

Modifications to the 2004-2005 Comprehensive Plan in Consideration of Solar and Battery Storage Facilities

(Revised April 2, 2019 and February 17, 2022)



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November 8, 2021

The Sussex County, Virginia 2004-2005 Comprehensive Plan was adopted on October 20, 2005. The plan was revised by the Sussex County Board of Supervisors on April 2, 2019 to include land use policy guidance and recommendations for regulating utility-scale solar facilities.

Adopted Amendment from April 2019

The Comprehensive Plan 2004-2005 update was adopted on October 20, 2005 and updated for solar facilities on April 2, 2019. The updated plan defined “utility-scale solar facility as a facility that generates electricity from sunlight which will be used to provide electricity to a utility provider or a large private user with a generating capacity in excess of one megawatt (1 MW). They were classified as an industrial scale land use with the potential to occupy significant acreage.

The plan also recognized that many utility-scale solar facilities are located on agricultural or forested land that may have had other future land use potential or land use designations. Therefore, Sussex’s abundant agricultural and forest land combined with its electrical infrastructure and transportation system would be attractive to the solar industry.

The County considered solar facilities in districts zoned agricultural or industrial with preference for brownfields and County-owned capped landfills. The following site features we established to address mitigating the potential negative impacts of utility-scale solar facilities on County land use patterns as part of the evaluation of a Conditional Use Permit (CUP) application. These recommendations were included in Chapter II: Concerns and Aspirations, section B. Issues and Existing and Emerging Conditions enumerated as item 23 (p.11-12):

- the total size shall be larger than two (2) acres but less than 1,500 contiguous acres with no more than 65% PV panel coverage;
- located outside planning areas or community hubs;
- located outside forested areas to preserve forest resources;
- further than three (3) miles from any village or town boundary;
- further than two (2) miles from other existing or permitted solar facilities; and
- proximity to residences; historic, cultural, recreational, or environmentally-sensitive areas; and scenic viewsheds.

In 2019, there was also a recommendation to work with the Crater Planning District Commission or another regional planning entity to identify, catalogue, and map relevant features, including:

- Major electrical facilities (i.e., transmission lines, transfer stations, generation facilities, etc.),
- Brownfield sites and County-owned capped landfills, and
- Prime Farmland including areas of prime farmland or farmlands of statewide importance as defined by the USDA and Commonwealth of Virginia, respectively.

Since this comprehensive plan guidance was adopted, Sussex County has approved four solar facilities (one with battery storage) and one battery storage facility adjacent to a substation and staff has been contacted by several additional developers regarding potential applications for additional facilities.

<u>Summary Statistics of Approved Solar/Battery Storage Facilities</u>					
Project Name	Project Area	Site Area	MW _{AC}	MW/Acre Ratio	Average Project Area Coverage Percentage
Cabin Point Solar (Approved August 2020)	1,468 acres	1,842 acres	75 with Battery Energy Storage System (BESS)	1,842 acres/75 MW= 24.6 acres per megawatt	1468 ÷ 1842 = 80%
Sappony Solar (Approved August 2016)	250 acres	371 acres	20	371 acres/20 MW= 18.6 acres per megawatt	250 ÷ 371 = 67%
Shands Energy Center (primary use) (Approved May 2021)	2 acres	32.28 acres	Battery Energy Storage System (BESS)	N/A	2 ÷ 32 = 6%
Waverly Solar (Approved March 2019)	2,000+/- acres	2,700 acres	118	2,700 acres/118 MW= 22.9 acres per megawatt	2000 ÷ 2700 = 74%

With solar utility scale solar facilities having the potential to take up agricultural, industrial, or commercial land for at least twenty years or more, a number of Comprehensive Plan and Zoning Ordinance amendments are recommended for discussion by the Planning Commission and Board of Supervisors.

Additionally, the County recognizes battery energy storage facilities as an industrial land use that requires more safety requirements than solar facilities.

Therefore, the goal is to bring greater clarity and specificity for how the County reviews and potentially authorizes renewable energy facilities moving forward, and any proposed location of these renewable energy facilities need to be carefully weighed against other potential uses of the same property.

Proposed Comprehensive Plan and Zoning Ordinance Amendments

In an effort to continue the protection of prime agricultural, forest and industrial lands in the County, the proposed revisions are recommended to:

Chapter II: Concerns and Aspirations, section B. Issues and Existing and Emerging Conditions under enumerated item 23 (p.11-12) of the 2004-2005 Sussex County Comprehensive Plan

23. Utility-Scale Solar Facilities

As used in this Comprehensive Plan, a utility-scale solar facility is a facility that generates electricity from sunlight which will be used to provide electricity to a utility provider or a large private user with a generating capacity in excess of one megawatt alternating current (1 MWAC). Sussex's abundant agricultural and forest land combined with its electrical infrastructure and transportation system appear to be attractive to the solar industry. These facilities are an industrial scale land use that occupy significant acreage. Many utility-scale solar facilities are located on agricultural or forested land that may have had other future land use potential or land use designations.

The County will consider utility-scale solar facilities as a primary use in districts zoned agricultural or industrial with preference for brownfields and County-owned capped landfills. The following site features should be addressed to mitigate the potential negative impacts of utility-scale solar facilities on County land use patterns as part of the evaluation of a Conditional Use Permit (CUP) application:

- the total size shall be 100 acres or more but less than 5,000 contiguous acres;
- large contiguous projects are preferred over small decentralized or large discontinuous projects to prevent land fragmentation;
- laid out appropriately on the project parcels;
- laid out with no more than 65% equipment and building coverage;
- located outside planning areas or community hubs;
- located outside forested areas to preserve forest resources;
- located outside prime agricultural land;
- further than three (3) miles from any village or town boundary;
- further than two (2) miles from other existing or permitted solar facilities; and
- located to minimize negative impacts in proximity to residences; historic, cultural, recreational, or environmentally-sensitive areas; and scenic viewsheds.
- located less than or equal to one (1) mile from a transmission line.

Battery energy storage facilities are also an industrial land use but require more safety requirements than solar facilities. The County will consider battery facilities as:

- an accessory use to utility-scale solar facilities, other energy generation facilities, or substations; or
- a primary use on a parcel contiguous to utility-scale solar facilities, other energy generation facilities, and substations.

Article XXIII of the Zoning Ordinance

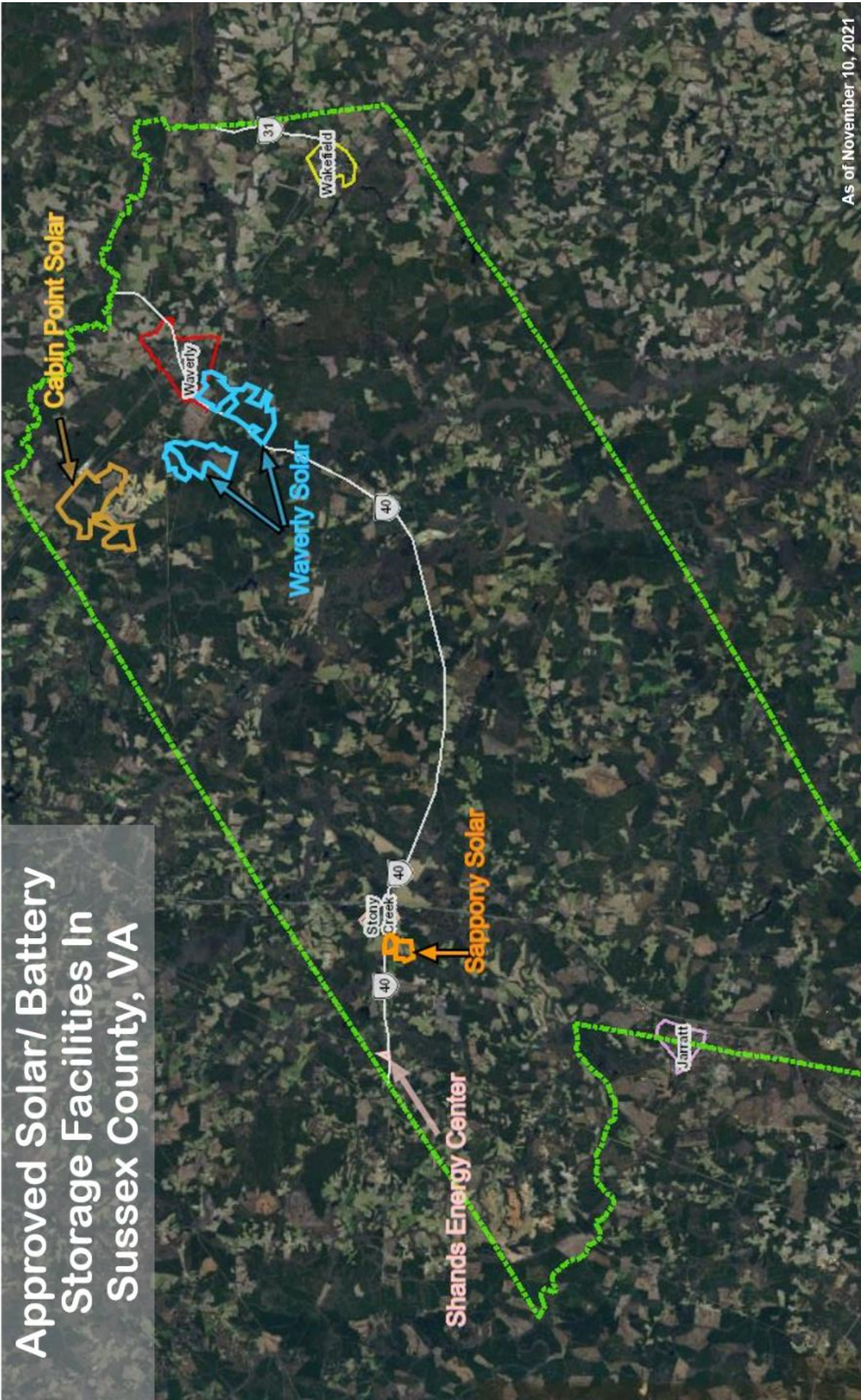
The following changes shall be made to the Sussex County Zoning Ordinance.

- The minimum area of a utility-scale solar facility shall be 100 acres or more.
- Other administrative changes as shown in the Sussex Article XXIII document dated 8-25-21.
- These changes include recommended reorganization of the article for better flow and a reflection of best practices to date.

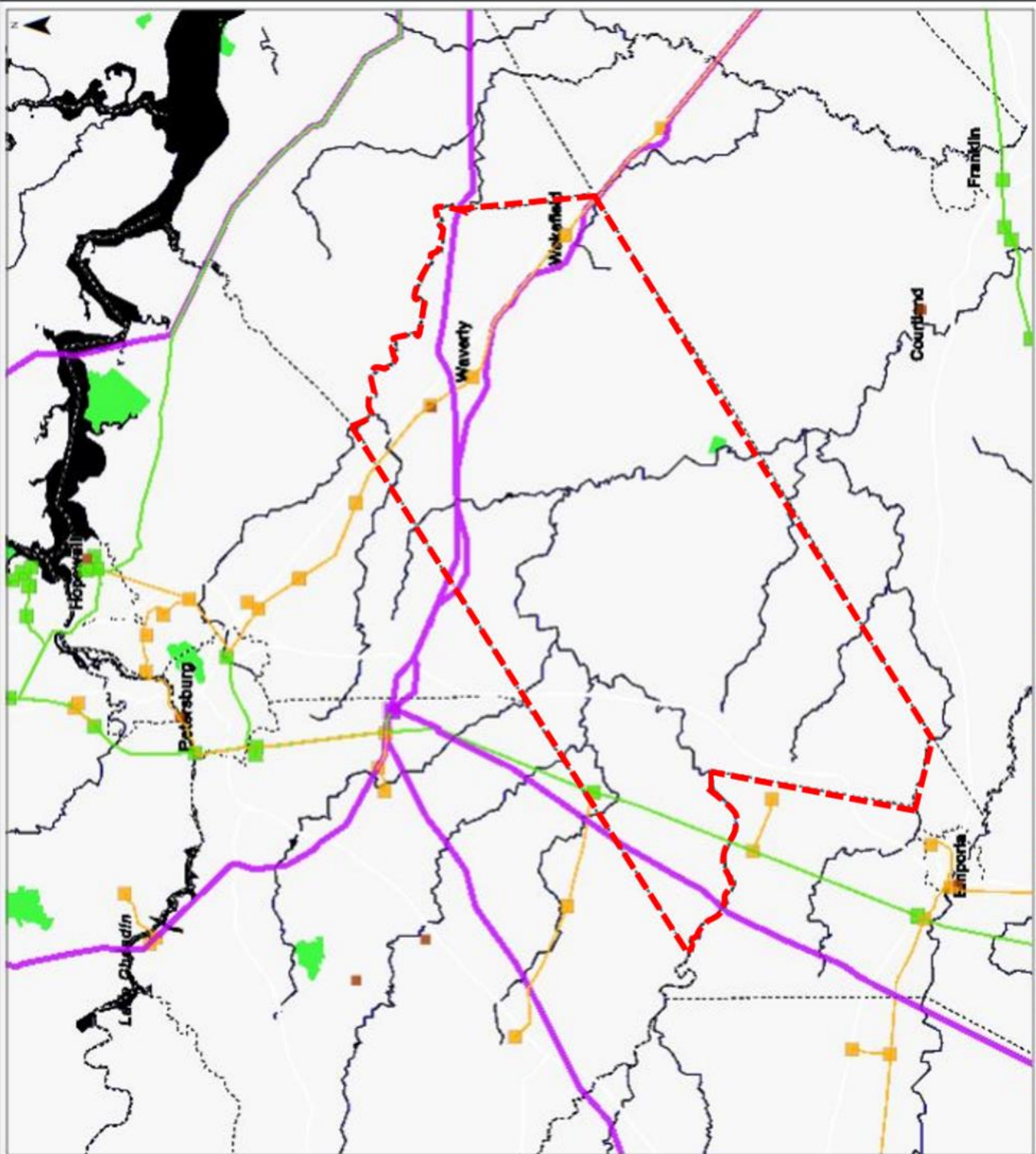
Map Attachments

- *Approved Solar/Battery Storage Facilities Map*
- *Major Transmission Lines and Substations Map*
- *Agricultural Land and Soils Map*

Approved Solar/ Battery Storage Facilities In Sussex County, VA



As of November 10, 2021



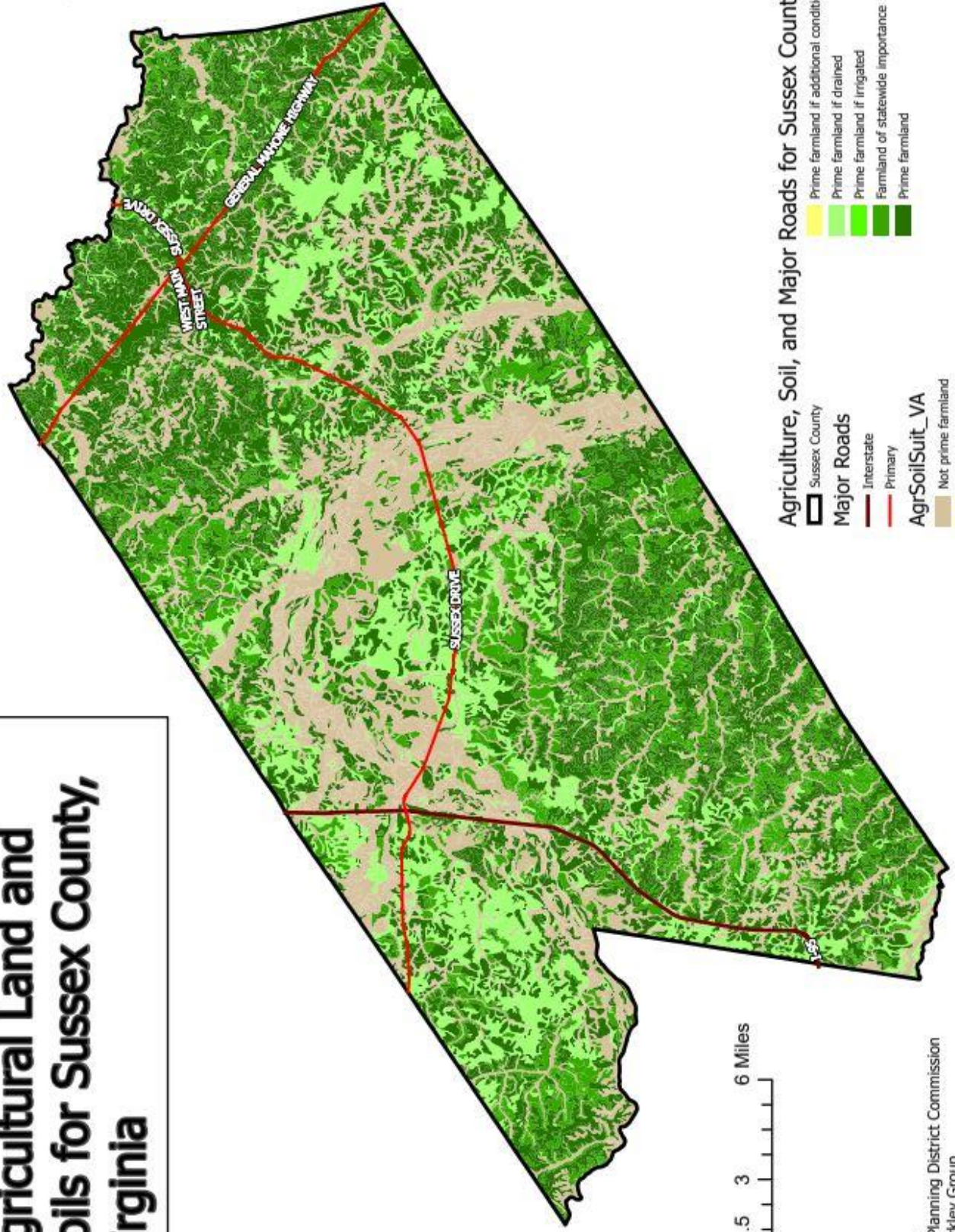
This map was generated using data on the Northeast Ocean Data Portal on 11/10/2021.
www.northeastoceandata.org



- Countries
- Electric_Transmission_...
- NOT AVAILABLE
 - 34; 46; 69; 115; 138; 155; 161
 - 220; 230
 - 345
 - 450; 500
 - 765
- Electric_Substations_M...
- NOT AVAILABLE
 - 34; 46; 69; 115; 138; 155; 161
 - 220; 230
 - 345
 - 450; 500
 - 765

Major Transmission Lines and Substations defined by voltage (KV) In Sussex County, VA

Agricultural Land and Soils for Sussex County, Virginia



0 1.5 3 6 Miles

Credits:
Crater Planning District Commission
The Berkley Group

- Agriculture, Soil, and Major Roads for Sussex County**
- Sussex County
 - Major Roads
 - Interstate
 - Primary
 - AgrSoilSuit_VA**
 - Not prime farmland
 - Prime farmland if additional conditions met
 - Prime farmland if drained
 - Prime farmland if irrigated
 - Farmland of statewide importance
 - Prime farmland