as listed in Section 36.2-642. Additionally, a fence meeting the requirements of Section 36.2-410 shall be installed around the perimeter of the solar energy system, and on the interior of the landscaped buffer strip.

Rockbridge County

Rockbridge County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is currently no language regarding requirements for utility-scale solar facilities in their zoning ordinance.

Rockingham County

Zoning Ordinance

Rockingham County currently requires climate-hardy, non-invasive, and pollinator-friendly species on the ground cover of utility-scale solar facilities, with preference given to indigenous plants on the vegetated buffer and ground cover of utility-scale solar facilities. Their zoning ordinance regarding vegetation at utility-scale solar facilities states:

"Vegetated buffer: If needed to mitigate off-site visual impact, as determined by the Board of Supervisors at the time of issuance of a special use permit or rezoning, a vegetated buffer of year-round effectiveness shall be installed and maintained within the setback area by the solar facility operator or landowner as follows:

a. All plants shall be climate-hardy.

b. No monoculture shall be permitted; at least five (5) different species of shrubs and six-foot-high trees shall be installed, with preference given to indigenous trees and shrubs.
c. Selected species shall have mixed leaf- and branch-types of varying mature heights.
d. Two or three of the same species shall be grouped to ensure a naturalized effect. Uniform, staggered rows of plantings are not permitted.
e. Existing vegetation in the setback area shall be supplemented with new plantings, and all existing, invasive species shall be removed prior to new plantings being installed.
f. Land within the setback, not in trees and shrubs, shall have a stabilizing ground cover.
g. Any fencing shall be located interior to the vegetated buffer.
h. Trees and shrubs are not required where utility easements cross the setback.
i. Ongoing maintenance:
    1. All vegetation (trees, shrubs, and ground covers) in the setback areas shall be maintained from installation through decommissioning. Ground covers shall provide continuous coverage for the life of the project.
    2. The solar facility operator and landowner shall manage non-invasive species and remove invasive species for the life of the project.
    3. Trees and shrubs shall be replaced if needed to maintain intended, camouflage effect.

(9) Ground cover: Ground cover shall be installed and maintained throughout the site, including the setback area, as follows:

a. Ground cover shall be climate-hardy, non-invasive, and pollinator-friendly species, with preference given to indigenous plants.
b. Shade-tolerant plants shall be installed under the solar panels.
c. Ground covers shall meet erosion and sediment control and stormwater management regulations effective at the time of site plan approval.
d. Ongoing maintenance: The solar facility operator and landowner shall manage non-invasive species and remove invasive species for the life of the project.

(10) Vegetated buffers and ground covers shall be addressed in the SUP application and on the site plan.

Russell County

Russell County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is currently no language regarding utility-scale solar facilities in their Comprehensive Development Plan and their zoning ordinance was not found online. However, Russell County has committed to the SolSmart National Designation Program which is a playbook for local governments to facilitate large-scale solar projects in Southwest Virginia.

City of Salem

The City of Salem does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is currently no language regarding utility-scale solar facilities in their zoning ordinance.

Scott County

Scott County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is currently no language regarding utility-scale solar facilities in their zoning ordinance.

Shenandoah County

Solar Ordinance

Shenandoah County currently requires the use of vegetation that supports pollinators to be planted in accordance with the applicant's pollinator plan at utility-scale solar facilities in their zoning ordinance. This pollinator plan must demonstrate the location(s) where local pollinators are to be planted. The plan

may follow, but is not limited to, the guidelines set by the Virginia Solar Site Native Plant Finder developed by the Virginia Department of Conservation and Recreation. The plan should demonstrate the percentage of land to be covered by local pollinator-friendly plants as well as the methods of maintenance and repair. Unless otherwise provided, all plans should demonstrate a minimum of fifty percent coverage of a Disturbance Zone of a Project by local pollinator-friendly plants.

Smyth County

Smyth County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is currently no language regarding utility-scale solar facilities in their zoning ordinance.

Southampton County

Solar Ordinance

Southampton County currently requires native vegetation and pollinator species to be incorporated into landscape plans and natural areas to the extent possible at utility-scale solar facilities. The planting of non-native plant species is discouraged in Southampton County at utility-scale solar facilities. However, their zoning ordinance regarding vegetation at solar facilities states:

“If non-native species must be utilized, such planting shall not constitute more than twenty five (25) percent of all new plantings, unless the landscape design professional determines additional non-native plantings are necessary to meet the desired buffering standards. All landscape material must be certified nursery stock, so as to ensure invasive species and insects are not in the material.”

The specific requirements regarding vegetation at utility-scale solar facilities in Southampton County further states:
“(2) *Landscaping and buffering.*

Fencing abutting public rights-of-way—As part of the conditional use permit application, zoning map amendment request, or site plan approval request, a landscape plan for the perimeter of the project in areas that the required fencing will abut a public right-of-way must be provided. Such plan must provide an intermittent screen along such roadways to reflect the agricultural nature of the surrounding countryside. Plantings at intersections are to reduce the visual impacts of the solar panels and equipment on drivers. Plantings along the public rights-of-way are not meant to completely screen the solar installation, but to break up the impact of the installation on drivers and nearby residents. Four (4) foot tall landscaped berms planted with grass shall be required as necessary abutting all public rights-of-way, with such requirements specifically imposed by the board of supervisors at the time a conditional use permit is issued.

Fencing not abutting public rights-of-way—Plantings In areas that the required fencing will abut residential uses, cemeteries, schools, structures with documented historical significance, places of worship, or state scenic rivers shall provide an opaque screen of the solar installation to the abutting properties. Such plans shall to the greatest extent possible use native and locally adapted vegetation. Opaque screening to a height of eight (8) feet within three (3) years of installation must be provided along these areas. If the fence abuts any property in residential use, a four (4) foot tall landscaped berm planted with grass shall be part of the opaque screening.

If landscaping is proposed and/or required to meet the visual screening requirements, plantings shall be installed during the first available planting season following issuance of a land disturbing permit to ensure viability of the plantings, as determined by a landscape design professional. Vegetation to be installed shall be of such size and variety so as to achieve required screening effects within three (3) years of installation.

It is preferred that natural areas be retained to meet some or all of the buffer requirements, provided a landscape design professional determines the existing vegetation is of adequate size and health to meet the screening requirements. Vegetation to be retained for this purpose shall be shown on the site plan, type and size enumerated.

Native vegetation and pollinator species shall be incorporated into landscape plans and natural areas to the extent possible. The planting of non-native plant species is discouraged. If non-native species must be utilized, such planting shall not constitute more than twenty five (25) percent of all new plantings, unless the landscape design professional determines additional non-native plantings are necessary to meet the desired buffering standards. All landscape material must be certified nursery stock, so as to ensure invasive species and insects are not in the material.

The landscape plan shall also include information regarding the grass or ground cover to be installed within the solar installation. Such ground cover or grass is limited in height to twelve (12) inches by Southampton County Code section 10-48. A landscape plan for the installation and maintenance of the plantings, natural areas, and other vegetated areas within the buffer shall be provided, which shall ensure the long-term viability of the buffer area. Invasive species plans and pest management plans specific to the site for both insects and vegetation, prepared by a licensed landscape architect or certified agronomist or equivalent, shall be incorporated into all landscape plans. Such landscape plans shall be approved by the county as part of the site plan review process.

Prior to the issuance of the first land disturbance permit, appropriate surety equal to fifty (50) percent of the cost of the installation of the landscaping for the entire project shall be submitted. Additionally, a fifty thousand dollar ($50,000.00) landscape bond shall be submitted that remain in effect for the life of the project. Once one hundred (100) percent of the landscaping for the entire project has been installed and verification

by the landscape design professional is provided that the landscaping is healthy and meets the mitigation requirement, the fifty (50) percent surety shall be released upon request. However, the fifty thousand dollar ($50,000.00) landscape bond shall remain in effect for the life of the project. That bond, to be renewed if/when the county needs to pull from it, shall cover landscaping that needs to be replaced, damaged fencing, tall vegetation that needs to be mowed, or complaints of glare from the project from an abutting neighbor, should the owner of the project not accomplish those repairs in a timely manner upon receiving knowledge of the issue. Any dead, diseased, or dying vegetation shall be replaced in accordance with the specification of the maintenance plan in the first planting season after such replanting is required. Annual inspection of the landscaping and ground cover shall be made by a licensed landscape architect and a report provided to the community development department.

The board may determine that further screening improvement may be reduced or are not required based on supporting documentation provided by the landscape design professional."

Spotsylvania County

Spotsylvania County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is currently no language regarding vegetation requirements at utility-scale solar facilities in their zoning ordinance.

Stafford County

Solar Ordinance

Stafford County currently requires pollinator-friendly and wildlife-friendly native

Plants, shrubs, and trees at utility-scale solar facilities in the vegetated buffer. Their solar ordinance regarding vegetation states:

“(8) A vegetated buffer shall be required around the solar project site consisting of a landscaped strip at least fifty (50) feet wide measured from each boundary line of the solar project site around the entire perimeter. The solar project site shall be landscaped and maintained with a buffer of plant materials that are mature enough to effectively screen the view to eight (8) feet above ground level of the solar panels from adjacent properties all year round. Non-invasive plant species, pollinator-friendly and wildlife-friendly native plants, shrubs and trees shall be used.”

City of Staunton

The City of Staunton does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. Their zoning ordinance contains standards for a Landscaping Plan that applies to all land use and development activities that states:

“The following minimum screening standards shall apply:
Screening shall consist of a planting strip, existing vegetation, a slightly opaque wall or fence, or combination thereof, to the reasonable satisfaction of the agent. Where only vegetative screening is provided, such screening strip shall not be less than five feet wide in the business and professional districts and 10 feet wide in the industrial districts. Vegetative screening may consist of a double staggered row of evergreen trees planted 15 feet on center, or a double staggered row of evergreen shrubs planted 10 feet on center. Alternate methods of vegetative screening may be approved by the agent. Where a fence or a wall is provided, it shall be a minimum of six feet in height and plantings shall be required at intervals along such fence or wall.

(3) The following minimum street tree standards shall apply:

(a) Street trees shall be required along existing or proposed public streets and shall be planted with even spacing, or as otherwise required by the agent, adjacent to the public street right-of-way. One street tree shall be required for every 50 feet of road frontage, or portion thereof, if the street abutment is 20 feet or more in length, except as exempted in subsection (4) of this section. These trees should have a clear trunk height of at least six feet. The agent may waive these requirements in certain cases where site conditions warrant an alternate solution.

(b) Streets with posted speeds of over 35 mph shall have minor trees only planted along the right-of-way. Streets with posted speeds of less than 35 mph may have major or minor trees planted along the right-of-way.

(c) In the event that trees are desired along walkways adjacent to traffic flow, no tree shall be planted closer than 35 feet of any street corner, measured from the point of nearest intersecting curbs or curblines or pavement lines. No street tree shall be planted closer than 10 feet to any fire hydrant.

(d) No trees other than those species listed as 30 feet or less in height at maturity may be planted under or within 10 lateral feet to any overhead utility wire, or over or within five lateral feet of any underground water line, sewer line, transmission line, or other utility.

(4) The following landscaping requirements for new parking areas consisting of five spaces or more shall apply:

(a) Street Trees. Street trees shall be planted in accordance with subsection (3) of this section. The trees shall be planted between the street right-of-way and the parking area within the landscape setback. If this requirement creates a hardship by causing the relocation of required parking spaces, then the additional planting area may be counted toward the interior landscaping requirement.

(b) Interior Landscaping. An area equal to five percent of the parking and patron vehicular circulation area, as measured by the outside boundaries thereof, shall be landscaped to include trees and shrubs. Such landscaping shall be fairly uniformly dispersed throughout the vehicular parking and circulation area. At least one minor shade tree is required for each 10 parking spaces or portion thereof. Shrub plantings, except to the extent that they exceed five feet in width, adjacent to a building shall not be counted as interior landscaping. The requirements of subsections (4)(a), Street Trees, and (4)(c), Additional Planting Along Public Streets, of this section and screening of parking lots are to be excluded as a part of the five percent interior landscaping requirement.

(c) Additional Plantings Along Public Streets. When a parking lot is located such that the parked cars will be visible from a public street, then additional landscaping of low street shrubs may be required between the street and the parking lot. Shrubs shall be in a single row planted five feet on center. All shrub plantings along entrances, exits, and intersections shall be kept below two and one-half feet so that visibility will not be impaired. Alternate methods of landscaping designed to minimize the visual impact of the parking lot may be approved by the agent.

(d) Wheel stops, curbing, or other barriers shall be provided to prevent damage to landscaping by vehicles. Where necessary, trees shall be walled or otherwise protected against change of grade. All pervious areas of the site shall be permanently protected from soil erosion with grass, ground covers, low shrubs, or mulch material. Special attention should be given to using plants that are drought tolerant. (Zoning ordinance Art. 5, § 15).

(1) In lieu of planting new materials, existing trees and vegetation may satisfy landscaping and screening requirements, subject to the agent's approval. The landscaping plan shall indicate the trees to be saved, limits of clearing, location and type of protective fencing, grade changes requiring tree wells, or walls and trenching. Upon review of the site and/or site plan, the agent, or the reviewing authority, may reduce or suspend any of the requirements of this chapter, if the site presents special circumstances whereby the strict compliance of this chapter will produce an undue hardship or if the spirit of the chapter has been met and deviation has been deemed to be in the best interest of the city.

(1) All landscaping shall be planted and maintained according to established planting and maintenance procedures using good quality plant materials. The required plant materials may be chosen from a recommended species list provided by the agent. Plant materials not listed may be substituted for suggested plant material if such substitution is expressly approved by the agent.

(2) Approval of landscaping and screening plan under the provisions of this chapter is valid for a period of one year; however, if said plan is part of approved site plan in accordance with this title or an approved subdivision plan, then approval is extended for same period as the site or subdivision plan.

(3) Requested changes or revisions to approved landscaping and screening plans may be authorized in writing by the agent as long as said revisions do not, in the agent's opinion, substantially affect terms of the original approval. Otherwise, the agent may require a new plan be prepared and submitted for review in accordance with the provisions of this chapter.

(4) All landscaping and screening required by this chapter shall be installed at the cost of the developer or property owner. The owner shall be responsible for maintaining all landscaping in good condition so as to present a healthy, neat appearance and shall be kept free from refuse and debris.

(5) All landscaping and screening features shown on the approved plan must be adequately maintained and kept in effect in order for approved plan to remain valid and not become a zoning violation of this title. (Zoning ordinance Art. 5, § 15)."

City of Suffolk

The City of Suffolk does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. Their zoning ordinance regarding vegetation at utility-scale solar facilities states:

"Any solar energy facility shall be required to have a minimum 15-foot vegetated buffer or a 50-foot buffer where adjacent to a residential use or zoning district in accordance with the following landscaping standards:

A. In those instances where the existing natural vegetation and topography are insufficient to achieve continuous opaque screen a planted buffer shall be installed so that within two (2) years of planting the screening shall be complete. If the planting fails to provide the required of screening

by the end of that time, the solar farm developer shall be required to install a full height green heavy-duty, UV stabilized, knitted polyethylene screening fabric on the portion of the fence not being completely screened.

B. With the exception of any required planting, buffers shall remain undisturbed.

C. Materials and ratios.

1. Plant materials. Buffers shall contain a maximum of 25 percent of deciduous plant materials.

2. Planting for the entire length of the unvegetated buffer area shall provide:

    a. Plant material having a height of not less than 6 feet at the time of planting and planted in a minimum of two rows, with staggered on center spacing: or

    b. A minimum of one row of evergreen screening trees spaced 8 feet on center and 20 shrubs planted a minimum of 5 feet on center in two rows per Appendix C; and

    c. For every 50 linear feet of unvegetated buffer area, 2 large canopy trees planted a minimum of 25 feet apart and 3 understory trees planted a minimum of 15 feet apart per Appendix C.

3. Alternate layouts that achieve the same performance level may be approved by the Director."

Surry County

Surry County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. Their zoning ordinance regarding vegetation at utility-scale solar facilities states:

"A continuous evergreen vegetative buffer shall be present and maintained at all times around the perimeter of the exterior of the fencing and gates which are required around the perimeter of the solar farms as stipulated in appendix A, article IV, supplementary regulations, section 4-607, utility service/major. The

continuous evergreen vegetative buffer shall not block reasonable access to a solar farm.

The evergreen vegetative buffer shall be composed of evergreen trees or shrubs of a type which at planting shall be a minimum of four feet in height and which shall be maintained at maturity at a height of not less than six feet in height.

The evergreen trees or shrubs shall be spaced no more than ten feet apart (from the base of tree or shrub to the base of tree or shrub). The evergreen vegetative buffer shall be carefully planted and shall be maintained in good condition. Failure to maintain the evergreen vegetative buffer shall constitute a violation of this article.

The evergreen vegetative buffer requirements specified here shall continue notwithstanding the fact that a solar farm is no longer operational and/or falls into disuse unless and until such solar farm is dismantled and removed from the parcel or parcels of land upon which it was constructed."

Sussex County

Solar Ordinance, pp. 10-11

Sussex County currently requires native and pollinator plants where compatible with site conditions on the ground cover, as well as non-invasive species, pollinator species, and native plants, shrubs, trees, grasses, forbs, and wildflowers in the vegetative screening and berms of utility-scale solar facilities. Their solar ordinance regarding vegetation at utility-scale solar facilities states:

"1. All ground cover, screening and buffering materials, landscaping, and elevations.

a. Ground cover shall be native vegetation where compatible with site conditions.

b. Screening vegetation shall include pollinator plants where compatible with site conditions.

2. Vegetative Screening: In the event existing vegetation or landforms providing the screening are inadequate or disturbed, new plantings shall be provided in a landscaped strip at least 50 feet wide. Landscaping intended for screening shall consist of a combination of non-invasive species, pollinator species, and native plants, shrubs, trees, grasses, forbs, and wildflowers. Trees intended for screening shall consist of a combination of evergreen and deciduous trees that are 5-6 ft. in height at time of planting. A triple row of trees shall be placed on average at 15 ft. on center. A list of appropriate plant materials shall be available at the Planning Office. Species listed on DCR's Invasive Plant Species list shall not be used.

3. Berming: Berms shall generally be constructed with a 3:1 side slope to rise ratio, 4-6 ft. above the adjacent grade, with a 3 ft. wide top with appropriate pollinator-friendly native plants, shrubs, trees, forbs, and wildflowers. The outside edges of the berm shall be sculpted such that there are vertical and horizontal undulations to give variations in appearance. When completed, the berm should not have a uniform appearance like a dike.

(f) Ground cover on the site shall be native vegetation and maintained in accordance with the landscaping plan in accordance with established performance measures. A performance bond reflecting the costs of anticipated maintenance shall be posted and maintained. Failure to maintain the ground cover shall result in revocation of the CUP and the facility's decommissioning. The operator shall notify the County prior to application of pesticides and fertilizers. The County reserves the right to request soil and water testing."

Tazewell County

Tazewell County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is currently no language regarding utility-scale solar facilities in their code of ordinances.

City of Virginia Beach

The City of Virginia Beach does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There's currently no language regarding vegetation at utility-scale solar facilities in their zoning ordinance.

Warren County

Warren County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is currently no language regarding utility-scale solar facilities in their zoning ordinance.

Washington County

Washington County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There’s currently no language regarding vegetation at utility-scale solar facilities in their zoning ordinance.

City of Waynesboro

The City of Waynesboro does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There’s currently no language regarding vegetation at utility-scale solar facilities in their zoning ordinance.

Westmoreland County

Westmoreland County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There’s currently no language regarding utility-scale solar facilities in their zoning ordinance.

City of Williamsburg

The City of Williamsburg does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. The city does not currently permit ground-mounted solar energy generation facilities in their zoning ordinance.

City of Winchester

The City of Winchester does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. The requirements regarding vegetation for solar energy systems in their zoning ordinance states:

“Any solar energy system that is a principal use shall satisfy the minimum required improvements and standards, as applicable, in Section 19-5.
1. Single row of evergreen trees, from the arborvitae species, and preferably from the current Evergreen Screening Suggestion list prepared by the Tree Commission. The trees will be planted in a single row no more than four feet apart and not less than five feet high at the time of planting; or,
2. Double row of evergreen trees, preferably from the current Evergreen Screening Suggestion list prepared by the Tree Commission, the trees in each row planted not more than ten feet apart, and the trees to be staggered in the two rows. The trees shall be not less than five feet high at the time of planting; or,
3. Six-foot high fence; solid decay resistant wood or otherwise constructed to be permanently opaque with the finished side facing out.
4. The screening required by this section may be waived or modified by the Commission or Planning Director in the following situations:

i. If the adjacent property is being used for or, if vacant at the time of application, is zoned to allow a use similar to that proposed by the site plan applicant.
ii. If the subject property abuts a railway along the interface with the less intensive zoning district.
iii. If the applicant provided alternative screening which will provide opaque screening not less than six feet high at the time of installation.

e. Trees shall be provided along property lines between parcels in different zoning districts when the proposed structure will be taller than the maximum height allowed in the adjacent zoning district. At least one tree for each 35 feet of property line and within ten feet of the line shall be provided within an area of at least 150 square feet at the base of each tree.

f. All portions of the landscaped area (excluding recreation, detention, and drainage areas) shall be landscaped with living ground cover (excluding rock or bark), shrubs, and/or trees so that no ground is exposed.

h. A landscape plan shall be provided that clearly and specifically identifies all landscape, buffering, and/or recreational areas as well as the type and size of all plant material. Large deciduous shade trees (preferably from the current Recommend Tree List as adopted by the Tree Commission) that are compatible with urban environments shall be used adjacent to public rights of way, within surface parking areas, and along property lines (when screening tall structures). Trees listed as prohibited from planting within the public rights of way by the Tree Commission shall not be accepted as compatible. Applicants should discuss specific species with the staff and the City Tree Commission. When planted, these trees shall have a minimum of two inch caliper, six inches above grade and shall be no closer than 20 feet to each other."

Wise County

Wise County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is no language regarding vegetation at utility-scale solar facilities in their zoning ordinance.

Wythe County

Wythe County does not currently require native or pollinator-friendly plant species at utility-scale solar facilities. There is no language regarding utility-scale solar facilities in their ordinances.

York County

York County does not currently require native or pollinator-friendly

plant species at utility-scale solar facilities. Their zoning ordinance regarding vegetation at utility-scale solar facilities states:

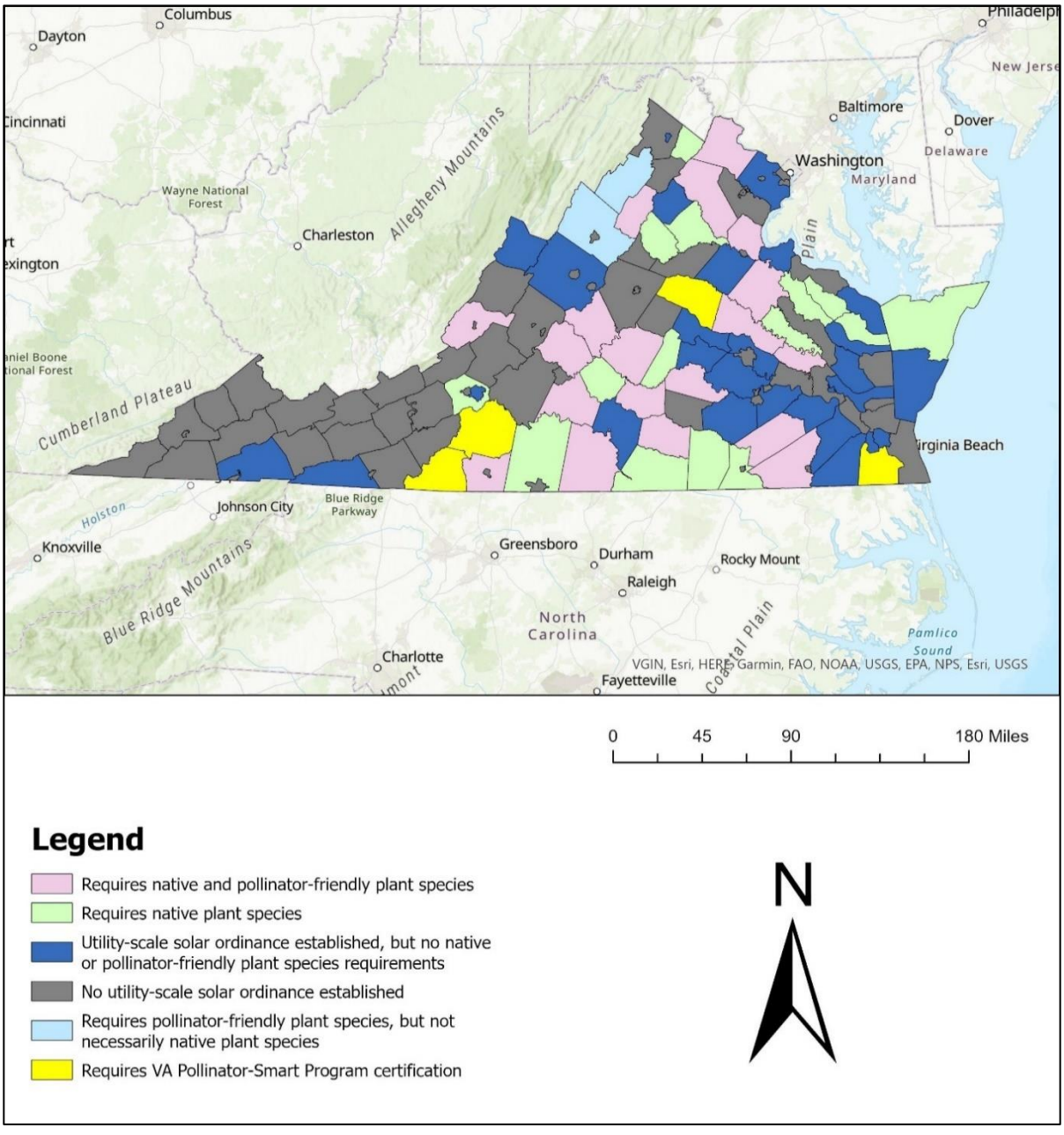
“The facility shall be surrounded by a perimeter buffer of at least fifty feet (50') in width which shall be landscaped, in accordance with the provisions of article II, division 4 of this chapter, to meet the Type 50 Transitional Buffer standards.

Transitional Buffer Type 50: shall consist of a strip of open space, a minimum of fifty feet (50') wide, landscaped with evergreen trees and shrubs to achieve a minimum of 1.25 landscape credits for every linear foot measured along the outside edge of the transitional buffer. A maximum of 50% of the landscape credits may be earned from shrubs.”

Summary of Results & Recommendations

In total, 68 out of 133 localities in Virginia have currently established a utility-scale solar ordinance. There are currently 65 localities in Virginia that have not established a utility-scale solar ordinance. 38 localities currently require native vegetation at utility-scale solar facilities in their solar ordinance and 25 localities currently require pollinator-friendly vegetation at utility-scale solar facilities. Four localities currently reference the Virginia Pollinator-Smart program in their solar ordinances: City of Chesapeake, Franklin County, Louisa County, and Patrick County (Figure 1).

Figure 1: Map of Virginia Localities with Utility-Scale Solar Vegetation Requirements



As of December 2023, the following localities…

➢ **Have not yet established a utility-scale solar ordinance**: Albemarle County, City of Alexandria, Arlington County, Bath County, Bedford County, Bland County, Botetourt County, City of Bristol, Buchanan County, City of Buena Vista, Carroll County, Charles City County, City of Charlottesville, City of Colonial Heights, City of Covington, Craig County, City of Danville, Dickenson County, City of Emporia, City of Fairfax, City of Falls Church, Floyd County, Fluvanna County, City of Franklin, Frederick County, City of Fredericksburg, City of Galax, Giles County, Greene County, City of Hampton, City of Harrisonburg, City of Hopewell, James City County, King and Queen County, Lee County, City of Lexington, City of Lynchburg, City of Manassas, City of Manassas Park, City of Martinsville, Mathews County, Montgomery County, City of Newport News, City of Norton, Nottoway County, Orange County, City of Petersburg, City of Poquoson, Prince William County, Pulaski County, City of Radford, City of Richmond, Rockbridge County, Russell County, City of Salem, Scott County, Smyth County, City of Staunton, Tazewell County, City of Virginia Beach, Warren County, City of Waynesboro, Westmoreland County, Wise County, Wythe County.

➢ **Have established a utility-scale solar ordinance, but do not require native or pollinator-friendly plant species at utility-scale solar facilities**: Augusta County, Charlotte County, Chesterfield County, Dinwiddie County, Fairfax County, Gloucester County, Goochland County, Grayson County, Henrico County, Highland County, Isle of Wight County, King George County, Middlesex County, City of Norfolk, Northampton County, Northumberland County, City of Portsmouth, Powhatan County, Prince George County, Rappahannock County, City of Roanoke, Rockingham County, Shenandoah County, Spotsylvania County, City of Suffolk, Surry

County, Washington County, City of Williamsburg, City of Winchester, York County.

➢**Require native plant species at utility-scale solar facilities, but not pollinator-friendly plant species**: Accomack County, Appomattox County, Brunswick County, Clarke County, Culpeper County, Cumberland County, Essex County, Greensville County, King William County, Lancaster County, Madison County, Mecklenburg County, Pittsylvania County, Richmond County, Roanoke County.

➢**Require pollinator-friendly plant species at utility-scale solar facilities, but not necessarily native plant species**: Rockingham County, Shenandoah County.

➢**Require native AND pollinator-friendly plant species at utility-scale solar facilities**: Alleghany County, Amelia County, Amherst County, Buckingham County, Campbell County, Caroline County, City of Chesapeake, Fauquier County, Franklin County, Halifax County, Hanover County, Henry County, Loudoun County, Louisa County, Lunenburg County, Nelson County, New Kent County, Page County, Patrick County, Prince Edward County, Southampton County, Stafford County, Sussex County.

➢**Reference the Pollinator-Smart Program in their solar ordinance (which require native and pollinator-friendly plant species at utility-scale solar facilities and Virginia Pollinator-Smart site certification)**: City of Chesapeake, Franklin County, Louisa County, Patrick County.

In addition, Table 1 summarizes the results for native and/or pollinator-friendly vegetation requirements at the end of this document. It was noted during this

research that many of the localities solar ordinances did not define what is considered to be native vegetation.

The Virginia Department of Conservation and Recreation, Division of Natural Heritage recommends the use of native and pollinator-friendly plant species at solar energy facilities. There are economic, ecological, and aesthetic benefits to using native and pollinator-friendly vegetation to complement solar energy technology including: 1) reduced cost of mowing and maintaining non-native grasses, 2) panel efficiency is significantly enhanced by the cooling effects of diverse meadow habitat compared to non-native grass monocultures, 3) native plant meadows are much better than turf grass at capturing atmospheric carbon and returning it to the soil, thus reducing a solar operation's carbon footprint, 4) native plants effectively minimize soil and water runoff, and 5) providing pollinator habitat greatly benefits surrounding agriculture by enhancing pollinator populations.

In 2019, the Virginia Department of Environmental Quality and Virginia Department of Conservation and Recreation have developed the Virginia Pollinator-Smart Program, an ecologically-responsible program to encourage pollinator friendly solar energy developments throughout the Commonwealth of Virginia. Recognizing the potential to promote environmental stewardship and reduce long-term maintenance costs on solar installations over time, the Commonwealth has taken a proactive step in developing the Pollinator-Smart program to increase ecologically-sustainable and climate-resilient landscapes using Virginia native species.

A Pollinator-Smart solar facility is one that meets performance standards outlined in the most current release of the Virginia Pollinator Smart/Bird Habitat Scorecard (“Scorecard”). There are two versions of the Scorecard for different scenarios: 1) Proposed or Retrofit Solar Sites (i.e., sites where a Pollinator-Smart

re-vegetation program is planned); and 2) Established Solar Sites (i.e., sites where a Pollinator-Smart management program has already been implemented). Solar sites that meet the minimum requirement of 80 points on the Scorecard are considered “Certified Virginia Pollinator-Smart”; those that score 100 or more points are considered “Gold Certified Virginia Pollinator-Smart”.

The Virginia Department of Conservation and Recreation, Division of Natural Heritage developed and maintains a Virginia Solar Native Plant Finder to aid solar site developers by providing a database of Virginia native plant species that are commercially available. The database contains information useful in designing a high-quality habitat for pollinators, birds, beneficial insect predators, and other wildlife. The Virginia Solar Site Native Plant Finder is built on a robust database of native plant species generated from the Flora of Virginia (Weakley et al. 2012), the state’s comprehensive manual of vascular flora.

As noted above, the Virginia Solar Site Native Plant Finder is used to define the concept of "native species" in developing a Pollinator-Smart vegetation community on solar sites, so this tool is an integral part of the Pollinator-Smart program. The full, comprehensive manual for the Virginia Pollinator-Smart program can be found here.

DCR encourages localities to explore the inclusion of the Virginia Pollinator-Smart Program as part of their solar ordinance requirements to increase the benefits of solar energy ecologically, economically, and aesthetically across the landscape.

This information provided in this report is subject to change as localities develop and modify local ordinances due to the continuing development of solar energy in Virginia. The information provided in this document has been verified through December 2023 and any errors found in this report are the author’s alone.

Table 1 – Virginia Localities Utility-Scale Solar Ordinances and Vegetation Requirements Summary

Locality	Utility-Scale Solar Ordinance?	Requires native plantings?	Requires pollinator plantings?	Link to Ordinance	Pollinator-Smart Program Reference
Accomack County	Yes	Yes, 50%	No	Zoning Ordinance	No
Albemarle County	No	No	No	Zoning Ordinance	No
City of Alexandria	No	No	No	Zoning Ordinance	No
Alleghany County	Yes	Yes	Yes	Zoning Ordinance	No
Amelia County	Yes	Yes	Yes	Zoning Ordinance	No
Amherst County	Yes	Yes	Yes	Zoning Ordinance	No
Appomattox County	Yes	Yes	No	Zoning Ordinance	No
Arlington County	No	No	No	Zoning Ordinance	No
Augusta County	Yes	No	No	Solar Ordinance	No
Bath County	No	No	No	Zoning Ordinance	No
Bedford County	No	No	No	Zoning Ordinance	No
Bland County	No	No	No	Zoning Ordinance	No
Botetourt County	No	No	No	Zoning Ordinance	No
City of Bristol	No	No	No	Zoning Ordinance	No
Brunswick County	Yes	Yes	No	Zoning Ordinance	No
Buchanan County	No	No	No	Zoning Ordinance	No
Buckingham County	Yes	Yes	Yes	Solar Ordinance	No
City of Buena Vista	No	No	No	Zoning Ordinance	No
Campbell County	Yes	Yes	Yes	Solar Energy Guidance	No
Caroline County	Yes	Yes (to extent possible)	Yes (to extent possible)	Solar Ordinance	No
Carroll County	No	No	No	Ordinances	No
Charles City County	No	No	No	Ordinances	No
Charlotte County	Yes	No	No	Zoning Ordinance	No
City of Charlottesville	No	No	No	Zoning Ordinance	No
City of Chesapeake	Yes	Yes	Yes	Solar Energy Policy	Yes
Chesterfield County	Yes	Planting list available which includes some Virginia native species	No	Zoning Ordinance	No
Clarke County	Yes	Yes, trees and shrubs	No	Zoning Ordinance	No
City of Colonial Heights	No	No	No	Zoning Ordinance	No
City of Covington	No	No	No	Ordinances	No
Craig County	No	No	No	Zoning Ordinance	No
Culpeper County	Yes	Yes	No	Solar Ordinance	No
Cumberland County	Yes	Yes, native grasses	No	Solar Ordinance	No
City of Danville	No	No	No	Zoning Ordinance	No
Dickenson County	No	No	No	Zoning Ordinances	No
Dinwiddie County	Yes	No	No	Solar Ordinance	No
City of Emporia	No	No	No	Zoning Ordinance	No
Essex County	Yes	Yes	No	Solar Ordinance	No
City of Fairfax	No	No	No	Zoning Ordinance	No
Fairfax County	Yes	No	No	Zoning Ordinance	No
City of Falls Church	No	No	No	Zoning Ordinance	No
Fauquier County	Yes	Yes	Yes	Zoning Ordinance	No
Floyd County	No	No	No	Ordinances	No
Fluvanna County	No	No	No	Zoning Ordinance	No
City of Franklin	No	No	No	Zoning Ordinance	No
Franklin County	Yes	Yes	Yes	Solar Ordinance	Yes
Frederick County	No	No	No	Zoning Ordinance	No
City of Fredericksburg	No	No	No	Code of Ordinances	No
City of Galax	No	No	No	Zoning Ordinance	No
Giles County	No	No	No	Zoning Ordinance	No
Gloucester County	Yes	No	No	Solar Ordinance	No
Goochland County	Yes	No	No	Zoning Ordinance	No
Grayson County	Yes	No	No	Zoning Ordinance	No
Greene County	No	No	No	Zoning Ordinance	No
Greensville County	Yes	Yes (on ground cover)	No	Zoning Ordinance	No
Halifax County	Yes	Yes	Yes	Zoning Ordinance	No
City of Hampton	No	No	No	Zoning Ordinance	No
Hanover County	Yes	Yes, but only in the Battery Energy Storage Systems where supplemental platning is required	Yes	Solar Policy	No
City of Harrisonburg	No	No	No	Zoning Ordinance	No
Henrico County	Yes	No	No	Zoning Ordinance	No
Henry County	Yes	Yes	Yes	Zoning Ordinance	No
Highland County	Yes	No	No	Zoning Ordinance	No
City of Hopewell	No	No	No	Zoning Ordinance	No
Isle of Wight County	Yes	No, but encourages it	No	Zoning Ordinance	No
James City County	No	No	No	Zoning Ordinance	No
King and Queen County	No	No	No	Code of Ordinances	No
King George County	Yes	No	No	Zoning Ordinance	No
King William County	Yes	Yes	No	Zoning Ordinance	No
Lancaster County	Yes	Yes	No	Zoning Ordinance	No
Lee County	No	No	No	Zoning Ordinance	No
City of Lexington	No	No	No	Zoning Ordinance	No
Loudoun County	Yes	Yes	Yes	Zoning Ordinance	No
Louisa County	Yes	Yes	Yes	Zoning Ordinance	Yes
Lunenburg County	Yes	Yes	Yes	Solar Ordinance	No
City of Lynchburg	No	No	No	Code of Ordinances	No
Madison County	Yes	Yes, only for timber	No	Zoning Ordinance	No
City of Manassas	No	No	No	Zoning Ordinance	No
City of Manassas Park	No	No	No	Zoning Ordinance	No
City of Martinsville	No	No	No	Zoning Ordinance	No
Mathews County	No	No	No	Zoning Ordinance	No
Mecklenburg County	Yes	Yes, on ground cover	No	Solar Ordinance	No
Middlesex County	Yes	No	No, but encourages it in setback areas	Zoning Ordinance	No
Montgomery County	No, but have drafted one	No	No	Zoning Ordinance	No
Nelson County	Yes	Yes, but only if existing vegetation doesn't meet buffer width requirements	Yes, but only if existing vegetation doesn't meet buffer width requirements	Solar Ordinance	No
New Kent County	Yes	Yes, for new plantings	Yes, for new plantings	Zoning Ordinance	No
City of Newport News	No	No	No	Zoning Ordinance	No
City of Norfolk	Yes	No	No	Zoning Ordinance	No
Northampton County	Yes	No	No	Zoning Ordinance	No
Northumberland County	Yes	No	No	Zoning Ordinance	No
City of Norton	No	No	No	Zoning Ordinance	No
Nottoway County	No	No	No	Zoning Ordinance	No
Orange County	No	No	No	Zoning Ordinance	No
Page County	Yes	Yes	Yes, on ground cover	Solar Ordinance	No
Patrick County	Yes	Yes	Yes	Solar Ordinance	Yes
City of Petersburg	No	No	No	Zoning Ordinance	No
Pittsylvania County	Yes	Yes, but only native evergreen plantings	No	Zoning Ordinance	No
City of Poquoson	No	No	No	Zoning Ordinance	No

Table 1 – Virginia Localities Utility-Scale Solar Ordinances and Vegetation Requirements Summary

Locality	Utility-Scale Solar Ordinance?	Requires native plantings?	Requires pollinator plantings?	Link to Ordinance	Pollinator-Smart Program Reference
City of Portsmouth	Yes	No, but encourages it	No	Zoning Ordinance	No
Powhatan County	Yes	No, but encourages it	No	Zoning Ordinance	No
Prince Edward County	Yes	Yes	Yes	Zoning Ordinance	No
Prince George County	Yes	No	No	Zoning Ordinance	No
Prince William County	No	No	No	Zoning Ordinance	No
Pulaski County	No	No	No	Zoning Ordinance	No
City of Radford	No	No	No	Zoning Ordinance	No
Rappahannock County	Yes	No	No	Zoning Ordinance	No
City of Richmond	No	No	No	Zoning Ordinance	No
Richmond County	Yes	Yes	No	Zoning Ordinance	No
City of Roanoke	Yes	No	No	Zoning Ordinance	No
Roanoke County	Yes	Yes, minimum of 50%	No	Zoning Ordinance	No
Rockbridge County	No	No	No	Zoning Ordinance	No
Rockingham County	Yes	No, but preference is given to indigenous plants	Yes, on ground cover	Zoning Ordinance	No
Russell County	No	No	No	Comprehensive Development Plan	No
City of Salem	No	No	No	Zoning Ordinance	No
Scott County	No	No	No	Zoning Ordinance	No
Shenandoah County	Yes	No, but pollinator plan may follow, but is not limited to, guidelines set by the Virginia Solar Site Native Plant Finder	Yes	Zoning Ordinance	No
Smyth County	No	No	No	Zoning Ordinance	No
Southampton County	Yes	Yes, to extent possible	Yes, to extent possible	Zoning Ordinance	No
Spotsylvania County	Yes	No	No	Zoning Ordinance	No
Stafford County	Yes	Yes	Yes	Zoning Ordinance	No
City of Staunton	No	No	No	Zoning Ordinance	No
City of Suffolk	Yes	No	No	Zoning Ordinance	No
Surry County	Yes	No	No	Zoning Ordinance	No
Sussex County	Yes	Yes	Yes	Solar Ordinance	No
Tazewell County	No	No	No	Code of Ordinances	No
City of Virginia Beach	No	No	No	Zoning Ordinance	No
Warren County	No	No	No	Zoning Ordinance	No
Washington County	Yes	No	No	Zoning Ordinance	No
City of Waynesboro	No	No	No	Zoning Ordinance	No
Westmoreland County	No	No	No	Zoning Ordinance	No
City of Williamsburg	Yes (doesn't allow ground-mounted solar energy facilities)	No	No	Zoning Ordinance	No
City of Winchester	Yes	No	No	Zoning Ordinance	No
Wise County	No	No	No	Zoning Ordinance	No
Wythe County	No	No	No	Ordinances	No
York County	Yes	No	No	Zoning Ordinance	No

Acknowledgements

I would like to thank René Hypes, the Environmental Review Coordinator for the Virginia Department of Conservation and Recreation, Division of Natural Heritage, for her guidance, support, and assistance in the research and creation of this document. I would also like to thank Nicki Gustafson and Mina Ross, Project Review Assistants for the Virginia Department of Conservation and Recreation, Division of Natural Heritage, for Nicki's guidance and assistance in creating and updating the map (Figure 1) of Virginia's localities solar ordinance vegetation requirements and for Mina's assistance in researching changes to Virginia's localities solar ordinances as it pertained to vegetation at utility-scale solar facilities.

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