Special Use Permit Application

TRC Project Number:
000642256.0000.0000

July 2026

USS Staunton Solar LLC Project

Augusta County, Virginia

Prepared for:

United States Solar Corporation
100 N 6th St., Suite 410B
Minneapolis, MN 55403

Prepared by:

TRC Environmental Corporation
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1.0 Introduction

Staunton Solar LLC, a wholly owned entity of United States Solar (US Solar), proposes to construct and operate an approximately 3.0 megawatt alternating current (MWac) solar photovoltaic (PV) facility (the Project). Appendix A details the completed Special Use Permit (SUP) Application Form for the Project. The approximate number of modules for this installation is set for 6,864 Jinko Solar modules (Model # JKM580N-72HL4-BDV). Ancillary facilities include a stormwater management (SWM) facility and well as a temporary laydown area (Appendix B). The 14.61-acre Study Area is a portion of a 37-acre parcel located on Quicks Mill Road outside the Town limits of Staunton, Augusta County, VA, in a rural residential and agricultural use area. The Site parcel is zoned as A-1 – Agricultural and currently is not being used for any purpose except for potential equipment storage by the landowner and grazing. The buffering landscape surrounding the property line is comprised of forest habitat to the east, north, and west, while open rural residential is positioned to the south.

The Staunton Solar LLC Project is designed to serve local loads and is strictly prohibited from providing transmission level power, ensuring the benefit will go directly to the area it is sited in. The proposed 3.0 MWac solar PV facility will be constructed and operated on tax parcel 036-35P, within the southern portion of the parcel.

This document presents additional information for the Augusta County Board of Zoning Appeals (BZA) and Board of Supervisors (BOS) as it considers a SUP for the Project under Chapter 25 – Zoning; Division 1 – Permits and Amendments; Article LVIII – Special Use Permit Procedures; Section 25-583 – Applications of the Code of Ordinances for Augusta County, VA. which was approved by the County on December 2018. Per §25-583, utility-scale solar energy facilities for the A-1 Zoning District are permissible by SUP.

This document is in accordance with the Small Solar Energy Systems SUP application procedure checklist which describes the Standards Applicable to Small Energy Systems (§25-70.4 C.); Project Description; Narrative of Compliance with the Comprehensive Plan addressing the 12 Policies; Site Plan; Fiscal Impact Analysis; and Decommissioning Plan

1.1 About the Applicant

US Solar is an energy company that produces and markets renewable energies and electricity. US Solar's mission is to make solar energy accessible through simple, money-saving, long-term solutions that benefit both the environment and the consumer. They focus on developing, owning, and operating community solar programs, utilizing core values of integrity, quality, and environmental stewardship. Additional information on US Solar can be found at www.us-solar.com.

1.2 Project Description and Narrative

US Solar is proposing to develop approximately 14.61 acres of an approximately 37-acre parcel currently owned by Herbert and Karen Fauber. The Project is located at 820 Quicks Mill Road, Staunton, Augusta County, Virginia. The proposed Project is in the northeast quadrant of the intersection of Quicks Mill Road and Limestone Road, outside the Town of Staunton. Access to the site will be located off Maury Mill Lane. The Study Area is described by the Augusta County tax assessor as tax map number 036-35P and is zoned as A-1 Agricultural.

At the completion of construction, the Project will provide power to local homes and businesses and will have a maximum generation capacity of approximately 3.0 MWac. The Project has been designed to meet the electricity needs of the residents of Augusta County living in the immediate vicinity of the project. US Solar has worked closely with Dominion Energy to locate and size the system in order to maximize the benefits to the anticipated energy needs of the community. The estimated time of construction is anticipated at approximately eight to 12 months, with the proposed start date of operations in 2028.

Traffic associated with the operation of the Project during routine security and/or maintenance activities is anticipated to be minimal, less than 1 trip per month. As depicted on the Conceptual Site Plan, the Project's ingress and egress is limited to one private access road, with one Project entrance.

There are no public sewers, wells, septic, public or community water within the Project Area, as it is cleared pastureland. No schools or parks are located within the Project Area. The gravel access road will be approximately 12 feet wide, which will accommodate emergency vehicles. The Project will have no impact on adjoining properties as the Project is contained entirely to one parcel of land, with the forest habitat surrounding the Project Area. Views of the arrays from the south along Quicks Mill Road Lane will be limited by the maximum equipment height of 15 feet, 25-50 feet wide setbacks from the roadways, existing vegetation that obscures sightlines, and the location of the Project Area, which is in a location on the parcel that is isolated. The Project is not located within an Urban Service, Community Development Area, or within two miles of an existing energy system.

Solar electric generation facilities consist primarily of three main systems: PV modules that convert sunlight to into electricity (attached to support structures), an electrical collection system, and electrical interconnection equipment. Crystalline silicon PV modules are typically approximately 6 feet by 3 feet, include anti-reflective coating and are attached to a racking system mounted on embedded (pounded) steel posts. Support posts typically extend approximately 4 to 7 feet above grade. PV modules attached to the racking systems typically extend approximately 10 to 12 feet above grade, with a maximum height of up to 15 feet. The racking on which the PV modules sit will either be single-axis tracker, and the Project will consist of approximately 6,864 modules. The rows of PV modules will be organized into electrical groups referred to as "arrays." The arrays will be connected to inverters that convert the DC power from the solar modules to AC power, which is utilized on the power grid. The Project plans to have two equipment pads including two step-up transformers and 13 inverters. Each equipment pad is anticipated to have a footprint of approximately 10 feet by 35 feet. The point of interconnection will be at the intersection of the ROW and Quicks Mill Road, to the southeast of the arrays and at the beginning of the access road onto the Project Area.

The height of equipment will not exceed 15 feet. Based on noise studies conducted at other solar facilities and the specifications of representative inverters that will be used in the Project, noise levels of <39 to 42 dBA, less than that of a household refrigerator, are anticipated at the Parcel boundary. The Project produces minimal discernable noise, if any, and will not disrupt surrounding land uses.

During operations, the Project will be monitored remotely so there will be no daily vehicle trips to the Project site by staff. Traffic volume during operation will be similar to existing conditions and will not result in noticeable impacts. As depicted on the attached Conceptual Plan, the Project's ingress and egress is limited to one access road off of Maury Mill Road as the Project entrance. Impacts to road traffic conditions will be limited to the construction phase; thus, will be short-term and temporary. Development of the Project is expected to result in an increase in vehicular traffic traveling along Maury Mill Road only during the construction phase of the Project (approximately 6 to 9 months). Generally, vehicular traffic to/from the Project site during the construction phase will be limited to daily Project site workers, staff, and delivery of

materials, equipment, and supplies. Trucks accessing the Project during the peak of construction, approximately 1 to 2 months, will be associated with the delivery of modules, racking and electrical equipment. Up to 10 trucks per day will be required during the busiest segment of construction. Safety precautions will be implemented, as needed, to maintain safe access/egress of personnel and equipment from the Project while minimizing disruptions to local road conditions and neighbors. During both construction and operation, no pedestrian or unauthorized vehicular access to the Project is expected and will be managed via fencing.

There is currently one structure within the Project Area, and none are proposed. The structure is a frame barn within the southern portion of the Project Area. The structures for the Project include steel support posts, racking, solar PV modules, gravel necessary for access roads, equipment pads for transformers and/or inverters, electrical interconnection equipment, and fencing around the Project. Solar electricity generation equipment will not be located outside of the proposed Project Area shown on the attached figures, with the exception of some required electrical interconnection equipment. For illustration purposes, a preliminary conceptual layout of the solar array modules and the ancillary equipment is presented on the attached Conceptual Site Plan figure.

The Project will include the installation of an at least 8-foot-tall wooded post security fence. Access is planned off Maury Mill Road to the southeast of the Project Area. No parking spaces are proposed nor required onsite. The Project does not anticipate utilizing lighting. No signs, other than warning signs on electrical equipment are proposed.

The Project itself is a passive use and neither creates nor exacerbates hazards to adjacent properties, the community, or public roadways. Operation of the Project will be monitored online, and emergency and normal shutdown procedures can be implemented remotely.

Views of the Project will be mitigated by the relatively small footprint of the Project as compared to the overall property size (14.61 acres of the 37-acre property), the orientation of the Project within the surrounding existing vegetation, the maximum equipment height of 15 feet, and Project setbacks from property lines.

Minimal site grading and clearing activities are anticipated due to the existing site topography. Trees around the perimeter of the Project Area will be maintained, to the extent practicable, to provide visual screening from nearby properties. Vegetation within the array boundary will be removed during construction.

Areas disturbed by grading will be seeded with ground cover designed to quickly stabilize soils. The Project will be unmanned during operations and is designed to be operated remotely with only occasional visits to the site for maintenance activities. These visits are anticipated to occur less than 1 trip per month. Operation of the Project will be monitored online 24 hours/day, and emergency and normal shutdown procedures can be implemented remotely.

Construction activities for the Project will consist of the following:

- Best management practices (BMPs) implementation for erosion and sediment control, stormwater management, and site clearing;
- Site preparation, including grading, fencing and access driveway installation;
- Foundation and solar module support racking installation;

- PV module and inverter skid installation;
- Electrical collection system installation; and
- Testing and commissioning.

Site design, preparation and construction will be conducted in accordance with local and state requirements pertaining to Virginia Stormwater Management Program (VSMP) and Virginia Erosion and Sediment Control Law and Regulations (ESC). Thus, the Project is not anticipated to adversely impact the surrounding area.

The operation of the Project produces no emissions and does not generate smoke, debris, dust, or traffic. The Project is designed to avoid impacting natural resources and mitigate the community impacts in the surrounding area and will have little to no impact on the adjacent rural residences along Quick Mills Road or Maury Mill Road. The Project will utilize an 8-foot-tall fence around the perimeter to protect the equipment. The low visual profile and quiet operations of the Project preserve the rural, open-space character of the area, while at the end of the Project's life, the land may be returned to agricultural use.

2.0 Development Standards

US Solar has worked closely with Dominion Energy and Augusta County Planning & Zoning Division staff to ensure that the Concept Plan meets all applicable setbacks and design requirements set forth in §25-70 (1-11) Solar Energy Facilities Ordinance of Augusta County.

2.1 Setbacks

The Project will comply with the 25 feet setbacks from side and rear property lines and 50 feet from the right of way for small utility-scale solar facilities, from all abutting public rights-of-way and from adjacent property lines. Setbacks are shown on the Conceptual Site Plan in Appendix B.

2.2 Anti-glare and Anti-reflective Coating

All solar arrays will have an anti-glare and anti-reflective coating. Refer to Section 3.5 for the Glint and Glare Analysis Report and written certification stating that panels will incorporate an anti- glare and anti-reflective coating.

2.3 Erosion and Sediment Control

The Project Area is 14.61-acres and will not go above the 100-acre threshold for development at one time. The Project will be completed in one phase. The Project will reach out to the Development Services Division of Augusta County's Department of Community Development for compliance of erosion and sediment control measures prior to land disturbance or construction activities.

2.4 Security Fencing

The fencing around the Project Area will be 6 feet high,. The fencing will be installed on the interior of the required vegetative buffer.

2.5 Vegetative Buffer

A vegetative buffer consisting of existing and new plantings is located around the perimeter of the project area. See the Conceptual Site Plan in Appendix B.

2.6 Existing Trees and Vegetation

The Project will maintain any present trees and vegetation to the maximum extent practicable, wherever possible as to not interfere with the performance of the Project.

2.7 Vegetative Screening and/or Buffer Requirement Waivers

As the Project Area is mostly within the existing open pasture, tree clearing will be limited while keeping the existing surrounding woodlands preserved to help serve as a buffer for adjacent properties. The solar arrays are situated to avoid the delineated streams and wetlands that are on-site.

2.8 Maximum Height of Equipment

Small utility-scale solar energy facilities may not exceed 15 feet in height, measured from the highest natural grade below each solar panel. The height of the solar panels for the Project will not exceed 15-feet the maximum.

2.9 Lighting

The Project is not proposing any lighting for this facility.

2.10 Federal Aviation Administration Regulations

A review of online resources shows no airports within the immediate vicinity of the Study Area. The FAA Notice Criteria Tool was utilized to determine if notice is required and based on specific project specifications, FAA notice is not required. The closest airport is approximately 15 miles northeast of the Project Area.

2.11 Community Meeting

A community meeting for the Project is set to be held for review of the Project with the community. Public comment will be in accordance with the parameters set forth by the Augusta County Ordinance.

3.0 Application Requirements for Utility-scale Solar Facilities

Section 25-447 of the County Code lists application requirements for utility-scale solar facilities for SUP approval.

3.1 Concept Plan and Landscape and Screening Plan

A screening buffer is being proposed around the eastern and southern perimeter of the Project Area. A Concept Plan including requirements in §25-447(h)(2)(a) through (j) is included as Appendix B. A Landscape and Screening Plan that addresses the required vegetative buffering and screening, 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 is included as Appendix B.

3.2 Wildlife and Wildlife Habitats within 2-mile Radius / Environmental Risk Assessment

An Environmental Inventory, Wildlife Assessment Report, and Environmental Risk Assessment (referenced as Critical Issue Analysis [CIA]), which discusses the potential impacts on wildlife and wildlife habitats at the site within a 2-mile radius as well as an environmental hazardous waste analysis of the proposed Project (Appendix C).

Overall, additional studies and adherence to permit requirements (such as measures to avoid and minimize impacts in compliance with applicable regulations) may be required for the Project; however, no constraints for the Project were identified that would pose a significant issue for the development of the Project.

3.3 Cultural Resources

TRC acquired the Virginia Department of Historic Resources (VDHR) Virginia Cultural Resource Information System (VCRIS) data regarding historical, architectural, archeological, and other cultural resources within a 1-mile radius of the proposed facility and is described in the CIA under section 9.0 (CIA - Appendix E). A cultural resource risk assessment was completed, which indicates the overall review considers the Project to have a low risk to potentially affect NRHP eligible historic architectural properties.

On behalf of the Applicant, TRC prepared a project review request to initiate consultation with VDHR for the Project. Once approved by US Solar, TRC will submit the project review electronically to the VDHR through their electronic Project Information Exchange System. A response is typically received back within 30 days of submittal.

3.4 Potential Impacts on Pollinators and Pollinator Habitats

This low impact solar farm project, set along the James River, will provide a lush pollinator-friendly habitat of native plants, evergreen trees, wildflower mixes and grasses. The planned 20’ landscape buffer will offer a variety of native plants of differing heights and sizes that provide food (fruit and nut-bearing tree and shrub species), winter cover (e.g. red cedar and American holly), and nesting opportunities. In addition, an approved seed-mix will be used to create a diverse ground cover habitat for many birds and pollinators. To maintain the grassland for wildlife and slow the water flow, this Project plans for reduced mowing after establishment. Keeping the grasses above 8 inches allows for the breeding and nesting of migratory birds.

In addition to these beneficial wildlife impacts, we must note that solar power is a sustainable, renewable, clean energy that doesn’t pollute air, water or land. The solar panels sit above the ground and allow for the infiltration of rainwater. Moreover, at the end of the useful life of the project, the area will be restored to its natural habitat.

While a few potential impacts such as removal of existing vegetation and temporary disruption to birds of prey will be temporary during construction activities, the added positive benefits long-term outweigh the temporary impacts. Post-construction, there will be better habitat for pollinators, the planting of native

plants including evergreen trees, shrubs, wildflowers, and grasses (not mowed to the ground), will provide a much-improved pollinator habitat. Less mowing would occur than what typically would take place on-site, so the existing lawn areas look manicured.

3.5 Glint and Glare Analysis

A Glint and Glare Analysis that demonstrates that the panels will be sited, designed, and installed to eliminate glint and glare effects on roadway users, nearby residences, commercial areas, and other sensitive viewing locations, or that the Applicant will use all reasonably available mitigation techniques to reduce glint and glare to the lowest achievable levels, is provided under Appendix D.

3.6 Commission Permit

A commission permit is required prior to or in conjunction with any special exception approvals. As the commission permit is included as part of the SUP application form, no additional application forms are included.

3.7 Decommissioning Plan

The expected life of the Project is approximately 25 to 35 years. When the Project reaches the end of its operational life, it will be deenergized and disconnected from all external electrical connections. The Applicant will remove all solar panels, cabling, electrical equipment, fencing, and any other associated equipment, facilities, and structures. The majority of the equipment will be composed of recyclable materials including steel, aluminum, copper, and glass. These materials will be recycled to the extent possible to minimize waste streams. Select roads, driveways, fences, and other property improvements including landscaping may remain for future use by the landowner. The lease agreement with the landowner ensures the removal of the power generating equipment at the end of the Project life. If an entity purchases the Project or the parcel, an agreement will be signed with county officials that ensures proper decommissioning and removal of the equipment.

A decommissioning plan by a certified engineer with a professional engineering license in the Commonwealth of Virginia, is required as part of the SUP submittal. A Decommissioning Plan containing requirements in §25-70.10, is included in Appendix E.

3.8 Cost Benefit Analysis

The Project will generate the bulk of its economic benefits during the construction period. Following construction, tax benefits and operation and maintenance will be the main driver of economic benefits delivered to the locality. Additionally, the interconnection upgrades required will bolster Dominion's local infrastructure. The Project will not terminate any current jobs associated with its installation. Appendix F provides a detailed cost benefit analysis on the economic impacts associated with the Project. Solar generating facilities, including this Project, provide the following benefits to the community:

- Generates clean, renewable electricity without using water, creating emissions, or producing waste products;
- Places little to no demand on County infrastructure and services including roads, water, sewer, fire, emergency medical services or schools;

- Diversifies the region's electricity generation mix, which reduces the reliance on natural gas and other fuels that are subject to high price volatility;
- Reduces the need for long-term transmission system upgrades by siting power generation in communities where electricity is consumed;
- Creates jobs during construction of the project with indirect economic benefits in the form of local contracting opportunities, equipment sales and rentals, material purchases, and spending on hotels, restaurants and other local goods and services;
- Carries a low visual profile and provides quiet operations to preserve the rural, open- space character of the area; and
- Ensures that land may be returned to previous agricultural use at end of the project's life.

Appendix A
Special Use Permit Application Form

AUGUSTA COUNTY

BOARD OF ZONING APPEALS APPLICATION FOR SPECIAL USE PERMIT

DISTRICT: 03: North River

PERMIT NUMBER: _____

DATE: _____

RECEIPT NUMBER: _____

FEE PAID: _____

TO THE AUGUSTA COUNTY BOARD OF ZONING APPEALS:

Application is hereby made for a Special Use Permit, in accordance with the description and for the purpose hereinafter set forth. This application is made subject to all the County and State laws, ordinances, rules and regulations now in force effecting thereto; and which are hereby agreed to by the undersigned applicant and which shall be deemed a condition entering into the exercise of the permit.

1. Land Owner's Name: Herbert R. and Karen L. Fauber
2. Land Owner's Address: 820 Quicks Mill Road, Staunton, VA 24401
3. Occupant or User's Name: Same
4. Occupant or User's Address: Same
5. Location of Property: Northeast quadrant of the intersection of Quicks Mill Road and Limestone Road.
6. Real Estate Map & Parcel #: 036-35P 7. Zoning: GA 8. Acreage: 36.22
9. Subdivision: N/A 10. Present Use: Farming/Non-Residence
11. Section(s) of the Zoning Ordinance that permit is being applied for: 25-70 Article VI.D
12. Describe request: Solar installation for power generation is being proposed and tied-in to the electrical grid.

I hereby authorize appropriate County Officials to enter upon the above described property during normal business hours to conduct required inspections. I hereby certify, under the penalties of perjury, that the above information is true and correct.

SEND CORRESPONDENCE TO:

Dan Csaplar
(Signature of Applicant or Agent)

612-225-4682
(Phone Number)

ACTION BY BOARD OF ZONING APPEALS

Approved: _____ Disapproved: _____

Stipulations: _____

Date of Final Action: _____ Signed: _____
Secretary, Board of Zoning Appeals

(PLEASE READ BACK OF APPLICATION)

NOTICE

PRE-CONDITIONS - The Board of Zoning Appeals may make your Special Use Permit subject to certain "pre-conditions" which must be satisfied before your permit is issued.

OPERATING CONDITIONS - The Board of Zoning Appeals may make your Special Use Permit subject to certain "operating conditions" with which you must comply so long as you operate your special use. If you fail to comply with one (1) or more of the operating conditions, your permit may be revoked by the Board of Zoning Appeals after a public hearing and advance written notice to you as required by law.

ABANDONMENT - If you should cease the use authorized by your Special Use Permit for two (2) years or more, the Zoning Administrator shall seek revocation of the permit by the Board of Zoning Appeals.

The Augusta County Zoning Ordinance establishes the following requirements of all Special Use Permits:

"Section 25-584. Requirements of Special Use Permits.

A. A Special Use Permit shall not be issued until all **pre-conditions**, if any, imposed by the Board of Zoning Appeals have been met. Commencement of a Special Use Permit prior to the issuance of the Permit shall be a violation of this chapter. Whenever the Board of Zoning Appeals has required pre-conditions, the pre-conditions shall be established, constructed or diligently pursued within a reasonable time as determined by the Board of Zoning Appeals. If in the opinion of the Zoning Administrator, compliance with the pre-conditions is not diligently pursued within one year or other time as specified by the Board of Zoning Appeals, the approval of the Special Use Permit shall automatically expire without notice and the Special Use Permit will not be issued.

B. Any BZA review plan submitted to and approved by the Board of Zoning Appeals shall be followed.

C. Unless otherwise provided by the Board of Zoning Appeals, the Special Use Permit shall be issued to the applicant and shall be non-transferable

D. All Special Use Permits are subject to and conditioned upon compliance with any applicable federal, state or local licensing or regulatory requirements, and may be revoked upon failure to so comply."

Appendix B
Concept Plan & Landscaping Plan

SYSTEM SPECIFICATIONS	
SYSTEM SIZE DC	3,981.12 kW
SYSTEM SIZE AC	3,000.00 kW
DC/AC RATIO	1.36
MODULE MANUFACTURER	JINKO SOLAR
MODULE MODEL	JKM580N-72HL4-BDV
MODULE RATING	580 W
TOTAL MODULE QTY	6864
MODULES PER STRING	26
TOTAL NO. OF STRINGS	264
INVERTER MODEL	CPS SCH275KTL-DO/US-800
INVERTER RATING	250 kW
INVERTER QTY	12
STEP-UP TRANSFORMER	(1) 2.2MVA, 23kV Grd-Y/ 0.6kV Grd-Y, (1) 1.1MVA, 23kV Grd-Y/ 0.6kV Grd-Y
RACKING	ATI HSAT
AZIMUTH	210°
#TRACKERS WITH 104 MODULES	41
#TRACKERS WITH 81 MODULES	18
#TRACKERS WITH 52 MODULES	23
INTER-ROW SPACING	11.21'
PITCH	18.69'
GCR	40.0%
AREA OCCUPIED	14.61 Ac

SET BACK REQUIREMENTS:
RIGHT-OF-WAY=50'
REAR AND SIDE=25'

GENERAL NOTES

1. CUSTOMER POLE. UTILITY BESS AC DISCONNECT, FUSED, ACCESSIBLE, VISIBLE AND LOCKABLE DISCONNECT. PROVIDE PLACARD STATING "UTILITY BESS AC DISCONNECT".
2. DISCONNECT: WILL BE ACCESSIBLE, LOCKABLE, VISIBLE BLADE DISCONNECT.
3. BESS INSTALLATION TO COMPLY WITH NEC 2023 ARTICLE 690 AND ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES OR REGULATIONS.
4. EQUIPMENT SHALL BE LABELED PER NEC 2023ARTICLE 690.
5. 16' ACCESS DRIVES SHALL BE DESIGNED TO ACCOMMODATE ALL CONSTRUCTION, OPERATIONS, MAINTENANCE AND UTILITY TRAFFIC THROUGHOUT THE SITE.
6. PROVIDE UTILITY 24/7 UNESCORTED KEYLESS ACCESS.
7. ALL EQUIPMENT CLEARANCES AND WORK SPACES SHALL COMPLY WITH NEC 2023 REQUIREMENTS.

QUICK'S MILL RD
VERONA
VA 24482
LAT: 38.213705°
LON: -79.025629°

LEGEND

- 104 MODULES TRACKER ROW
- 78 MODULES TRACKER ROW
- 52 MODULES TRACKER ROW
- EQUIPMENT PAD
- STRING INVERTER
- 16' WIDE SITE ACCESS ROAD
- EXISTING ROADS
- PROPERTY LINE
- SETBACK
- MV — MV — U.G. MEDIUM VOLTAGE CABLE
- OVE — OVE — (E)UTILITY CIRCUIT
- OC — OC — (N)UTILITY CIRCUIT
- PROJECT SITE SECURITY FENCE
- BUIDABLE AREA
- WETLANDS

1 ARRAY PLAN
SCALE:1"=100'



US SOLAR

TRC Companies, Inc.
2200 South Main Street
Suite A
Blacksburg, VA 24060
Tel: 540-552-0444
www.trccompanies.com

STAMP:

USS STAUNTON SOLAR, LLC
CONCEPTUAL PLAN

AUGUSTA COUNTY
STAUNTON, VA 24482

PROJECT NUMBER: 642256

SHEET TITLE: CONCEPTUAL SITE PLAN

SHEET SIZE: ARCH "D" 24" X 36" (610 x 914)

NO.	REVISION	DATE	INIT

DATE:	07/06/2026
DRAWN BY:	
ENGINEER:	
APPROVED BY:	NWA
PROJECT PHASE:	--
SCALE:	
SHEET NO.:	

P:\2025\642256 - USS Staunton Solar\USS Staunton Solar LLC - CAD (1)\CAD\Concept Plan - Latest.dwg 07-09-2026 8:39:40 AM BY: SAuruchalam

Site Conceptual Plan

SET BACK REQUIREMENTS:
RIGHT-OF-WAY=50'
REAR AND SIDE=25'

GENERAL NOTES

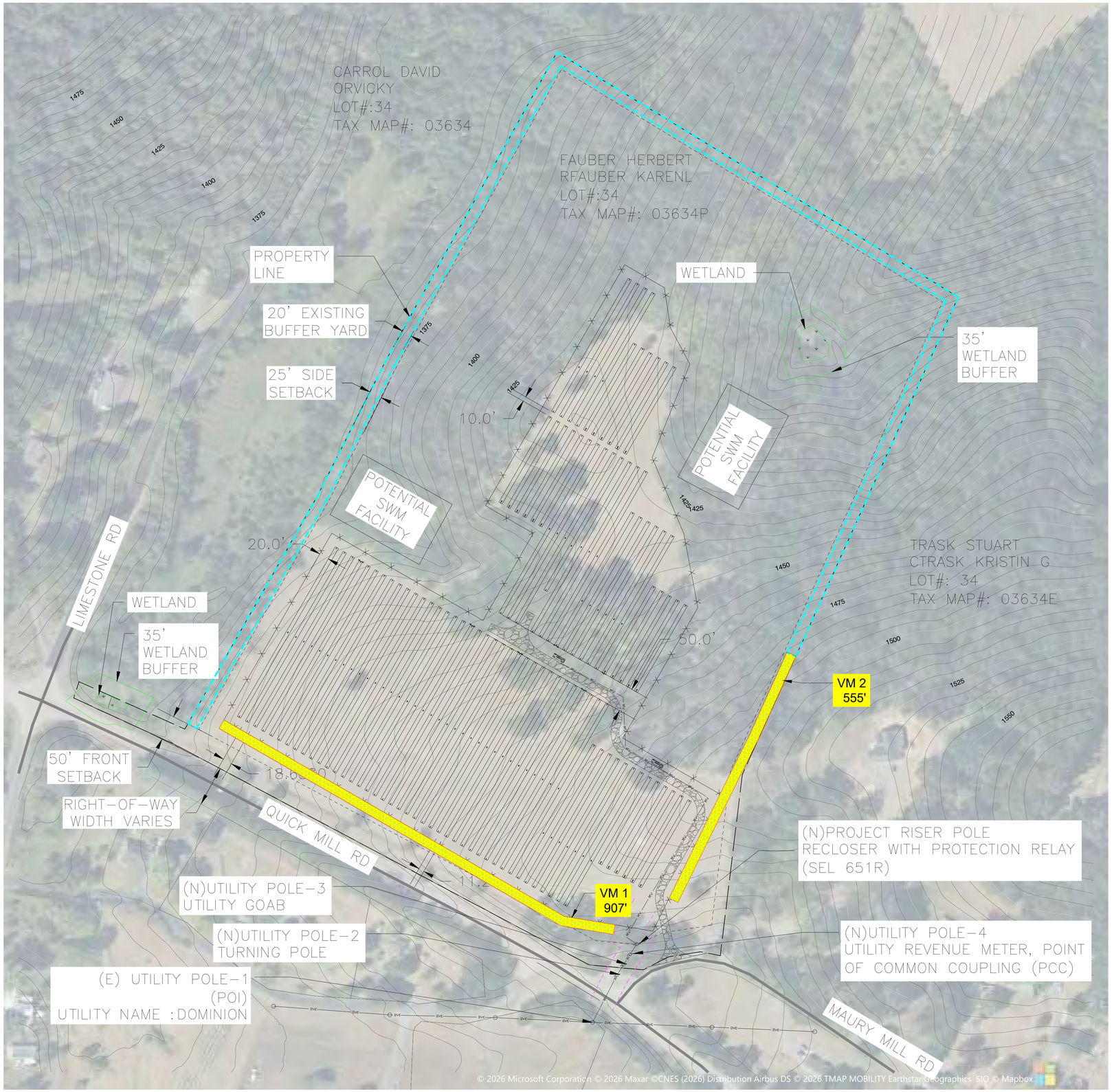
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VERONA
VA 24482
LAT: 38.213705°
LON: -79.025629°

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- PROPERTY LINE
- SETBACK
- U.G. MEDIUM VOLTAGE CABLE
- (E)UTILITY CIRCUIT
- (N)UTILITY CIRCUIT
- PROJECT SITE SECURITY FENCE
- BUIDABLE AREA
- WETLANDS
- VISUAL MITIGATION (VM) PLANTINGS
- EXISTING BUFFER YARD

LANDSCAPE PLAN
SCALE:1"=100'



US SOLAR

TRC Companies, Inc.
2200 South Main Street
Suite A
Blacksburg, VA 24060
Tel: 540-552-0444
www.trccompanies.com

STAMP:

USS STAUNTON SOLAR, LLC
CONCEPTUAL PLAN
AUGUSTA COUNTY
STAUNTON, VA 24482

PROJECT NUMBER: 642256

SHEET TITLE: LANDSCAPE PLAN

SHEET SIZE: ARCH "D"
24" X 36" (610 x 914)
0 ½" 1"

NO.	REVISION	DATE	INIT

DATE:	07/06/2026
DRAWN BY:	
ENGINEER:	
APPROVED BY:	NWA
PROJECT PHASE:	--
SCALE:	1"=100'-0"
SHEET NO.:	L-100

GENERAL LANDSCAPE AND SEEDING NOTES

1. THE LANDSCAPE PLAN AND DETAILS ARE FOR LANDSCAPING INFORMATION ONLY. PLEASE REFER TO THE SITE LAYOUT PLAN, GRADING PLAN AND/OR UTILITIES PLAN FOR ALL OTHER INFORMATION.

2. THE CONTRACTOR SHALL MONITOR AND GUARANTEE THAT ALL PLANTS, TREES, AND SHRUBS SHALL BE HEALTHY AND FREE OF DISEASE FOR A PERIOD OF (1) ONE YEAR AFTER SUBSTANTIAL COMPLETION AND ACCEPTANCE BY THE OWNER. CONTRACTOR SHALL REPLACE ANY DEAD OR UNHEALTHY PLANTS AT CONTRACTOR'S EXPENSE. FINAL ACCEPTANCE SHALL BE MADE IF ALL PLANTS MEET THE GUARANTEE REQUIREMENTS INCLUDING MAINTENANCE. MAINTENANCE RESPONSIBILITIES INCLUDE INVASIVE SPECIES MONITORING, REMOVAL, AND SUPPLEMENTATION. MONITORING OF THE PROJECT SITE SHALL OCCUR IN THE SPRING AND THE FALL TO DETERMINE THE PRESENCE OF INVASIVE SPECIES. SHOULD ANY INVASIVE SPECIES BE IDENTIFIED WITHIN THE PROJECT SITE, THE INVASIVE SPECIES SHALL BE REMOVED ACCORDING TO METHODS MOST LIKELY TO BE EFFECTIVE IN CONTROLLING THAT SPECIES AND SUPPLEMENTING ITS REPLACEMENT WITH APPROPRIATE VEGETATION AND SEED MIX IDENTIFIED (AND APPROVED) ON THIS PLAN AND/OR AN APPROVED EQUAL. ADDITIONAL MAINTENANCE RESPONSIBILITIES INCLUDE: APPROVED CULTIVATING, SPRAYING, WEEDING, WATERING, TIGHTENING OF TREE STRAP GUYS, PRUNING, FERTILIZING, MULCHING, AND ANY OTHER OPERATIONS NECESSARY TO MAINTAIN PLANT VIABILITY. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING AND CONTINUE FOR THE DURATION OF SOLAR ARRAY USE BY THE OWNER/OPERATOR AFTER FINAL ACCEPTANCE. WATERING DURING THE ESTABLISHMENT PERIOD SHALL BE PERFORMED USING A WATER TRUCK OR OTHER APPROVED METHOD AS REQUIRED FOR SUCCESSFUL ESTABLISHMENT.

3. THE CONTRACTOR SHALL SUPPLY ALL LABOR, PLANTS, APPROVED SEEDING MIX. AND MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE WORK SHOWN ON THE DRAWING(S) AND LISTED IN THE PLANT SCHEDULE(S) AND/OR SEEDING TABLE(S). IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE PLANT SCHEDULE AND/OR SEEDING TABLE AND THOSE REQUIRED BY THE DRAWINGS, THE LARGER SHALL APPLY. ALL PLANTS SHALL BE ACCLIMATED BY THE SUPPLY NURSERY TO THE LOCAL HARDINESS ZONE AND BE CERTIFIED THAT THE PLANTING MATERIAL HAS BEEN GROWN FOR A MINIMUM OF (2) TWO YEARS AT THE SOURCE AND OBTAINED WITHIN 200 MILES OF PROJECT SITE UNLESS OTHERWISE APPROVED BY OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT.

4. THE LOCATIONS FOR PLANT MATERIAL ARE APPROXIMATE AND ARE SUBJECT TO FIELD ADJUSTMENT DUE TO SLOPE, VEGETATION, AND SITE FACTORS SUCH AS THE LOCATION OF ROCK OUTCROPS. PRIOR TO PLANTING THE CONTRACTOR SHALL ACCURATELY STAKE OUT THE LOCATIONS FOR ALL PLANTS. THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT SHALL APPROVE THE FIELD LOCATIONS OR ADJUSTMENTS OF THE PLANT MATERIAL.

5. ALL SHRUB MASSING SHALL BE MULCHED TO A DEPTH OF 2" AND SHREDDED HARDWOOD BARK MULCH SHALL BE USED FOR SHRUB MASSING AREAS.

6. NO PLANT SHALL BE PLACED IN THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE CONTRACTOR. STAKING THE LOCATION OF ALL TREES AND SHRUBS SHALL BE COMPLETED PRIOR TO PLANTING FOR APPROVAL BY THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT. STAKING OF THE INSTALLED TREE MUST BE COMPLETED THE SAME DAY AS IT IS INSTALLED. ALL TREES SHALL BE STAKED OR GUYED AS PER THE DETAIL. SEE LANDSCAPING PLAN(S) FOR PLANTING DETAILS.

7. COORDINATE PLANT MATERIAL LOCATIONS WITH SITE UTILITIES. SEE SITE LAYOUT, GRADING AND/OR UTILITY PLANS FOR STORM, SANITARY, GAS, ELECTRIC, TELEPHONE AND WATER LINES. UTILITY LOCATIONS ARE APPROXIMATE. EXERCISE CARE WHEN DIGGING IN AREAS OF POTENTIAL CONFLICT WITH UNDERGROUND OR OVERHEAD UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DUE TO CONTRACTOR'S NEGLIGENCE AND SHALL REPLACE OR REPAIR ANY DAMAGE AT CONTRACTOR'S EXPENSE.

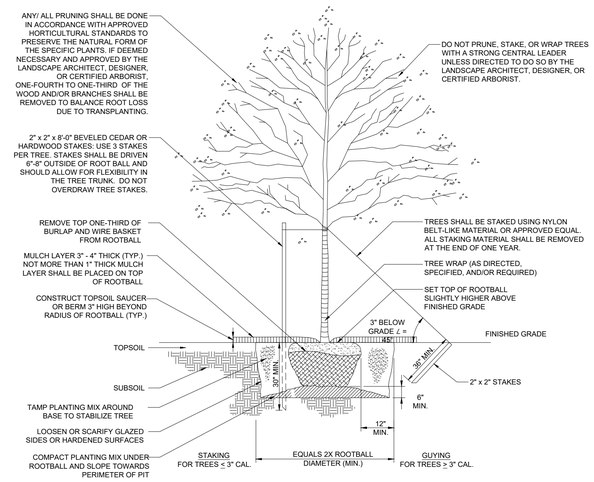
8. LANDSCAPE PLANTING PITS MUST BE FREE DRAINING. PAVEMENT, COMPACTED SUBGRADE, AND BLASTED ROCK SHALL BE REMOVED TO A DEPTH OF 2' OR TO A GREATER DEPTH IF REQUIRED BY PLANTING DETAILS OR SPECIFICATIONS. REPLACE SOIL WITH MODERATELY COMPACTED LOAM OR SANDY LOAM FREE FROM STONES AND RUBBISH 1" OR GREATER IN DIAMETER AND ANY OTHER MATERIAL HARMFUL TO PLANT GROWTH AND DEVELOPMENT. PLANTING INSTALLATION SHALL BE AS DETAILED AND CONTAIN PLANTING MIX AS SPECIFIED UNLESS RECOMMENDED OTHERWISE BY SOIL ANALYSIS.

   PLANTING SOIL MIXTURE:
   2 PARTS PEAT MOSS
   5 PARTS TOPSOIL
   MYCORRHIZA INOCULANT - "TRANSPLANT 1-STEP" AS MANUFACTURED BY ROOTS, INC. OR APPROVED EQUAL. USE PER MANUFACTURER'S RECOMMENDATIONS FOR TREES AND SHRUBS. FERTILIZER/LIME APPLY AS RECOMMENDED BY SOIL ANALYSIS

   - TREES, AND SHRUBS: TREES AND SHRUBS SHALL BE NURSERY GROWN UNLESS OTHERWISE NOTED AND HARDY UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCATION OF THE PROJECT. THEY SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY, WITH NORMAL HABIT OF GROWTH. THEY SHALL BE SOUND, HEALTHY, VIGOROUS, WELL-BRANCHED AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL BE FREE OF DISEASE, INSECT PESTS, EGGS OR LARVAE. THEY SHALL HAVE HEALTHY AND WELL-DEVELOPED ROOT SYSTEMS. ALL TREES SHALL HAVE STRAIGHT SINGLE TRUNKS WITH THEIR MAIN LEADER INTACT UNLESS OTHERWISE STATED. THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, LANDSCAPE ARCHITECT SHALL ONLY PERMIT SUBSTITUTIONS UPON WRITTEN APPROVAL. THEIR SIZES SHALL CONFORM TO THE MEASUREMENT SPECIFIED ON THE DRAWINGS. PLANTS LARGER THAN SPECIFIED ON THE DRAWINGS MAY BE USED IF APPROVED. THE USE OF SUCH PLANTS SHALL NOT INCREASE THE CONTRACT PRICE. ALL TREES AND SHRUBS SHALL BE MULCHED IN ACCORDANCE WITH THE RESPECTIVE PLANTING DETAIL(S) PROVIDED IN THE LANDSCAPING PLAN.
   - ALL PRUNING SHALL CONFORM TO THE TREE CARE INDUSTRY ASSOCIATION (TCIA) ANSI A300 (PART 1) - 2017 PRUNING STANDARDS. PRUNING STANDARDS SHALL RECOGNIZE BUT, ARE NOT LIMITED TO, THE FOLLOWING PRUNING OBJECTIVES: MANAGE RISK, MANAGE HEALTH, DEVELOP STRUCTURE, PROVIDE CLEARANCE, MANAGE SIZE OR SHAPE, IMPROVE AESTHETICS, MANAGE PRODUCTION OF FRUIT, FLOWERS, OR OTHER PRODUCTS, AND/OR MANAGE WILDLIFE HABITAT. DEVELOPING STRUCTURE SHALL IMPROVE BRANCH AND TRUNK ARCHITECTURE, PROMOTE OR SUBORDINATE CERTAIN LEADERS, STEMS, OR BRANCHES; PROMOTE DESIRABLE BRANCH SPACING; PROMOTE OR DISCOURAGE GROWTH IN A PARTICULAR DIRECTION (DIRECTIONAL PRUNING); MINIMIZE FUTURE INTERFERENCE WITH TRAFFIC, LINES OF SIGHT, INFRASTRUCTURE, OR OTHER PLANTS; RESTORE PLANTS FOLLOWING DAMAGE; AND/OR REJUVENATE SHRUBS. PROVIDING CLEARANCE SHALL ENSURE SAFE AND RELIABLE UTILITY SERVICES; MINIMIZE CURRENT INTERFERENCE WITH TRAFFIC, LINES OF SITE, INFRASTRUCTURE, OR OTHER PLANTS; RAISE CROWN(S) FOR MOVEMENT OF TRAFFIC OR LIGHT PENETRATION; ENSURE LINES OF SIGHT OR DESIRED VIEWS; PROVIDE ACCESS TO SITES, BUILDINGS, OR OTHER STRUCTURES; AND/OR COMPLY WITH REGULATIONS.
   - TOPSOIL SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. CONTRACTOR SHALL SUBMIT TOPSOIL TO A CERTIFIED TESTING LABORATORY TO DETERMINE PH, FERTILITY, ORGANIC CONTENT AND MECHANICAL COMPOSITION. THE CONTRACTOR SHALL SUBMIT THE TEST RESULTS FROM REGIONAL EXTENSION OFFICE OF USDA TO THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL. CONTRACTOR SHALL INCORPORATE AMENDMENTS FOR GOOD PLANT GROWTH AND PROPER SOIL ACIDITY RECOMMENDED FROM THE TOPSOIL TEST.
   - NO PHOSPHOROUS SHALL BE USED AT PLANTING TIME UNLESS SOIL TESTING HAS BEEN COMPLETED AND TESTED BY A HORTICULTURAL TESTING LAB AND SOIL TESTS SPECIFICALLY INDICATE A PHOSPHOROUS DEFICIENCY THAT IS HARMFUL, OR WILL PREVENT NEW LAWNS/GRASSES AND PLANTINGS FROM ESTABLISHING PROPERLY.
   - IF SOIL TESTS INDICATE A PHOSPHOROUS DEFICIENCY THAT WILL IMPACT PLANT AND LAWN ESTABLISHMENT, PHOSPHOROUS SHALL BE APPLIED AT THE MINIMUM RECOMMENDED LEVEL PRESCRIBED IN THE SOIL TEST FOLLOWING ALL APPLICABLE STANDARDS, REQUIREMENTS, AND/OR REGULATIONS.
   - ALL SLOPES GREATER THAN 3:1 RECEIVING A WILDFLOWER, WETLAND, AND/OR GRASS SEEDING MIXTURE SHALL BE COVERED WITH AN EROSION CONTROL BLANKET.
   - ALL WILDFLOWERS AND GRASSES SOWED SHALL BE ALLOWED TO GROW TO THEIR NATURALLY OCCURRING HEIGHTS WHENEVER POSSIBLE. NATIVE WILDFLOWERS AND/OR GRASSES CAN BE MOWED/MAINTAINED (WITHIN ACCEPTABLE AREAS IDENTIFIED AND/OR APPROVED BY APPROPRIATE REGULATORY AGENCIES) AS OFTEN AS NEEDED TO KEEP THE VEGETATION AT A DESIRED AND/OR MANAGEABLE/MANICURED HEIGHT.

9. INVASIVE SPECIES SHALL NOT BE PERMITTED.

10. ALL PLANT MATERIAL SHALL CONFORM TO THE PLAN SIZE SPECIFICATIONS AS ESTABLISHED BY THE AMERICAN STANDARD FOR NURSERY STOCK LATEST EDITION.

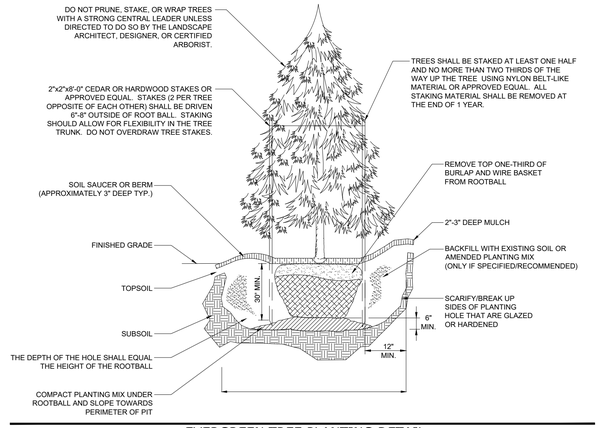


NATIVE/DECIDUOUS TREE PLANTING DETAIL

N.T.S.

NOTES:

- TREE PLANTING SHALL BEAR SAME RELATIONSHIP TO FINISH GRADE AS IT WAS PRE-DUG IN THE NURSERY.
- NEVER CUT THE PRIMARY LEADER.
- IT IS NOT RECOMMENDED TO AMEND THE EXISTING SOIL BEFORE BACKFILLING THE HOLE UNLESS SOIL CONDITIONS ARE POOR FOR PLANTING.
- WATER THOROUGHLY TO HELP ENSURE THE REMOVAL OF AIR POCKETS AND PROPERLY SET THE TREE.

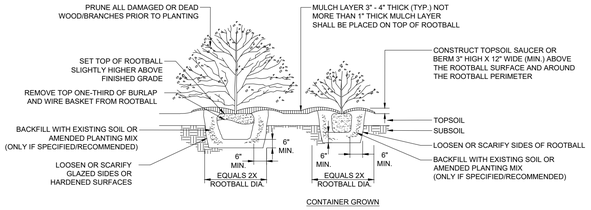


EVERGREEN TREE PLANTING DETAIL

N.T.S.

NOTES:

- TREE PLANTING SHALL BEAR SAME RELATIONSHIP TO FINISH GRADE AS IT WAS PRE-DUG IN THE NURSERY.
- NEVER CUT THE PRIMARY LEADER.
- IT IS NOT RECOMMENDED TO AMEND THE EXISTING SOIL BEFORE BACKFILLING THE HOLE UNLESS SOIL CONDITIONS ARE POOR FOR PLANTING.
- WATER THOROUGHLY TO HELP ENSURE THE REMOVAL OF AIR POCKETS AND PROPERLY SET THE TREE.



SHRUB PLANTING DETAIL

N.T.S.

NOTE:

- IN AREAS WITH MASS PLANTINGS, CONTINUOUS EXCAVATION AND MULCHING PRACTICES SHALL BE IMPLEMENTED WHENEVER POSSIBLE
- IT IS NOT RECOMMENDED TO AMEND THE EXISTING SOIL BEFORE BACKFILLING THE HOLE UNLESS SOIL CONDITIONS ARE POOR FOR PLANTING.
- WATER THOROUGHLY TO HELP ENSURE THE REMOVAL OF AIR POCKETS.

US SOLAR

TRC Companies, Inc.
2200 South Main Street
Suite A
Blacksburg, VA 24060
Tel: 540-552-0444
www.trccompanies.com

STAMP:

USS STAUNTON SOLAR, LLC

CONCEPTUAL PLAN

AUGUSTA COUNTY
STAUNTON, VA 24482

PROJECT NUMBER: 642256

SHEET TITLE: LANDSCAPE DETAILS

SHEET SIZE: ARCH "D" 24" X 36" (610 x 914)

0 ½" 1"

NO.	REVISION	DATE	INIT

DATE: 07/06/2026
DRAWN BY:
ENGINEER:
APPROVED BY: NWA
PROJECT PHASE: --
SCALE:
SHEET NO.: L-200

LEGEND

VISUAL MITIGATION PLANTING TEMPLATE

LANDSCAPE PLANTING SCHEDULE (VISUAL BUFFER/SCREENING EFFORT)

EVERGREEN TREE

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
JV	JUNIPERUS VIRGINIANA EASTERN RED CEDAR	2	6'-7' HT.	B&B	40'-50' HT.

CANOPY TREE

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
NS	NYSSA SYLVATICA BLACK GUM	2	6'-7' HT.	B&B	30'-50' HT.

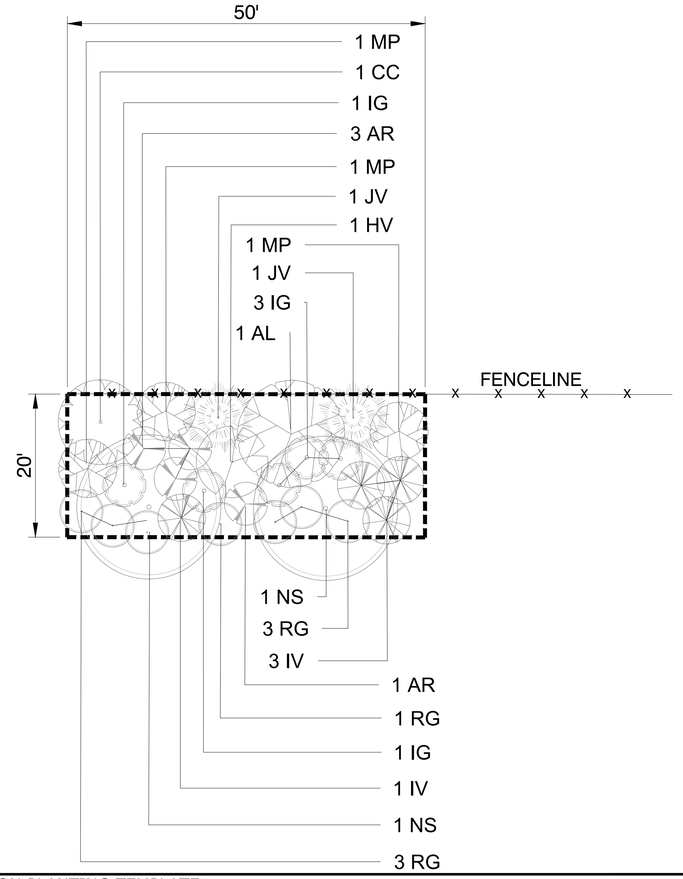
UNDERSTORY TREES

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
AL	AMELANCHIER LAEVIS ALLEGHENY SERVICEBERRY	1	6'-7' HT.	B&B	40'-50' HT.
CC	CERCIS CANADENSIS EASTERN REDBUD	1	6'-7' HT.	B&B	20'-30' HT.

SHRUBS

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
AR	ARONIA ARBUTIFOLIA RED CHOKEBERRY	4	24"-30" HT.	#3/5 CONT.	7'-10' HT.
HV	HAMAMELIS VIRGINIANA COMMON WITCH HAZEL	1	24"-30" HT.	B&B	15'-25' HT.
IG	ILEX GLABRA INKBERRY	5	24"-30" HT.	#3/5 CONT.	6'-10' HT.
IV	ILEX VERTICILLATA COMMON WINTERBERRY	4	24"-30" HT.	#3/5 CONT.	8'-12' HT.
MP	MORELLA PENSYLVANICA COMMON BAYBERRY	3	24"-30" HT.	#3/5 CONT.	5'-10' HT.
RG	RHUS GLABRA SMOOTH SUMAC	7	24"-30" HT.	#3/5 CONT.	6'-12' HT.

NOTE: THE 50-FOOT PLANTING MODULE SHOWN IS INTENDED TO ILLUSTRATE A REPRESENTATIVE PLANTING PATTERN AND SHALL BE REPEATED AS NECESSARY ALONG VM-1 AND VM-2 TO SATISFY THE REQUIRED BUFFER LENGTH.



VISUAL MITIGATION PLANTING TEMPLATE

N.T.S.

LEGEND - VM1

VISUAL MITIGATION PLANTING TEMPLATE

LANDSCAPE PLANTING SCHEDULE — TOTAL SCREENING LENGTH = 907 LF

EVERGREEN TREE

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
JV	JUNIPERUS VIRGINIANA EASTERN RED CEDAR	36	6'-7' HT.	B&B	40'-50' HT.

CANOPY TREE

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
NS	NYSSA SYLVATICA BLACK GUM	36	6'-7' HT.	B&B	30'-50' HT.

UNDERSTORY TREES

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
AL	AMELANCHIER LAEVIS ALLEGHENY SERVICEBERRY	18	6'-7' HT.	B&B	40'-50' HT.
CC	CERCIS CANADENSIS EASTERN REDBUD	18	6'-7' HT.	B&B	20'-30' HT.

SHRUBS

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
AR	ARONIA ARBUTIFOLIA RED CHOKEBERRY	72	24"-30" HT.	#3/5 CONT.	7'-10' HT.
HV	HAMAMELIS VIRGINIANA COMMON WITCH HAZEL	18	24"-30" HT.	B&B	15'-25' HT.
IG	ILEX GLABRA INKBERRY	90	24"-30" HT.	#3/5 CONT.	6'-10' HT.
IV	ILEX VERTICILLATA COMMON WINTERBERRY	72	24"-30" HT.	#3/5 CONT.	8'-12' HT.
MP	MORELLA PENSYLVANICA COMMON BAYBERRY	54	24"-30" HT.	#3/5 CONT.	5'-10' HT.
RG	RHUS GLABRA SMOOTH SUMAC	127	24"-30" HT.	#3/5 CONT.	6'-12' HT.

LEGEND - VM2

VISUAL MITIGATION PLANTING TEMPLATE

LANDSCAPE PLANTING SCHEDULE — TOTAL SCREENING LENGTH = 555 LF

EVERGREEN TREE

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
JV	JUNIPERUS VIRGINIANA EASTERN RED CEDAR	22	6'-7' HT.	B&B	40'-50' HT.

CANOPY TREE

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
NS	NYSSA SYLVATICA BLACK GUM	22	6'-7' HT.	B&B	30'-50' HT.

UNDERSTORY TREES

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
AL	AMELANCHIER LAEVIS ALLEGHENY SERVICEBERRY	11	6'-7' HT.	B&B	40'-50' HT.
CC	CERCIS CANADENSIS EASTERN REDBUD	12	6'-7' HT.	B&B	20'-30' HT.

SHRUBS

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
AR	ARONIA ARBUTIFOLIA RED CHOKEBERRY	44	24"-30" HT.	#3/5 CONT.	7'-10' HT.
HV	HAMAMELIS VIRGINIANA COMMON WITCH HAZEL	11	24"-30" HT.	B&B	15'-25' HT.
IG	ILEX GLABRA INKBERRY	55	24"-30" HT.	#3/5 CONT.	6'-10' HT.
IV	ILEX VERTICILLATA COMMON WINTERBERRY	44	24"-30" HT.	#3/5 CONT.	8'-12' HT.
MP	MORELLA PENSYLVANICA COMMON BAYBERRY	34	24"-30" HT.	#3/5 CONT.	5'-10' HT.
RG	RHUS GLABRA SMOOTH SUMAC	78	24"-30" HT.	#3/5 CONT.	6'-12' HT.

LEGEND - OVERALL PLANTING TOTALS

LANDSCAPE PLANTING SCHEDULE — VISUAL MITIGATION PLANTING TEMPLATE

EVERGREEN TREE

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
JV	JUNIPERUS VIRGINIANA EASTERN RED CEDAR	58	6'-7' HT.	B&B	40'-50' HT.

CANOPY TREE

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
NS	NYSSA SYLVATICA BLACK GUM	58	6'-7' HT.	B&B	30'-50' HT.

UNDERSTORY TREES

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
AL	AMELANCHIER LAEVIS ALLEGHENY SERVICEBERRY	29	6'-7' HT.	B&B	40'-50' HT.
CC	CERCIS CANADENSIS EASTERN REDBUD	30	6'-7' HT.	B&B	20'-30' HT.

SHRUBS

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
AR	ARONIA ARBUTIFOLIA RED CHOKEBERRY	116	24"-30" HT.	#3/5 CONT.	7'-10' HT.
HV	HAMAMELIS VIRGINIANA COMMON WITCH HAZEL	29	24"-30" HT.	B&B	15'-25' HT.
IG	ILEX GLABRA INKBERRY	145	24"-30" HT.	#3/5 CONT.	6'-10' HT.
IV	ILEX VERTICILLATA COMMON WINTERBERRY	116	24"-30" HT.	#3/5 CONT.	8'-12' HT.
MP	MORELLA PENSYLVANICA COMMON BAYBERRY	88	24"-30" HT.	#3/5 CONT.	5'-10' HT.
RG	RHUS GLABRA SMOOTH SUMAC	205	24"-30" HT.	#3/5 CONT.	6'-12' HT.

VISUAL MITIGATION PLANTING SCHEDULES

US SOLAR

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2200 South Main Street
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STAMP:

USS STAUNTON SOLAR, LLC

CONCEPTUAL PLAN

AUGUSTA COUNTY
STAUNTON, VA 24482

NO.	REVISION	DATE	INIT

DATE: 07/06/2026
DRAWN BY:
ENGINEER:
APPROVED BY: NWA
PROJECT PHASE: --
SCALE:
SHEET NO.: L–201

PROJECT NUMBER: 642256

SHEET TITLE: LANDSCAPE DETAILS

SHEET SIZE: ARCH "D" 24" X 36" (610 x 914)

0 ½" 1"

Appendix C
Environmental Inventory, Wildlife Assessment, Cultural Resources, and Wetland Delineation Reports

Environmental Inventory, Wildlife Assessment, and Cultural Resources (Critical Issues Analysis)

USS Staunton Solar LLC Project
Augusta County, Virginia

Critical Issues Analysis

January 2024

TRC Project Number: 576550.0000.0000

Prepared For:
United States Solar Corporation
100 N 6th St., Suite 410B
Minneapolis, MN 55403

Prepared By:

TRC Environmental
1030 Wilmer Ave., Suite 100
Richmond, VA 23227



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Figure 1 – Site Location Map (Aerial)
Figure 2 – Site Location Map (USGS)
Figure 3 – Parcel Map
Figure 4 – WERMS Map
Figure 5 – NRCS SSURGO Soils Map
Figure 6 – Geological Map
Figure 7 – Cultural Resources Map

Appendix B Study Area Photo Log

Appendix C Environmental Review Documents
USFWS IPaC Official Resource List
Northern Long-eared Bat Determination Key
VAFWIS Biota of Virginia
ArcGIS Web Map – Northern Long-eared Bat Hibernaculum and Roosts
ArcGIS Web Map – Little Brown Bat and Tri-colored Bat Hibernaculum and Roosts
Center for Conservation Biology Eagle Map

Appendix D Federal Aviation Administration (FAA) Notice Criteria Tool Report

Appendix E Cultural Resources Risk Assessment

ACRONYM LIST

CCB	Center for Conservation Biology
The Client	United States Solar Corporation [US Solar]
DHR	Department of Historic Resources
Project	USS Staunton Solar LLC Project
FAA	Federal Aviation Administration
HUC	Hydrologic Unit Code
IPaC	USFWS Information for Planning and Consultation tool
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
PEM	Palustrine Emergent Wetland
USACE	United States Army Corps of Engineers
USDA	United State Department of Agriculture
USGS	United States Geological Survey
USFWS	United States Fish and Wildlife Service
U.S.C.	United States Code
VADCR	Virginia Department of Conservation and Recreation
VADGMR	Virginia Department of Geology and Mineral Resources
VADOF	Virginia Department of Forestry
VADWR	Virginia Department of Wildlife Resources
VAFWIS	Virginia Fish and Wildlife Information Service
VAHU	Virginia Hydrologic Unit
VANLA	Virginia Natural Landscape Assessment
WOTUS	Waters of the United States

1.0 Executive Summary

On behalf of United States Solar Corporation (US Solar), TRC Environmental Corporation (TRC) conducted a Critical Issues Analysis (CIA) in support of the USS Staunton Solar Project (Project) positioned within Augusta County Parcel ID# 036 34P and within the Augusta County General Agriculture (GA) zoning district, located north of Quick's Mill Road and east of Limestone Road in an unincorporated area of Augusta County, Virginia. This CIA details a desktop review of known environmental and cultural resources within the vicinity of the Project. The vicinity refers to a two (2) mile buffer around the Study Area unless otherwise stated. A field study was conducted on the approximately 37.38-acre Study Area by TRC biologists on December 5, 2023. The Study Area includes the approximately 15-acre preliminary Project footprint and the surrounding parcel. The field study included an evaluation of potential habitat for threatened and endangered (TE) species, a delineation of Wetlands and Waters of the United States (WOTUS) and onsite work to support a Phase I Environmental Site Assessment (ESA). A **Wetland and Surface Waters Delineation Report** and **Phase I Environmental Assessment** are provided under separate covers. The following is an overall summary of major findings with an emphasis on potential development constraints:

OVERVIEW

- **TRC did not identify significant issues which could threaten or prohibit the development of the Project**.
-

WATER RESOURCES

- Field delineations found a single jurisdictional waterway, Falling Springs Run, and one associated Palustrine Emergent (PEM) Wetland. The wetland is presumed to be jurisdictional as well by TRC.

- An anthropogenic pond and associated drainage channel within the Study Area are presumed to be non-jurisdictional by TRC.

- TRC recommends a Preliminary Jurisdictional Determination (PJD) be obtained from the U.S. Army Corps of Engineers (USACE) if aquatic features are to be disturbed.

- Federal Emergency Management Agency (FEMA) 100-year floodplains are absent within the Study Area thus building restrictions related to floodplains will not apply to any development.

PROTECTED SPECIES

- There are nine (9) threatened or endangered (TE) species (northern long-eared bat, Indiana bat, tricolored bat, little brown bat, brook floater, tiger salamander, Bewick's wren, loggerhead shrike and migrant loggerhead shrike) and eight species of migratory birds which have a reasonable potential to utilize the site. As protected species could utilize the project site, coordination should be conducted with the appropriate regulatory agencies including the U.S. Fish and Wildlife Service (USFWS), Virginia Department of Wildlife Resources (VADWR) and Virginia Department of Conservation and Recreation (VADCR). These agencies are likely to impose tree clearing restrictions outside of winter months to protect roosting bats and breeding birds and/or targeted surveys to determine the presence or absence of protected species and their habitats.

- There are no known critical habitats for protected species or bat hibernacula within the Study Area.

- Suitable habitat for the proposed federally endangered tricolored bat is present within the Study Area. If listed additional consultation may be required.

FARMLAND CLASSIFICATION

- Approximately 74 percent of soils within the Study Area are classified as Farmland of Statewide Importance. Less than 0.01 percent of the Study Area is classified as Prime Farmland. The portion of the Study Area classified as Prime Farmland is outside of the proposed project footprint. Given the lack of Prime Farmland, coordination with NRCS may not be required if federal funding is used for the Project. Local ordinances may apply to the permanent conversion of Farmland of Statewide Importance.

LAND USE

- Ecological Cores intersecting the Study Area are of general quality. The VADCR defines Ecological Cores as areas of unfragmented natural cover with at least 100 acres of the interior providing a wide variety of habitats and recommends against developing these areas. General quality is the lowest rank issued for Ecological Cores by VADCR.

- The forest present within the Study Area has an average conservation value per the Virginia Department of Forestry (VADOF) Forest Conservation Value system. It is unlikely that VADOF will seek to preserve forested portions of the Study Area.

- There are no publicly owned lands or conservation easements within the Study Area. The Study Area is comprised entirely of privately owned property.

GEOLOGY

- Bedrock within the Study Area consists primarily of limestone and other karstic minerals. Although evidence of existing caves and sinkholes within the Study Area was not identified either during field surveys or the desktop review, three (3) sinkholes are documented within 1-mile of the Study Area, and the Study Area lies within a cave rich region. For this reason, a geotechnical investigation of the site is recommended to further evaluate potential geologic constraints.

TRANSPORTATION FACILITIES AND UTILITIES

- There are no public airports within five (5) miles of the Study Area. FAA notification should not be required prior to land disturbance based on the findings of the FAA Notice Criteria Tool.

CULTURAL RESOURCES

- The need for coordination with the Virginia Department of Historic Resources (DHR) and need for cultural resource surveys is contingent upon municipal, county, state, and federal permitting requirements, some of which are beyond the scope of this report. Coordination may involve cultural resource surveys.

- There is a low potential for the presence of intact and significant cultural resources within the Study Area.

- There are no archaeological sites, historic properties, or cemeteries known to be within the Study Area.

- Three archaeological sites and six historic architectural properties are recorded within

one-half mile of the Study Area.

2.0 Introduction

US Solar proposes to construct the USS Staunton Solar Project (Project). The proposed Project consists of a solar array system to be constructed within an approximately 15-acre area of fallow agricultural land. The Study Area is wholly located within a 37.38-acre mixed agricultural tax parcel, identified as PIN: 036 89P. The physical address of the tax parcel is 820 Quick's Mill Road, Verona, Augusta County, VA. The site location is shown on satellite imagery, a topographic map, and a parcel map in **Appendix A Figure 1, Figure 2** and **Figure 3** respectively. A photo log depicting the site is included in **Appendix B**.

On behalf of US Solar, TRC has completed this Critical Issues Analysis (CIA) for the Project. The purpose of this CIA is to screen for factors that could constrain development activities or potentially delay the permitting process for developing a solar array within the Study Area. Constraints are evaluated using desktop analysis of wetlands, waterways, soils and farmland classifications, floodplains, special status plant and/or wildlife species, land use and public lands, geology, and airports. Our analysis is described and presented below.

3.0 Aquatic Resources

TRC completed a separate **Wetland and Surface Waters Delineation Report** documenting the aquatic resources within the Study Area and vicinity; please see this report for detailed information on aquatic resources. Otherwise, a brief summary of the findings is included below.

- There are two jurisdictional aquatic features within the Study Area. Falling Springs Run, which crosses the finger of the Study Area extending along Quick's Mill Road towards Limestone Road and one Palustrine Emergent (PEM) wetland, associated with Falling Springs Run are located within the Study Area.

- An anthropogenic pond is present within the northern portion of the Study Area. A channelized aquatic feature drains the pond to the north. TRC presumes that these anthropogenic features will not be considered jurisdictional by state and federal regulators.

- There are no hydric soils within the Study Area.

- There are no FEMA-mapped floodplains within the Study Area. The closest mapped floodplain is associated with the Middle River and is located approximately 0.10 miles northeast of the site.

- If disturbances to aquatic features cannot be avoided, TRC recommends US Solar obtain a Preliminary Jurisdictional Determination to obtain a non-binding statement from the USACE regarding the jurisdictional statues of resources within the Study Area.

4.0 Protected Species

A list of protected species and their habitats potentially occurring in the Study Area was generated from publicly available databases maintained by the United States Fish and Wildlife Service (USFWS), Virginia Department of Wildlife Resources (VADWR) and Virginia Department of Conservation Resources (VADCR). This list was then screened against the available habitat occurring within the Study Area as identified during the field investigation to determine the likelihood that these species inhabit the Study Area.

4.1 Federally and State Listed Threatened and Endangered Species

4.1.1 Desktop Resources

The USFWS' Information, Planning, and Conservation (IPaC) Tool, which provides information on federally listed threatened and endangered species, was utilized to identify potential federal threatened and endangered species within the Study Area.

The VADWR's Virginia Fish and Wildlife Information Service (VAFWIS) Biota of Virginia (BOVA) database was queried to identify state-listed threatened and endangered species potentially occurring within the Study Area and define their habitat requirements. The VADWR's Wildlife Environmental Review Map Service (WERMS) was utilized to identify specific observation locations where listed and declining species and their habitats have been documented as well as the locations of trout streams, waterbird nesting colonies, anadromous fish use areas, and natural heritage resources. Natural heritage resources are defined as the habitat of rare, threatened, and endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations. WERMS data within two (2) miles of the Study Area is depicted in **Appendix A Figure 4**.

The VADCR Natural Heritage Database Explorer was utilized to generate a list of federal and state-listed plants potentially occurring within the watershed encompassing the Project, the Middle River – Falling Springs Run watershed. The Natural Heritage Database Explorer does not support TE species queries at specific locations without a formal review.

4.1.2 Results and Agency Recommendations

The USFWS official IPaC report (**Appendix C**) lists five (5) species as potentially occurring in the Study Area and/or vicinity; the northern long-eared bat (*Myotis septentrionalis,* federally endangered), the Indiana bat (*Myotis sodalis*, federally endangered), the tricolored bat (*Perimyotis subflavus*, proposed endangered) the Madison Cave Isopod (*Antrolana lira*, federally threatened), and the monarch butterfly (*Danaus plexippus,* candidate). The IPaC report found no critical habitat for federally threatened or endangered species within the Study Area.

Northern long-eared bats, Indiana bats, and tricolored bats all roost underneath bark, in cavities, or crevices of both live and dead trees, masses of dead leaves; and rarely structures such as barns and sheds. During the roosting season, northern long-eared bats show a preference for mature forested areas with moderate to high clutter in the midstory. Conversely, Indiana bats show a roosting preference for open habitats with scattered mature trees such as hardwood savannas, but Indiana bats will utilize other forested habitats with mature trees and low midstory clutter. The habitat preferences of tricolored bats are not as well understood as the other bat species listed, but tricolored bats are most often documented along forested edges and near bodies of water.

Winter (hibernating) habitat for all three (3) bat species is typically within large caves or mines with large passages and entrances, constant temperatures, and high humidity with no air currents. No cave entrances were observed during a site visit, but the Study Area is located in a cave-rich area.

WERMS provided observations of both tricolored bats and northern long-eared bats within five (5) miles of the Study Area. Forested portions of the Study Area may provide suitable summer roosting habitat for listed bat species.

The USFWS Determination Key provided a may affect - not likely to adversely affect determination

for the northern long-eared bat (**Appendix C**). Determination keys are species-specific tools designed to assist in project planning. Determination keys were not available for the other species listed by IPaC.

The USFWS is currently evaluating the tricolored bat for listing as an endangered species. Additional coordination with USFWS may be required if the tricolored bat is listed.

Maps of known roosts and hibernacula are available for the Northern long-eared bat, tricolored bat, and state-protected little brown bat (*Myotis lucifugus*) from VADCR (**Appendix C**). The Indiana bat is comparatively poorly documented within the State, and no such maps are available for this species.

The Madison Cave isopod is a freshwater isopod found exclusively in flooded limestone caves. This species utilizes calcite-saturated karst aquifers and flooded caverns. Subterranean surveys are beyond the scope of this report, but no cave entrances were identified within the Study Area during the site visit. No readily available information suggests that a cave system exists below the Study Area, though TRC cannot completely rule out the possibility without a geotechnical survey. Based on available data, TRC does not believe the Madison Cave isopod is present within the Study Area. Additionally, given the nature of the project, it appears unlikely the proposed project would impact cave ecosystems.

Larvae of monarch butterflies are obligate feeders of their host plant, milkweed (*Genus Asclepias*). The presence of milkweed is necessary for monarch butterfly reproduction. Milkweed can grow in a variety of habitats, but the most common species in Virginia grow in full sun and well-draining soils. No milkweed was observed during the site visit, though the visit was conducted outside of the growing season for this genus. Sunny, upland, portions of the Study Area likely provide suitable habitat for the most common milkweed species. The monarch butterfly is a candidate for listing for USFWS and not protected by the State of Virginia. USFWS requests suitable habitat for monarch butterfly containing areas of wildflowers containing milkweed, be preserved where possible. This is not an enforceable regulation, and there are no penalties for impacting monarch butterfly habitat.

The VAFWIS BOVA database yielded 14 state or federally protected wildlife species potentially occurring within a 2-mile radius of the Study Area (A 2-mile radius is the minimum search criteria for those with a subscription to the BOVA information service) (**Appendix C**). Table 1 includes a complete species list from the BOVA search.

To produce a list of protected vascular plant species with the potential to occur in the Study Area, the VADCR Natural Heritage Database Explorer was queried for watersheds within two (2) miles of the Study Area. This consists of a single sub-watershed, Middle River-Falling Springs Run (Hydrologic Unit Code [HUC]12 020700050302, Virginia Hydrologic Unit [VAHU]6 PS07). No endangered vascular plant species were identified within the watershed. This database does not provide a readily reproducible output if no species results are obtained.

According to the WERMS database, one (1) protected recorded species observations, potential habitat, or natural heritage resources were documented within two (2) miles of the Study Area. This observation was for the state-threatened loggerhead shrike. This observation was made approximately one (1) mile northeast of the Study Area. A WERMS Map has been included in **Appendix A Figure 4**.

TRC conducted a site visit in December of 2023 to evaluate the likelihood that protected species are utilizing the Study Area based on the available habitat documented therein. Table 1 below is

a comprehensive list of species potentially occurring within two (2) miles of the Study Area and is compiled from the previously described USFWS, VADCR, and VADWR databases. The table is annotated according to the likelihood that each species could be found within the Study Area based on available habitat.

Table 1: VAFWIS List of Wildlife & Plant Species Potentially within 2 miles of the Study Area

Species	State Status	Federal Status	Habitat Requirements	Potential to Occur in Study Area
Rusty patched bumble bee (*Bombus affinis*)	None	E	Occupy tall grass prairies and grasslands. The species requires constant supply of wildlife flowers to feed upon. Colonies are constructed in rodent burrows. This species hibernates underground in winter in these rodent burrows.	Unlikely to occur Open areas appear managed for lawn grasses and lack areas rich with wildflowers.
Northern long-eared bat (*Myotis septentrionalis*)	T	E	This species hibernates in caves and mines in winter. In the active season they roost in tree cavities or loose bark. These bats will also roost in snags. Rarely uses manmade structures such as barns or homes. Foraging habitat consists of forested areas with moderate to high canopy clutter. The nearest northern long-eared bat hibernaculum is approximately 12.5 miles to the northwest of the Study Area. A roost observation has been made approximately 15.5 miles northeast of the Study Area. WERMS documented an observation of this species within 5 miles of the Study Area.	May occur The forested portion of the Study Area may provide suitable habitat for this species. USFWS determination key gave a may affect – not likely to adversely affect determination for this species.
Madison Cave isopod (*Antrolana lira*)	T	T	Madison Cave isopods are a troglobitic species found in flooded cave systems and aquifers with high concentrations of dissolved calcite.	Does not occur The surrounding area is cave-rich, but no caves are known to be present within the Study Area.
Little brown bat (*Myotis lucifugus*)	E	None	This species hibernates in caves and mines. During active season, roosts consist of cavities or loose bark on trees and snags. This species will readily use manmade structures such as barns and houses for roosting. The little brown bat will forage in a wide variety of habitats. The nearest little brown bat hibernaculum is located approximately 12.5 miles northwest of the Study Area. WERMS documented species observations within 5 miles of the Study Area.	May occur Forested portions of the Study Area may provide suitable summer roosting habitat. No cave entrances are present within the Study Area.
Tricolored bat (*Perimyotis subflavus*)	E	P	This species hibernates in caves and mines. Active season roosts consist of cavities or loose bark on trees and snags or in masses of dead leaves. This species rarely uses manmade structures such as	May occur The forested portion of the Study Area may provide suitable habitat for this species. No

Species	State Status	Federal Status	Habitat Requirements	Potential to Occur in Study Area
			barns or houses. The species forages along wooded edges of fields and over streams. The nearest hibernaculum for tricolored bats is located approximately 15.5 miles northwest of the Study Area.	cave entrances are present within the Study Area.
Brook floater (*Alasmidonta varicosa*)	E	None	This species lives in flowing streams. Can utilize a variety of substrate material (clay, gravel, sand) if the materials can provide a suitable anchorage. Species is particularly vulnerable to fatality if dislodged from the substrate.	May occur Potential habitat is limited to a single waterway, Falling Springs Run, which crosses the Study Area. The proposed Project layout avoids Falling Springs Run.
Eastern tiger salamander (*Ambystoma trigrinum*)	E	None	Terrestrial adults can be found in a variety of habitats if suitable substrate for burrowing is present. Breeding requires ponds or temporary pools.	May occur The single anthropogenic pond could provide suitable breeding habitat for this species. The proposed Project layout avoids this pond.
Bewick's Wren (*Thryomanes bewickii*)	E	None	In the eastern US, this species utilizes high-elevation pastureland, wood lots, and brushland. Nests are made in tree cavities and terrestrially in exposed tree roots. Will use manmade structures.	May occur Suitable habitat may be present within the Study Area.
Peregrine falcon (*Falco peregrinus*)	T	None	This species nests on tall trees, cliff walls, or tall buildings. Forage in areas with concentrations of prey such as over ponds or farm fields.	Unlikely to occur No suitable nesting structures are present.
Loggerhead shrike (*Lanius ludovicianus*)	T	None	This species utilizes shrub-scrub savannas, open woodlands, and abandoned agricultural fields. Nests in shrubs or small trees or in hedgerows. Thorny plants or barbed wire are utilized during hunting. WERMS documented an observation of this species within two (2) miles of the Study Area.	May occur Suitable nesting habitat present within the Study Area.
Appalachian grizzles skipper (*Prygus wyandot*)	T	None	Found in barren areas adjacent to pine forests. Larvae feed on the host plant dwarf cinquefoil (*Potentilla canadensis*), a somewhat common weedy plant often associated with poor soil quality.	Does not occur Barren habitats are not present.

Species	State Status	Federal Status	Habitat Requirements	Potential to Occur in Study Area
			This species is vulnerable to pesticides intended to control agricultural pests such as spongy moths.	
Madison Cave amphipod (*Stygobromus stegerorum*)	T	None	This species is an aquatic troglobitic species. Little additional information on habitat needs is available for this species.	Does not occur The surrounding area is cave-rich, but no caves are present within the Study Area.
Migrant loggerhead shrike (*Lanius ludovicianus migrans*)	T	None	Habitat requirements like those of the loggerhead shrike. Observation for the loggerhead shrike obtained from WERMS could be the migrant sub-species.	May occur Suitable habitat is present within Study Area.
Monarch butterfly (*Danaus plexippus*)	None	C	Obligate feeder of milkweed plants. Milkweed typically grows in full sun and fast-draining soils.	Unlikely to occur Milkweed was not observed during the site visit.

E= Endangered, T=Threatened, C= Candidate, P= Proposed

Of the 14 listed species identified as potentially occurring within two (2) miles of the Study Area, eight (8) are threatened or endangered and have a reasonable potential to be found therein based on the field habitat assessment; northern long-eared bat, tricolored bat, little brown bat, brook floater, tiger salamander Bewick's wren, loggerhead shrike and migrant loggerhead shrike. Potential impacts to the northern long-eared, tricolored, and little brown bat and their habitats could be mitigated by conducting any required tree or structure removal within a USFWS time-of-year restriction period (TOYR), April 1 through November 15. Similarly, impacts to the loggerhead shrike, migrant loggerhead shrike, and Bewick's wren and their habitats could be reduced by conducting any clearing activities outside of a typical nesting season occurring between March 15 and September 10.

4.2 Migratory Birds and Bald and Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require the development of an eagle conservation plan.

The USFWS IPaC tool and the Center for Conservation Biology's Virginia Eagle Nest Locator were utilized to determine whether known bald and golden eagle nests or habitat are mapped in the vicinity of the Study Area (**Appendix C**). The IPaC report did not identify bald or golden eagle concentration areas or nests within the vicinity of the Study Area. According to the Eagle Nest Locator, the closest documented Bald Eagle nests are approximately 6.5 miles east, and 11.3 miles to the southwest.

Bald eagles generally require large bodies of water and/or substantial wetland habitats supporting an abundance of fish species and no such resources were identified within the Study Area. As such, bald eagles are unlikely to nest or forage in the Study Area. The closest suitable waterbody

for foraging is Middle River, approximately 0.20 miles northeast of the Study Area. No eagles or eagle nests were observed during the site visit.

The IPaC report identifies eight (8) migratory bird species (including the bald eagle) as having the potential to utilize the Study Area and these are listed in Table 2 below. TRC expects suitable habitat for some of these migratory bird species to be present in the wooded portions of the Study Area. Given the potential presence of suitable habitat for at least some migratory bird species, clearing restrictions could be imposed or recommended by the USFWS. In Virginia, the USFWS generally recommends that clearing of non-agricultural land be conducted outside of the spring nesting season which is approximately March 15 for the earliest species and Sept 10 for the latest breeding species per the IPaC.

Table 2: US IPaC List of Migratory Bird Species Potentially within 3 miles of the Study Area

Species	Preferred Breeding Habitat	Breeding Season
Bald eagle *(Haliaeetus leucocephalus)*	Forested areas adjacent to large bodies of water.	Sept 1 to Aug 31
Black-billed cuckoo *(Coccyzus erythrpthalmus)*	Forest edges, moist thickets, overgrown pastures, deciduous or evergreen shrub-scrub.	May 15 to Oct 10
Black-capped chickadee *(Poecile atricapillus practicus)*	Mixed forests, old fields, mixed deciduous and conifer forests, shrubland, orchards, and wooded suburban areas.	Apr 10 to Jul 31
Chimney Swift *(Chaetura peligica)*	Cosmopolitan, utilizing rural and urban environments. Pasture lands, wooded edges, and riparian edges. Requires suitable nest cavities, generally tree cavities, snags, or man-made structures.	Mar 15 to Aug 25
Eastern whip-poor-will (*Antrostomus vociferus*)	Open woodlands with well-spaced canopy. Rarely utilizes mature woodlands.	May 1 to Aug 20
Prairie warbler *(Dendroica discolor)*	Mixed pine-oak barrens, scrub, old pastures and fields, and dry hillsides.	May 1 to July 31
Red-headed woodpecker *(Melanerpes erythrocephalus)*	Deciduous forests with oak or beech, groves of dead or dying trees, river bottoms, clearings, beaver swamps, farmland, grasslands with scattered trees, forest edges, and roadsides.	May 10 to Sep 10
Wood thrush *(Hylocichla mustelina)*	Deciduous or mixed forests with a dense tree canopy and a well-developed deciduous understory, especially where moist.	May 10 to Aug 31

5.0 Farmland Classification

The Farmland Protection Policy Act (FPPA) is intended to minimize the effect that federal programs have on the unnecessary and irreversible conversion of farmland to non-agricultural uses, including solar projects. Farmland classifications include prime farmland, unique farmland, and farmland of statewide or local importance. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a federal agency or with assistance from a federal agency. Less than 0.01 percent of the soils mapped within the Study Area are designated as prime farmland; however, 74.5 percent of the Study Area is classified as Farmland of Statewide Importance. If federal funding for Project construction is obtained, consultation with the NRCS under the FPPA could be required using Form AD-1006. Given that the portion of the Study Area classified as Prime Farmland is not within the proposed project footprint, such coordination may not be required if federal funding is obtained. Local ordinances may apply to the permanent conversion of farmland of statewide importance. Farmland classification for individual soil types is shown on the NRCS Soil Map included in **Appendix A Figure 5.**

6.0 Land Use, Public and Conservation Land

TRC reviewed aerial photos and public information available on the State of Virginia's Conservation Lands Database to determine locations and extent of public and conservation lands in and near the Study Area. TRC reviewed the available recreation data for public protected lands and state nature preserves to identify this information.

Current land use within the Study Area is primarily composed of fallow agricultural land dominated by managed grass-dominated areas with scattered hardwoods and conifers. The northern portion of the Study Area is more forested, with mixed hardwoods and pines. Within a one-mile radius of the proposed Study Area, other primary land uses include agricultural, rural residential, churches, state roads, and commercial businesses.

According to a review of the Virginia Conservation Lands Database, the Study Area is not located within or in the general vicinity of any federal, state, local, or non-profit conservation lands. No state-designated scenic rivers, highways, or trails are located within or adjacent to the Study Area. There are two (2) conservation easements within five (5) miles of the Study Area. These easements are located approximately 2.14 miles east and 2.75 southwest of the Study Area. The nearest public conservation land is the Augusta Forestry Center, managed by the Virginia Department of Forestry (VADOF). The Augusta Forestry Center is located approximately nine (9) miles east of the Study Area. Shenandoah National Park is located approximately 11 miles east of the Study Area.

The Study Area is located within EPA Level III Ecoregion 67 – Ridge and Valley. This is a diverse ecoregion that is relatively flat and low-lying compared to other parts of Appalachia. The terrain was defined primarily by glaciation. Bedrock consists primarily of sedimentary limestone and dolomite. Natural vegetation was historically predominated by oak-pine-hickory forests. Agriculture has displaced much of these forested areas.

The VADCR Natural Heritage Database Explorer was utilized to determine Forest Conservation Values and Ecological Cores within the vicinity of the Project. The forested land within the Study Area is classified as having an average conservation value by the VADOF. Ecological Cores are defined by VADCR's Virginia Natural Landscape Assessment (VANLA) as areas of unfragmented, natural, cover of at least 100 acres and providing a habitat for a broad variety of wildlife. Ecological Cores within the Study Area are ranked as having a general value. General is the lowest-ranking

VANLA issues Ecological Cores. VADOF and VANLA will seek to work with stakeholders to conserve areas of high conservation value and/or high-quality Ecological Cores.

No tribal lands are located within the general vicinity of the Study Area.

7.0 Geology

TRC reviewed the information available on The Virginia Department of Mines Minerals and Energy: Division of Geology and Mineral Resources (VADGMR) and the US Geological Survey: Association of American State Geologist website map viewer to determine the location and extent of geologic features in and near the Study Area. Bedrock in the vicinity of the Study Area consists of dolostone, a karstic mineral.

Sinkholes are common within the area, with three (3) identified by VADGMR within one (1) mile of the Study Area, all located near Thacker's Hallow to the north. Over a dozen sinkholes, some relatively large, have been reported to VADGMR west of the Study Area near Berry Lane, approximately 1.5 miles away. Caves are common in the general vicinity, but no mapped caves have been identified within the Study Area. A Geological Features Map has been included as **Appendix Figure 6**.

Based on the local commonality of sinkholes and the presence of karstic bedrock, TRC recommends a geotechnical survey be completed within the Study Area to identify potential geological concerns.

No mines or quarries were identified within or adjacent to the Study Area. The nearest active mine or quarry is the Rockydale – Staunton & Belmont Quarry approximately five (5) miles south of the Study Area.

8.0 Transportation Facilities and Utilities

The Federal Aviation Administration's Circle Search for Airport online tool found no airports within five (5) miles of the Study Area. The FAA Notice Criteria Tool was queried to determine if coordination with the FAA would be required for this project. Based on the FAA Notice Criteria Tool, coordination with the FAA should not be required for this project. The complete findings of the FAA Notice Criteria Tool have been included in **Appendix D**.

9.0 Cultural Resources

TRC conducted a review of data regarding previously recorded archaeological and historic architectural resources and studies within one-half mile of the Study Area through the Virginia Department of Historic Resources (DHR) online database (V-CRIS), as well as published and unpublished sources of historical and environmental data pertinent to the Study Area (including historical maps, soil survey data, topographic maps, aerial photographs, property records, cemetery censuses, etc.).

V-CRIS shows no cultural resources within the Study Area but three previously recorded archaeological sites, six previously recorded historic architectural properties, and one previously conducted cultural resources survey are recorded within one-half mile of the Study Area (**Appendix A Figure 7**). Please note for Figure 7 that as archaeological sites may be at risk for looting and vandalism, location data for these are exempt from the Virginia Freedom of Information Act §2.2-3705.7 and they should not be depicted on any figures that will be distributed to the public. The archaeological sites include a prehistoric site that produced temporally diagnostic artifacts associated with the Early Archaic through Late Woodland periods and was

initially recorded in 1960 but field verified in 2021 (44AU0007), a scatter of historic artifacts dating from the eighteenth through late twentieth centuries (44AU0737) that is associated with the John Poage House (007-0088), and a grist mill known as Thacker's Mill that dates from the early nineteenth through mid-twentieth centuries (44AU0882); none of these has been evaluated for the National Register of Historic Places (NRHP) by the DHR. The historic architectural properties consist of the ca. 1830 Mowry House and associated outbuildings (007-0085), the ca. 1750 John Poage House and associated outbuildings (007-0088), the ca. 1840 Fletcher Collins House and associated outbuildings (007-0329), the ca. 1876 Jenny Poage Wilson House (007-1002), the 1926 Augusta County Bridge No. 6288 (007-5051), and the 1926 Augusta County Bridge No. 6358 (007-5052) (**Appendix A Figure 7**). The Mowry House property would have a view of the Study Area, but it is not clear if other properties would also be within the Project's viewshed due to intervening vegetation. The Mowry House property was visited in May 2023 by the DHR Western Region architectural historian as technical assistance for the landowner and was recommended not eligible for the NRHP based on that survey, but a final eligibility determination has not been made. Both bridges have been determined not eligible for the NRHP by the DHR, but the remaining properties have not been evaluated for the NRHP by the DHR.

An archaeological survey (AU-065) was conducted for proposed improvements to Route 626 (Limestone Road) for the Virginia Department of Transportation in 2000 and covered a small section along Quick's Mill Road on both sides of the intersection close to the Study Area (**Appendix A Figure 7**). Historic aerial photographs show structures located in the Study Area along Quick's Mill Road that were in place sometime in the mid-twentieth century, had been abandoned by 2011, and were fully demolished by 2021. There are no indications of a cemetery in the Study Area.

The Study Area has a limited potential for containing intact prehistoric period archaeological sites due to eroded soil conditions and steeply sloped landforms, but the area surrounding the location of the former older structure along Quick's Mill Road has some potential for containing intact historic period deposits associated with that occupation, although those deposits if present are not likely to be significant.

10.0 Preliminary Environmental Risk Assessment

TRC obtained an Environmental Database Resources, Inc. (EDR) report to identify any major fatal flaws within and immediately surrounding the site. Additionally, a site visit occurred in December 2023 to identify any obvious environmental issues. A review of the EDR Radius Report found no major issues with environmental contamination or risk. Given that the portions of the Study Area and adjacent areas may have been used for agriculture, the presence of herbicides and pesticides cannot be ruled out. There is no reason to believe these chemicals occur on-site at levels beyond what is expected in an agricultural setting based on available information. A full Phase I ESA and EDR report have been provided by TRC under a separate cover.

11.0 Potentially Required Additional Field Studies

The following additional field studies may be necessary to assure regulatory compliance with state and federal agencies and to confirm the findings of this study:

- Phase I Cultural Resources Survey, if the regulatory agency (DHR) requires it.
- Further assessment for listed species (presence/absence survey), if USFWS and/or VA DWR requires it.

- Geotechnical survey to determine the geological stability of the Study Area.

12.0 Cultural Resources Risk Assessment

A cultural resource risk assessment was completed and is provided under Appendix E. Overall, the Project is considered to have a low risk for the potential to affect NRHP eligible historic architectural properties. Whether consultation with the DHR and/or cultural resources surveys of any type will be required for this project is contingent upon the permits required (federal, state, or county).

13.0 Critical Issues Summary

Additional studies and adherence to permit requirements (such as measures to avoid and minimize impacts in compliance with applicable regulations) may be required for the Project; however, no constraints for the Project were identified that would pose a significant issue for the development of the Project. TRC anticipates the need for federal, state, and local permits, coordination with agencies for listed species, and coordination with the DHR for potential cultural resources.

14.0 References

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Appendix A:

Figures

Figure 1 – Site Location Map (Aerial)

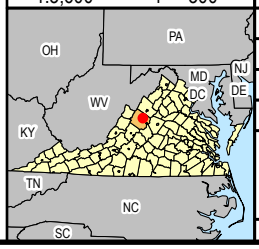


PROJECT AREA
PROJECT FOOTPRINT
PARCELS

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER
IMAGERY DATE : 11/04/2018
DATA SOURCES: TRC, ESRI, VIRGINIA PARCEL SERVICE

N

0 150 300
FEET
1:3,600 1" = 300'



PROJECT: **US SOLAR**
STAUNTON SOLAR PROJECT
AUGUSTA COUNTY, VIRGINIA

TITLE: **PARCEL MAP**

DRAWN BY:	H. BEST	PROJ. NO.:	576550
CHECKED BY:	R. SPRING		
APPROVED BY:	P. KIENZLER		
DATE:	DECEMBER 2023		

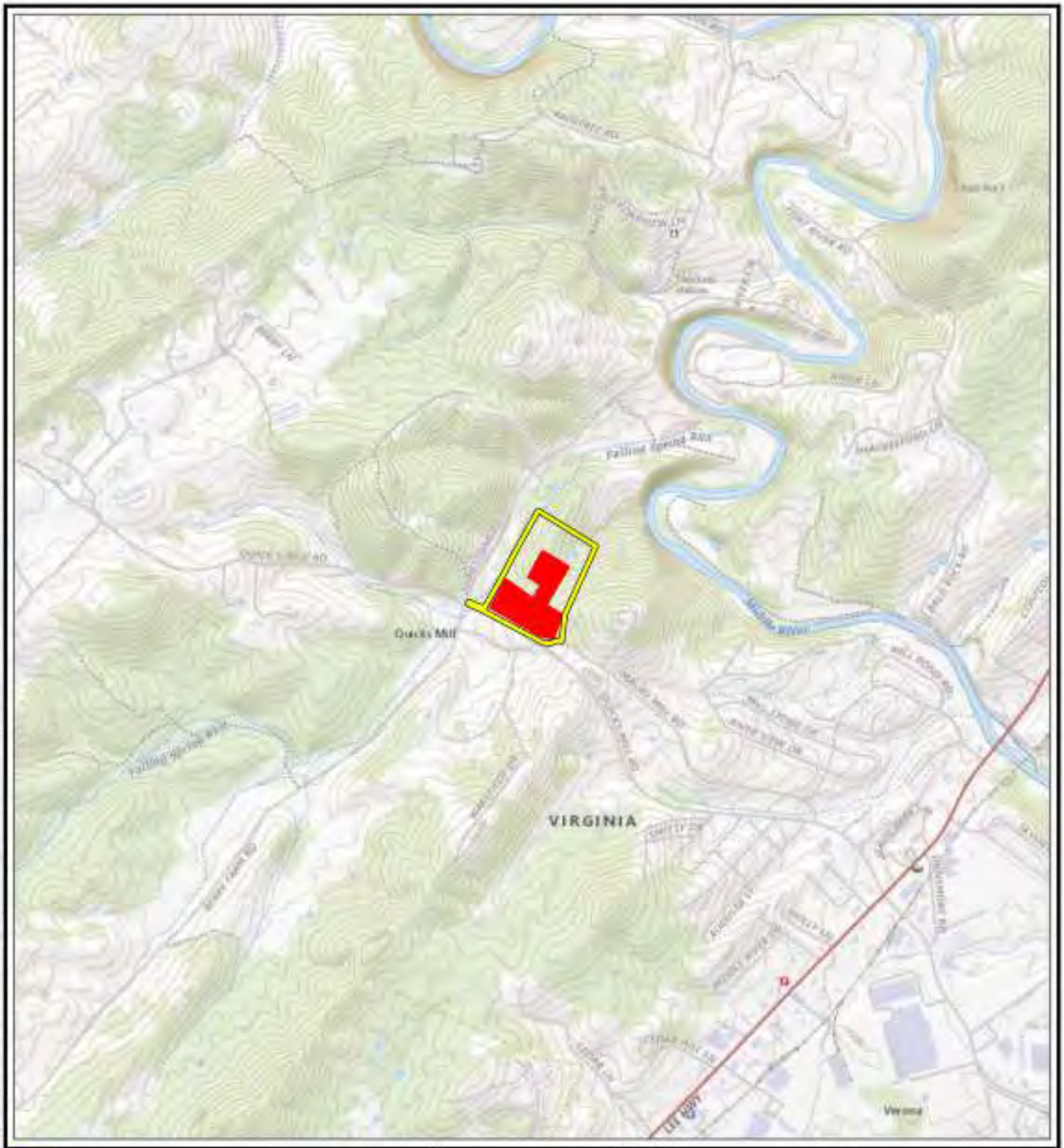
FIGURE 3

TRC
1030 WILMER AVE
STE. 100
RICHMOND, VA 23227
PHONE: 804.264.2228

FILE: STAUNTON_SOLAR

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE VIRGINIA NORTH FIPS 4501 FT US; MAP ROTATION: 0
-- SAVED BY: HBEST ON 12/22/2023, 09:07:05 AM -- FILE PATH: \\EMPLOYEES\GIS\ARCGIS\PRO\1-PROJECTS\US_SOLAR\576550_STAUNTON\2-APRX\STAUNTON_SOLAR.APRX -- LAYOUT NAME: CIA FIG 3 PARCEL

Figure 2 – Site Location Map (USGS)



PROJECT AREA

PROJECT FOOTPRINT

0 1,000 2,000

FEET

1:24,000 1" = 2,000'

PROJECT: **US SOLAR**

STAUNTON SOLAR PROJECT
AUGUSTA COUNTY, VIRGINIA

TITLE: SITE LOCATION MAP (USGS)

DRAWN BY:	H. BEST	PROJ. NO.:	576550
CHECKED BY:	R. SPRING		
APPROVED BY:	P. KIENZLER		**FIGURE 2**
DATE:	DECEMBER 2023		

BASE MAP: ESRI "USGS TOPO" ONLINE SERVICE LAYER
USGS 7.5' QUADRANGLE: STAUNTON, VIRGINIA
DATA SOURCES: TRC, ESRI, USGS

TRC
1030 WILMER AVE
STE. 100
RICHMOND, VA 23227
PHONE: 804.264.2228

FILE: STAUNTON_SOLAR

Figure 3 – Parcel Map

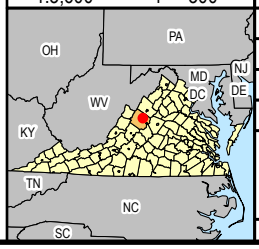


PROJECT AREA
PROJECT FOOTPRINT
PARCELS

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER
IMAGERY DATE : 11/04/2018
DATA SOURCES: TRC, ESRI, VIRGINIA PARCEL SERVICE

N

0 150 300
FEET
1:3,600 1" = 300'



PROJECT: **US SOLAR**
STAUNTON SOLAR PROJECT
AUGUSTA COUNTY, VIRGINIA

TITLE: **PARCEL MAP**

DRAWN BY:	H. BEST	PROJ. NO.:	576550
CHECKED BY:	R. SPRING		
APPROVED BY:	P. KIENZLER		
DATE:	DECEMBER 2023		

FIGURE 3

TRC
1030 WILMER AVE
STE. 100
RICHMOND, VA 23227
PHONE: 804.264.2228

FILE: STAUNTON_SOLAR

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE VIRGINIA NORTH FIPS 4501 FT US; MAP ROTATION: 0
-- SAVED BY: HBEST ON 12/22/2023, 09:07:05 AM -- FILE PATH: \\EMPLOYEES\GIS\ARCGIS\PRO\1-PROJECTS\US_SOLAR\576550_STAUNTON\2-APRX\STAUNTON_SOLAR.APRX -- LAYOUT NAME: CIA FIG 3 PARCEL

Figure 4 – WERMS Map



PROJECT BOUNDARY
2-MILE BUFFER
SPECIES OBSERVED
STATE THREATENED

0 2,000 4,000
FEET
1:48,000 1" = 4,000'

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER
IMAGERY DATE : 11/04/2018
DATA SOURCES: TRC, ESRI, WERMS

PROJECT: US SOLAR
STAUNTON SOLAR PROJECT
AUGUSTA COUNTY, VIRGINIA

TITLE: WERMS MAP

DRAWN BY:	H. BEST	PROJ. NO.:	576550
CHECKED BY:	R. SPRING		
APPROVED BY:	P. KIENZLER		FIGURE 4
DATE:	DECEMBER 2023		

TRC
1030 WILMER AVE
STE. 100
RICHMOND, VA 23227
PHONE: 804.264.2228

FILE: STAUNTON_SOLAR

Figure 5 – NRCS SSURGO Soils Map



SYMBOL	MAP UNIT NAME	DRAINAGE CLASS	HYDRIC RATING	FARMLAND CLASS	ACRES
39	FLUVAQUENTS, NEARLY LEVEL	POORLY DRAINED	95	NOT PRIME FARMLAND	0.277
40C2	FREDERICK-CHRISTIAN SILT LOAMS, 7 TO 15 PERCENT SLOPES, ERODED	WELL DRAINED	0	FARMLAND OF STATEWIDE IMPORTANCE	9.555
40D2	FREDERICK-CHRISTIAN SILT LOAMS, 15 TO 25 PERCENT SLOPES, ERODED	WELL DRAINED	0	FARMLAND OF STATEWIDE IMPORTANCE	4.022
42C2	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS, 7 TO 15 PERCENT SLOPES, ERODED	WELL DRAINED	0	FARMLAND OF STATEWIDE IMPORTANCE	2.879
42D2	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS, 15 TO 25 PERCENT SLOPES, ERODED	WELL DRAINED	0	FARMLAND OF STATEWIDE IMPORTANCE	11.248
42E2	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS, 25 TO 45 PERCENT SLOPES	WELL DRAINED	0	NOT PRIME FARMLAND	6.372
60	MASSANETTA SILT LOAM	MODERATELY WELL DRAINED	2	ALL AREAS ARE PRIME FARMLAND	0.007
65E	OPEQUON-ROCK OUTCROP COMPLEX, 7 TO 45 PERCENT SLOPES	WELL DRAINED	0	NOT PRIME FARMLAND	0.418
70E	ROCK OUTCROP-FREDERICK COMPLEX, STEEP		0	NOT PRIME FARMLAND	2.401
W	WATER		0	NOT PRIME FARMLAND	0.201

PROJECT AREA

PROJECT FOOTPRINT

NRCS SSURGO SOIL BOUNDARY

NON-HYDRIC SOIL

PREDOMINANTLY NON-HYDRIC SOIL

PREDOMINANTLY HYDRIC SOIL

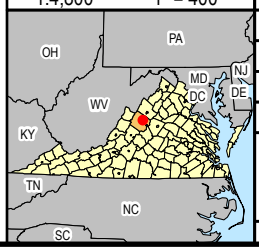
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER
IMAGERY DATE : 11/04/2018
DATA SOURCES: TRC, ESRI, NRCS SSURGO

N

0 200 400

FEET

1:4,800 1" = 400'



PROJECT:

US SOLAR

STAUNTON SOLAR PROJECT
AUGUSTA COUNTY, VIRGINIA

TITLE:

NRCS SSURGO SOILS MAP

DRAWN BY:	H. BEST	PROJ. NO.:	576550
CHECKED BY:	R. SPRING		
APPROVED BY:	P. KIENZLER		**FIGURE 5**
DATE:	DECEMBER 2023		

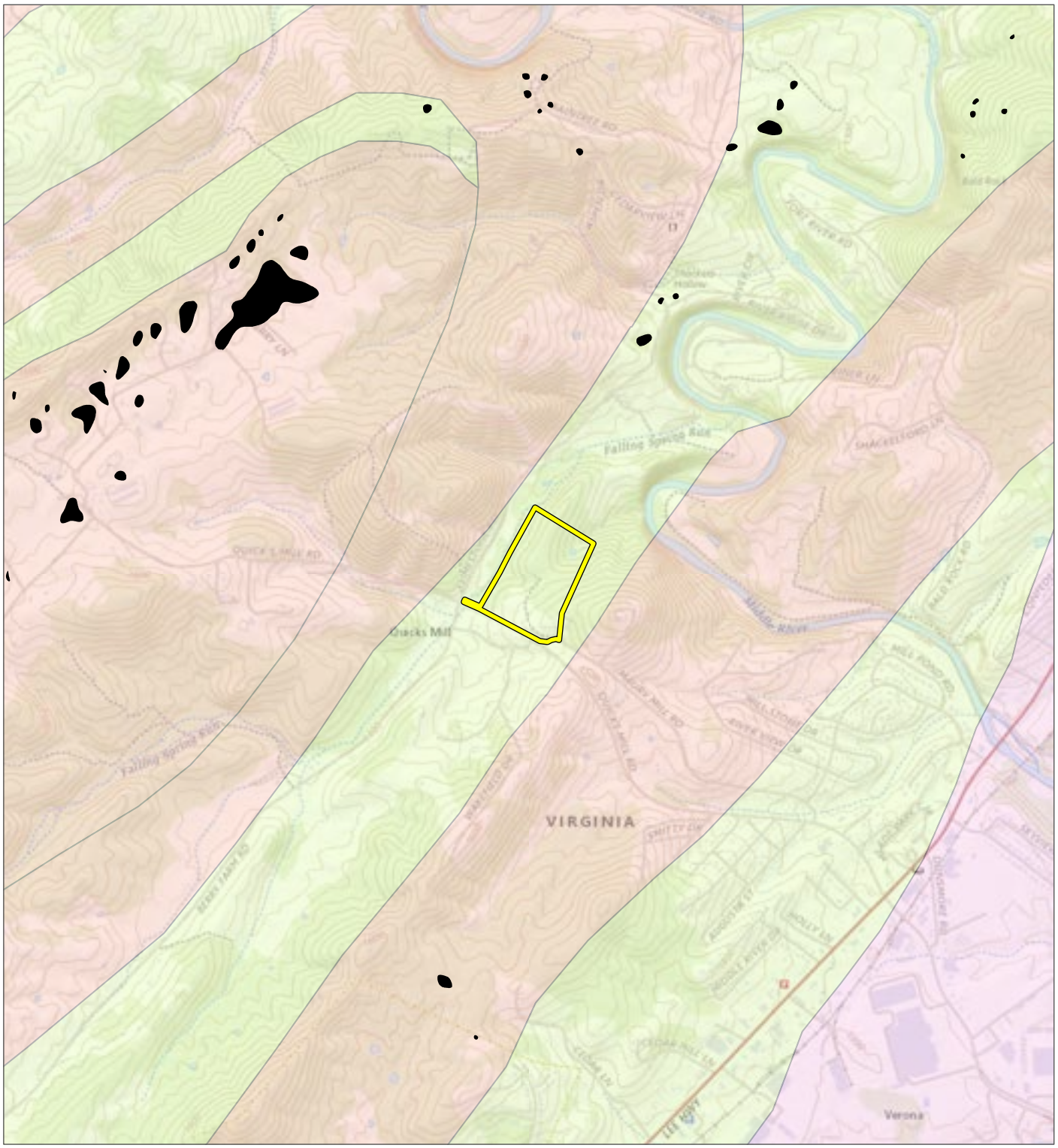
TRC

1030 WILMER AVE
STE. 100
RICHMOND, VA 23227
PHONE: 804.264.2228

FILE: STAUNTON_SOLAR

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE VIRGINIA NORTH FIPS 4501 FT US; MAP ROTATION: 0
-- SAVED BY: HBEST ON 12/22/2023, 09:07:05 AM; FILE PATH: \\EMPLOYEES\GIS\ARCGISPRO\1-PROJECTS\US_SOLAR\576550_STAUNTON\2-APRX\STAUNTON_SOLAR.APRX; LAYOUT NAME: CIA FIG 5 SOIL

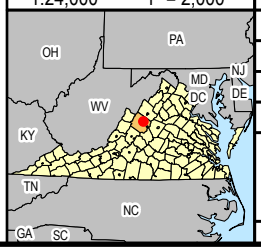
Figure 6 – Geological Map



PROJECT BOUNDARY
SINKHOLES
DOLOSTONE (DOLOMITE)
LIMESTONE
SHALE

N

0 1,000 2,000
FEET
1:24,000 1" = 2,000'



BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER
IMAGERY DATE : 11/04/2018
DATA SOURCES: TRC, ESRI, VIRGINIA DEPARTMENT OF ENERGY

PROJECT: **US SOLAR**
STAUNTON SOLAR PROJECT
AUGUSTA COUNTY, VIRGINIA

TITLE:
GEOLOGICAL MAP

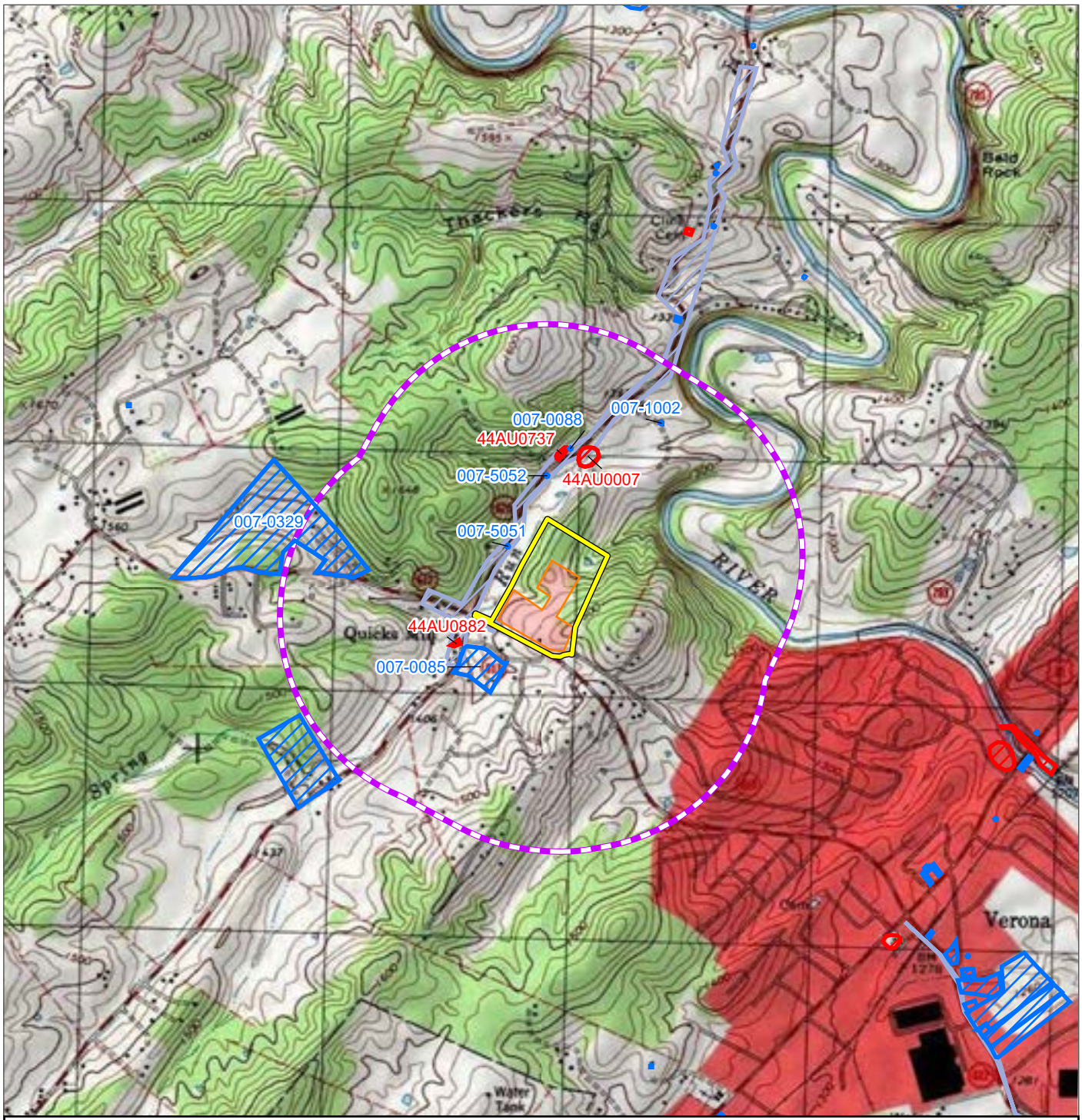
DRAWN BY:	H. BEST	PROJ. NO.:	576550
CHECKED BY:	R. SPRING		
APPROVED BY:	P. KIENZLER		**FIGURE 6**
DATE:	DECEMBER 2023		

TRC
1030 WILMER AVE
STE. 100
RICHMOND, VA 23227
PHONE: 804.264.2228

FILE: STAUNTON_SOLAR

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE VIRGINIA NORTH FIPS 4501 FT US; MAP ROTATION: 0
--SAVED BY: HBEST ON 12/22/2023, 09:07:05 AM-- FILE PATH: \\EMPLOYEES\GIS\ARCGIS\PRO\1-PROJECTS\US_SOLAR\576550_STAUNTON\2-APRX\STAUNTON_SOLAR.APRX-- LAYOUT NAME: CIA FIG 6 GEOLOGICAL

Figure 7 – Cultural Resources Map



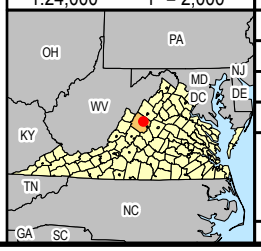
ARCHAEOLOGICAL SITE LOCATION DATA ARE EXEMPT FROM THE VIRGINIA FREEDOM OF INFORMATION ACT §2.2-3705.7 AND SHOULD NOT BE DEPICTED ON ANY FIGURES THAT WILL BE DISTRIBUTED TO THE PUBLIC.

- PROJECT AREA
- PROJECT FOOTPRINT
- HALF-MILE STUDY AREA
- ARCHAEOLOGICAL RESOURCE
- ARCHITECTURE RESOURCE
- ARCHAEOLOGY PHASE 1 SURVEY
- USGS 7.5' QUADRANGLE BOUNDARY

BASE MAP: ESRI "USGS TOPO" ONLINE SERVICE LAYER
USGS 7.5' QUADRANGLE: STAUNTON, VIRGINIA (1975)
DATA SOURCES: TRC, ESRI, USGS

N

0 1,000 2,000
FEET
1:24,000 1" = 2,000'



PROJECT: **US SOLAR**
STAUNTON SOLAR PROJECT
AUGUSTA COUNTY, VIRGINIA

TITLE:
CULTURAL RESOURCES MAP
CONFIDENTIAL & PRIVILEGED

DRAWN BY:	R. SPRING	PROJ. NO.:	576550
CHECKED BY:	H. MILLIS		
APPROVED BY:	S. GREENBERG		**FIGURE 7**
DATE:	JANUARY 2024		

TRC
1030 WILMER AVE
STE. 100
RICHMOND, VA 23227
PHONE: 804.264.2228

FILE: STAUNTON_SOLAR.APRX

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE VIRGINIA NORTH FIPS 4501 FT US; MAP ROTATION: 0
-- SAVED BY: RSPRING ON 1/3/2024, 09:11:54 AM; FILE PATH: \\EMPLOYEES\GIS\ARCGISPRO\1-PROJECTS\US_SOLAR\576550_STAUNTON\2-APRX\STAUNTON_SOLAR.APRX; LAYOUT NAME: CIA FIG 7 CULTURAL

Appendix B:

Photolog

Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona VA	576550

Photo No.	Date
1	12/5/23

Description

Landcover photo of upland cow pasture. Photo taken in southern portion of the Study Area, facing west.



Photo No.	Date
2	12/5/23

Description

Landcover of upland mixed hardwood consisting of Black Walnut (*Juglans nigra*), Red Cedar (*Juniperus virginiana*) Red Oak (*Quercus rubrua*), and White Oak (*Quercus alba*). Photo taken in northern portion of the Study Area, facing east.



Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona VA	576550

Photo No.	Date
3	12/5/23

Description

Perennial stream Falling Spring Run, S-TPT-01, located in the south western portion of the Study Area. Stream is running north to south along the western boundary. Photo is facing north.



Photo No.	Date
4	12/5/23

Description

Emergent wetland (W-TPT-01) located within the southwestern portion of the Study Area. Falling Spring Run splits the wetland in half. Photo is facing east.



Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona VA	576550

Photo No.	Date
5	12/5/23

Description

Rain water fed pond (P-TPT-01) located within the northeastern portion of the Study Area. Photo is facing south.



Photo No.	Date
6	12/5/23

Description

Additional photo of the pond, facing east.



Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona VA	576550

Photo No.	Date
7	12/5/23

Description

Overflow culvert for the pond. Photo is facing north.



Photo No.	Date
8	12/5/23

Description

Non jurisdictional upland drainage (NJD-TPT-01) located in the northeastern portion of the Study Area. Photo is facing north.



Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona VA	576550

Photo No.	Date
9	12/5/23

Description

Landcover photo of upland cow pasture located in the central portion of the Study Area. Photo is facing south.



Photo No.	Date
10	12/5/23

Description

Upland swale located within the central portion of the Study Area. The swale runs east to west and contains no evidence of an Ordinary High Water Mark.



Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona VA	576550

Photo No.	Date
11	12/5/23

Description

Upland roadside drainage (NJD-TPT-01) along the southern boundary. Drainage contains a concrete base. Photo is facing west. Drainage loses definition further towards the stream.



Appendix C:

Environmental Review Documents

USFWS IPaC Official Resource List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032

In Reply Refer To:
Project Code: 2024-0024506
Project Name: US Solar Staunton

December 08, 2023

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

To Whom It May Concern:

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

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

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

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

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

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Project Code in the header of this

letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds

OFFICIAL SPECIES LIST

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

This species list is provided by:

Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

PROJECT SUMMARY

Project Code: 2024-0024506
Project Name: US Solar Staunton
Project Type: Power Gen - Solar
Project Description: Solar Project near Verona VA
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.214665249999996,-79.02439514670922,14z



Counties: Augusta County, Virginia

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

---

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

MAMMALS

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRUSTACEANS

NAME	STATUS
Madison Cave Isopod *Antrolana lira* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4162	Threatened

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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

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

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are bald and/or golden eagles in your project area.

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

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

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

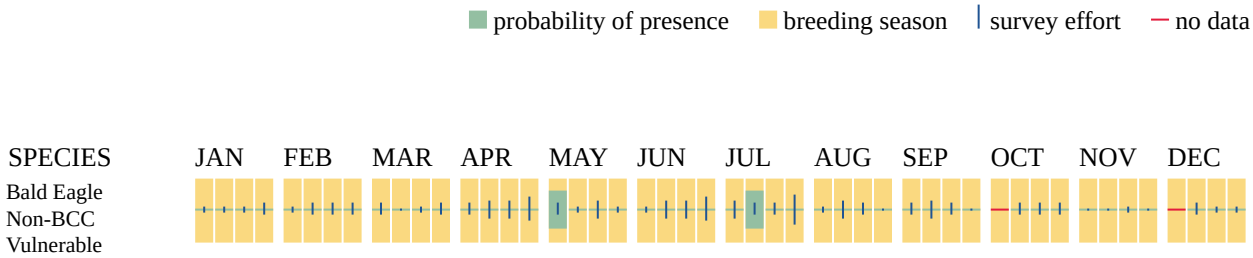
Probability of Presence (▪)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Managment https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

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

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Aug 31
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Black-capped Chickadee *Poecile atricapillus practicus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/10645	Breeds Apr 10 to Jul 31
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10678	Breeds May 1 to Aug 20

NAME	BREEDING SEASON
Prairie Warbler *Dendroica discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9513	Breeds May 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

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

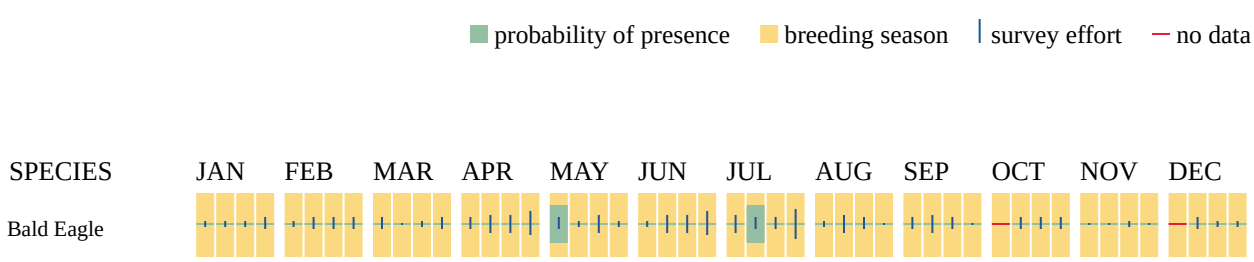
Probability of Presence (■)

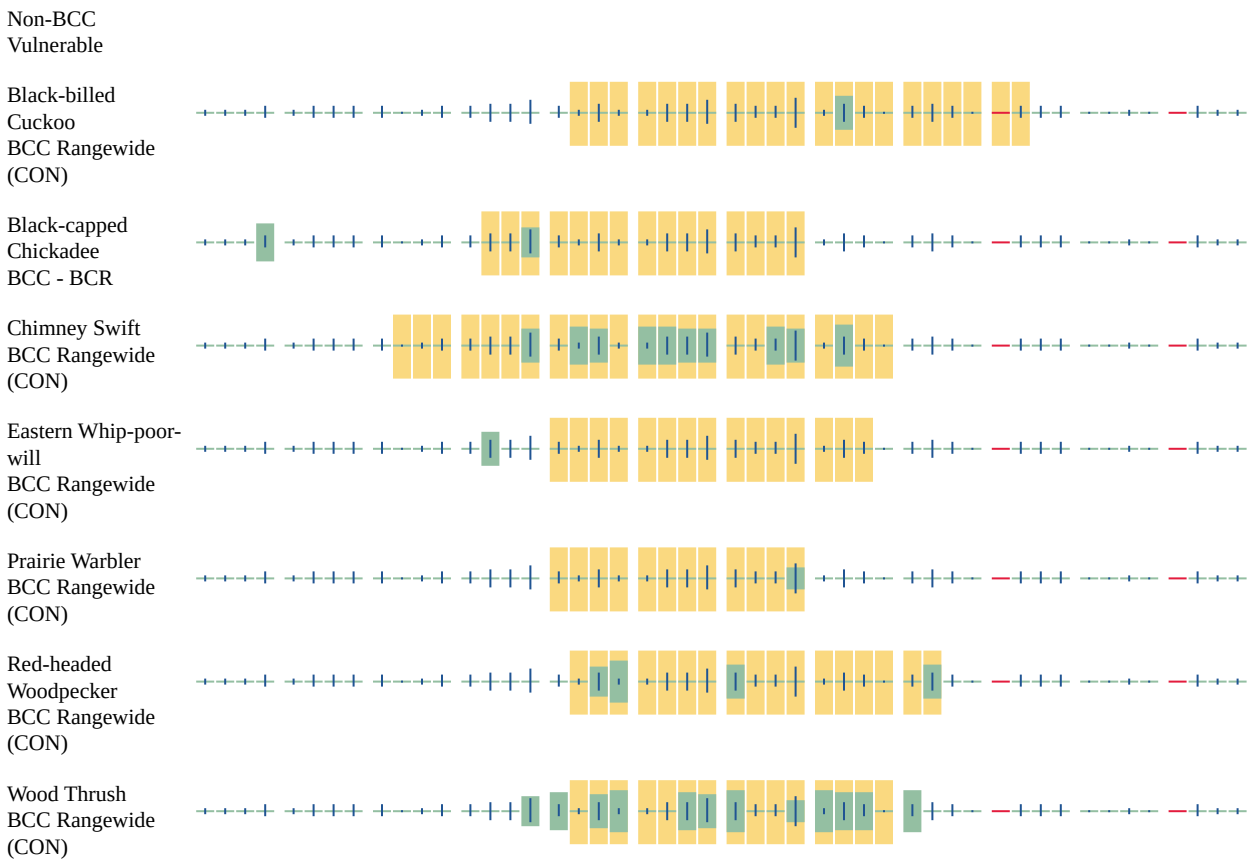
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.





Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

IPAC USER CONTACT INFORMATION

Agency: TRC Environmental
Name: Peter Kienzler
Address: 1429 Rock Quarry Rd
Address Line 2: #116
City: Raleigh
State: NC
Zip: 27610
Email pkienzler@trccompanies.com
Phone: 9106208705

Northern Long-eared Bat Determination Key

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032

In Reply Refer To:
Project code: 2024-0024506
Project Name: US Solar Staunton

December 19, 2023

Federal Nexus: no
Federal Action Agency (if applicable):

Subject: Technical assistance for 'US Solar Staunton'

Dear Peter Kienzler:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on December 19, 2023, for 'US Solar Staunton' (here forward, Project). This project has been assigned Project Code 2024-0024506 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements are not complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project is not reasonably certain to cause incidental take of the northern long-eared bat. Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Indiana Bat *Myotis sodalis* Endangered
- Madison Cave Isopod *Antrolana lira* Threatened
- Monarch Butterfly *Danaus plexippus* Candidate
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species and/or critical habitat listed above. Note that if a new species is listed that may be affected by the identified action before it is complete, additional review is recommended to ensure compliance with the Endangered Species Act.

Next Steps

Coordination with the Service is complete. This letter serves as technical assistance. All conservation measures should be implemented as proposed. Thank you for considering federally listed species during your project planning.

We are uncertain where the northern long-eared bat occurs on the landscape outside of known locations. Because of the steep declines in the species and vast amount of available and suitable forest habitat, the presence of suitable forest habitat alone is a far less reliable predictor of their presence. Based on the best available information, most suitable habitat is now expected to be unoccupied. During the interim period, while we are working on potential methods to address this uncertainty, we conclude take is not reasonably certain to occur in areas of suitable habitat where presence has not been documented.

If no changes occur with the Project or there are no updates on listed species, no further consultation/coordination for this project is required for the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place before project implements any changes which are final or commits additional resources.

If you have any questions regarding this letter or need further assistance, please contact the Virginia Ecological Services Field Office and reference Project Code 2024-0024506 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

US Solar Staunton

2. Description

The following description was provided for the project 'US Solar Staunton':

> Solar Project near Verona VA

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.214665249999996,-79.02439514670922,14z



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of "may affect, but not likely to adversely affect" for the Endangered northern long-eared bat (*Myotis septentrionalis*).

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

3. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   No

PROJECT QUESTIONNAIRE

IPAC USER CONTACT INFORMATION

Agency: TRC Environmental
Name: Peter Kienzler
Address: 1429 Rock Quarry Rd
Address Line 2: #116
City: Raleigh
State: NC
Zip: 27610
Email pkienzler@trccompanies.com
Phone: 9106208705

VAFWIS Biota of Virginia

VaFWIS Search Report Compiled on 12/8/2023, 10:28:19 AM

Help

Known or likely to occur within a **2 mile radius around point 38.2143990 -79.0249285** in **015 Augusta County, 790 Staunton City, VA**

View Map of Site Location

550 Known or Likely Species ordered by Status Concern for Conservation (displaying first 30) (30 species with Status* or Tier I** or Tier II**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed	Database(s)
050022	FEST	Ia	Bat, northern long-eared	Myotis septentrionalis		BOVA
101005	FE	Ia	Bee, rusty patched bumble	Bombus affinis		BOVA
070001	FTST	IIc	Isopod, Madison Cave	Antrolana lira		BOVA
050020	SE	Ia	Bat, little brown	Myotis lucifugus		BOVA
050027	FPSE	Ia	Bat, tri-colored	Perimyotis subflavus		BOVA
060006	SE	Ib	Floater, brook	Alasmidonta varicosa		BOVA
020052	SE	IIa	Salamander, eastern tiger	Ambystoma tigrinum		BOVA
040267	SE		Wren, Bewick's	Thryomanes bewickii		BOVA
040096	ST	Ia	Falcon, peregrine	Falco peregrinus		BOVA
040293	ST	Ia	Shrike, loggerhead	Lanius ludovicianus	Yes	BOVA,BBA,SppObs,HU6
100155	ST	Ia	Skipper, Appalachian grizzled	Pyrgus wyandot		BOVA,HU6
070012	ST	Ib	Amphipod, Madison Cave	Stygobromus stegerorum		BOVA
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus migrans		BOVA
100079	FC	IIIa	Butterfly, monarch	Danaus plexippus		BOVA
030063	CC	IIIa	Turtle, spotted	Clemmys guttata		BOVA,HU6
030012	CC	IVa	Rattlesnake, timber	Crotalus horridus		BOVA,HU6
030040		Ia	Pinesnake, northern	Pituophis melanoleucus melanoleucus		BOVA,HU6
040092		Ia	Eagle, golden	Aquila chrysaetos		BOVA
040306		Ia	Warbler, golden-winged	Vermivora chrysoptera		BOVA,HU6

050024		Ia	Myotis, eastern small-footed	Myotis leibii		BOVA,HU6
100248		Ia	Fritillary, regal	Speyeria idalia idalia		BOVA,HU6
010346		Ib	Shiner, roughhead	Notropis semperasper		BOVA
020027		Ic	Salamander, Cow Knob	Plethodon punctatus		BOVA
040213		Ic	Owl, northern saw-whet	Aegolius acadicus		BOVA,HU6
040052		IIa	Duck, American black	Anas rubripes		BOVA,HU6
040036		IIa	Night-heron, yellow-crowned	Nyctanassa violacea violacea		BOVA
040320		IIa	Warbler, cerulean	Setophaga cerulea		BOVA,HU6
040140		IIa	Woodcock, American	Scolopax minor		BOVA,HU6
040203		IIb	Cuckoo, black-billed	Coccyzus erythropthalmus	Potential	BOVA,BBA
040304		IIc	Warbler, Swainson's	Limnothlypis swainsonii		BOVA,HU6

To view **All 550 species** View 550

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

**I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need
Virginia Widlife Action Plan Conservation Opportunity Ranking:
a - On the ground management strategies/actions exist and can be feasibly implemented.;
b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.;
c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

View Map of All Query Results from All Observation Tables

Bat Colonies or Hibernacula: **Not Known**

Anadromous Fish Use Streams

N/A

Impediments to Fish Passage

N/A

Colonial Water Bird Survey

N/A

Threatened and Endangered Waters

N/A

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests

N/A

Species Observations

(3 records , 1 Observation with Threatened or Endangered species)

View Map of All Query Results
Species Observations

obsID	class	Date Observed	Observer	N Species			View Map
				Different Species	Highest TE*	Highest Tier**	
417	SppObs	Jan 1 1900		1	ST	I	Yes
85476	SppObs	Jun 12 1998	Andrew Zadnik	1		IV	Yes
361955	SppObs	Jan 1 1900		1			Yes

Displayed 3 Species Observations

Habitat Predicted for Aquatic WAP Tier I & II Species

N/A

Habitat Predicted for Terrestrial WAP Tier I & II Species

N/A

Virginia Breeding Bird Atlas Blocks

(2 records)

View Map of All Query Results

[Virginia Breeding Bird Atlas Blocks]

BBA ID	Atlas Quadrangle Block Name	Breeding Bird Atlas Species			View Map
		Different Species	Highest TE*	Highest Tier**	
39141	Fort Defiance, NW	57	ST	I	Yes
38144	Staunton, CE	1		II	Yes

Public Holdings:

N/A

Summary of BOVA Species Associated with Cities and Counties of the Commonwealth of Virginia:

FIPS Code	City and County Name	Different Species	Highest TE	Highest Tier
015	Augusta	487	FESE	I
790	Staunton City	407	FESE	I

USGS 7.5' Quadrangles:
Staunton
Fort Defiance

USGS NRCS Watersheds in Virginia:

N/A

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

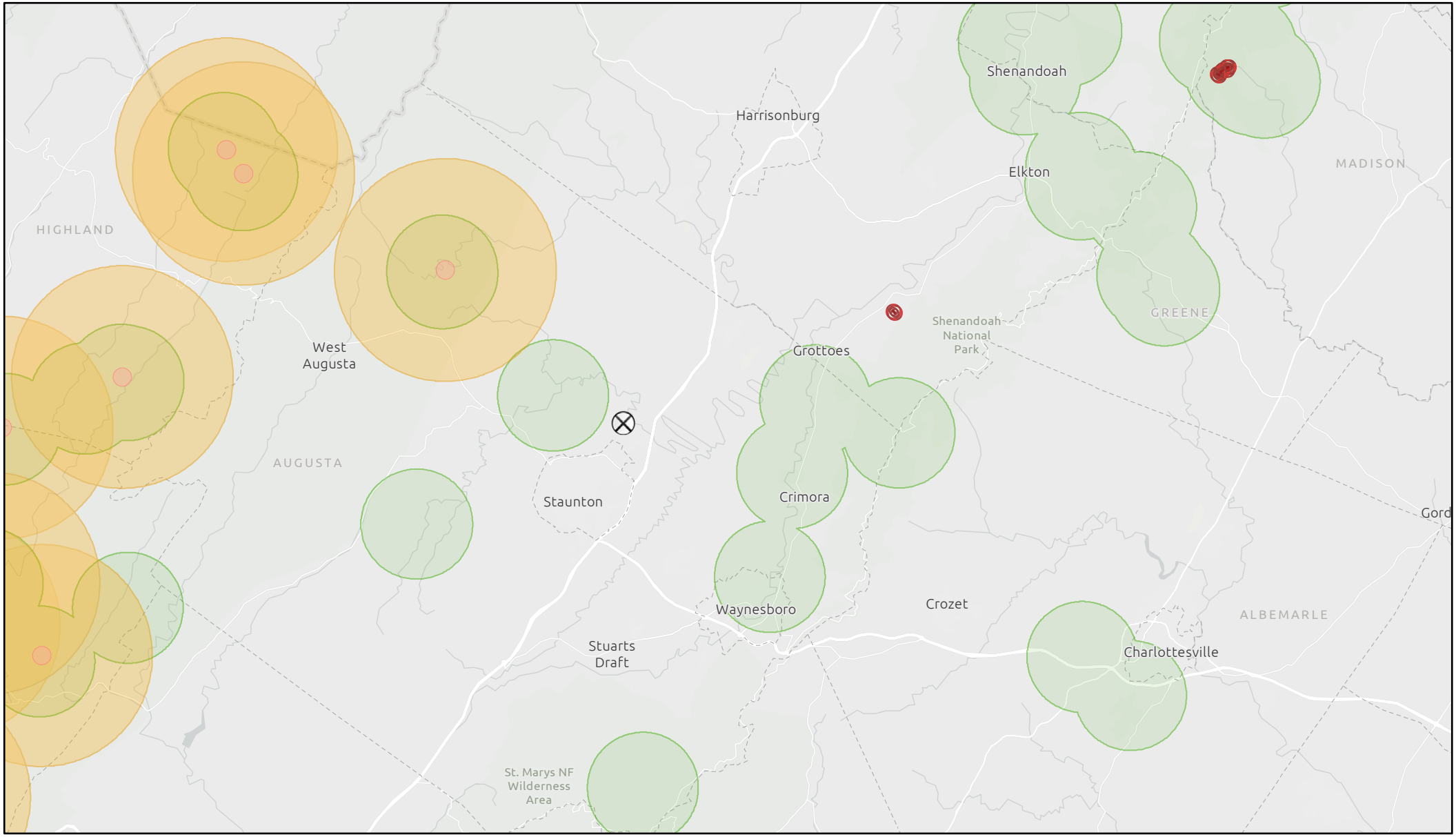
HU6 Code	USGS 6th Order Hydrologic Unit	Different Species	Highest TE	Highest Tier
PS06	Lewis Creek	64	ST	I
PS07	Middle River-Falling Spring Run	67	ST	I

Compiled on 12/8/2023, 10:28:19 AM I1543686.0 report=all searchType= R dist= 3218 poi= 38.2143990 -79.0249285

PixelSize=64; Anadromous=0.01753; BBA=0.027162; BECAR=0.017705; Bats=0.016895; Buffer=0.060982; County=0.052143; HU6=0.041193; Impediments=0.017489; Init=0.090385; PublicLands=0.020262; Quad=0.022797; SppObs=0.204452; TEWaters=0.017721; TierReaches=0.018805; TierTerrestrial=0.029898; Total=0.830988; Tracking_BOVA=0.194655; Trout=0.018774; huva=0.019474

ArcGIS Web Map – Northern Long-eared Bat Hibernaculum and Roosts

NLEB Locations and Roost Trees



12/8/2023, 12:35:54 PM

1:577,791

0 3.75 7.5 15 mi

0 5 10 20 km

VGIN, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

NLEB Known Occupied Maternity Roost (Summer Habitat)

NLEB Roost Tree 150-Foot Buffer

NLEB Hibernaculum Half Mile Buffer

NLEB Hibernaculum 5.5 Mile Buffer

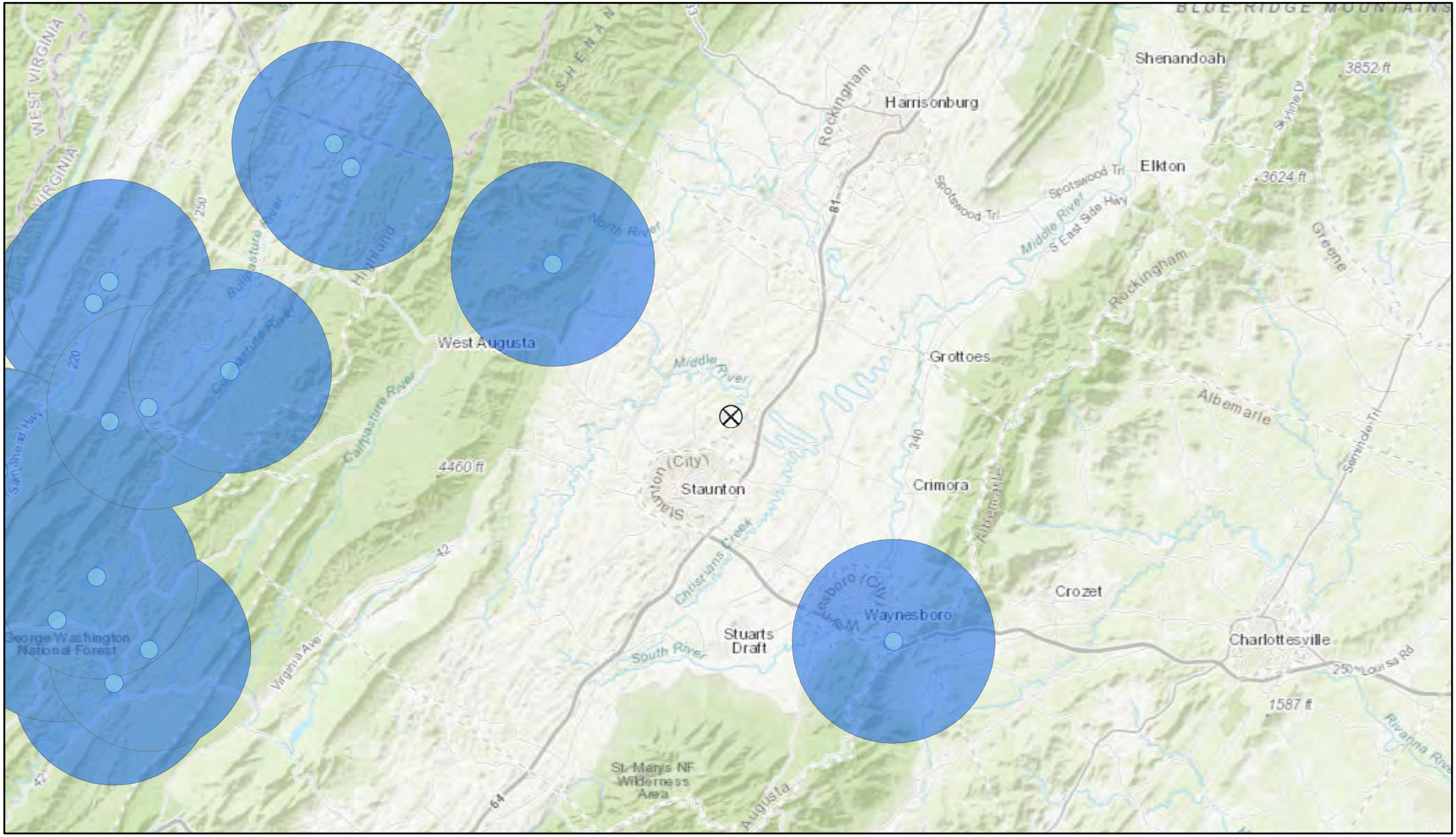
NLEB Capture 3 Mile Buffer

VA Dept. Game & Inland Fisheries

VGIN, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS | Virginia Geographic Information Network (VGIN), and the Census and Localities and Towns submitting data to the project | VGIN, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS |

ArcGIS Web Map – Little Brown Bat and Tri-colored Bat Hibernaculum and Roosts

ArcGIS Web Map



12/8/2023, 12:47:03 PM

Tri-colored and Little Brown Hibernaculum Half Mile Buffer

Tri-colored and Little Brown Hibernaculum 5.5 Mile Buffer

1:577,791

0 3.75 7.5 15 mi

0 5 10 20 km

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

Dept. Game and Inland Fisheries

Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS |

Center for Conservation Biology Eagle Map

CCB Mapping Portal



Layers: VA Eagle Nest Locator

Map Center [longitude, latitude]: [-79.03186798095703, 38.22537009345963]

Map Link:
https://ccbbirds.org/maps/#layer=VA+Eagle+Nest+Locator&zoom=12&lat=38.22537009345963&lng=-79.03186798095703&legend=legend_tab_7c321b7e-e523-11e4-aaa0-0e0c41326911&base=Street+Map+%28OSM%2FCarto%29

Report Generated On: 12/19/2023

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

Appendix D:

Federal Aviation Administration (FAA) Notice Criteria Tool

Federal Aviation Administration

« OE/AAA

Notice Criteria Tool

Notice Criteria Tool - Desk Reference Guide V_2018.2.0

The requirements for filing with the Federal Aviation Administration for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc. For more details, please reference CFR Title 14 Part 77.9.

You must file with the FAA at least 45 days prior to construction if:

- your structure will exceed 200ft above ground level
- your structure will be in proximity to an airport and will exceed the slope ratio
- your structure involves construction of a traverseway (i.e. highway, railroad, waterway etc...) and once adjusted upward with the appropriate vertical distance would exceed a standard of 77.9(a) or (b)
- your structure will emit frequencies, and does not meet the conditions of the FAA Co-location Policy
- your structure will be in an instrument approach area and might exceed part 77 Subpart C
- your proposed structure will be in proximity to a navigation facility and may impact the assurance of navigation signal reception
- your structure will be on an airport or heliport
- filing has been requested by the FAA

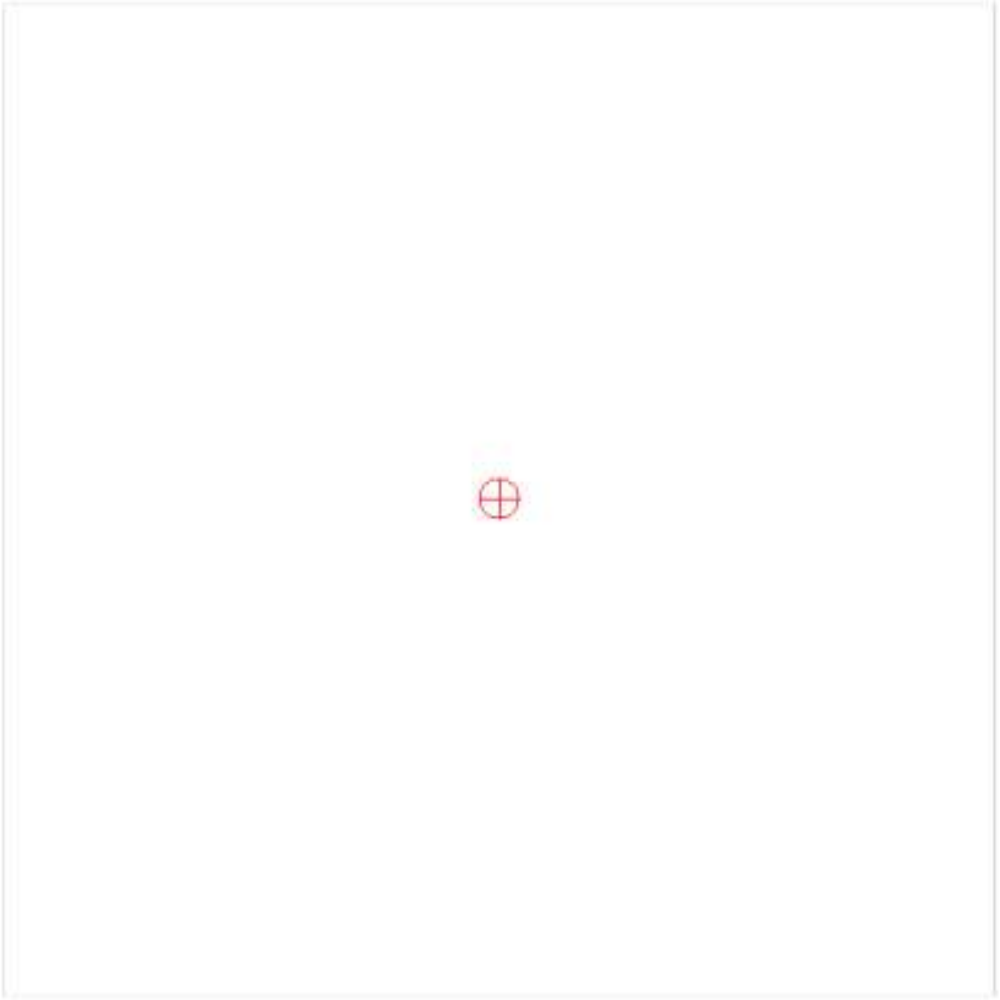
If you require additional information regarding the filing requirements for your structure, please identify and contact the appropriate FAA representative using the Air Traffic Areas of Responsibility map for Off Airport construction, or contact the FAA Airports Region / District Office for On Airport construction.

The tool below will assist in applying Part 77 Notice Criteria.

* **Structure Type:**	SOLAR | Solar Panel Please select structure type and complete location point information.
Latitude:	28 Deg 12 M 51.84 S N
Longitude:	79 Deg 1 M 29.74 S W
Horizontal Datum:	NAD83
Site Elevation (SE):	500 (nearest foot)
Structure Height :	10 (nearest foot)
Is structure on airport:	(●) No ( ) Yes

Results

You do not exceed Notice Criteria.



Appendix E:

Cultural Resources Risk Assessment

50101 Governors Dr.
Suite 250
Chapel Hill, NC 27517

T 919.475.5507
TRCcompanies.com

5 January 2024

US Solar LLC
100 North 6th Street, #401B
Minneapolis, Minnesota 55403

Re: Cultural Resources Risk Assessment for the USS Staunton Solar Project, Augusta County, Virginia

Dear Sir or Madam:

We appreciate the opportunity to provide this cultural resources risk assessment report for the USS Staunton Solar Project located in Augusta County, Virginia. As depicted on a kmz file provided to TRC by US Solar LLC, the USS Staunton Solar project Study Area (area where disturbance will occur) consists of 15 acres situated northeast of the intersection of Limestone Road (SR 626) and Quick's Mill Road (SR 616) (Figures 1 and 2). A cultural resources desktop review was conducted for the USS Staunton Solar project, and summary information was also conveyed to US Solar LLC in a *Critical Issues Analysis* document; the following report is based on the same data collected during that review. Research was conducted by a TRC cultural resources specialist who meets the Secretary of the Interior's professional qualifications for archaeology and involved a review of data regarding previously recorded archaeological and historic architectural resources and cultural resources studies within one-half mile of the project through the Virginia Department of Historic Resources (DHR) online database (V-CRIS), as well as published and unpublished sources of historical and environmental data pertinent to the Study Area (e.g., historical maps, soil survey data, aerial photographs, topographic maps, cemetery censuses, cultural resources reports, etc.). No consultation with the DHR was conducted for this project. Following are the results of our research and analysis.

ENVIRONMENTAL SETTING

Topography. The Study Area is situated in the Middle section of the Valley and Ridge Province of the Appalachian Highlands. This area is characterized by folded and faulted parallel ridges and valleys carved out of anticlines, synclines, and thrust blocks and has narrow to moderately broad valleys and strongly sloping to extremely steep and narrow ridgelines (Fenneman 1938). The Study Area is situated on ridgetop, terrace, and side slope settings above Falling Spring Run, a tributary of the Middle River, with elevations ranging from about 1,380 to 1,500 feet above mean sea level. A majority of the Study Area is currently fallow agricultural land covered in managed grass, with scattered hardwoods and conifers. The northern portion of the Study Area is more forested, with mixed hardwoods and pines (Figures 3–5).

Soils. The Study Area is underlain by just a few soil types (Figure 6). A majority of the Study Area is underlain by Frederick-Christian silt loams (7–25% slopes), eroded, and Frederick-Christian gravelly silt loams, 7–45% slopes, eroded. These soils are well drained and formed from colluvium and from residuum weathered from limestone, dolomite, calcareous shales, siltstones, sandstones, phyllite, quartzite, and cherty limestone. The southeastern corner of the Study Area is underlain by Rock Outcrop-Frederick complex, steep (USDA NCRS 2024).

Hydrology. The Study Area is drained by Falling Spring Run, which drains into the Middle River about a half mile northeast of the Study Area. Middle Run meanders northeastward to empty into the North River, and as the South Fork Shenandoah River continues north/northeast to the confluence with the North Fork Shenandoah. The Shenandoah River meanders northeastward to join with the Potomac River in Harpers Ferry, and the Potomac River flows generally south/southeast to empty into the Chesapeake Bay and ultimately the Atlantic Ocean.

PREVIOUSLY RECORDED CULTURAL RESOURCES

Cultural Resources Studies. According to the data available in V-CRIS, one previous archaeological survey has been conducted within a half mile of the Study Area—a Phase I Archaeological Survey for proposed improvements to Limestone Road (SR 626) conducted for the Virginia Department of Transportation in 2000 (Parfitt and Simpson 2001; Figure 7). This survey identified a low density of archaeological sites.

Archaeological Sites. Three previously recorded archaeological sites are located within a half mile of the Study Area; none is located within the Study Area (Figure 7; Table 1). These consist of a prehistoric site that produced temporally diagnostic artifacts associated with the Early Archaic through Late Woodland periods and was initially recorded in 1960 and field verified in 2021 (44AU0007), a scatter of historic artifacts dating from the eighteenth through late twentieth centuries (44AU0737) that is associated with the John Poage House (007-0088), and a grist mill known as Thacker's Mill that dates from the early nineteenth through mid-twentieth centuries (44AU0882); none of these has been evaluated for the National Register of Historic Places (NRHP) by the DHR.

Historic Architectural Properties. Six previously recorded historic architectural resources are located within a half mile of the Study Area; none is located within the Study Area (Figure 7; Table 2). The historic architectural properties consist of the ca. 1830 Mowry House and associated outbuildings (007-0085), the ca. 1750 John Poage House and associated outbuildings (007-0088), the ca. 1840 Fletcher Collins House and associated outbuildings (007-0329), the ca. 1876 Jenny Poage Wilson House (007-1002), the 1926 Augusta County Bridge No. 6288 (007-5051), and the 1926 Augusta County Bridge No. 6358 (007-5052) (Figure 7). The Mowry House property would have a view of the Study Area, but it is not clear if other properties would due to intervening vegetation. The Mowry House property was visited in May 2023 by the DHR Western Region architectural historian as technical assistance for the landowner and was recommended not eligible for the NRHP based on that survey, but a final eligibility determination has not been made. Both bridges have been determined not eligible for the NRHP by the DHR, but the remaining properties have not been evaluated for the NRHP by the DHR.

Cemeteries. There are no indications of a cemetery within or in close proximity to the Study Area.

HISTORICAL DATA

Historic Maps. No structures are depicted in the vicinity of the Study Area on nineteenth century maps (e.g., Figure 8). One apparent outbuilding structure is depicted in the Study Area on the 1964 USGS map, although the current alignment of Quick's Mill Road is not depicted on USGS maps until 1978 (Figure 9). That same structure is depicted on subsequent USGS maps through 1986 and then is depicted as a residential structure on late twentieth century maps (Figure 10). Vegetation patterns within the Study Area appear to be fairly consistent across those decades, with most of the Study Area cleared and likely in use for agricultural purposes.

Aerial Photographs. Aerial photographs dating from 1960 show a very consistent vegetation pattern similar to the current conditions, with forested areas in the central and northeastern corner portions of the Study

Area and the remainder cleared of vegetation and in agricultural use. The structure depicted on USGS maps is visible in aerial photographs as early as 1960, appears to have been abandoned by 2011, and was demolished by 2021.

RISK ASSESSMENT

The results of the research were analyzed according to factors associated with three risk categories:

High Risk: Previously recorded cultural resources are present within or immediately adjacent to the limits of the Study Area.

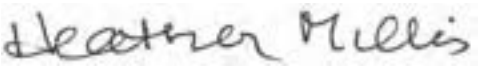
Medium Risk: Previously recorded resources are located either adjacent to or in the immediate vicinity of the Study Area and site predictors (i.e., well drained elevated landforms, short distance to water, map projected sites, etc.) are present within the Study Area.

Low Risk: No previously recorded cultural resources are located within or adjacent to the Study Area and there is an overall absence of site predictors.

The above three categories do not allow a consideration of all of the nuances that can affect archaeological site and historic architectural property location, preservation, and significance with respect to the NRHP, however, based on these characteristics, the Study Area can be considered to have a low risk for the presence of intact significant archaeological sites (NRHP eligible). The project contains well drained, elevated, relatively level landforms close to a permanent water source, but these are shallow, eroded, and rocky. One structure is depicted in the Study Area on historic maps, and there is some potential for intact historic period archaeological deposits in that portion of the Study Area, but given the time frame associated with these structures, these are unlikely to be significant (NRHP eligible). One previously recorded historic architectural property is located within view of the project, but it has been recommended not eligible for the NRHP by a DHR architectural historian. Overall, the project is considered to have a low risk for the potential to affect NRHP eligible historic architectural properties. Whether consultation with the DHR and/or cultural resources surveys of any type will be required for this project is contingent upon the permits required (federal, state, or county).

We appreciate the opportunity to provide these services to US Solar LLC. If you have any questions regarding this report, please do not hesitate to contact me by phone at (919) 475-5507 or email at hmillis@trccompanies.com.

Sincerely,



Heather Millis
Office Practice Leader, Cultural Resources

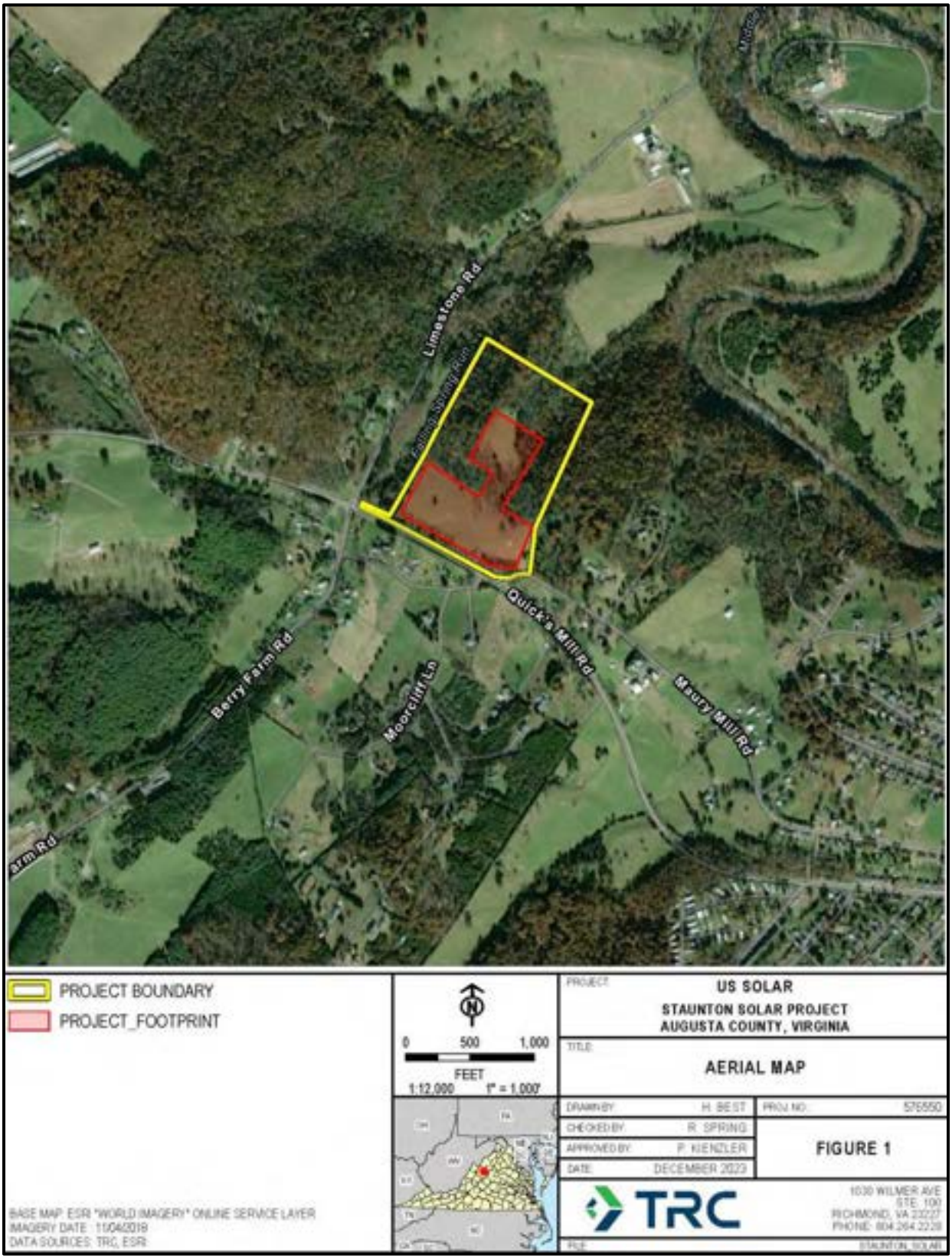


Figure 1. USS Staunton Solar Study Area on Current Aerial Photograph.

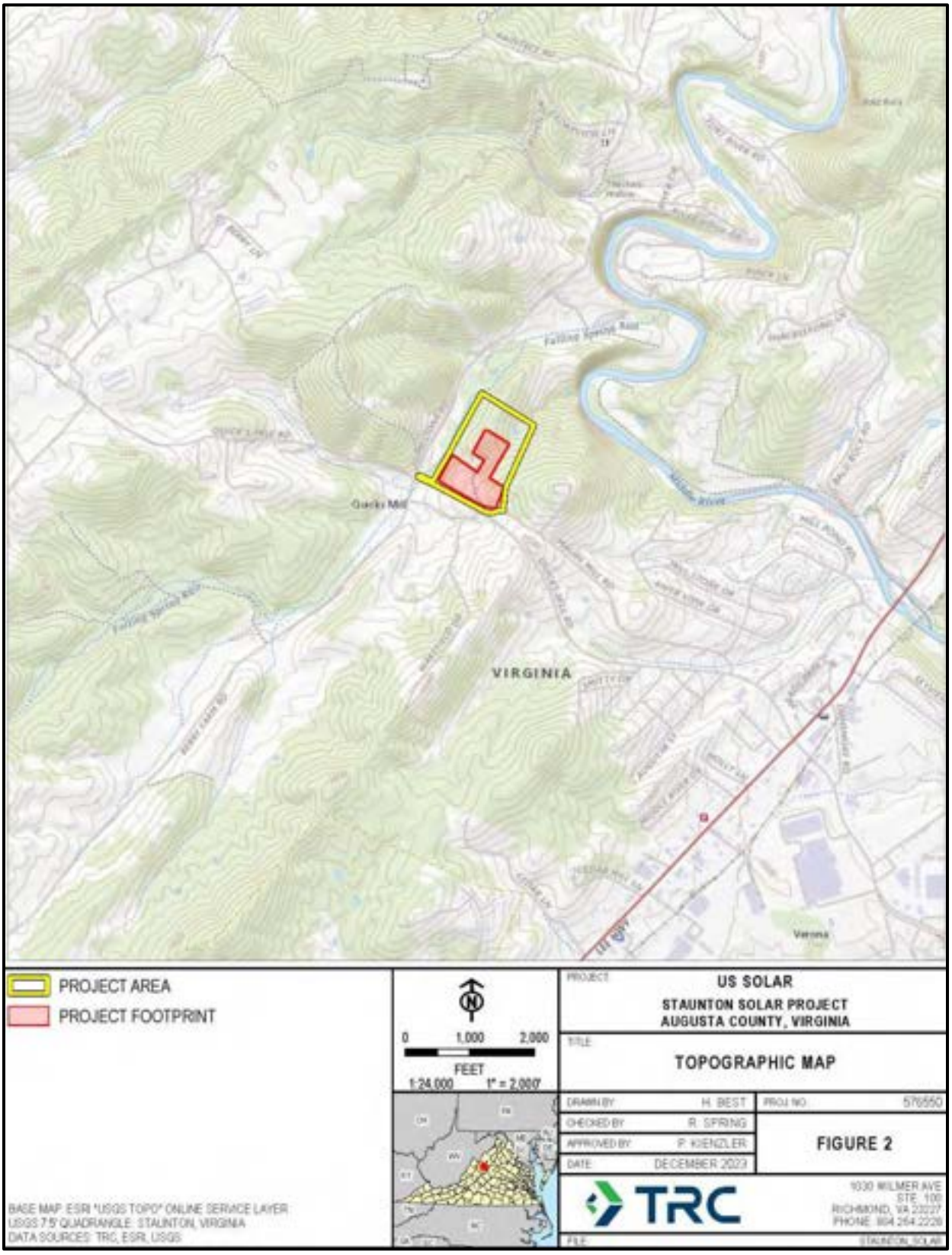


Figure 2. USS Staunton Solar Project on Current USGS Map.



Figure 3. View of Pasture in Southern Portion of Project, Facing North.



Figure 4. View of Pasture in Central Portion of Project, Facing South.



Figure 5. View of Forest in Northern Portion of Project, Facing East.



SYMBOL	MAP UNIT NAME	DRAINAGE CLASS	HYDRIC RATING	FARMLAND CLASS	ACRES
39	FLUVAQUENTS, NEARLY LEVEL	POORLY DRAINED	95	NOT PRIME FARMLAND	0.277
40C2	FREDERICK-CHRISTIAN SILT LOAMS, 7 TO 15 PERCENT SLOPES, ERODED	WELL DRAINED	0	FARMLAND OF STATEWIDE IMPORTANCE	9.555
40D2	FREDERICK-CHRISTIAN SILT LOAMS, 15 TO 25 PERCENT SLOPES, ERODED	WELL DRAINED	0	FARMLAND OF STATEWIDE IMPORTANCE	4.022
42C2	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS, 7 TO 15 PERCENT SLOPES, ERODED	WELL DRAINED	0	FARMLAND OF STATEWIDE IMPORTANCE	2.879
42D2	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS, 15 TO 25 PERCENT SLOPES, ERODED	WELL DRAINED	0	FARMLAND OF STATEWIDE IMPORTANCE	11.248
42E2	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS, 25 TO 45 PERCENT SLOPES	WELL DRAINED	0	NOT PRIME FARMLAND	6.372
60	MASSANETTA SILT LOAM	MODERATELY WELL DRAINED	2	ALL AREAS ARE PRIME FARMLAND	0.007
65E	OPEQUON-ROCK OUTCROP COMPLEX, 7 TO 45 PERCENT SLOPES	WELL DRAINED	0	NOT PRIME FARMLAND	0.418
70E	ROCK OUTCROP-FREDERICK COMPLEX, STEEP		0	NOT PRIME FARMLAND	2.401
W	WATER		0	NOT PRIME FARMLAND	0.201

Figure 6. USS Staunton Solar Project Soil Map.

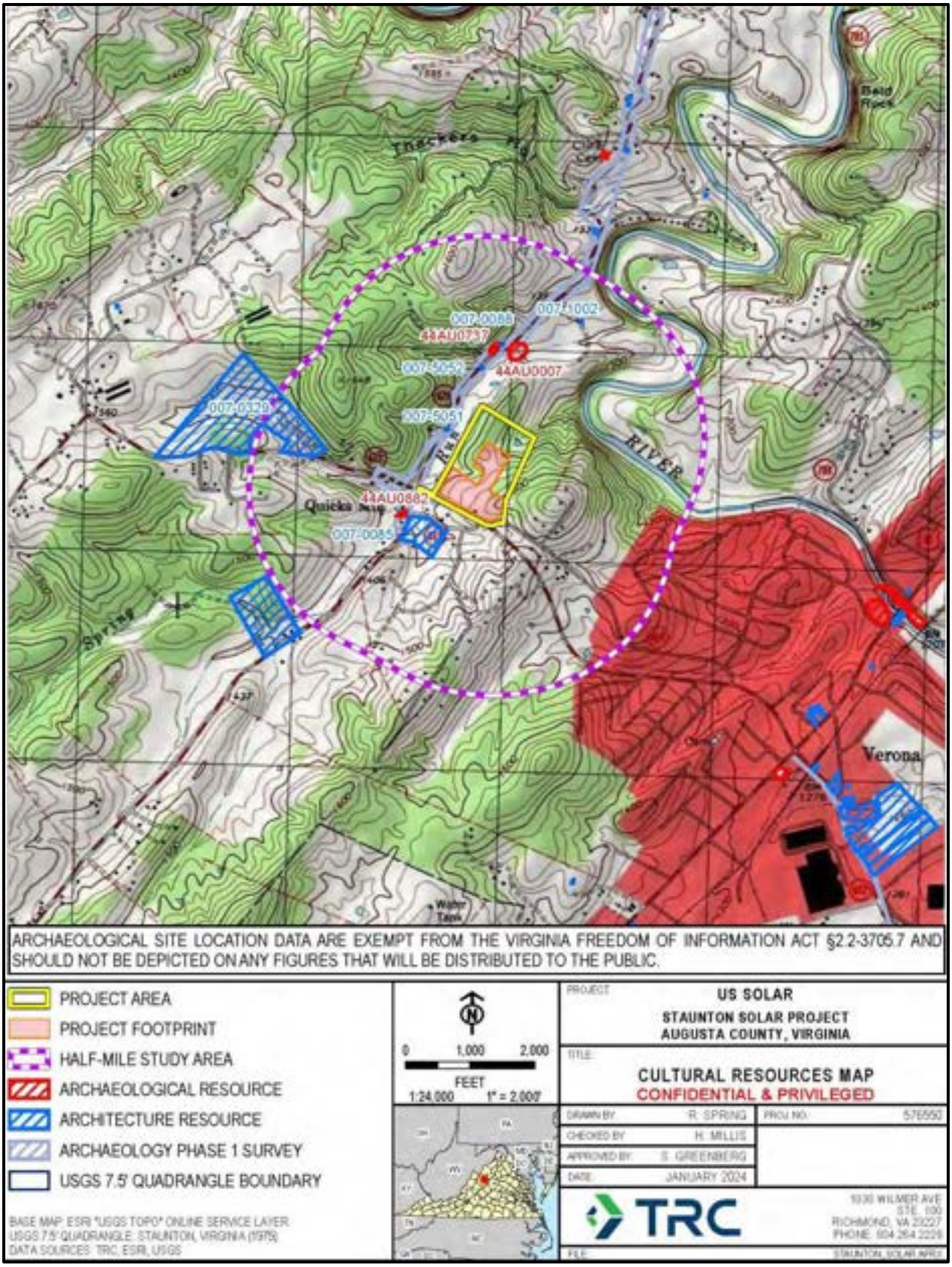


Figure 7. Previously Recorded Cultural Resources and Previously Conducted Archaeological Surveys within One-Half Mile of the USS Staunton Solar Project from V-CRIS.

Table 1. Previously Recorded Archaeological Sites within One-Half Mile of the Project.

DHR #	Site	NRHP Status
44AU0007	Prehistoric campsite dating to Early Archaic through Late Woodland	Not Evaluated
44AU0737	Domestic artifact scatter dating from eighteenth through late twentieth centuries associated with the John Poage House	Not Evaluated
44AU0882	Thacker's Mill, grist mill dating from the early nineteenth through mid-twentieth centuries	Not Evaluated

Table 2. Previously Recorded Historic Architectural Properties within One-Half Mile of the Project.

DHR #	Property	NRHP Status
007-0085	ca. 1830 Mowry House and associated outbuildings	Not Evaluated
007-0088	ca. 1750 John Poage House and associated outbuildings	Not Evaluated
007-0329	ca. 1840 Fletcher Collins House and associated outbuildings	Not Evaluated
007-1002	ca. 1876 Jenny Poage Wilson House	Not Evaluated
007-5051	1926 Augusta County Bridge No. 6288	Not Eligible
007-5052	1926 Augusta County Bridge No. 6358	Not Eligible



Figure 8. USS Staunton Solar Project Boundary on 1947 USGS Map.



Figure 9. USS Staunton Solar Project Boundary on 1978 USGS Map.



Figure 10. USS Staunton Solar Project Boundary on 2001 USGS Map.

REFERENCES

Fenneman, N.M.
1938 *Physiography of Eastern United States*. McGraw-Hill, New York.

Parfitt, Joseph, and Kay Simpson
2001 *An Archaeological Survey of Route 626 - Limestone Road, Augusta County, Virginia*. The Cultural Resource Group, Louis Berger & Associates, Inc., Richmond Virginia. Submitted to the Virginia Department of Transportation, Richmond.

United States Department of Agricultural (USDA) Natural Resources Conservation Service (NRCS)
2024 Web Soil Survey. Electronic document, https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

United States Geological Survey (USGS)
1947 Staunton, Virginia, quadrangle map, 1:62,500, Reston, Virginia.
1964 Staunton, Virginia, quadrangle map, 1:24,000, Reston, Virginia.
1978 Staunton, Virginia, quadrangle map, 1:24,000, Reston, Virginia.
2001 Staunton, Virginia, quadrangle map, 1:24,000, Reston, Virginia.

Environmental Risk Assessment (ESA Phase I Report)

PRIVILEGED AND CONFIDENTIAL
Prepared at the Request of Counsel

PHASE I ENVIRONMENTAL SITE ASSESSMENT

USS Staunton Solar LLC Project
Quick's Mill Road
Verona, VA 24482
Parcel 036 34P

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January 2024

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EXECUTIVE SUMMARY

TRC Environmental Corporation (TRC) was retained by United States Solar Corporation (US Solar [USS]) (also known as "Client" or "User") to perform a Phase I Environmental Site Assessment (ESA) of the property located at Parcel 036 34P off of Quick's Mill Road outside Verona, Augusta County, Virginia (herein referred to as the "subject property"). TRC conducted the Phase I ESA in connection with the Client's planned purchase of the subject property. The Phase I ESA described in this report was performed in accordance with the scope and limitations of the ASTM International Practice E1527-21 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (hereinafter "ASTM Practice E1527-21" or "ASTM Standard"). Limiting conditions and/or deviations from the ASTM Practice E1527-21 standard are described in Sections 1.3 and 7.7 of this report.

The approximately 38-acre subject property is comprised of one (1) parcel (Parcel ID: 036 34P) and consists of open land and mixed hardwood forest. The subject property is currently owned and operated by Herbert Fauber. The Fauber's have owned the subject property since February 19, 2021.

The subject property was historically open land with mixed hardwood forests.

This assessment has revealed no evidence of recognized environmental conditions (RECs), controlled RECs (CRECs), or historical RECs (HRECs) in connection with the subject property.

This Executive Summary is part of this complete report; the findings, opinions, or conclusions in this Executive Summary are made in context with the complete report. TRC recommends that the User read the entire report for supporting information related to findings, opinions, and conclusions.

1.0 INTRODUCTION

TRC Environmental Corporation (TRC) has prepared this Phase I Environmental Site Assessment (ESA) for United States Solar Corporation (US Solar [USS]). This report was prepared for and may be relied upon by Client and User for the purposes set forth herein; it may not be relied on by any party other than the Client and User.

1.1 Purpose and Scope of Services

The following Phase I ESA was performed for the property located at Parcel 036 34P in Verona, Augusta County, VA 24482 (hereinafter the "subject property"). A subject property location map is included as **Figure 1**. TRC prepared this Phase I ESA in accordance with the ASTM International E1527-21 *Standard Practice for Environmental Site Assessments: Phase I ESA Process* (hereinafter "ASTM Practice E1527-21" or "ASTM Standard") and is intended for the sole use of US Solar.

The purpose of this assessment is to identify Recognized Environmental Conditions (RECs) at the subject property, as defined by ASTM Practice E1527-21. The completion of this Phase I ESA report may be used to satisfy one of the requirements for the User to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser liability protections pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), thereby constituting all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial or customary practice as defined by 42 United States Code §9601(35)(B) of CERCLA.

The Scope of Services for this Phase I ESA included the following tasks:

- Subject property and vicinity reconnaissance;
- Subject property and vicinity description and physical setting;
- Historical sources review and a description of historical subject property and adjoining property conditions;
- Interviews with owners, operators, and/or occupants of the subject property, and/or local officials;
- Review of environmental databases and regulatory agency records;
- Review of previous environmental reports/documentation, as applicable;
- Review of environmental liens, if provided or authorized to obtain by the User; and
- Preparation of a report summarizing findings, opinions, and conclusions.

1.2 Additional Services

Items outside the scope of ASTM Practice E1527-21 are, but are not limited to the following:

- Substances not defined as Hazardous Substances
- Asbestos-containing building materials
- Radon
- Lead-based paint
- Lead in drinking water
- Wetlands
- Regulatory compliance
- Cultural and historic resources
- Industrial hygiene
- Health and safety
- Ecological resources
- Endangered species
- Indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment
- Biological agents
- Mold
- Polychlorinated Biphenyl (PCB)-containing building materials

No additional services were performed outside the scope of ASTM Practice E1527-21.

1.3 Deviations to ASTM Practice E1527-21

No significant deviations or deletions to the ASTM Standard were made during this Phase I ESA.

2.0 SUBJECT PROPERTY DESCRIPTION

2.1 Subject Property Location and Description

The subject property location, ownership, and parcel information are included in the following table. A subject property location map is included as **Figure 1**.

Table 2.1 - Subject Property Location and Description

Subject Property Details	Description
Location	Parcel 036 34P in Verona, Augusta County, Virginia 24482
Primary use of surrounding area	Rural, mixed residential
Acreage	38-acres
Parcel Numbers	036 34P
Zoning	General agriculture by Augusta County
Owner	Herbert Fauber
Operator	Herbert Fauber

2.2 Subject Property Improvements

Current subject property improvements are listed in the following table. A subject property layout is included as **Figure 2**.

Table 2.2 - Subject Property Improvements

Subject Property Feature	Description
Buildings	No buildings are present on the subject property.
Exterior areas	Vegetated
On-site roads/rail lines	N/A
Potable water supply	None
Sewage disposal system(s)	None
Stormwater system	None – Roadside ditches and adjoining waterways
Heating system (supplier)	None
Cooling system (supplier)	None
Back-up fuel source(s)	N/A
Electricity supplier(s)	None

2.3 Current and Historical Subject Property Use

2.3.1 Current Subject Property Use(s)

The subject property is currently operated by Herbert Fauber. The property consists of open land and mixed hardwood forests. There are no operations going on at the subject property.

2.3.2 Previous Owner and Operator Information

Based on information provided by the User (Section 3.0), the historical record review (Section 4.0), and interviews conducted during this Phase I ESA (Section 5.0), historical subject property ownership and operator information are provided below.

Table 2.3 - Previous and Current Owner & Operator Information

Subject Property Owner & Operator	Description	From	To
The Fauber's	Open property and forested areas.	2021	Present
Unknown Owners	Open property and forested areas.	1941	Present

2.4 Physical Setting

According to United States Geological Survey topographic maps reviewed, including the map included as **Figure 1**, the subject property is located approximately 0.00 miles to the east from Falling Spring Run, the subject property topographic elevation is approximately 1500 feet above mean sea level, and local topography slopes to the northwest. The topographic downward slope observed at the subject property during the site reconnaissance is generally toward the northwest. Based on local topography the assumed direction of shallow groundwater flow is to the west, toward Falling Spring Run.

The database radius report, supplied by Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut, was reviewed to obtain information regarding the dominant soil composition in the vicinity of the subject property. This information is summarized below:

Hydric Status:	Soil does not meet the requirements for a hydric soil
Soil Surface Texture:	Gravelly silt loam
Soil Component Name:	Frederick
Deeper Soil Types:	Silt clay loam and clay

Please refer to the Geocheck Physical Setting Source Summary of the EDR report presented in **Appendix A** for further information regarding the soil composition in the vicinity of the subject property.

3.0 USER-PROVIDED INFORMATION

According to ASTM Practice E1527-21, certain tasks that may help identify the presence of RECs associated with the subject property are generally conducted by the Phase I ESA User. These tasks include providing or authorizing the environmental professional to obtain recorded land title records for environmental liens or activity and use limitations (AULs); providing specialized knowledge related to RECs at the subject property (e.g., information about previous ownership or environmental litigation); providing commonly known or reasonably ascertainable information within the local community about the subject property that is material to RECs in connection with the subject property; and informing the environmental professional if, as believed by the User, the purchase price of the subject property is lower than the fair market value due to contamination. A copy of the User questionnaire is included in **Appendix B**. No additional helpful documents as defined in ASTM Practice E1527-21 were provided.

3.1 Records for Environmental Liens or Activity and Use Limitations

The User has not provided TRC with information associated with a review of title and judicial records for environmental liens or AULs associated with the subject property and may remain as an User requirement to satisfy All Appropriate Inquiries.

3.2 Specialized Knowledge

The User was not aware of specialized knowledge, including the potential presence or likely presence of RECs, regarding the subject property or nearby properties.

3.3 Property Value Reduction Issues

The User was not aware of property valuation reduction issues regarding the subject property.

3.4 Commonly Known or Reasonably Ascertainable Information

The User did not provide commonly known or reasonably ascertainable information to TRC.

3.5 Reason for Conducting a Phase I ESA

TRC understands the User requires a Phase I ESA for their planned purchase of the subject property.

4.0 RECORDS REVIEW

4.1 Historical Research

Information regarding subject property and vicinity historical uses was obtained from various publicly available and practically reviewable sources including:

- Aerial photographs dated 2018, 2014, 2011, 2005, 2000, 1998, 1991, 1982, 1977, 1972, 1972, 1963, 1960, and 1941;
- Topographic maps dated 2022, 2019, 2016, 2013, 1998, 1986, 1984, 1978, 1968, 1964, 1949, 1947, 1944, 1894, and 1892;
- City directories dated 2020, 2017, 2014, 2010, 2005, 2000, 1995, and 1992;
- Local municipal records;
- An environmental database report; and
- Interviews with subject property representative and regulatory agency officials, as necessary.

Aerial photographs, topographic maps, city directories, and the environmental database report were provided by EDR. Historical research documentation is included in **Appendix C**.

Historical Sanborn® Fire Insurance Maps (Sanborn Maps®) were originally produced for assessing fire insurance liability in urban areas in the United States. The maps provide detailed information (e.g., building construction, subject property occupants, storage tank locations, and hazardous material storage areas), which can be used as a resource to document land use and structural change over time. EDR researched the availability of Sanborn Maps® in the vicinity of the subject property; however, EDR stated that Sanborn Map® coverage does not exist for the subject property or nearby surrounding area.

4.1.1 Subject Property History

Operational History

Table 4.1 - Subject Property History

Year	Subject Property History
From at least 1941 to at least 2005	According to the 1941 – 2005 aerial photographs, the property was mostly wooded with a cleared section on the southern end of the property. A small structure looks to be present on the southeastern end of the property.
2011-Present	In the 2011-2018 aerial photographs, the property still looks the same as in the previous years, however the structure is now gone.

4.1.2 Adjoining Property History

Table 4.2 - Adjoining Property History

Direction from Subject Property	Adjoining Property History
North	Since at least 1941, the north adjoining property was mostly forested with some open land with no structures. The Property remains unchanged to this day.
East	Since at least 1941, the east adjoining property has been residential properties. By 1972 additional houses were built. The properties remain mostly unchanged since 1972 with the exception of more forested areas growing in around the houses.
South	Since at least 1941, the south adjoining property was residential with multiple houses. No major changes have happened since 1941, with the exception of a few additional structures being built.
West	Since at least 1941, the west adjoining property has been mixed residential property, with mostly forested land. The property remains unchanged since at least 1941.

4.1.3 Surrounding Property History

Since at least 1941, the surrounding area was historically open land with scattered roads, dwellings, and waterways. The area remains basically the same to this day, with the exception of an increase in residential dwellings and the forest growing in in some of the open areas.

4.2 Database Report and Environmental Record Review

A database search report that identifies properties listed on state and federal databases within the ASTM-required radii of the subject property was obtained from EDR. These properties included those that could be mapped and those that could not (i.e., orphan properties). A copy of the database search report is included in **Appendix A**. The database search report includes the list of environmental databases/records searched and their corresponding abbreviations.

4.2.1 Subject Property

No records/listings were identified for the subject property in the environmental database report.

4.2.2 Adjoining and Surrounding Property Record Review

TRC evaluated the following factors to determine whether additional environmental records should be reviewed with respect to the potential for contaminant migration from the adjoining and surrounding properties:

(1) Whether the property is upgradient or downgradient of the subject property related to potential groundwater migration based on the local topography, and the assumed (or known) groundwater depth and shallow groundwater flow direction (refer to Section 2.4 above);

(2) Whether the property is upgradient or downgradient of the subject property related to potential vapor migration based on readily available information pursuant to ASTM Practice E1527-21 including soil and geological characteristics; contaminant characteristics; contaminated plume migration data; and significant conduits that might provide preferential pathways for vapor migration such as major utility corridors, sanitary sewers, storm sewers, and significant natural conduits such as karst terrain (vapor migration may also be influenced by the age and design of infrastructure features associated with these conduits);
(3) Property case status (i.e., whether the state environmental agency or applicable regulatory authority has issued a No Further Action (NFA) letter or other similar closure document);
(4) Type of database and whether the presence of contamination is known; and
(5) The distance between the listed property and the subject property.

Based on this evaluation, TRC limited the review of additional environmental records to the properties listed below because the other properties are considered to have a low potential for contamination to migrate to the subject property.

4.2.2.1 Adjoining Properties

No records/listings were identified for the adjoining properties (those which share a common property boundary with the subject property) in the environmental database report.

4.2.2.2 Surrounding Properties

The surrounding properties (those within the general vicinity of the subject property) listed in the environmental database report are considered to have a low potential for contamination to migrate to the subject property based on the criteria described above.

Information regarding surrounding properties (those within the general vicinity of the subject property) included in the database search report is summarized in the following table:

Facility Name(s) and/or Address(es)	Ralph Curry Residence 234 Maury Mill Road, Verona, VA 24482
Map No(s).	1
Approximate Location Relative to the Subject Property	0.5 miles south by southeast of the Subject Property
Presumed Hydrogeologic Setting	Upgradient
Database(s)	LUST
Description/ID No(s).	EPA ID S105695808
Database Review Summary	Case involving a suspected LUST in 1992, case was closed in 1993 with no indication that a LUST was found.

4.3 Title and Judicial Records for Environmental Liens or AULs

User-provided information regarding potential environmental concerns associated with title or judicial records, or the existence of environmental liens or AULs for the subject property is discussed in Section 3.0.

Completion of an additional title and judicial record search was beyond the scope of this Phase I ESA, was not requested by the User, and remains a User requirement.

4.4 Previous Documents

TRC was not provided previous documents to review.

4.5 Other Environmental Record Sources

Per the ASTM Standard, local or additional state records were reviewed to enhance and supplement the ASTM-required federal and state records reviewed and discussed earlier in this report. Local sources that were contacted to obtain this information are discussed below:

Table 4.3 - Other Environmental Record Sources

Regulatory Agency/ Department	Available Information
Staunton Fire and Rescue	TRC contacted the Staunton Fire and Rescue on December 20, 2023 regarding the availability of files pertaining to the subject property. A response was not received by the issuance date of this report.
Land Records/ Agusta County Geographic Information System (GIS)	TRC accessed the Augusta County GIS system on January 2, 2024 to obtain the subject property's parcel number, acreage, general information, and property ownership. This information is included throughout this report as applicable.

5.0 INTERVIEWS

The following person was interviewed to obtain historically and/or environmentally pertinent information regarding RECs associated with the subject property. The information provided is discussed and referenced throughout this report. Interview documentation is included in **Appendix B**.

- Herbert Fauber, property owner at the subject property – Key Site Manager (as defined by the ASTM Standard and identified by the User), was interviewed on December 5, 2023 and December 27, 2023.

6.0 SITE RECONNAISSANCE

6.1 Methodology and Limiting Conditions

Tony Tredway, TRC Field Ecologist, conducted a site reconnaissance of accessible areas on and around the subject property on December 5, 2023 for the purpose of identifying potential RECs and was accompanied by Herbert Fauber who provided access to the subject property and answered questions during the reconnaissance. Photographs taken during the site reconnaissance are provided in **Appendix D**. A subject property layout plan is included as **Figure 2**.

No limiting conditions were encountered during the site visit.

6.2 Interior and Exterior Subject Property Observations

Unless otherwise noted, the items listed in the table below appeared in good condition with no visual evidence of staining, deterioration, or a discharge of hazardous materials; and there are no records of a release in these areas. Items where further description is warranted are discussed in the section(s) following the table.

Table 6.1 - Interior and Exterior Subject Property Observations

Item	Present (Current/ Historical/ Not Observed)	Description
Hazardous material storage or handling areas	Not Observed	See Section 6.2.1.
Solid and liquid wastes including municipal wastes	Not Observed	See Section 6.2.2.
Underground Storage Tanks (USTs) and associated piping	Not Observed	See Section 6.2.3.
Aboveground Storage Tanks (ASTs) and associated piping	Not Observed	See Section 6.2.4.
Unlabeled drums and containers (≥5 gallons)	Not Observed	
Strong, pungent, or noxious odors	Not Observed	
Pools of liquid, including surface water bodies and sumps (handling hazardous substances or substances likely to be hazardous only)	Not Observed	
Known or Likely PCB-containing items (liquid-filled transformers, hydraulic equipment, etc.)	Not Observed	
Stains or corrosion	Not Observed	

Table 6.1 - Interior and Exterior Subject Property Observations

Item	Present (Current/ Historical/ Not Observed)	Description
Drains and sumps	Not Observed	
Oil water separator	Not Observed	
Pits, ponds, and lagoons	Not Observed	
Stressed vegetation	Not Observed	
Fill material	Not Observed	
Wastewater (discharged from or to the subject property)	Not Observed	No wastewater is discharged from the site.
Stormwater (discharged from or to the subject property)	Observed	Stormwater at the subject property discharges to surrounding roadside ditches and streams.
Wells (including dry wells, irrigation wells, injection wells, abandoned wells, oil and gas wells, or other wells)	Not Observed	
Septic systems or cesspools	Not Observed	
Debris piles	Not Observed	

6.2.1 Hazardous Substances

According to subject property representatives, no hazardous substances or petroleum products are present at the subject property. Additionally, no hazardous substances or petroleum products were observed during the site visit.

6.2.2 Solid and Liquid Wastes

According to subject property representatives, no solid or liquid wastes are generated or stored at the subject property. Additionally, no solid or liquid wastes were observed during the site visit.

6.2.3 Underground Storage Tanks

According to subject property representatives, no USTs are currently or have historically been present at the subject property. Additionally, no visual evidence (e.g., vent pipes, fill ports, dispensing equipment, etc.) of USTs was observed during the site visit.

6.2.4 Aboveground Storage Tanks

According to subject property representatives, no ASTs are currently or have historically been present at the subject property. Additionally, no ASTs were observed during the site visit.

6.3 Adjoining and Surrounding Properties Reconnaissance

6.3.1 Adjoining Properties

During the site reconnaissance, TRC viewed the adjoining properties from the subject property and publicly accessible areas (e.g., public roadways, etc.).

Table 6.2 - Adjoining Properties Reconnaissance

Direction from Subject Property	Current Land Use Description
North	Open field and wooded property, zoned as general agriculture.
East	Residential properties.
South	Residential properties and Quick's Mill Road.
West	Residential properties and Falling Spring Run.

6.3.2 Surrounding Properties

Surrounding properties generally include mixed residential, and forested land to the north and to the east, mixed residential and a roadway to the south, and mixed residential and forested land to the west.

7.0 FINDINGS, OPINIONS, AND CONCLUSIONS

Potential findings can include RECs, controlled RECs (CRECs), historical RECs (HRECs), and de minimis conditions, pursuant to ASTM Practice E1527-21.

RECs are defined as (1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment: (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.

CRECs are defined as RECs affecting the subject property that have been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, AULs, institutional controls, or engineering controls).

HRECs are defined as previous releases of hazardous substances or petroleum products affecting the subject property that have been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria without subjecting the subject property to any controls (for example, property use restrictions, AULs, institutional controls, or engineering controls). An HREC is not a REC.

De minimis conditions are related to a release that generally does not present a threat to human health or the environmental and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis conditions are not RECs nor CRECs.

Business environmental risks (BERs) are defined as a risk which can have a material environmental or environmentally driven impact on the business associated with the current or planned use of commercial real estate, not necessarily related to those environmental issues required to be investigated in this practice. Consideration of BER issues may involve addressing one or more non-scope considerations.

Data gaps are defined as a lack of or inability to obtain information required by this practice despite good faith efforts by the Environmental Professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to, site reconnaissance (for example, an inability to conduct the site visit), and interviews (for example, an inability to interview the Key Site Manager, regulatory officials, etc.).

TRC has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E1527-21 at the property located at Parcel 036 34P in Verona, Augusta County, Virginia 24482. Any exceptions to, or deletions from, this practice are described in Sections 1.3 and 7.7 of this report.

No features, activities, uses, or conditions were identified during this assessment that may indicate the presence or likely presence of hazardous substances or petroleum products at the subject property.

7.1 RECs

This assessment has revealed no evidence of RECs in connection with the subject property.

7.2 CRECs

This assessment has revealed no evidence of CRECs in connection with the subject property.

7.3 HRECs

This assessment has revealed no evidence of HRECs in connection with the subject property.

7.4 De Minimis Conditions

This assessment has revealed no evidence of de minimis conditions in connection with the subject property.

7.5 Business Environmental Risks (BERs)

This assessment has revealed no evidence of BERs that warrant further discussion in this section.

7.6 Data Gaps

TRC has made an appropriate inquiry into the commonly known and reasonably ascertainable resources concerning the historical ownership and use of the subject property back to the first development per Section 8.3.8 of ASTM Practice E1527-21. Data gaps identified during this assessment include the following:

1. Past ownership of the property information was not available back to at least 1940. Based on historic aerial imagery and topographic maps, the property has not had any significant changes since 1941. Information on previous owners is not expected to substantially change the findings and conclusions of this report.

Based on other historical sources reviewed, Data Gap Number 1 is not considered significant.

7.7 Limiting Conditions and Deviations

7.7.1 Accuracy and Completeness

ASTM Practice E1527-21 recognizes inherent limitations for Phase I ESAs that apply to this report, including:

- Uncertainty Not Eliminated – No Phase I ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Data gaps identified during this Phase I ESA are listed in Section 7.6.
- Not Exhaustive – A Phase I ESA is not an exhaustive investigation.
- Past Uses of the Property – A review of standard historical sources at intervals less than 5 years is not required.

The Client is advised that the Phase I ESA conducted at the subject property is a limited inquiry into a property's environmental status, cannot wholly eliminate uncertainty, and is not an exhaustive assessment to discover every potential source of environmental liability at the subject property. Therefore, TRC does not make a statement i) of warranty or guarantee, express or implied for any specific use; ii) that the subject property is free of RECs or environmental impairment; iii) that the subject property is "clean;" or iv) that impairments, if any, are limited to those that were discovered while TRC was performing the Phase I ESA. This limiting statement is not meant to compromise the findings of this report; rather, it is meant as a statement of limitations within the ASTM Standard and intended scope of this assessment. Specific limiting conditions identified during the site reconnaissance are described in Section 6.1. Subsurface conditions may differ from the conditions implied by surface observations and can be evaluated more thoroughly through intrusive techniques that are beyond the scope of this assessment. Information in this report is not intended to be used as a construction document and should not be used for demolition, renovation, or other construction purposes.

This report presents TRC's site reconnaissance observations, findings, and conclusions as they existed at the time of the site reconnaissance. TRC makes no representation or warranty that the past or current operations at the property are or have been in compliance with applicable federal, state, and local laws, regulations, and codes. TRC makes no guarantees as to the accuracy or completeness of information obtained from others during the course of this Phase I ESA report. It is possible that information exists beyond the scope of this assessment, or that information was not provided to TRC. Additional information subsequently provided, discovered, or produced may alter findings or conclusions made in this Phase I ESA report. TRC is under no obligation to update this report to reflect such subsequent information. The findings presented in this report are based upon reasonably ascertainable information and observed subject property conditions at the time of the assessment.

This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not assessed. Regardless of the findings stated in this report, TRC is not responsible for consequences or conditions arising from facts that were not fully disclosed to TRC during the assessment.

An independent data research company provided the government agency database referenced in this report. Information regarding surrounding area properties was requested for approximate minimum search distances and was assumed to be correct and complete unless obviously contradicted by TRC's observations or other credible referenced sources reviewed during the assessment.

TRC is not a professional title insurance or land surveyor firm and makes no guarantee, explicit or implied, that any land title records acquired or reviewed, or any physical descriptions or depictions of the property in this report, represent a comprehensive definition or precise delineation of property ownership or boundaries.

7.7.2 Warranties and Representations Disclaimer

TRC prepared this document solely for the benefit of the Client and the User. With regard to third-party recipients of this document, neither TRC, nor the Client, nor the User, nor any of their respective parents, affiliates, or subsidiaries, nor any person acting on their behalf: (a) makes any warranty, expressed or implied, with respect to the use of any information or methods disclosed

in this document; or (b) assumes any liability with respect to the use of any information or methods disclosed in this document. Any third-party recipient of this document, by its acceptance or use of this document, releases TRC, the Client, the User, and their parents, affiliates, and subsidiaries from any liability for direct, indirect, economic, incidental, consequential, or special loss or damage whether arising in contract, warranty, express or implied, tort, or otherwise, and irrespective of fault, negligence, and strict liability.

This report does not warrant against: (1) operations or conditions which were not evident from visual observations or historical information provided; (2) conditions which could only be determined by physical sampling or other intrusive investigation techniques; (3) locations other than the client-provided addresses and/or subject property description; or (4) information regarding off-site location(s) (with possible impact to the subject property) not published in publicly available records.

7.7.3 Continued Validity/User Reliance

This report is presumed to be valid, in accordance with, and subject to, the limitations specified in ASTM Practice E1527-21, for a period of 180 days from the completion of each component using the dates provided in Section 8, or until the Client obtains specific information that may materially alter a finding, opinion, or conclusion in this report, or until the Client is notified by TRC that it has obtained specific information that may materially alter a finding, opinion, or conclusion in this report. Additionally, pursuant to ASTM Practice E1527-21, this report is presumed valid if the required components are completed fewer than 180 days prior to the date of acquisition of the property or (for transactions not involving an acquisition) the date of the intended transaction.

7.7.4 Significant Assumptions

During this Phase I ESA, TRC relied on database information; interviews with subject property representatives, regulatory officials, and other individuals having knowledge of subject property operations; and User-provided information as requested in our authorized Scope of Work. TRC has assumed that the information provided is true and accurate. Reliance on electronic database search reports is subject to the limitations set forth in those reports. TRC did not independently verify the information provided. TRC found no reason to question the validity of the information received unless explicitly noted elsewhere in this report. If other information is discovered and/or if previous reports exist that were not provided to TRC, our conclusions may not be valid.

8.0 REFERENCES

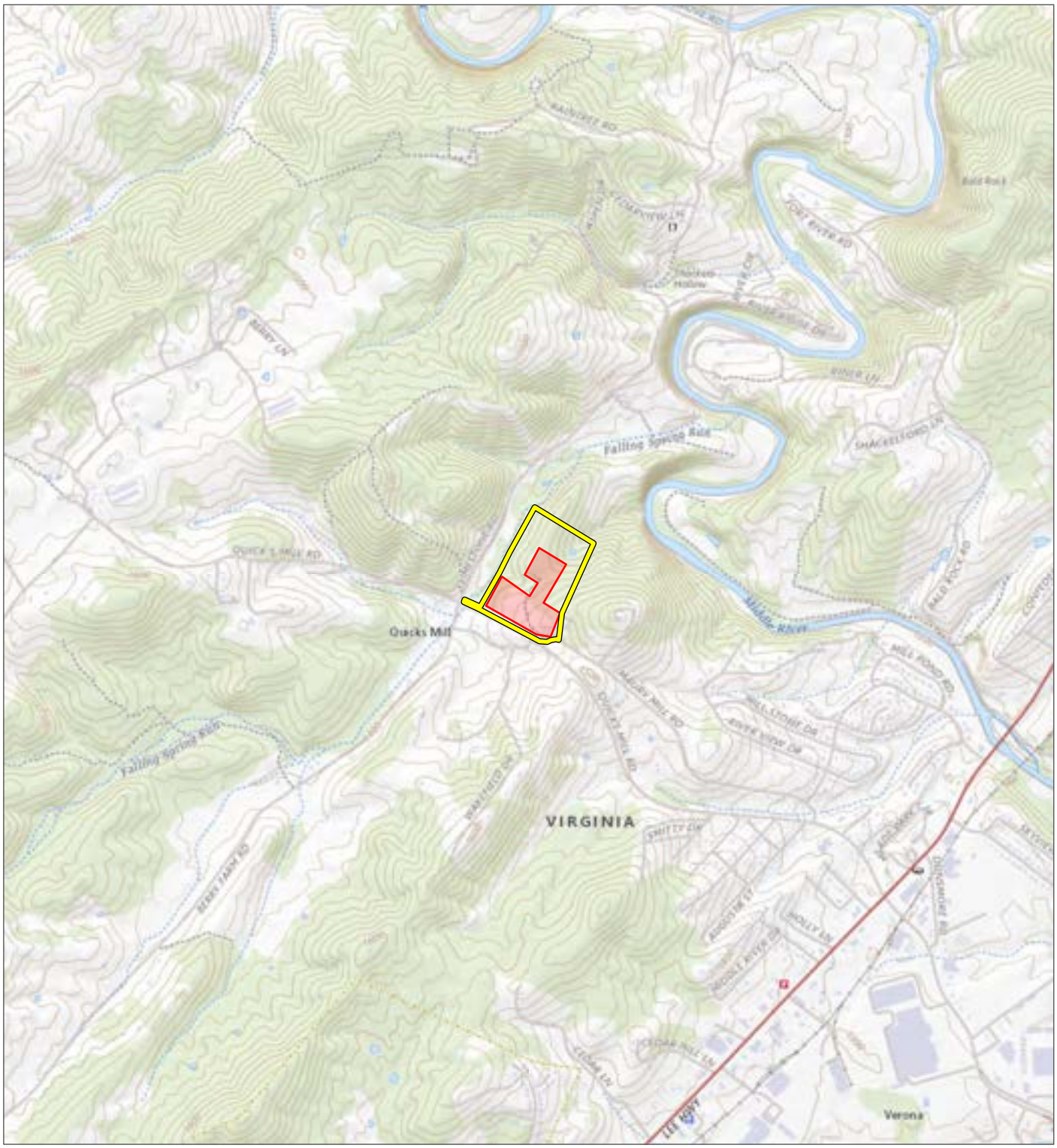
Table 8.1 - Reference Information

Description/Title of Document(s) Received or Agency Contacted	Date Information Request Filled/Date of Agency Contact	Information Updated	Reference Source
Regulatory database search and historical sources	December 4, 2023	N/A	EDR Inquiry Number: 7512217
Interview with Herbert Fauber	12/27/2023	N/A	
Site reconnaissance conducted by Tony Tredway	12/5/2023	N/A	N/A
Fire Department	12/20/2023	Attempted contact, have not heard back at this time.	
Virginia Department of Energy Gas and Oil Web viewer	1/8/2024	N/A	

9.0 NON-SCOPE ITEMS

This Phase I ESA report was limited to those items in ASTM Practice E1527-21. No ASTM Practice E1527-21 non-scope services were performed as part of this Phase I ESA.

FIGURES



PROJECT AREA

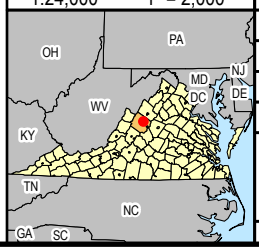
PROJECT FOOTPRINT

N

0 1,000 2,000

FEET

1:24,000 1" = 2,000'



BASE MAP: ESRI "USGS TOPO" ONLINE SERVICE LAYER
USGS 7.5' QUADRANGLE: STAUNTON, VIRGINIA
DATA SOURCES: TRC, ESRI, USGS

PROJECT: **US SOLAR**

STAUNTON SOLAR PROJECT
AUGUSTA COUNTY, VIRGINIA

TITLE:

SITE LOCATION MAP

DRAWN BY:	H. BEST	PROJ. NO.:	576550
CHECKED BY:	R. SPRING		
APPROVED BY:	T. TREDWAY		
DATE:	JANUARY 2024		

FIGURE 1

TRC

1030 WILMER AVE
STE. 100
RICHMOND, VA 23227
PHONE: 804.264.2228

FILE: STAUNTON_SOLAR

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE VIRGINIA NORTH FIPS 4501 FT US; MAP ROTATION: 0
--SAVED BY: HBEST ON 1/3/2024, 08:59:26 AM-- FILE PATH: \\EMPLOYEES\GIS\ARCGISPRO\1-PROJECTS\US_SOLAR\576550_STAUNTON\2-APRX\STAUNTON_SOLAR APRX-- LAYOUT NAME: PHASE I FIG 1 SITE LOCATION



PROJECT BOUNDARY

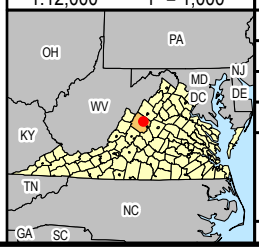
PROJECT_FOOTPRINT

N

0 500 1,000

FEET

1:12,000 1" = 1,000'



BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER
IMAGERY DATE : 11/04/2018
DATA SOURCES: TRC, ESRI

PROJECT: **US SOLAR**
STAUNTON SOLAR PROJECT
AUGUSTA COUNTY, VIRGINIA

TITLE:
SITE LAYOUT MAP

DRAWN BY:	H. BEST	PROJ. NO.:	576550
CHECKED BY:	R. SPRING		
APPROVED BY:	T. TREDWAY		**FIGURE 2**
DATE:	JANUARY 2024		

TRC
1030 WILMER AVE
STE. 100
RICHMOND, VA 23227
PHONE: 804.264.2228

FILE: STAUNTON_SOLAR

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE VIRGINIA NORTH FIPS 4501 FT US; MAP ROTATION: 0
-- SAVED BY: HBEST ON 1/3/2024, 08:59:26 AM; FILE PATH: \\EMPLOYEES\GIS\ARCGISPRO\1-PROJECTS\US_SOLAR\576550_STAUNTON\2-APRX\STAUNTON_SOLAR.APRX; LAYOUT NAME: PHASE I FIG 2 SITE LAYOUT

Appendix A:
Database Radius Report

USS Staunton Project
Quicks Mill Road
Verona, VA 24482

Inquiry Number: 7512217.2s
December 04, 2023

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Detail Map	3
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Map Findings	8
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Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

QUICKS MILL ROAD
VERONA, VA 24482

COORDINATES

Latitude (North):	38.2147820 - 38° 12' 53.21''
Longitude (West):	79.0236870 - 79° 1' 25.27''
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	673020.2
UTM Y (Meters):	4231286.0
Elevation:	1413 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	50022125 STAUNTON, VA
Version Date:	2022

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20181018
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
QUICKS MILL ROAD
VERONA, VA 24482

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	RALPH CURRY RESIDENC	234 MAURY MILL RD	LUST, LTANKS	Higher	2400, 0.455, SSE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---- National Priority List
Proposed NPL ---- Proposed National Priority List Sites
NPL LIENS ---- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---- Federal Facility Site Information listing
SEMS ---- Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ---- Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---- RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG ---- RCRA - Large Quantity Generators
RCRA-SQG ---- RCRA - Small Quantity Generators
RCRA-VSQG ---- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---- Land Use Control Information System

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROLS ..... Institutional Controls Sites List

Federal ERNS list

ERNS ..... Emergency Response Notification System

Lists of state- and tribal hazardous waste facilities

SHWS ..... This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF ..... Solid Waste Management Facilities

Lists of state and tribal leaking storage tanks

INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

Lists of state and tribal registered storage tanks

FEMA UST ..... Underground Storage Tank Listing
UST ..... Registered Petroleum Storage Tanks
AST ..... Registered Petroleum Storage Tanks
INDIAN UST ..... Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

ENG CONTROLS ..... Engineering Controls Sites Listing
INST CONTROL ..... Voluntary Remediation Program Database

Lists of state and tribal voluntary cleanup sites

VCP ..... Voluntary Remediation Program
INDIAN VCP ..... Voluntary Cleanup Priority Listing

Lists of state and tribal brownfield sites

BROWNFIELDS ..... Brownfields Site Specific Assessments

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
ODI ..... Open Dump Inventory
IHS OPEN DUMPS ..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ..... Delisted National Clandestine Laboratory Register

US CDL ..... National Clandestine Laboratory Register

Local Land Records

LIENS 2 ..... CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
SPILLS ..... Prep/Spills Database Listing
SPILLS 90 ..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR ..... RCRA - Non Generators / No Longer Regulated
FUDS ..... Formerly Used Defense Sites
DOD ..... Department of Defense Sites
SCRD DRYCLEANERS ..... State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ..... Financial Assurance Information
EPA WATCH LIST ..... EPA WATCH LIST
2020 COR ACTION ..... 2020 Corrective Action Program List
TSCA ..... Toxic Substances Control Act
TRIS ..... Toxic Chemical Release Inventory System
SSTS ..... Section 7 Tracking Systems
ROD ..... Records Of Decision
RMP ..... Risk Management Plans
RAATS ..... RCRA Administrative Action Tracking System
PRP ..... Potentially Responsible Parties
PADS ..... PCB Activity Database System
ICIS ..... Integrated Compliance Information System
FTTS ..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ..... Material Licensing Tracking System
COAL ASH DOE ..... Steam-Electric Plant Operation Data
COAL ASH EPA ..... Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ..... PCB Transformer Registration Database
RADINFO ..... Radiation Information Database
HIST FTTS ..... FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ..... Incident and Accident Data
CONSENT ..... Superfund (CERCLA) Consent Decrees
INDIAN RESERV ..... Indian Reservations
FUSRAP ..... Formerly Utilized Sites Remedial Action Program
UMTRA ..... Uranium Mill Tailings Sites
LEAD SMELTERS ..... Lead Smelter Sites
US AIRS ..... Aerometric Information Retrieval System Facility Subsystem
US MINES ..... Mines Master Index File
MINES MRDS ..... Mineral Resources Data System
ABANDONED MINES ..... Abandoned Mines
FINDS ..... Facility Index System/Facility Registry System
ECHO ..... Enforcement & Compliance History Information
DOCKET HWC ..... Hazardous Waste Compliance Docket Listing
UXO ..... Unexploded Ordnance Sites
FUELS PROGRAM ..... EPA Fuels Program Registered Listing
PFAS NPL ..... Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES ..... Federal Sites PFAS Information

PFAS TRIS List of PFAS Added to the TRI
PFAS TSCA PFAS Manufacture and Imports Information
PFAS RCRA MANIFEST PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR PFAS Contamination Site Location Listing
PFAS WQP Ambient Environmental Sampling for PFAS
PFAS NPDES Clean Water Act Discharge Monitoring Information
PFAS ECHO Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAINING Facilities in Industries that May Be Handling PFAS Listing
PFAS PART 139 AIRPORT All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC Aqueous Foam Related Incidents Listing
BIOSOLIDS ICIS-NPDES Biosolids Facility Data
AIRS Permitted Airs Facility List
NPDES Comprehensive Environmental Data System
COAL ASH Coal Ash Disposal Sites
DRYCLEANERS Drycleaner List
ENF Enforcement Actions Data
Financial Assurance Financial Assurance Information Listing
TIER 2 Tier 2 Information Listing
UIC Underground Injection Control Wells

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Auto EDR Exclusive Historical Auto Stations
EDR Hist Cleaner EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF Recovered Government Archive Solid Waste Facilities List
RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Lists of state and tribal leaking storage tanks

LUST: The Leaking Underground Storage Tank Database.

A review of the LUST list, as provided by EDR, has revealed that there is 1 LUST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RALPH CURRY RESIDENC	***234 MAURY MILL RD***	***SSE 1/4 - 1/2 (0.455 mi.)***	***1***	***8***

Database: LUST REG VA, Date of Government Version: 12/06/2011
Facility Status: Closed
Pollution Complaint #: 19921195
Release Status: Suspected

LTANKS: The Leaking Tanks Database contains current Leaking petroleum tanks. The data comes from the Department of Environmental Quality.

A review of the LTANKS list, as provided by EDR, and dated 08/02/2023 has revealed that there is 1 LTANKS site within approximately 0.5 miles of the target property.

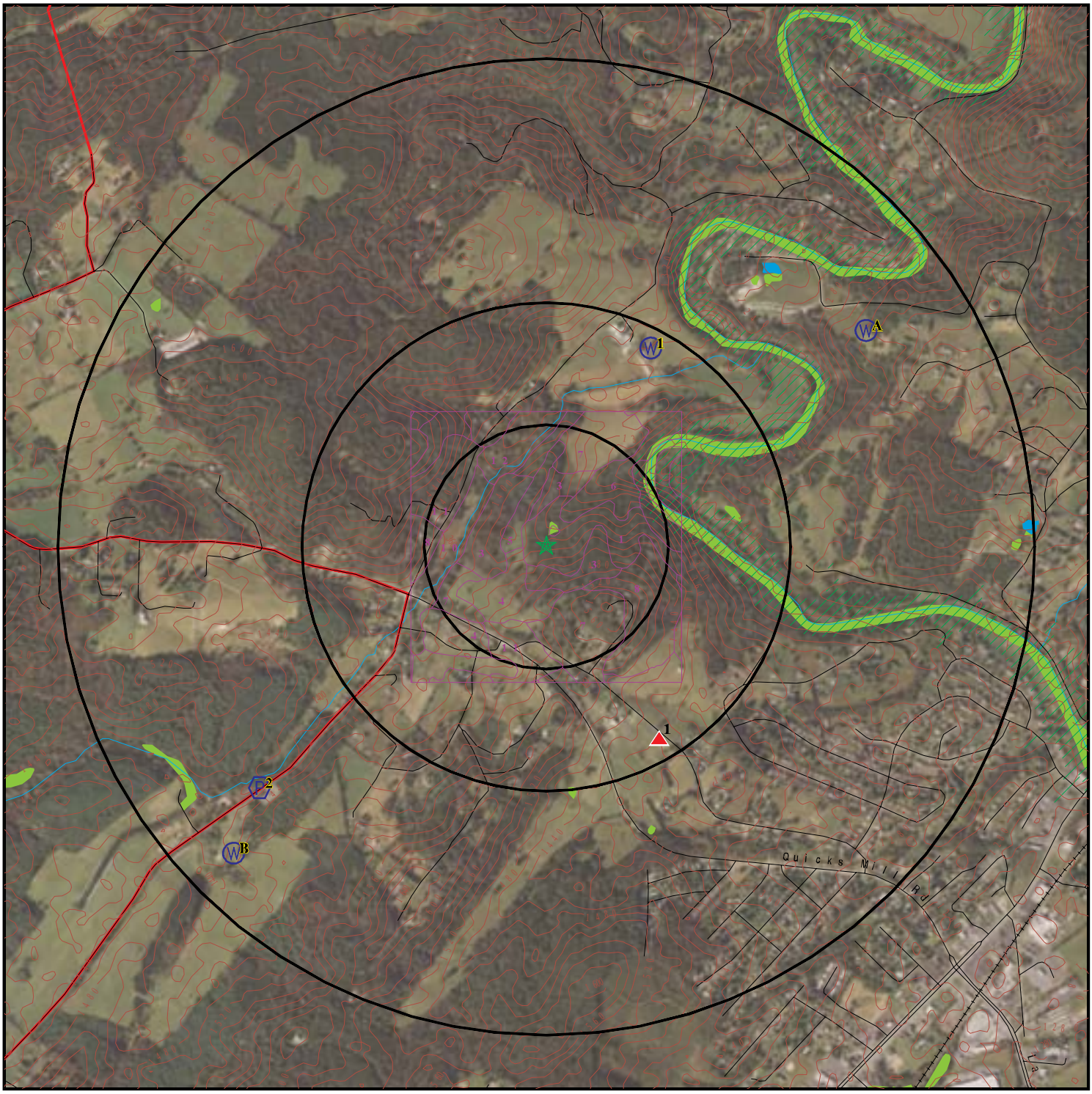
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RALPH CURRY RESIDENC	***234 MAURY MILL RD***	***SSE 1/4 - 1/2 (0.455 mi.)***	***1***	***8***

Facility Status: Closed
CEDS Facility Id: 200000092604
Pollution Complaint #: 19921195

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 7512217.2S



0 1/4 1/2 1 Miles

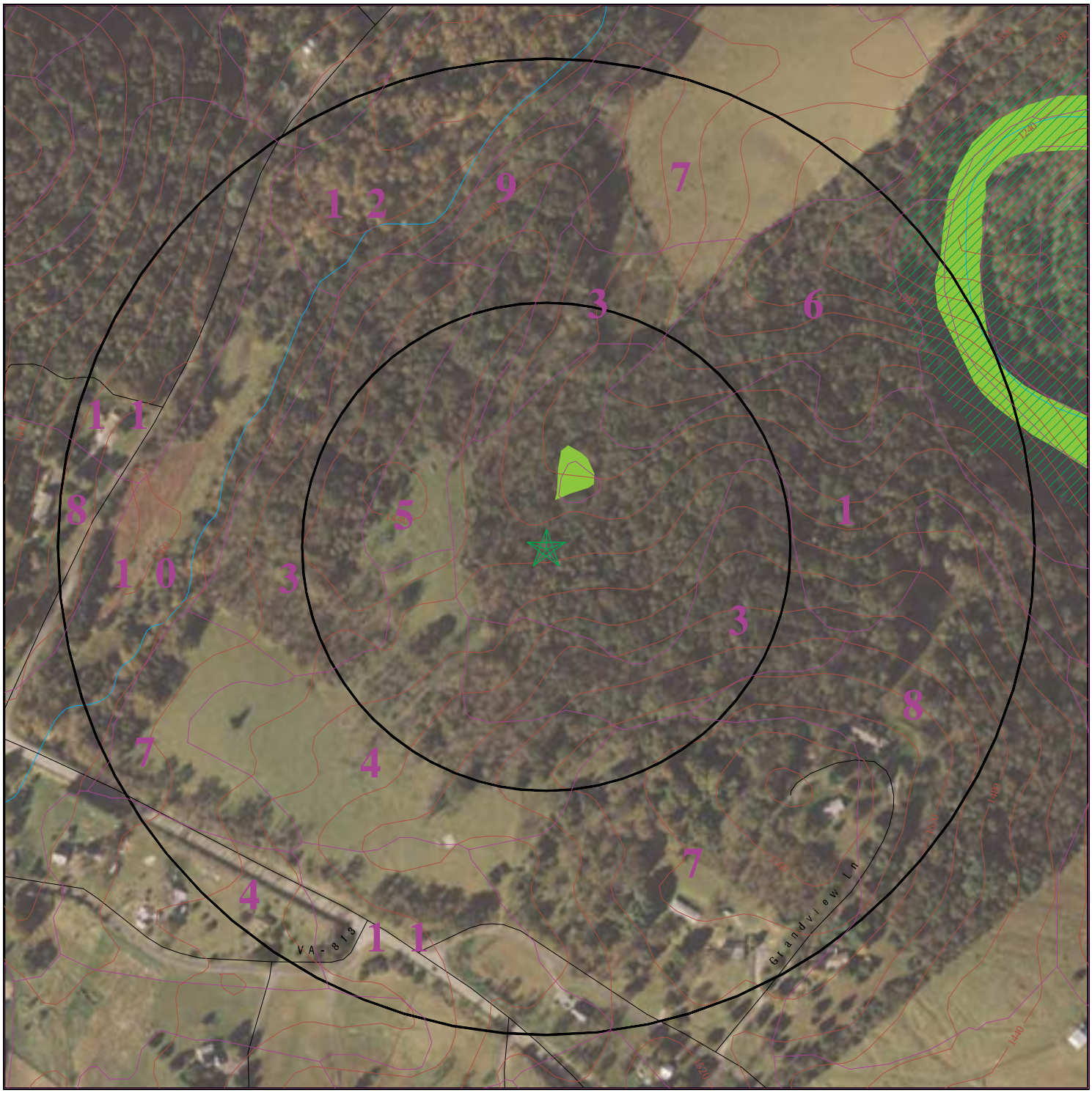
- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- County Boundary
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	USS Staunton Project	CLIENT:	TRC Environmental Corporation
ADDRESS:	Quicks Mill Road Verona VA 24482	CONTACT:	Tony Tredway
		INQUIRY #:	7512217.2s
LAT/LONG:	38.214782 / 79.023687	DATE:	December 04, 2023 4:13 pm

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DETAIL MAP - 7512217.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	USS Staunton Project	CLIENT:	TRC Environmental Corporation
ADDRESS:	Quicks Mill Road Verona VA 24482	CONTACT:	Tony Tredway
		INQUIRY #:	7512217.2s
LAT/LONG:	38.214782 / 79.023687	DATE:	December 04, 2023 4:14 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
Lists of state- and tribal hazardous waste facilities								
SHWS	N/A		N/A	N/A	N/A	N/A	N/A	N/A
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0
Lists of state and tribal leaking storage tanks								
LUST	0.500		0	0	1	NR	NR	1

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
LTANKS	0.500		0	0	1	NR	NR	1
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAINING	0.250		0	0	NR	NR	NR	0
PFAS PART 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	TP		NR	NR	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
TIER 2	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	0	0	2	0	0	2

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

1
SSE
1/4-1/2
0.455 mi.
2400 ft.

RALPH CURRY RESIDENCE
234 MAURY MILL RD
VERONA, VA 24482

LUST **S105695808**
LTANKS **N/A**

Relative:
Higher

Actual:
1422 ft.

LUST REG VA:

Region:	Valley
Facility Status:	**Closed**
Release Status:	Suspected
Pollution Complaint #:	19921195
Program:	RP Lead
Contact Name:	Ralph Curry
Contact Address:	234 Maury Mill Rd.
Contact City:	Verona
Contact State:	VA
Contact Zip:	Not reported
Contact Telephone:	Not reported

LTANKS:

Name:	RALPH CURRY RESIDENCE
Address:	234 MAURY MILL RD
City,State,Zip:	VERONA, VA 24482
City,State,Zip:	VERONA, VA 24482
Region:	Not reported
CEDS Facility Id:	200000092604
Case Status:	**Closed**
Pollution Complaint #:	19921195
Reported:	01/03/1992
Case Closed Date:	06/02/1993
Program:	Not reported
Federally Regulated UST (Y/N):	Not reported
Regulated Petroleum UST (1):	Not reported
Excluded UST (1):	Not reported
Deferred UST (1):	Not reported
Partially Deferred UST (1):	Not reported
Exempt 1 UST (2):	Not reported
Exempt 2 Heating Oil UST (2):	Not reported
Small Heating Oil AST (2):	Not reported
Regulated AST (3):	Not reported
Unregulated AST (3):	Not reported
Other Y/N:	Not reported
Unknown Y/N:	Not reported
Other Description:	Not reported
Heating Oil Category:	Not reported
Changed By:	kmkain
Changed Date:	05/17/2006
Inserted By:	Not reported
Inserted Date:	Not reported
Verified By:	Not reported
Verify Date:	Not reported
Reference Point:	Not reported
RST ID:	1445
RST Poll Complaint Number:	19921195
Des First Name:	David
Des Last Name:	Forrer
RST Rec Code:	VRO
RST Priority:	Not reported
RST Fed Reg Tank:	N

RALPH CURRY RESIDENCE (Continued) **S105695808**

RST Responsibility Ind:	RP Lead
RST Suspect Confirm Ind:	Suspected
Facility Location:	234 Maury Mill Road
FIC Description:	Augusta County
Latitude:	38.205924817725
Longitude:	-79.0144503870789

Count: 0 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 11/01/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 11/01/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 11/01/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 06/23/2023
Date Data Arrived at EDR: 06/23/2023
Date Made Active in Reports: 09/20/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 09/26/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/02/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/02/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/31/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 14

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/31/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 800-438-2474
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/31/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 800-438-2474
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/31/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 800-438-2474
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/31/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 800-438-2474
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 08/03/2023
Date Data Arrived at EDR: 08/07/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 64

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/02/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/21/2023
Date Data Arrived at EDR: 08/21/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/21/2023
Date Data Arrived at EDR: 08/21/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/12/2023
Date Data Arrived at EDR: 06/20/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 55

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: Department of Environmental Quality
Telephone: 804-698-4236
Last EDR Contact: 09/22/2023
Next Scheduled EDR Contact: 12/25/2023
Data Release Frequency: N/A

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF: Solid Waste Management Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/23/2023
Date Data Arrived at EDR: 08/29/2023
Date Made Active in Reports: 09/05/2023
Number of Days to Update: 7

Source: Department of Environmental Quality
Telephone: 804-698-4238
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Semi-Annually

Lists of state and tribal leaking storage tanks

LUST REG VA: Leaking Underground Storage Tank List

Leaking underground storage tank site locations. Includes: counties of Albemarle, Augusta, Bath, Clarke, Fluvanna, Frederick, Greene, Highland, Nelson, Page, Rockbridge, Rockingham, Shenandoah, Warren; cities of Buena Vista, Charlottesville, Harrisonburg, Lexington, Staunton, Waynesboro, Winchester.

Date of Government Version: 12/06/2011
Date Data Arrived at EDR: 12/08/2011
Date Made Active in Reports: 01/16/2012
Number of Days to Update: 39

Source: Department of Environmental Quality Valley Regional Office
Telephone: 540-574-7800
Last EDR Contact: 08/29/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: No Update Planned

LUST REG TD: Leaking Underground Storage Tank Sites

Leaking underground storage tank site locations. Includes: counties of Accomack, Isle of Wight, James City, Northampton, Southampton, York; cities of Chesapeake, Franklin, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, Williamsburg.

Date of Government Version: 06/30/2013
Date Data Arrived at EDR: 07/05/2013
Date Made Active in Reports: 09/16/2013
Number of Days to Update: 73

Source: Department of Environmental Quality Tidewater Regional Office
Telephone: trofoia@deq.vir
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Quarterly

LUST REG SW: Leaking Underground Storage Tank Database
Leaking underground storage tank site locations. Includes: counties of Bland, Buchanan, Carroll, Dickenson, Grayson, Lee, Russell, Scott, Smyth, Tazewell, Washington, Wise, Wythe; cities of Bristol, Galax, Norton.

Date of Government Version: 07/15/2013
Date Data Arrived at EDR: 07/18/2013
Date Made Active in Reports: 09/16/2013
Number of Days to Update: 60
Source: Department of Environmental Quality Southwest Regional Office
Telephone: 276-676-4800
Last EDR Contact: 10/11/2016
Next Scheduled EDR Contact: 01/23/2017
Data Release Frequency: No Update Planned

LUST REG SC: Leaking Underground Storage Tanks
Leaking underground storage tank site locations. Includes: counties of Amherst, Appomattox, Buckingham, Campbell, Charlotte, Cumberland, Halifax, Lunenburg, Mecklenburg, Nottoway, Pittsylvania, Prince Deward; cities of Danville, Lynchburg.

Date of Government Version: 09/06/2013
Date Data Arrived at EDR: 09/06/2013
Date Made Active in Reports: 09/17/2013
Number of Days to Update: 11
Source: Department of Environmental Quality, South Central Region
Telephone: 434-582-5120
Last EDR Contact: 08/29/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Semi-Annually

LUST REG PD: Leaking Underground Storage Tank Sites
Leaking underground storage tank site locaitons. Includes: counties of Amelia, Brunswick, Charles City, Chesterfield, Dinwiddie, Essex, Gloucester, Goochland, Greensville, Hanover, Henrico, King and Queen, King William, Lancaster, Mathews, Middlesex, New Kent, Northumberland, Powhatan, Prince George, Richmond, Surry, Sussex, Westmoreland; cities of Colonial Heights, Emporia, Hopewell, Petersburg.

Date of Government Version: 12/02/2014
Date Data Arrived at EDR: 12/04/2014
Date Made Active in Reports: 01/16/2015
Number of Days to Update: 43
Source: Department of Environmental Quality Piedmont Regional Office
Telephone: 804-527-5020
Last EDR Contact: 08/29/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Quarterly

LUST REG NO: Leaking Underground Storage Tank Tracking Database
Leaking underground storage tank site locations. Includes: counties of Arlington, Caroline, Culpeper, Fairfax, Fauquier, King George, Loudoun, Louisa, Madison, Orange, Prince William, Rappahannock, Spotsylvania, Stafford; cities of Alexandria, Fairfax, Falls Church, Fredericksburg, Manassas, Manassas Park.

Date of Government Version: 05/18/2004
Date Data Arrived at EDR: 05/22/2004
Date Made Active in Reports: 07/09/2004
Number of Days to Update: 48
Source: Department of Environmental Quality Northern Regional Office
Telephone: 703-583-3800
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG WC: Leaking Underground Storage Tank List
Leaking underground storage tank site locations. Includes: counties of Alleghany, Bedford, Botetourt, Craig, Floyd, Franklin, Giles, Henry, Montgomery, Patrick, Pulaski, Roanoke; cities of Bedford, Clifton Forge, Covington, Martinsville, Radford, Roanoke, Salem.

Date of Government Version: 06/04/2015
Date Data Arrived at EDR: 06/05/2015
Date Made Active in Reports: 07/07/2015
Number of Days to Update: 32
Source: Department of Environmental Quality West Central Regional Office
Telephone: 540-562-6700
Last EDR Contact: 08/29/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: No Update Planned

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/19/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/19/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/14/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

LTANKS: Leaking Petroleum Storage Tanks
Includes releases of petroleum from underground storage tanks and aboveground storage tanks.

Date of Government Version: 08/02/2023
Date Data Arrived at EDR: 08/22/2023
Date Made Active in Reports: 11/08/2023
Number of Days to Update: 78
Source: Department of Environmental Quality
Telephone: 804-698-4010
Last EDR Contact: 11/20/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Quarterly

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 03/08/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 05/30/2023
Number of Days to Update: 82
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

UST: Registered Petroleum Storage Tanks
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 07/04/2023
Date Data Arrived at EDR: 08/22/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 77
Source: Department of Environmental Quality
Telephone: 804-698-4010
Last EDR Contact: 11/20/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Quarterly

AST: Registered Petroleum Storage Tanks
Registered Aboveground Storage Tanks.

Date of Government Version: 07/04/2023
Date Data Arrived at EDR: 08/22/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 77
Source: Department of Environmental Quality
Telephone: 804-698-4010
Last EDR Contact: 11/20/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Quarterly

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/14/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66
Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66
Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/19/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Controls Sites Listing

A listing of sites with Engineering Controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 06/09/2023
Date Data Arrived at EDR: 07/07/2023
Date Made Active in Reports: 09/27/2023
Number of Days to Update: 82

Source: Department of Environmental Quality
Telephone: 804-698-4228
Last EDR Contact: 09/28/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Quarterly

INST CONTROL: Voluntary Remediation Program Database

Sites included in the Voluntary Remediation Program database that have deed restrictions.

Date of Government Version: 06/09/2023
Date Data Arrived at EDR: 07/07/2023
Date Made Active in Reports: 09/27/2023
Number of Days to Update: 82

Source: Department of Environmental Quality
Telephone: 804-698-4228
Last EDR Contact: 09/28/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Quarterly

Lists of state and tribal voluntary cleanup sites

VRP: Voluntary Remediation Program

The Voluntary Cleanup Program encourages owners of elected contaminated sites to take the initiative and conduct voluntary cleanups that meet state environmental standards.

Date of Government Version: 06/09/2023
Date Data Arrived at EDR: 07/07/2023
Date Made Active in Reports: 09/27/2023
Number of Days to Update: 82

Source: Department of Environmental Quality
Telephone: 804-698-4228
Last EDR Contact: 09/28/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/12/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS: Brownfields Site Specific Assessments

To qualify for Brownfields Assessment, the site must meet the Federal definition of a Brownfields and should have contaminant issues that need to be addressed and a redevelopment plan supported by the local government and community. Virginia's Department of Environmental Quality performs brownfields assessments under a cooperative agreement with the U.S. Environmental Protection Agency at no cost to communities, property owners or, prospective purchasers. The assessment is an evaluation of environmental impacts caused by previous site uses similar to a Phase II Environmental Assessment.

Date of Government Version: 07/17/2023
Date Data Arrived at EDR: 07/19/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 83

Source: Department of Environmental Quality
Telephone: 804-698-4207
Last EDR Contact: 10/17/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 08/15/2023
Date Data Arrived at EDR: 08/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 08/30/2023
Next Scheduled EDR Contact: 12/25/2023
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/23/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 10/28/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 08/21/2023
Date Data Arrived at EDR: 08/21/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 78

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 08/21/2023
Date Data Arrived at EDR: 08/21/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 78

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/01/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/18/2023
Date Data Arrived at EDR: 09/20/2023
Date Made Active in Reports: 11/14/2023
Number of Days to Update: 55

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

SPILLS WC: Prep Database

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 09/21/2009
Date Data Arrived at EDR: 09/29/2009
Date Made Active in Reports: 10/30/2009
Number of Days to Update: 31

Source: Department of Environmental Quality, West Central Region
Telephone: 540-562-6700
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

SPILLS PC: Pollution Complaint Database

Pollution Complaints Database. The pollution reports contained in the PC database include the initial release reporting of Leaking Underground Storage Tanks and all other releases of petroleum to the environment as well as releases to state waters. The database is current through 12/1/93. Since that time, all spill and pollution reporting information has been collected and tracked through the DEQ regional offices.

Date of Government Version: 06/01/1996
Date Data Arrived at EDR: 10/22/1996
Date Made Active in Reports: 11/21/1996
Number of Days to Update: 30

Source: Department of Environmental Quality
Telephone: 804-698-4287
Last EDR Contact: 03/08/2010
Next Scheduled EDR Contact: 06/21/2010
Data Release Frequency: No Update Planned

SPILLS NO: PREP Database

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/29/2009
Date Made Active in Reports: 10/30/2009
Number of Days to Update: 31

Source: Department of Environmental Quality, Northern Region
Telephone: 703-583-3864
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

SPILLS PD: PREP Database

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 10/20/2009
Date Data Arrived at EDR: 10/29/2009
Date Made Active in Reports: 12/03/2009
Number of Days to Update: 35

Source: Department of Environmental Quality, Piedmont Region
Telephone: 804-527-5020
Last EDR Contact: 02/06/2012
Next Scheduled EDR Contact: 05/21/2012
Data Release Frequency: Quarterly

SPILLS TD: PREP Database

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 09/17/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/06/2009
Number of Days to Update: 13

Source: Department of Environmental Quality, Tidewater Region
Telephone: trofoia@deq.vir
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: Quarterly

SPILLS VA: PREP Database

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 08/08/2012
Date Data Arrived at EDR: 08/09/2012
Date Made Active in Reports: 10/05/2012
Number of Days to Update: 57

Source: Department of Environmental Quality, Valley Regional Office
Telephone: 540-574-7800
Last EDR Contact: 05/06/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Quarterly

SPILLS BRL: Prep/Spills Database Listing

A listing of spills locations located in the Blue Ridge Regional area, Lynchburg.

Date of Government Version: 09/18/2009
Date Data Arrived at EDR: 09/18/2009
Date Made Active in Reports: 10/06/2009
Number of Days to Update: 18

Source: DEQ, Blue Ridge Regional Office
Telephone: 434-582-6218
Last EDR Contact: 11/28/2011
Next Scheduled EDR Contact: 03/12/2012
Data Release Frequency: Varies

SPILLS: Prep/Spills Database Listing

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment. PREP staff often work to assist local emergency responders, other state agencies, federal agencies, and responsible parties, as may be needed, to manage pollution incidents. Oil spills, fish kills, and hazardous materials spills are examples of incidents that may involve the DEQ's PREP Program.

Date of Government Version: 08/21/2023
Date Data Arrived at EDR: 08/22/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 77

Source: Department of Environmental Quality
Telephone: 804-698-4287
Last EDR Contact: 11/20/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Quarterly

SPILLS SW: Reportable Spills

The Department of Environmental Quality's POLLUTION RESPONSE PROGRAM, known as PREP, provides for responses to air, water, and waste pollution incidents in order to protect human health and the environment.

Date of Government Version: 01/21/2010
Date Data Arrived at EDR: 01/22/2010
Date Made Active in Reports: 02/16/2010
Number of Days to Update: 25

Source: Department of Environmental Quality, Southwest Region
Telephone: 276-676-4839
Last EDR Contact: 07/13/2012
Next Scheduled EDR Contact: 10/29/2012
Data Release Frequency: No Update Planned

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 09/01/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/15/2013
Number of Days to Update: 43

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/31/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 800-438-2474
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 08/07/2023
Date Data Arrived at EDR: 08/15/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 56

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 11/10/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/09/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/19/2023
Date Data Arrived at EDR: 06/20/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 55

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 10/31/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 11/03/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/15/2023
Next Scheduled EDR Contact: 12/25/2023
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 08/18/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 81

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 07/17/2023
Date Data Arrived at EDR: 07/18/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 84

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/20/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 11/01/2023
Next Scheduled EDR Contact: 12/11/2023
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 05/09/2023
Date Data Arrived at EDR: 06/29/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 09/26/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 11/01/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2023
Date Data Arrived at EDR: 04/04/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 66

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/06/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 09/27/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/20/2023
Date Data Arrived at EDR: 09/01/2023
Date Made Active in Reports: 09/20/2023
Number of Days to Update: 19
Source: Nuclear Regulatory Commission
Telephone: 301-415-0717
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 04/14/2023
Date Made Active in Reports: 07/10/2023
Number of Days to Update: 87
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 11/27/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 11/27/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/03/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 09/22/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2023
Date Data Arrived at EDR: 07/19/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 83

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/02/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023
Date Data Arrived at EDR: 03/03/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 98

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/09/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 11/01/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/01/2023
Date Data Arrived at EDR: 08/22/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 77

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 82

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/07/2022
Date Data Arrived at EDR: 02/24/2023
Date Made Active in Reports: 05/17/2023
Number of Days to Update: 82

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/20/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/20/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 06/13/2023
Date Data Arrived at EDR: 06/14/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 61

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 11/28/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 08/23/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 98

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 11/20/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/03/2023
Date Data Arrived at EDR: 11/08/2023
Date Made Active in Reports: 11/20/2023
Number of Days to Update: 12

Source: EPA
Telephone: (215) 814-5000
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/24/2023
Date Data Arrived at EDR: 06/29/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 11/15/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites
A listing of unexploded ordnance site locations

Date of Government Version: 11/09/2021
Date Data Arrived at EDR: 10/20/2022
Date Made Active in Reports: 01/10/2023
Number of Days to Update: 82

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 09/13/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/14/2023
Date Data Arrived at EDR: 08/15/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 65

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/10/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 10/02/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 10/02/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 10/02/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 10/02/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 10/02/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 10/23/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 10/02/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS ECHO FIRE TRAINING: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS PART 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/06/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 09/28/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: No Update Planned

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 09/28/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data

The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 07/16/2023
Date Data Arrived at EDR: 07/18/2023
Date Made Active in Reports: 08/28/2023
Number of Days to Update: 41

Source: Environmental Protection Agency
Telephone: 202-564-4700
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

PFAS: Per- and Polyfluoroalkyl Substances

PFOS and PFOA stand for perfluorooctane sulfonate and perfluorooctanoic acid, respectively. Both are fluorinated organic chemicals, part of a larger family of compounds referred to as perfluoroalkyl substances (PFASs).

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 09/21/2023
Number of Days to Update: 78

Source: Department of Environmental Quality
Telephone: 804-698-4336
Last EDR Contact: 09/28/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

AIRS: Permitted Airs Facility List

A listing of permitted Airs facilities.

Date of Government Version: 09/11/2023
Date Data Arrived at EDR: 09/12/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 80

Source: Department of Environmental Quality
Telephone: 804-698-4000
Last EDR Contact: 09/07/2023
Next Scheduled EDR Contact: 12/25/2023
Data Release Frequency: Annually

CEDS: Comprehensive Environmental Data System

Virginia Water Protection Permits, Virginia Pollution Discharge System (point discharge) permits and Virginia Pollution Abatement (no point discharge) permits.

Date of Government Version: 06/01/2023
Date Data Arrived at EDR: 06/01/2023
Date Made Active in Reports: 06/23/2023
Number of Days to Update: 22

Source: Department of Environmental Quality
Telephone: 804-698-4077
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Quarterly

COAL ASH: Coal Ash Disposal Sites

A listing of facilities with coal ash impoundments.

Date of Government Version: 08/25/2023
Date Data Arrived at EDR: 08/29/2023
Date Made Active in Reports: 11/15/2023
Number of Days to Update: 78

Source: Department of Environmental Protection
Telephone: 804-698-4285
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

DRYCLEANERS: Drycleaner List

A listing of registered drycleaners.

Date of Government Version: 08/28/2023
Date Data Arrived at EDR: 08/29/2023
Date Made Active in Reports: 11/15/2023
Number of Days to Update: 78

Source: Department of Environmental Quality
Telephone: 804-698-4407
Last EDR Contact: 08/28/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

ENFORCEMENT: Enforcement Actions Data

A listing of enforcement actions.

Date of Government Version: 09/26/2023
Date Data Arrived at EDR: 09/28/2023
Date Made Active in Reports: 10/24/2023
Number of Days to Update: 26

Source: Department of Environmental Quality
Telephone: 804-698-4031
Last EDR Contact: 09/22/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Quarterly

Financial Assurance 1: Financial Assurance Information Listing

A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 07/20/2023
Date Data Arrived at EDR: 07/20/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 82

Source: Department of Environmental Quality
Telephone: 804-698-4205
Last EDR Contact: 10/23/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information listing
Solid waste financial assurance information.

Date of Government Version: 07/21/2023
Date Data Arrived at EDR: 07/25/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 77

Source: Department of Environmental Quality
Telephone: 804-698-4123
Last EDR Contact: 10/22/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Varies

TIER 2: Tier 2 Information Listing
A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/04/2022
Date Made Active in Reports: 03/21/2022
Number of Days to Update: 76

Source: Department of Environmental Quality
Telephone: 804-698-4159
Last EDR Contact: 09/07/2023
Next Scheduled EDR Contact: 12/25/2023
Data Release Frequency: No Update Planned

UIC: Underground Injection Control Wells
A listing of underground injection controls wells.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/25/2023
Date Made Active in Reports: 07/26/2023
Number of Days to Update: 1

Source: Department of Mines, Minerals and Energy
Telephone: 276-415-9700
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Virgina.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/20/2014
Number of Days to Update: 203

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Virgina and at the Regional VA Levels.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/15/2014
Number of Days to Update: 198

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 08/07/2023
Date Data Arrived at EDR: 08/08/2023
Date Made Active in Reports: 10/24/2023
Number of Days to Update: 77

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/07/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 09/28/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 1

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/30/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/05/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/09/2022
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 11/29/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 804-692-1900

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

USS STAUNTON PROJECT
QUICKS MILL ROAD
VERONA, VA 24482

TARGET PROPERTY COORDINATES

Latitude (North):	38.214782 - 38° 12' 53.22''
Longitude (West):	79.023687 - 79° 1' 25.27''
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	673020.2
UTM Y (Meters):	4231286.0
Elevation:	1413 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	50022125 STAUNTON, VA
Version Date:	2022

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

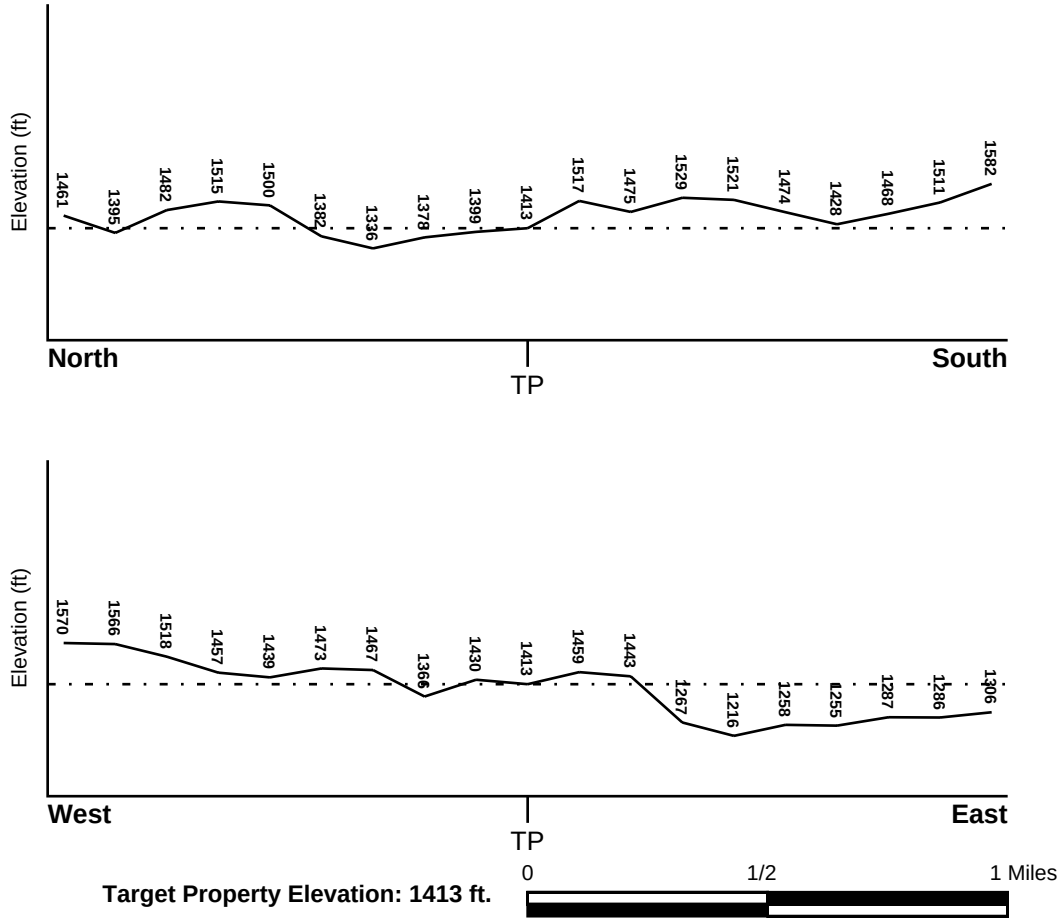
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General North

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 1413 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
51015C0334D	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
51015C0331D	FEMA FIRM Flood data
51015C0332D	FEMA FIRM Flood data
5100130095B	FEMA Q3 Flood data
5100130100B	FEMA Q3 Flood data
5100130140B	FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
STAUNTON	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

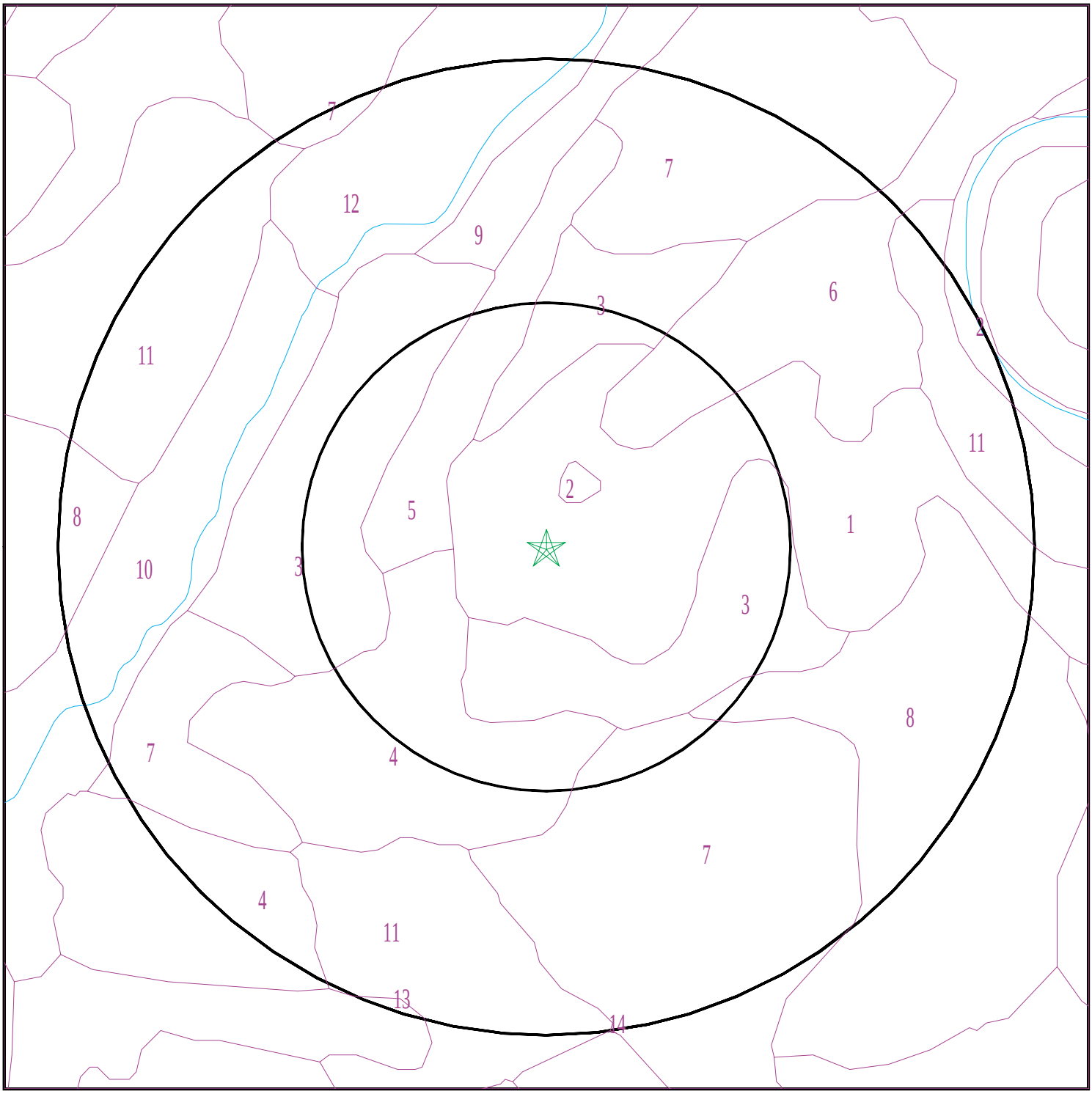
Era:	Paleozoic
System:	Cambrian
Series:	Cambrian
Code:	C *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 7512217.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	USS Staunton Project	CLIENT:	TRC Environmental Corporation
ADDRESS:	Quicks Mill Road Verona VA 24482	CONTACT:	Tony Tredway
LAT/LONG:	38.214782 / 79.023687	INQUIRY #:	7512217.2s
		DATE:	December 04, 2023 4:15 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Frederick

Soil Surface Texture: gravelly silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	gravelly silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5
2	7 inches	14 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5
3	14 inches	50 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
4	50 inches	70 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5

Soil Map ID: 2

Soil Component Name: Water

Soil Surface Texture: gravelly silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class:
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

Soil Map ID: 3

Soil Component Name: Frederick

Soil Surface Texture: gravelly silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	gravelly silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5
2	7 inches	14 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5
3	14 inches	50 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5
4	50 inches	70 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5

Soil Map ID: 4

Soil Component Name: Frederick

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5
2	7 inches	14 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5
3	14 inches	50 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5
4	50 inches	70 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5

Soil Map ID: 5

Soil Component Name: Frederick

Soil Surface Texture: gravelly silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	gravelly silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5
2	7 inches	14 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5
3	14 inches	50 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5
4	50 inches	70 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5

Soil Map ID: 6

Soil Component Name: Rock outcrop

Soil Surface Texture: bedrock

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 38 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	59 inches	bedrock	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 7

Soil Component Name: Frederick

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	7 inches	14 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5
3	14 inches	50 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5
4	50 inches	70 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5

Soil Map ID: 8

Soil Component Name: Frederick

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5
2	7 inches	14 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5
3	14 inches	50 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5
4	50 inches	70 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6 Min: 4.5

Soil Map ID: 9

Soil Component Name: Christian

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 5.5 Min: 3.6
2	7 inches	12 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 5.5 Min: 3.6
3	12 inches	40 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 5.5 Min: 3.6
4	40 inches	70 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 5.5 Min: 3.6

Soil Map ID: 10

Soil Component Name: Fluvaquents

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:
Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 42 Min: 1.4	Max: 5.5 Min: 4.5
2	9 inches	33 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 42 Min: 1.4	Max: 5.5 Min: 4.5
3	33 inches	66 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 42 Min: 1.4	Max: 5.5 Min: 4.5

Soil Map ID: 11

Soil Component Name: Rock outcrop

Soil Surface Texture: bedrock

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:
Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	59 inches	bedrock	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 12

Soil Component Name: Massanetta

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 188 inches

Depth to Watertable Min: > 84 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 42 Min: 0.42	Max: Min:
2	9 inches	44 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 42 Min: 0.42	Max: Min:
3	44 inches	74 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 42 Min: 0.42	Max: Min:

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
4	74 inches	77 inches	bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 42 Min: 0.42	Max: Min:

Soil Map ID: 13

Soil Component Name: Timberville

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6.5 Min: 3.6
2	9 inches	26 inches	gravelly silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6.5 Min: 3.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	26 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 6.5 Min: 3.6

Soil Map ID: 14

Soil Component Name: Christian

Soil Surface Texture: gravelly fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	gravelly fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 5.5 Min: 3.6
2	7 inches	12 inches	clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 5.5 Min: 3.6

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	12 inches	40 inches	clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 5.5 Min: 3.6
4	40 inches	70 inches	clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 5.5 Min: 3.6

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS40001204694	1/4 - 1/2 Mile NNE
B5	USGS40001204688	1/2 - 1 Mile SW
B6	USGS40001204689	1/2 - 1 Mile SW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

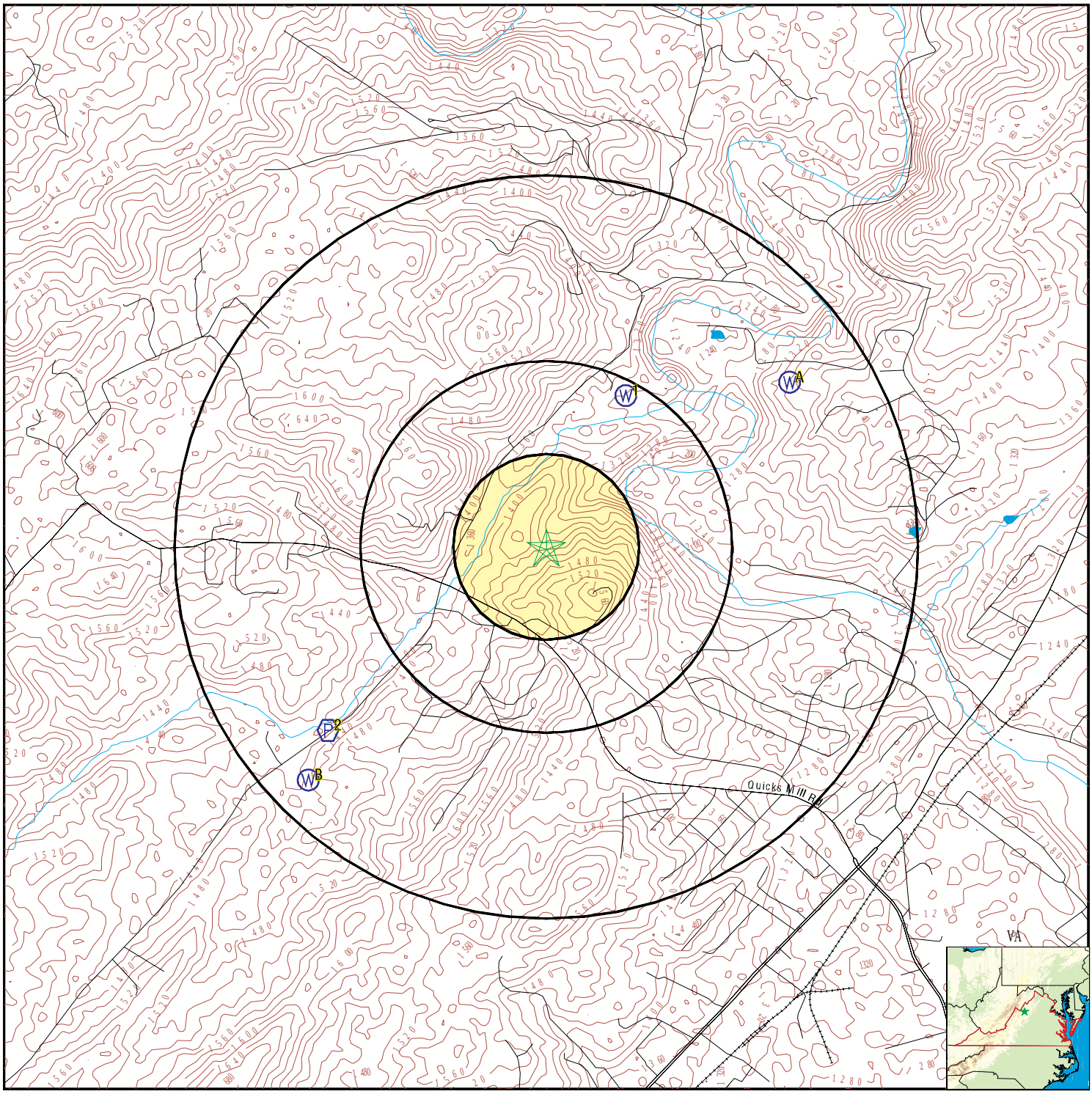
MAP ID	WELL ID	LOCATION FROM TP
2	VA2015725	1/2 - 1 Mile SW

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A3	VA7000000000305	1/2 - 1 Mile NE
A4	VA7000000000304	1/2 - 1 Mile NE

PHYSICAL SETTING SOURCE MAP - 7512217.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	USS Staunton Project	CLIENT:	TRC Environmental Corporation
ADDRESS:	Quicks Mill Road Verona VA 24482	CONTACT:	Tony Tredway
		INQUIRY #:	7512217.2s
LAT/LONG:	38.214782 / 79.023687	DATE:	December 04, 2023 4:15 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
NNE
1/4 - 1/2 Mile
Lower

FED USGS **USGS40001204694**

Organization ID:	USGS-VA	Organization Name:	USGS Virginia Water Science Center
Monitor Location:	38P 6	Type:	Well
Description:	Not Reported	HUC:	02070005
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Conococheague Formation
Aquifer Type:	Not Reported	Construction Date:	19610713
Well Depth:	101	Well Depth Units:	ft
Well Hole Depth:	101	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1961-07-13
Feet below surface:	80.00	Feet to sea level:	Not Reported
Note:	Not Reported		

2
SW
1/2 - 1 Mile
Lower

FRDS PWS **VA2015725**

Epa region:	03	State:	VA
Pwsid:	VA2015725	Pwsname:	VERONA SANITARY DISTRICT - ACSA
Cityserved:	Not Reported	Stateserved:	VA
Zipserved:	Not Reported	Fipscounty:	51015
Status:	Active	Retpopsrvd:	5378
Pwssvcconn:	2151	Psource longname:	Purch_surface_water
Pwstype:	CWS	Owner:	Local_Govt
Contact:	FANFONI, KENNETH J.	Contactorgname:	FANFONI, KENNETH J.
Contactphone:	540-245-5670	Contactaddress1:	18 Government Center Lane
Contactaddress2:	P. O. Box 859	Contactcity:	VERONA
Contactstate:	VA	Contactzip:	24482
Pwsactivitycode:	A		

Pwsid:	VA2015725	Facid:	4837
Facname:	BERRY FARM TREATMENT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	gaseous chlorination, post		
Factypecode:	TP		

Pwsid:	VA2015725	Facid:	4837
Facname:	BERRY FARM TREATMENT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	softening (hardness removal)
Trtprocess:	ion exchange	Factypecode:	TP

Pwsid:	VA2015725	Facid:	4837
Facname:	BERRY FARM TREATMENT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	particulate removal
Trtprocess:	filtration, ultrafiltration		
Factypecode:	TP		

Pwsid:	VA2015725	Facid:	4837
Facname:	BERRY FARM TREATMENT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	other
Trtprocess:	fluoridation	Factypecode:	TP

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

PWS ID:	VA2015725	PWS name:	VERONA SANITATION DIST - ACSA
Address:	ROUTE 1 BOX 267	Care of:	ROUTE 1, BOX 267
City:	FISHERSVILLE	State:	VA
Zip:	22939	Owner:	VERONA SANITATION DIST - ACSA
Source code:	Ground water	Population:	3150

PWS ID:	VA2015725	PWS type:	System Owner/Responsible Party
PWS name:	AUGUSTA CO SERVICE AUTH	PWS address:	Not Reported
PWS city:	STAUNTON	PWS state:	VA
PWS zip:	24401	PWS name:	VERONA SANITARY DISTRICT - ACSA
PWS type code:	C	Retail population served:	5383
Contact:	FANFONI, KENNETH J.	Contact address:	18 Government Center Lane
Contact address:	P. O. Box 859	Contact city:	VERONA
Contact state:	VA	Contact zip:	24482
Contact telephone:	540-245-5670		

County:	AUGUSTA	Source:	Ground water
Treatment Objective:	DISINFECTION	Process:	HYPOCHLORINATION, POST
Population:	3150		

County:	AUGUSTA	Source:	Ground water
Treatment Objective:	SOFTENING (HARDNESS REMOVAL)		
Process:	ION EXCHANGE	Population:	3150

PWS ID:	VA2015725	Activity status:	Active
Date system activated:	7303	Date system deactivated:	Not Reported
Retail population:	00003150	System name:	VERONA SANITATION DIST - ACSA
System address:	ROUTE 1, BOX 267	System address:	ROUTE 1 BOX 267
System city:	FISHERSVILLE	System state:	VA
System zip:	22939		

County FIPS:	015	City served:	AUGUSTA
Population served:	2,501 - 3,300 Persons	Treatment:	Treated
Latitude:	380556	Longitude:	0785809
Latitude:	381227	Longitude:	0790205
State:	VA	Latitude degrees:	38
Latitude minutes:	12	Latitude seconds:	27.0000
Longitude degrees:	79	Longitude minutes:	2
Longitude seconds:	5.0000		

Violation id:	108	Orig code:	S
State:	VA	Violation Year:	2007
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	24	Violation name:	Monitoring, Routine Minor (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	11/01/2007
Cmp edt:	11/30/2007		

Violation ID:	108	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	03/19/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving

Violation ID:	108	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/27/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal

Violation ID:	108	Orig Code:	S

Enforcemnt FY:	2008	Enforcement Action:	12/27/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
PWS name:	VERONA SANITARY DISTRICT - ACSA		
Population served:	5383	PWS type code:	C
Violation ID:	108	Contaminant:	COLIFORM (TCR)
Violation type:	Monitoring, Routine Minor (TCR)		
Compliance start date:	11/1/2007 0:00:00	Compliance end date:	11/30/2007 0:00:00
Enforcement date:	12/27/2007 0:00:00	Enforcement action:	State Formal NOV Issued
Violation measurement:	Not Reported		

PWS name:	VERONA SANITARY DISTRICT - ACSA		
Population served:	5383	PWS type code:	C
Violation ID:	108	Contaminant:	COLIFORM (TCR)
Violation type:	Monitoring, Routine Minor (TCR)		
Compliance start date:	11/1/2007 0:00:00	Compliance end date:	11/30/2007 0:00:00
Enforcement date:	12/27/2007 0:00:00	Enforcement action:	State Public Notif Requested
Violation measurement:	Not Reported		

A3
NE
1/2 - 1 Mile
Lower

VA WELLS **VA7000000000305**

WELLS:

TINWSF:	2669023	PWS ID:	2015552
System Name:	SHENANDOAH VALLEY KOA	Type:	Well
Facility Name:	WELL NO. 2	Fed Primary Src Class:	Groundwater
PWS Fed Class:	Non-Community	Population Served:	100
Max Production:	0 GPD	Avg Daily Production:	10000 GPD

A4
NE
1/2 - 1 Mile
Lower

VA WELLS **VA7000000000304**

WELLS:

TINWSF:	2640302	PWS ID:	2015552
System Name:	SHENANDOAH VALLEY KOA	Type:	Well
Facility Name:	WELL NO. 1	Fed Primary Src Class:	Groundwater
PWS Fed Class:	Non-Community	Population Served:	100
Max Production:	0 GPD	Avg Daily Production:	10000 GPD

B5
SW
1/2 - 1 Mile
Higher

FED USGS **USGS40001204688**

Organization ID:	USGS-VA	Organization Name:	USGS Virginia Water Science Center
Monitor Location:	38P 8	Type:	Well
Description:	Not Reported	HUC:	02070005
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Conococheague Formation
Aquifer Type:	Not Reported	Construction Date:	19710330
Well Depth:	370	Well Depth Units:	ft
Well Hole Depth:	370	Well Hole Depth Units:	ft

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

B6
SW
1/2 - 1 Mile
Higher | **FED USGS** | **USGS40001204689**

Organization ID:	USGS-VA	Organization Name:	USGS Virginia Water Science Center
Monitor Location:	38P 9	Type:	Well
Description:	Not Reported	HUC:	02070005
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Conococheague Formation
Aquifer Type:	Not Reported	Construction Date:	19720201
Well Depth:	363	Well Depth Units:	ft
Well Hole Depth:	363	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1972-06-22
Feet below surface:	7.00	Feet to sea level:	Not Reported
Note:	Other conditions existed that would affect the measured water level.		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

EPA Region 3 Statistical Summary Readings for Zip Code: 24482

Number of sites tested: 16.

Maximum Radon Level: 13.4 pCi/L.
Minimum Radon Level: 0.8 pCi/L.

pCi/L <4	pCi/L 4-10	pCi/L 10-20	pCi/L 20-50	pCi/L 50-100	pCi/L >100
10 (62.50%)	5 (31.25%)	1 (6.25%)	0 (0.00%)	0 (0.00%)	0 (0.00%)

Federal EPA Radon Zone for AUGUSTA County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Virginia Public Water Supplies
Source: Department of Health, Office of Water Programs
Telephone: 804-786-1756

OTHER STATE DATABASE INFORMATION

Virginia Oil and Gas Wells
Source: Department of Mines, Minerals and Energy
Telephone: 804-692-3200
A listing of oil and gas well locations.

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

EPA Region 3 Statistical Summary Readings
Source: Region 3 EPA
Telephone: 215-814-2082
Radon readings for Delaware, D.C., Maryland, Pennsylvania, Virginia and West Virginia.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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Appendix B:
User Questionnaire

Phase I Environmental Site Assessment
User Questionnaire

Pursuant to ASTM E1527-21 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM Practice E1527-21), in order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the User must conduct the following inquiries required by 40 C.F.R. §§ 312.25, 312.28, 312.29, 312.30, and 312.31. These inquiries must also be conducted by EPA Brownfield Assessment and Characterization grantees. The User should provide the following information to the environmental professional. Failure to conduct these inquiries could result in a determination that "all appropriate inquiries" is not complete.

The "User" is defined in ASTM Practice E1527-21 as the *party seeking to use Practice E1527 to complete an environmental site assessment of the subject property. A User may include, without limitation, a potential purchaser of subject property, a potential tenant of subject property, an owner of subject property, a lender, or a property manager.*

Thank you for taking the time to complete this questionnaire. If you have any questions, please contact Tony Tredway at ttredway@trccompanies.com or 304-205-3097.

User Name:	Dan Csaplar	**Company:**	US Solar
Address:	100 N. 6th Street, Suite 410B, Minneapolis, MN 55404	**Phone No.:**	612-225-4682
Email:	Dan.csaplar@us-solar.com		

Purpose of ASTM Phase I ESA (potential purchase, potential sale, re-finance, update the environmental condition of the subject property, lease termination or initiation, etc.):

Solar array development

Subject property name and address:

USS Staunton Solar LLC, QUICKS MILL RD
STAUNTON, 24401

Signature: Dan Csaplar **Date:** 1/11/2024

(1.) Environmental cleanup liens that are filed or recorded against the subject property (40 C.F.R. § 312.25)

	Yes	**No**
Did a search of land title records (or judicial records where appropriate[1]) identify any environmental liens filed or recorded against the subject property under federal, tribal, state, or local law?	☐	☒

[1] In certain jurisdictions, federal, tribal, state, or local statutes, or regulations specify that environmental liens and AULs be filed in judicial records rather than in land title records. In such cases judicial records must be searched for environmental liens and AULs.

(2.) Activity and use limitations (AULs) that are in place on the subject property or that have been filed or recorded against the subject property

Did a search of land title records (or judicial records where appropriate, see footnote 1 above) identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the subject property and/or have been filed or recorded against the subject property under federal, tribal, state or local law?

Yes ☐ **No** ☒

(3.) Specialized knowledge or experience of the person seeking to qualify for the *Landowner Liability Protection* (LLP) (40 C.F.R. § 312.28)

Do you have any specialized knowledge or experience related to the subject property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the subject property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Yes ☐ **No** ☒

(4.) Relationship of the purchase price to the fair market value of the subject property (40 C.F.R. § 312.29)

Does the purchase price being paid for the subject property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the subject property?

Yes ☐ **No** ☐

N/A

(5.) Commonly known or reasonably ascertainable information about the subject property (40 C.F.R. § 312.30)

Are you aware of commonly known or reasonably ascertainable information about the subject property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example,

Yes ☐ **No** ☒

(a.) Do you know the past uses of the subject property?

(b.) Do you know of specific chemicals that are present or once were present at the subject property?

(c.) Do you know of spills or other chemical releases that have taken place at the subject property?

(d.) Do you know of any environmental cleanups that have taken place at the subject property?

(6.) The degree of obviousness of the presence or likely presence of contamination at the subject property, and the ability to detect the contamination by appropriate investigation (40 C.F.R. § 312.31)

	Yes	No
Based on your knowledge and experience related to the subject property, are there any obvious indicators that point to the presence or likely presence of releases at the subject property?	☐	☒

(7.) Proceedings Involving the Subject Property

	Yes	No
Are you aware of**:** (1) any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the subject property; (2) any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the subject property; and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products at the subject property?	☐	☒

(8.) Questions Regarding Helpful Documents

Are you aware of the presence of any of the documents listed below and, if so, whether copies can and will be provided to TRC within reasonable time and cost constraints?	Yes	No
• Environment site assessment reports	☐	☒
• Environment compliance audit reports	☐	☒
• Environmental permits (e.g., solid waste disposal permits; hazardous waste disposal permits; wastewater permits; National Pollutant Discharge Elimination System [NPDES] permits; or underground injection permits)	☐	☒
• Registrations for underground and aboveground storage tanks	☐	☒
• Registrations for underground injection systems	☐	☒
• Safety Data Sheets (SDSs)	☐	☒
• Community Right-To-Know plan(s)	☐	☒
• Safety plans; preparedness and prevention plans; spill prevention, countermeasure, and control plans; etc.,	☐	☒
• Reports regarding hydrogeologic conditions at the subject property and surrounding area	☐	☒
• Notices or other correspondence from any government agency regarding current or previous violations of environmental laws with respect to the subject property or relating to environmental liens encumbering the subject property	☐	☒
• Hazardous waste generator notices or reports	☐	☒
• Geotechnical studies	☐	☒
• Risk assessments	☐	☒
• Recorded liens/AULs.	☐	☒

Appendix C:
Historical Research Documentation

USS Staunton Project
Quicks Mill Road
Verona, VA 24482

Inquiry Number: 7512217.4
December 04, 2023

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

12/04/23

Site Name:

USS Staunton Project
Quicks Mill Road
Verona, VA 24482
EDR Inquiry # 7512217.4

Client Name:

TRC Environmental Corporation
3 Walden Ridge Drive, Suite 250,
Asheville, NC 28803
Contact: Tony Tredway

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by TRC Environmental Corporation were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# 576550.0000.0000
Project: USS Staunton Project

Coordinates:

Latitude:	38.214782 38° 12' 53" North
Longitude:	-79.023687 -79° 1' 25" West
UTM Zone:	Zone 17 North
UTM X Meters:	673015.84
UTM Y Meters:	4231492.27
Elevation:	1410.12' above sea level

Maps Provided:

2022	1964
2019	1949
2016	1947
2013	1944
1998	1892, 1894
1984, 1986	
1978	
1968	

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2022 Source Sheets



Staunton
2022
7.5-minute, 24000



Fort Defiance
2022
7.5-minute, 24000

2019 Source Sheets



Staunton
2019
7.5-minute, 24000



Fort Defiance
2019
7.5-minute, 24000

2016 Source Sheets



Staunton
2016
7.5-minute, 24000



Fort Defiance
2016
7.5-minute, 24000

2013 Source Sheets



Staunton
2013
7.5-minute, 24000



Fort Defiance
2013
7.5-minute, 24000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1998 Source Sheets



Staunton
1998
7.5-minute, 24000
Aerial Photo Revised 1998

1984, 1986 Source Sheets



Fort Defiance
1984
7.5-minute, 24000
Aerial Photo Revised 1977



Staunton
1986
7.5-minute, 24000
Aerial Photo Revised 1982

1978 Source Sheets



Staunton
1978
7.5-minute, 24000
Aerial Photo Revised 1977



Fort Defiance
1978
7.5-minute, 24000
Aerial Photo Revised 1977

1968 Source Sheets



Staunton
1968
7.5-minute, 24000
Aerial Photo Revised 1968

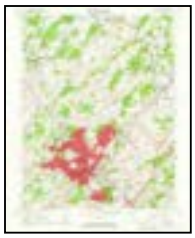
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1964 Source Sheets



Fort Defiance
1964
7.5-minute, 24000
Aerial Photo Revised 1963



Staunton
1964
7.5-minute, 24000
Aerial Photo Revised 1963

1949 Source Sheets



STAUNTON
1949
15-minute, 50000

1947 Source Sheets



Waynesboro
1947
15-minute, 62500



Staunton
1947
15-minute, 62500

1944 Source Sheets



Staunton
1944
15-minute, 62500

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1892, 1894 Source Sheets



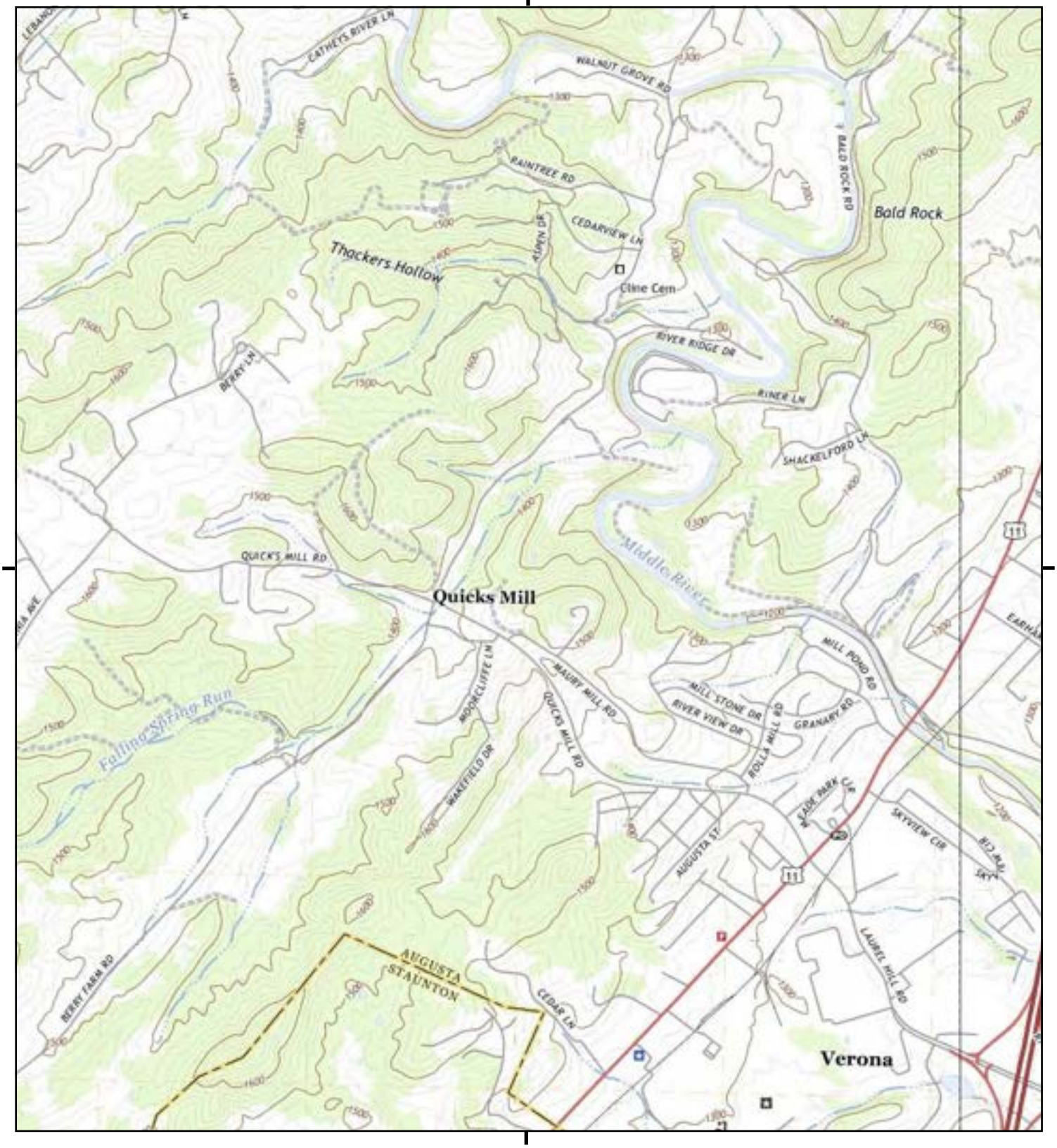
Harrisonburg
1892
30-minute, 125000



Staunton
1894
30-minute, 125000

Historical Topo Map

2022



This report includes information from the following map sheet(s).

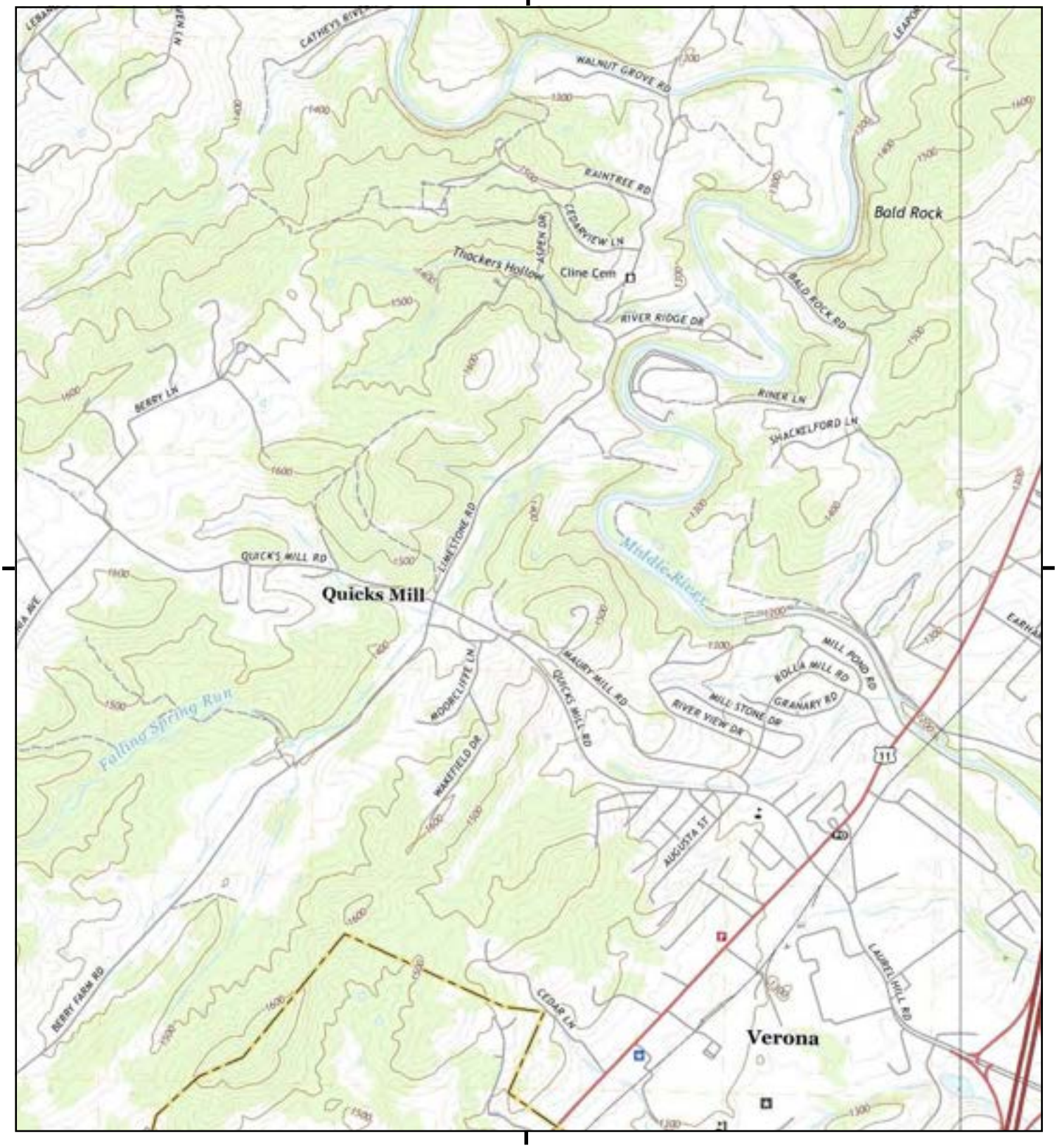
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Staunton, 2022, 7.5-minute
E, Fort Defiance, 2022, 7.5-minute

SITE NAME: USS Staunton Project
ADDRESS: Quicks Mill Road
Verona, VA 24482
CLIENT: TRC Environmental Corporation

N



This report includes information from the following map sheet(s).

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NW N NE
W E
SW S SE

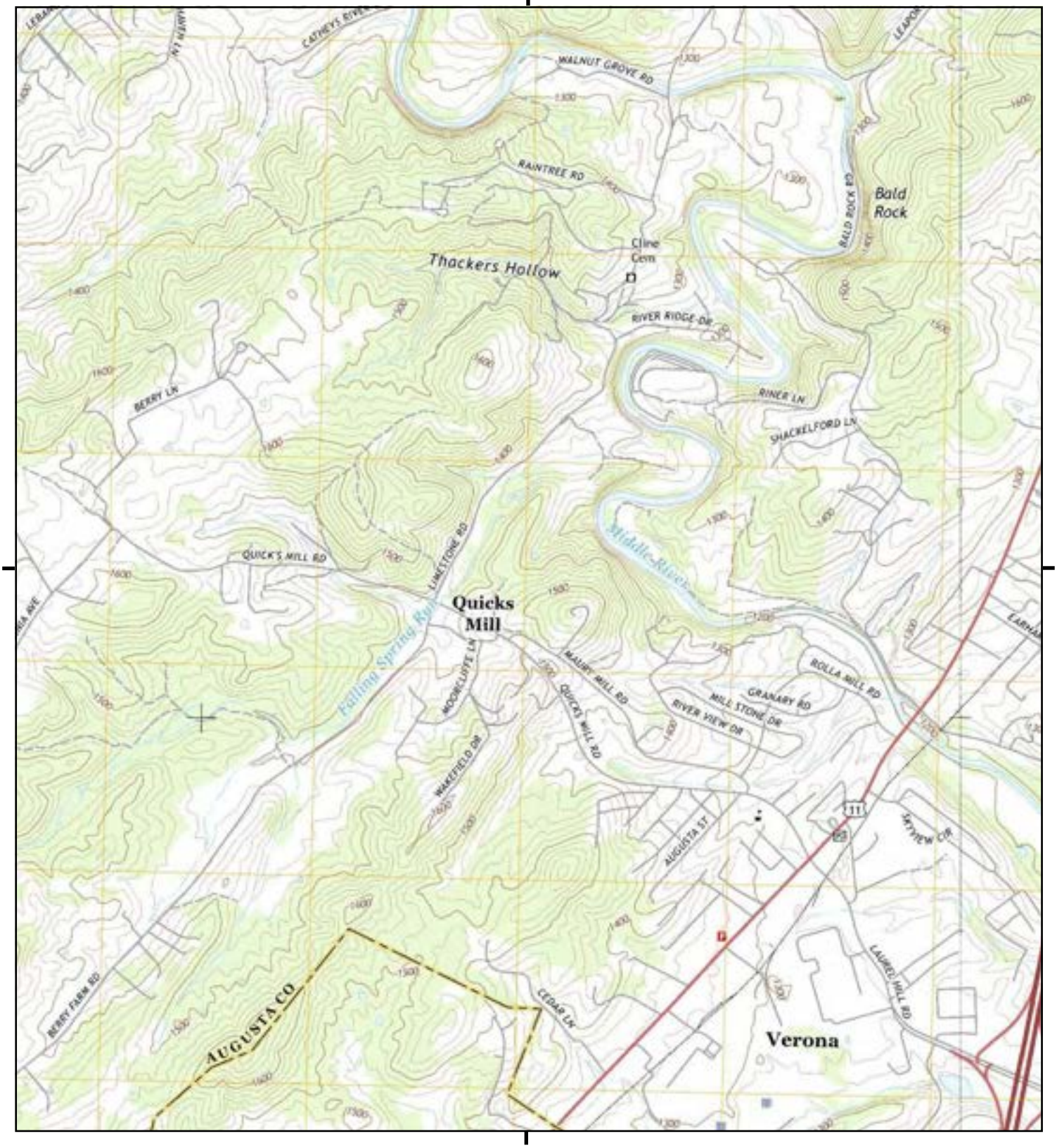
TP, Staunton, 2019, 7.5-minute
E, Fort Defiance, 2019, 7.5-minute

SITE NAME: USS Staunton Project
ADDRESS: Quicks Mill Road
Verona, VA 24482
CLIENT: TRC Environmental Corporation

N

Historical Topo Map

2016



This report includes information from the following map sheet(s).

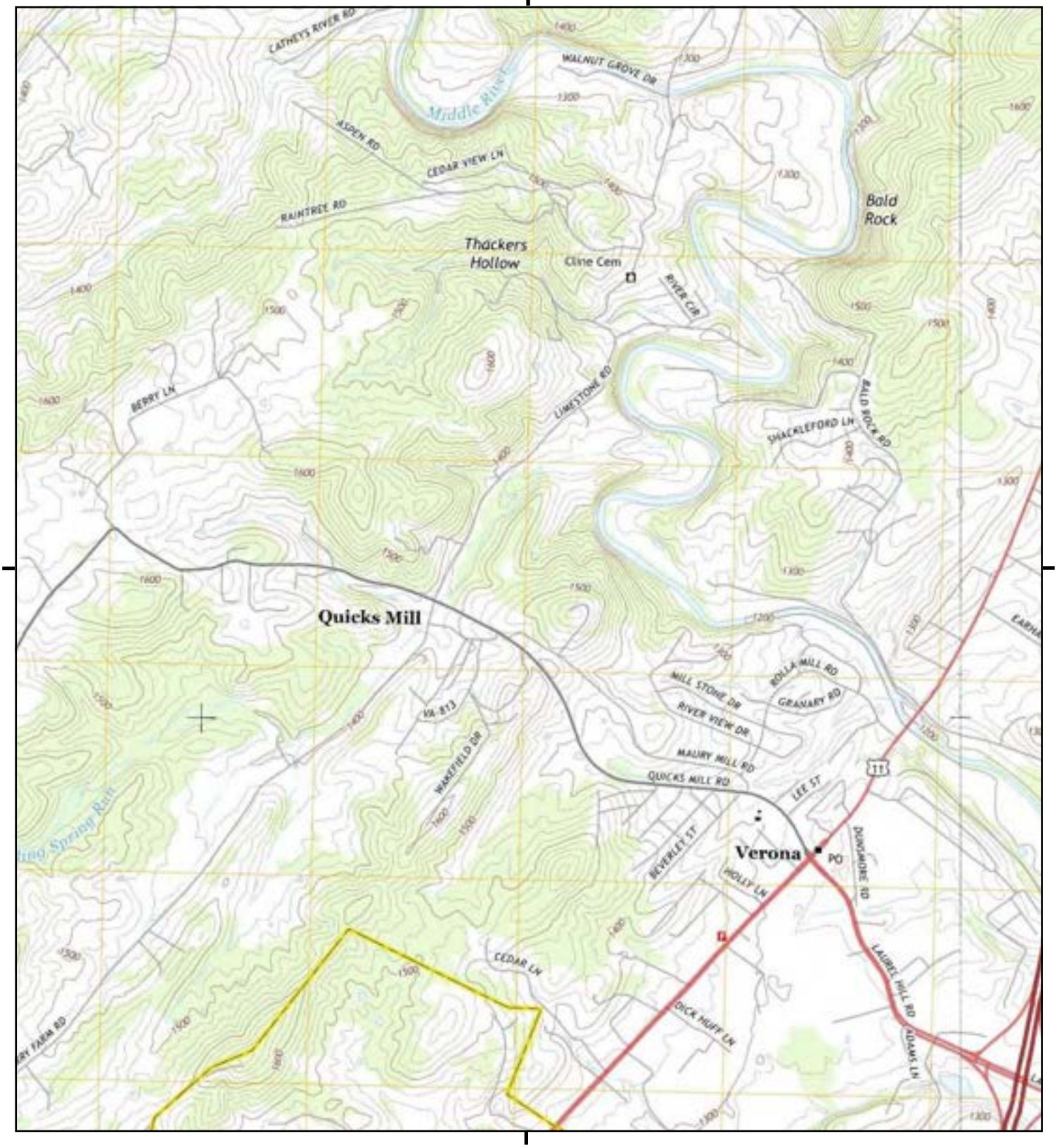
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Staunton, 2016, 7.5-minute
E, Fort Defiance, 2016, 7.5-minute

SITE NAME: USS Staunton Project
ADDRESS: Quicks Mill Road
Verona, VA 24482
CLIENT: TRC Environmental Corporation

N



This report includes information from the following map sheet(s).

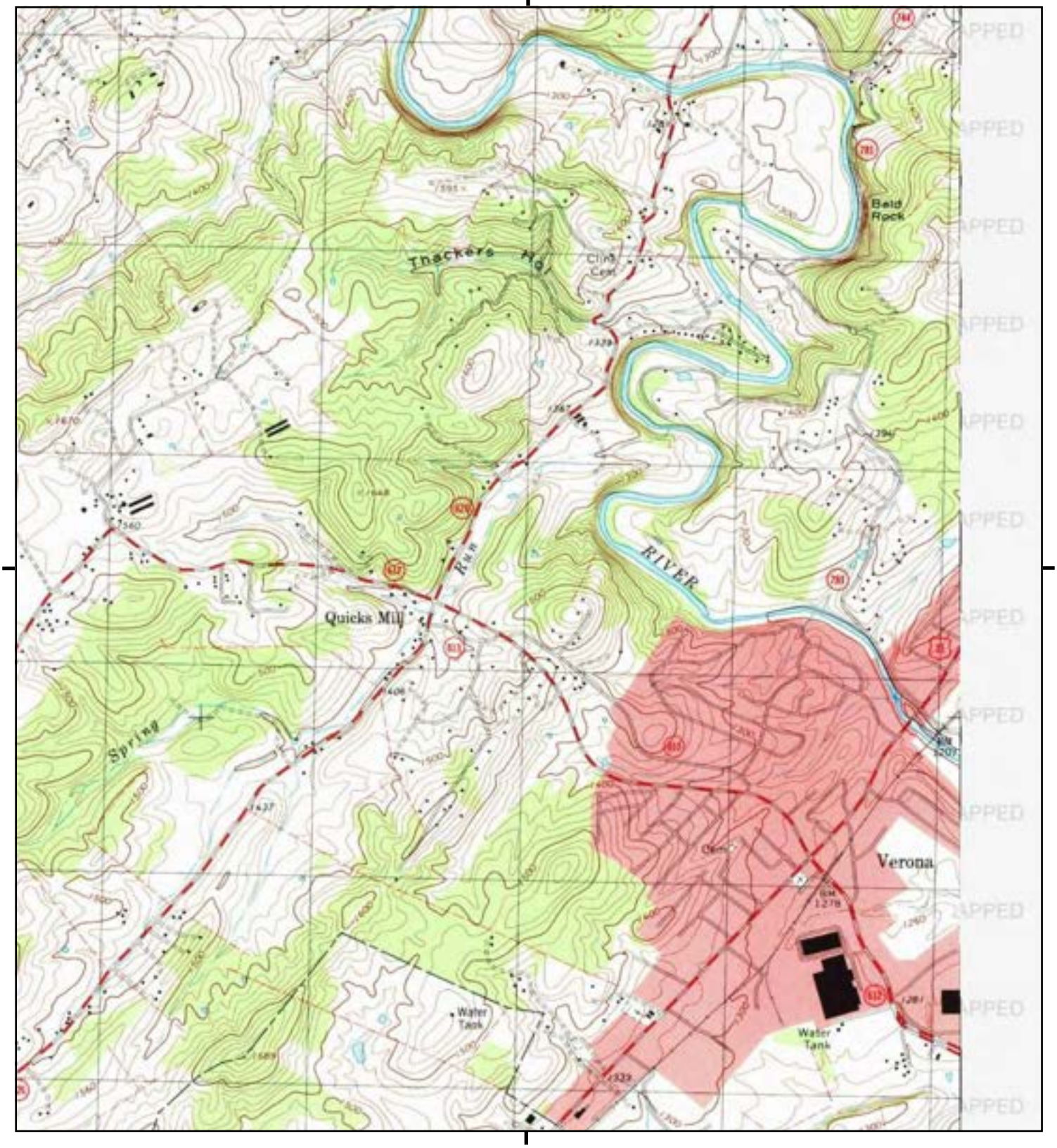
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Staunton, 2013, 7.5-minute
E, Fort Defiance, 2013, 7.5-minute

SITE NAME: USS Staunton Project
ADDRESS: Quicks Mill Road
Verona, VA 24482
CLIENT: TRC Environmental Corporation

N



This report includes information from the following map sheet(s).

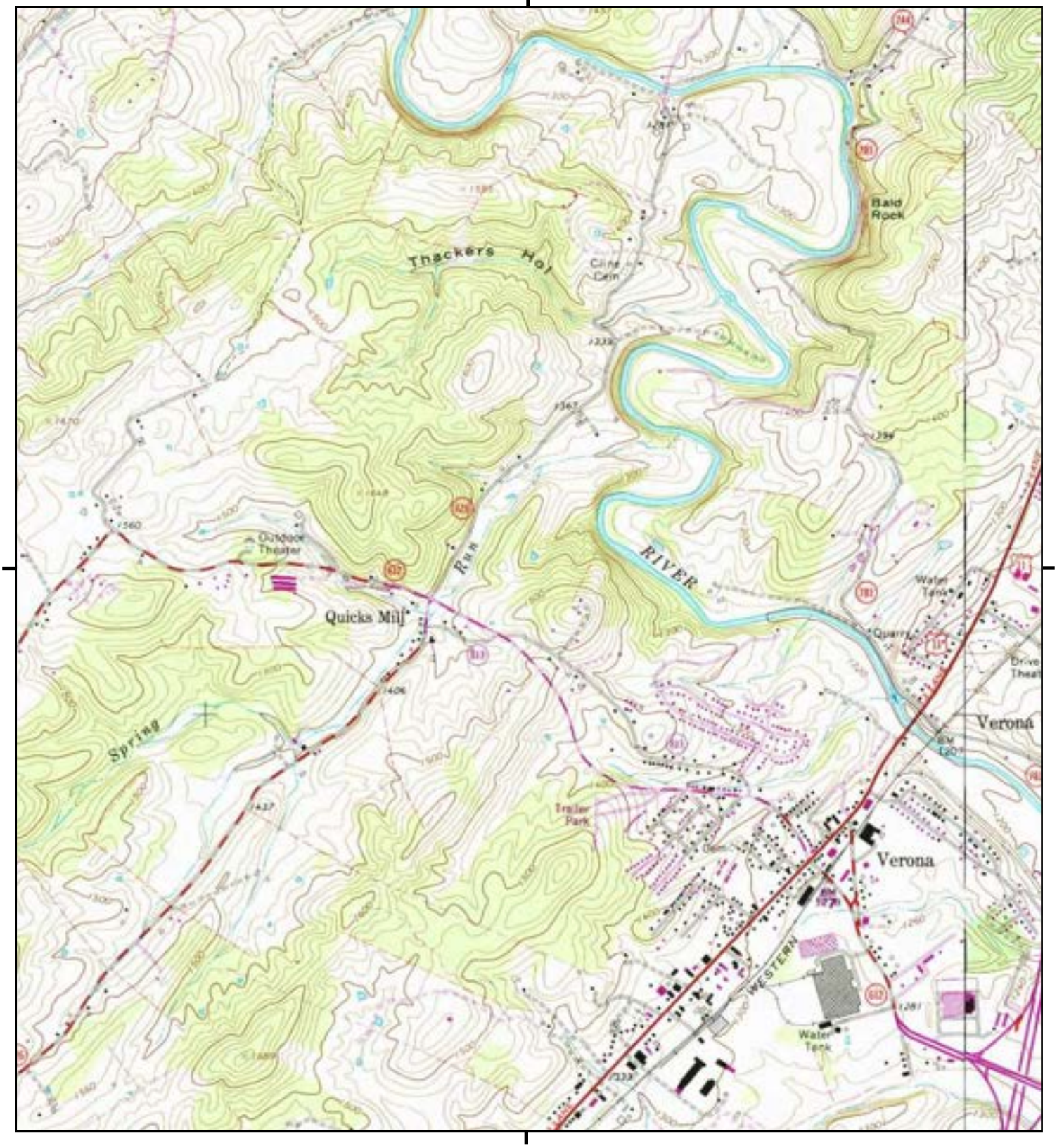
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Staunton, 1998, 7.5-minute

SITE NAME: USS Staunton Project
ADDRESS: Quicks Mill Road
Verona, VA 24482
CLIENT: TRC Environmental Corporation

N



This report includes information from the following map sheet(s).

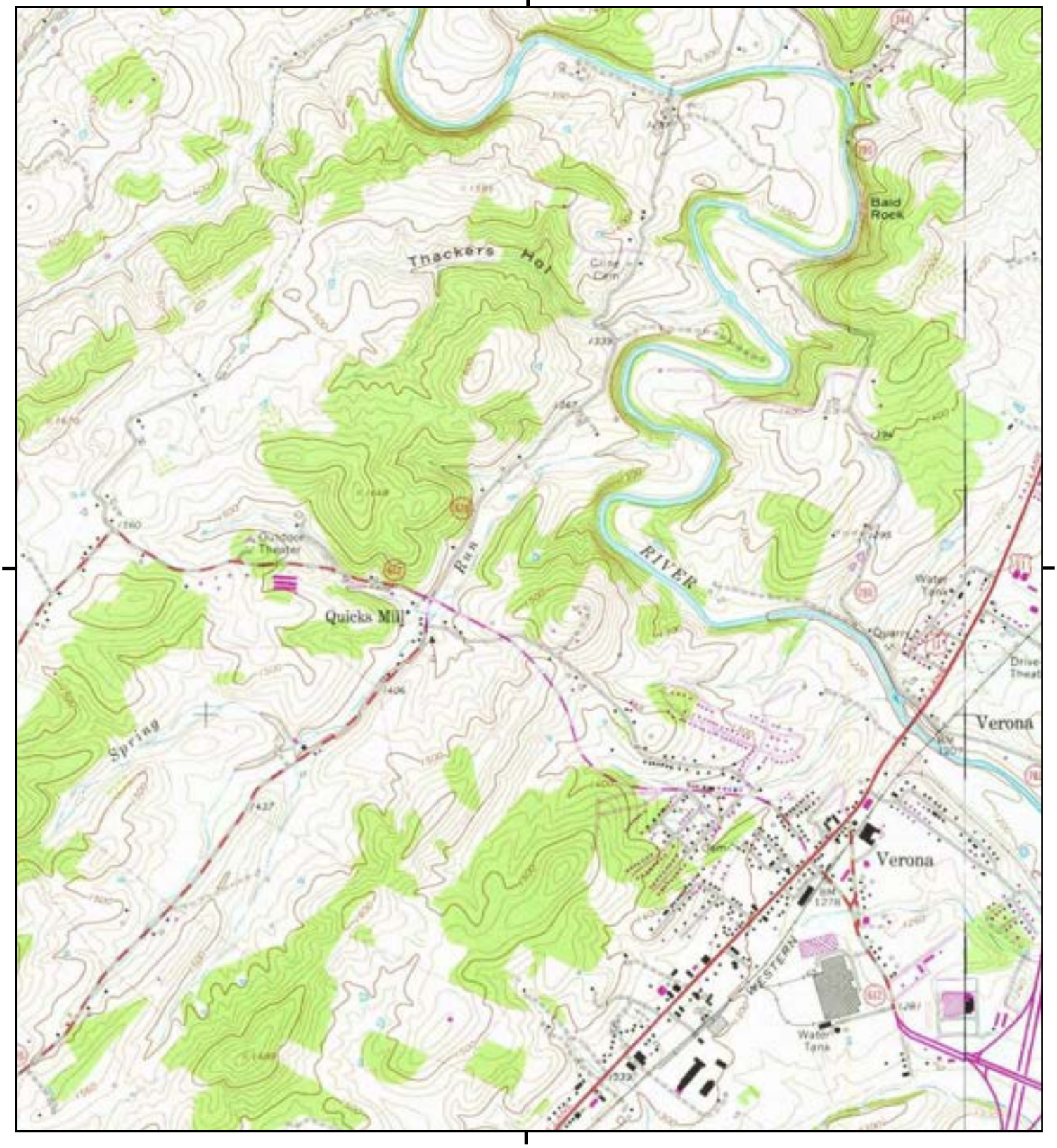
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Staunton, 1986, 7.5-minute
E, Fort Defiance, 1984, 7.5-minute

SITE NAME: USS Staunton Project
ADDRESS: Quicks Mill Road
Verona, VA 24482
CLIENT: TRC Environmental Corporation

N



This report includes information from the following map sheet(s).

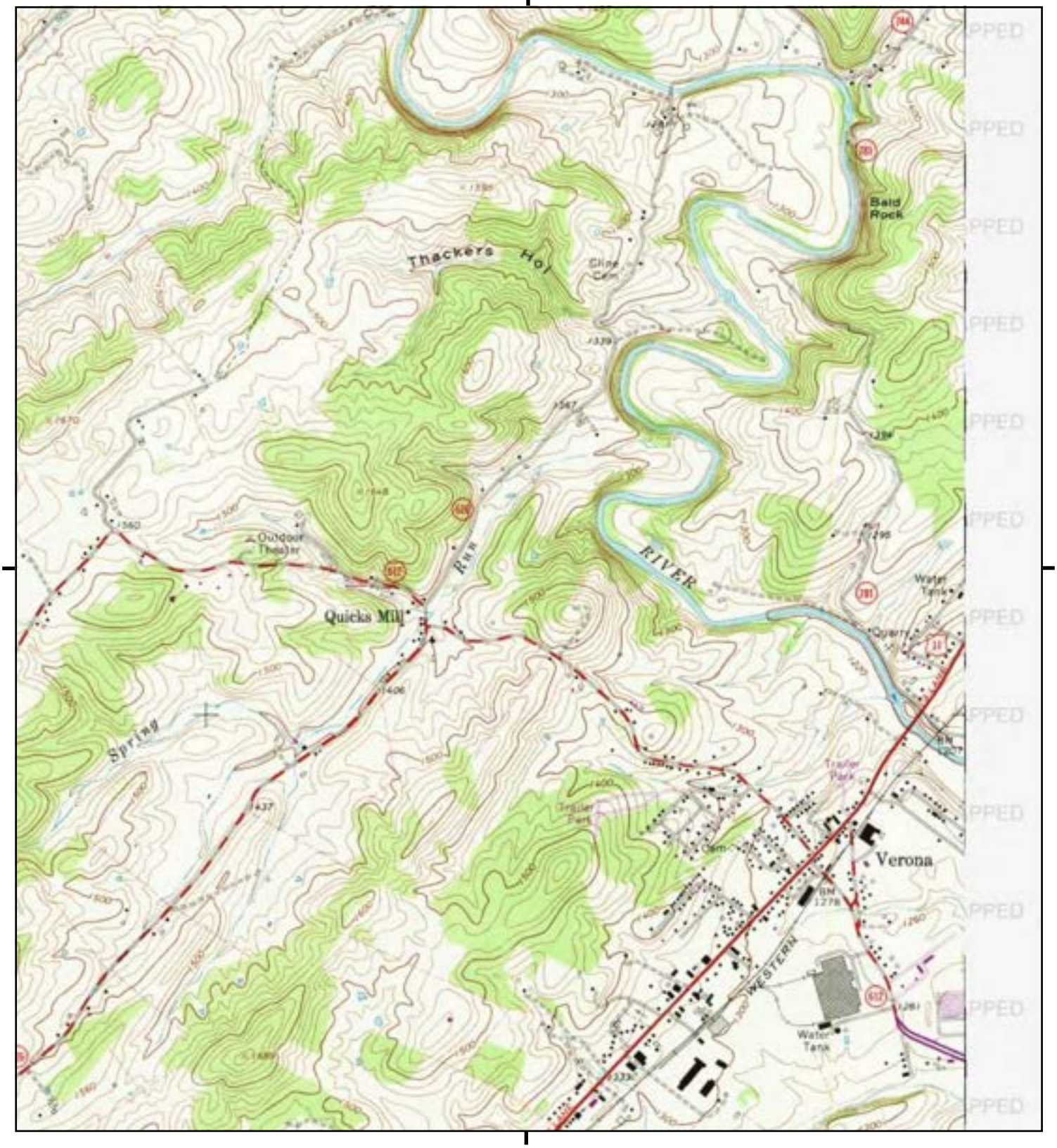
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Staunton, 1978, 7.5-minute
E, Fort Defiance, 1978, 7.5-minute

SITE NAME: USS Staunton Project
ADDRESS: Quicks Mill Road
Verona, VA 24482
CLIENT: TRC Environmental Corporation

N



This report includes information from the following map sheet(s).

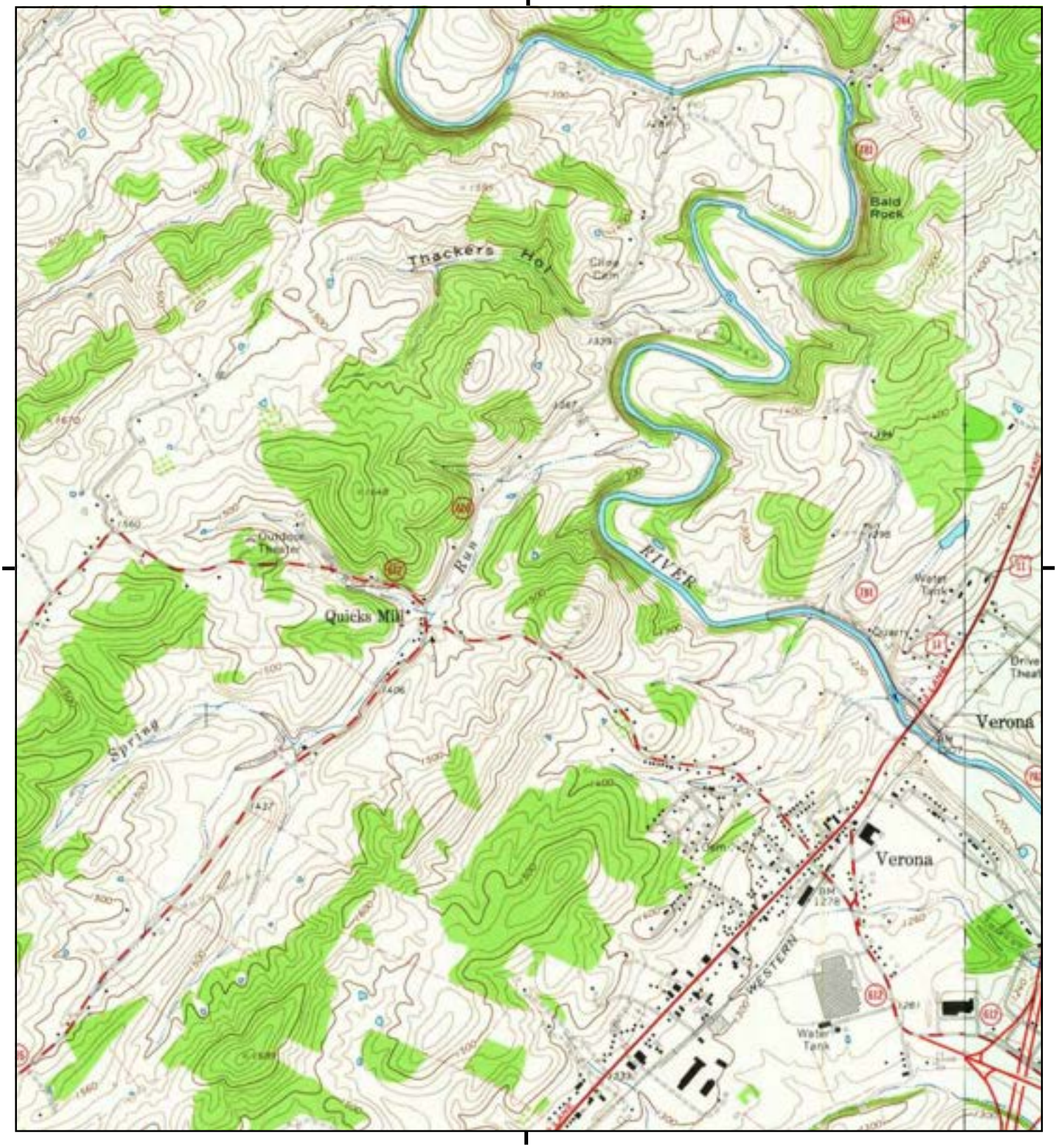
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Staunton, 1968, 7.5-minute

SITE NAME: USS Staunton Project
ADDRESS: Quicks Mill Road
Verona, VA 24482
CLIENT: TRC Environmental Corporation

N



This report includes information from the following map sheet(s).

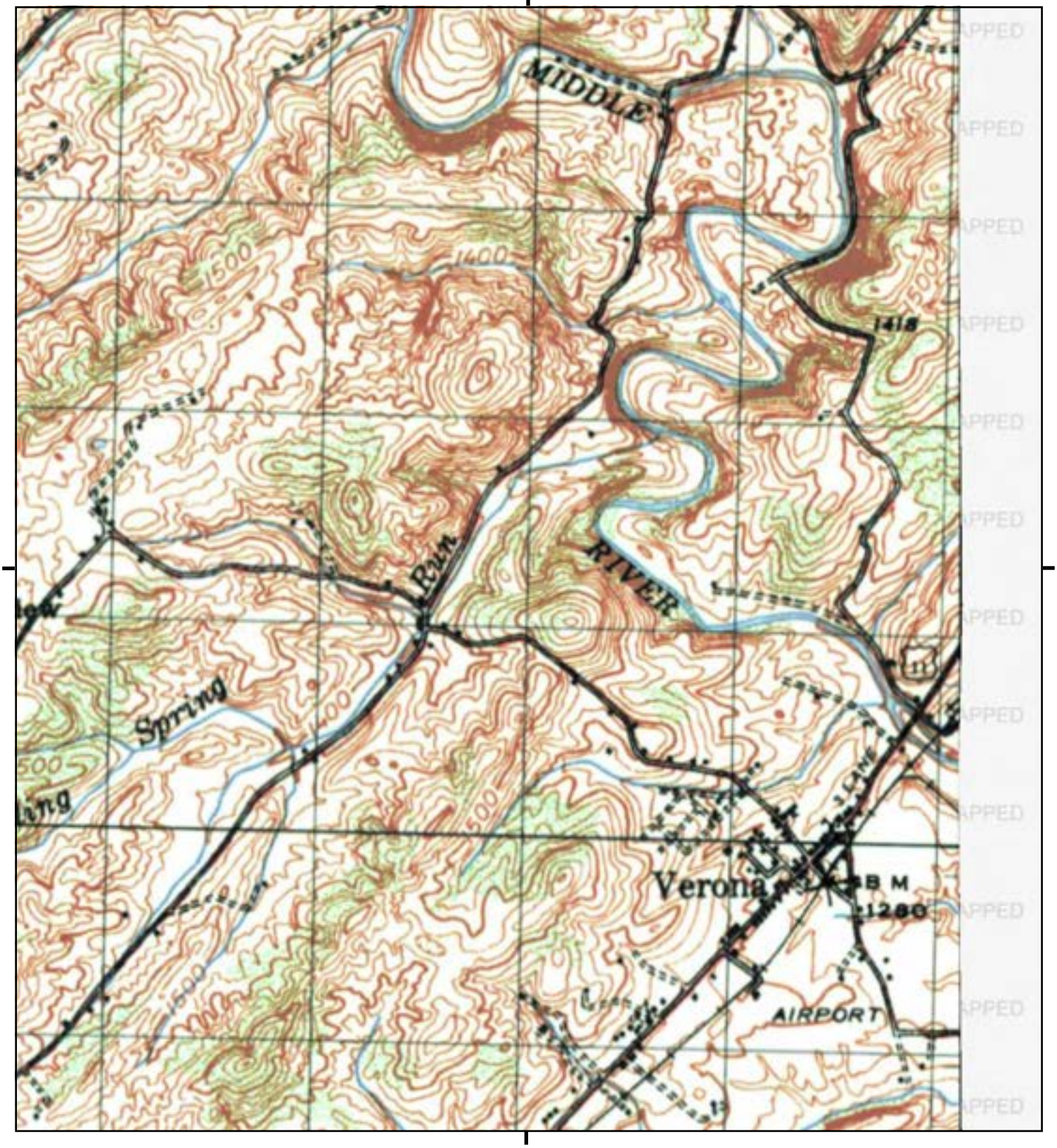
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Staunton, 1964, 7.5-minute
E, Fort Defiance, 1964, 7.5-minute

SITE NAME: USS Staunton Project
ADDRESS: Quicks Mill Road
Verona, VA 24482
CLIENT: TRC Environmental Corporation

N



This report includes information from the following map sheet(s).

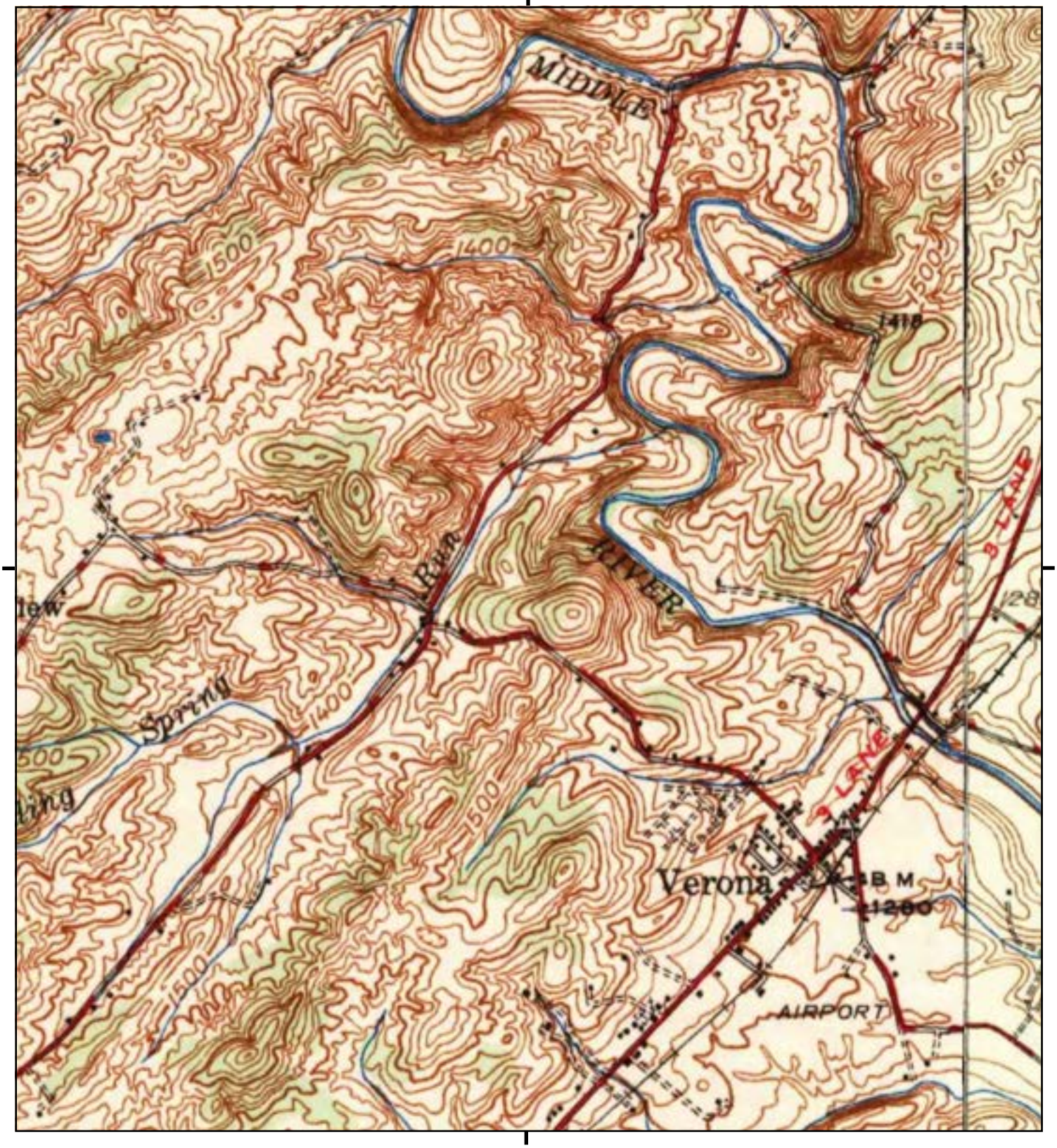
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, STAUNTON, 1949, 15-minute

SITE NAME: USS Staunton Project
ADDRESS: Quicks Mill Road
Verona, VA 24482
CLIENT: TRC Environmental Corporation

N



This report includes information from the following map sheet(s).

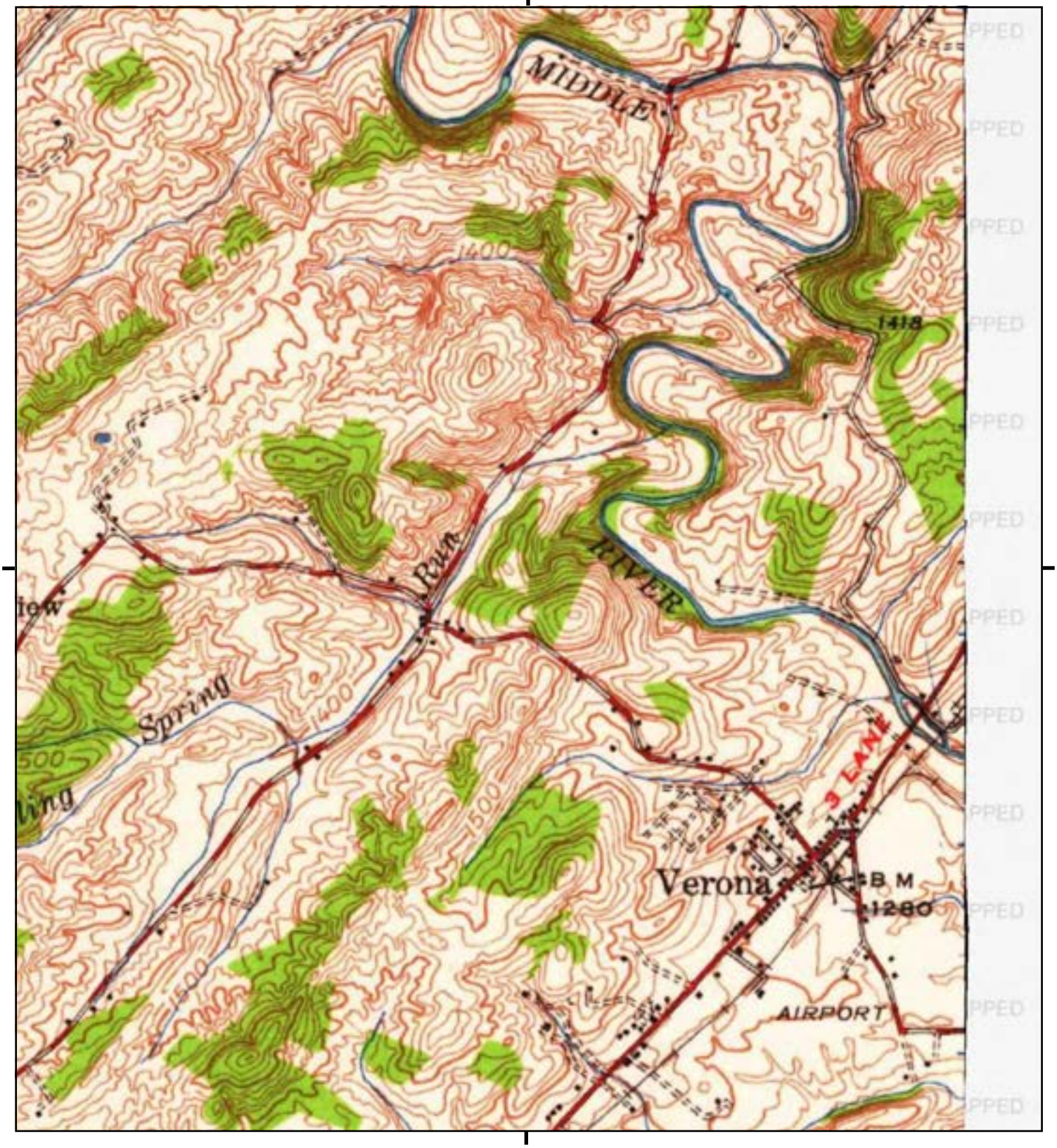
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Staunton, 1947, 15-minute
SE, Waynesboro, 1947, 15-minute

SITE NAME: USS Staunton Project
ADDRESS: Quicks Mill Road
Verona, VA 24482
CLIENT: TRC Environmental Corporation

N



This report includes information from the following map sheet(s).

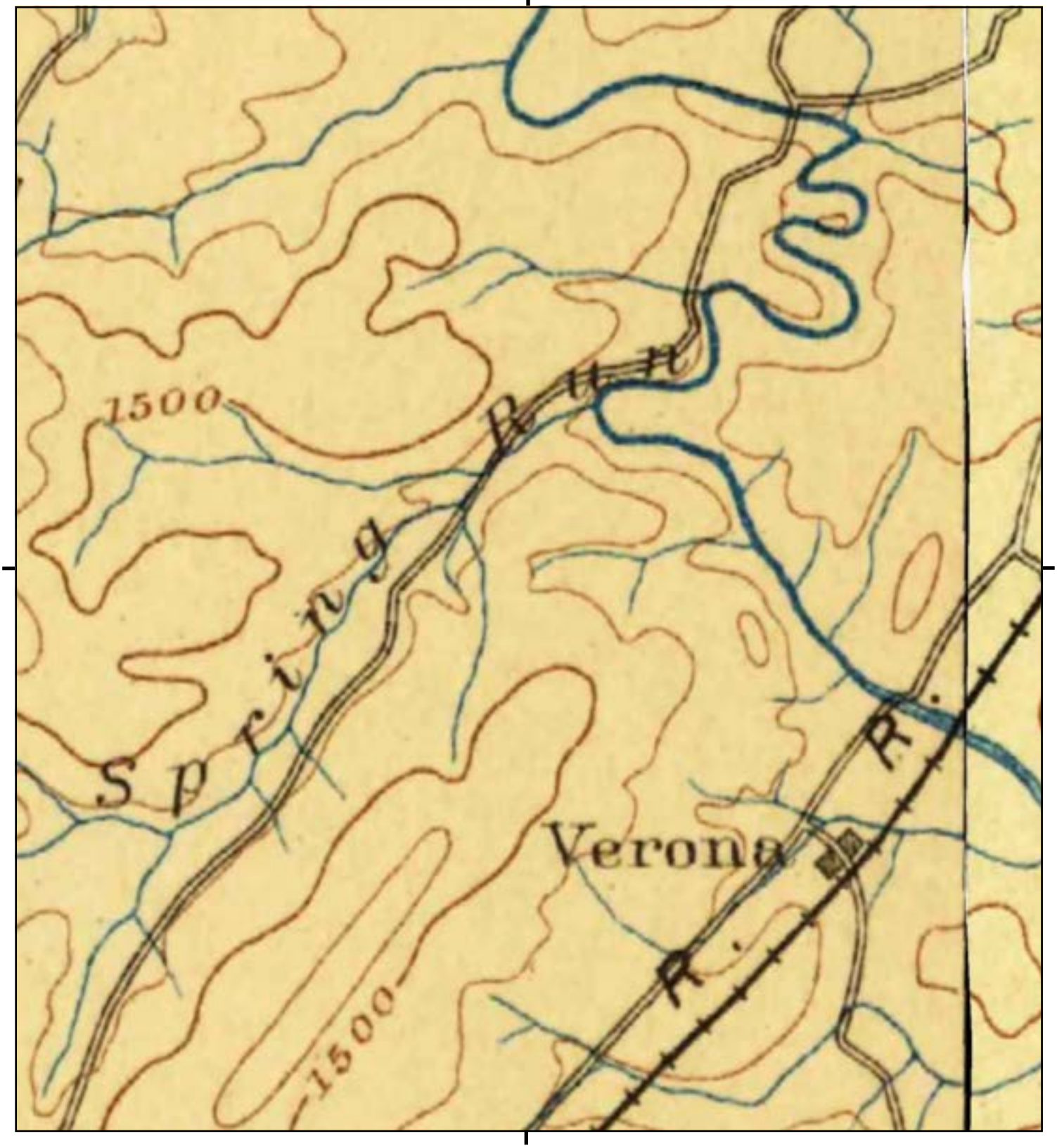
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Staunton, 1944, 15-minute

SITE NAME: USS Staunton Project
ADDRESS: Quicks Mill Road
Verona, VA 24482
CLIENT: TRC Environmental Corporation

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Staunton, 1894, 30-minute
E, Harrisonburg, 1892, 30-minute

SITE NAME: USS Staunton Project
ADDRESS: Quicks Mill Road
Verona, VA 24482
CLIENT: TRC Environmental Corporation

N

USS Staunton Project

Quicks Mill Road

Verona, VA 24482

Inquiry Number: 7512217.8

December 05, 2023

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

12/05/23

Site Name:

USS Staunton Project
Quicks Mill Road
Verona, VA 24482
EDR Inquiry # 7512217.8

Client Name:

TRC Environmental Corporation
3 Walden Ridge Drive, Suite 250,
Asheville, NC 28803
Contact: Tony Tredway

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2018	1"=500'	Flight Year: 2018	USDA/NAIP
2014	1"=500'	Flight Year: 2014	USDA/NAIP
2011	1"=500'	Flight Year: 2011	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
2000	1"=500'	Flight Date: March 26, 2000	USGS
1998	1"=500'	Acquisition Date: April 12, 1998	USGS/DOQQ
1991	1"=500'	Flight Date: April 17, 1991	USGS
1982	1"=500'	Flight Date: April 18, 1982	USDA
1977	1"=500'	Flight Date: March 09, 1977	USGS
1972	1"=500'	Flight Date: April 17, 1972	USGS
1963	1"=500'	Flight Date: March 24, 1963	USGS
1960	1"=500'	Flight Date: November 08, 1960	USGS
1941	1"=500'	Flight Date: December 23, 1941	USGS

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INQUIRY #: 7512217.8
YEAR: 2018
= 500'
N
EDR

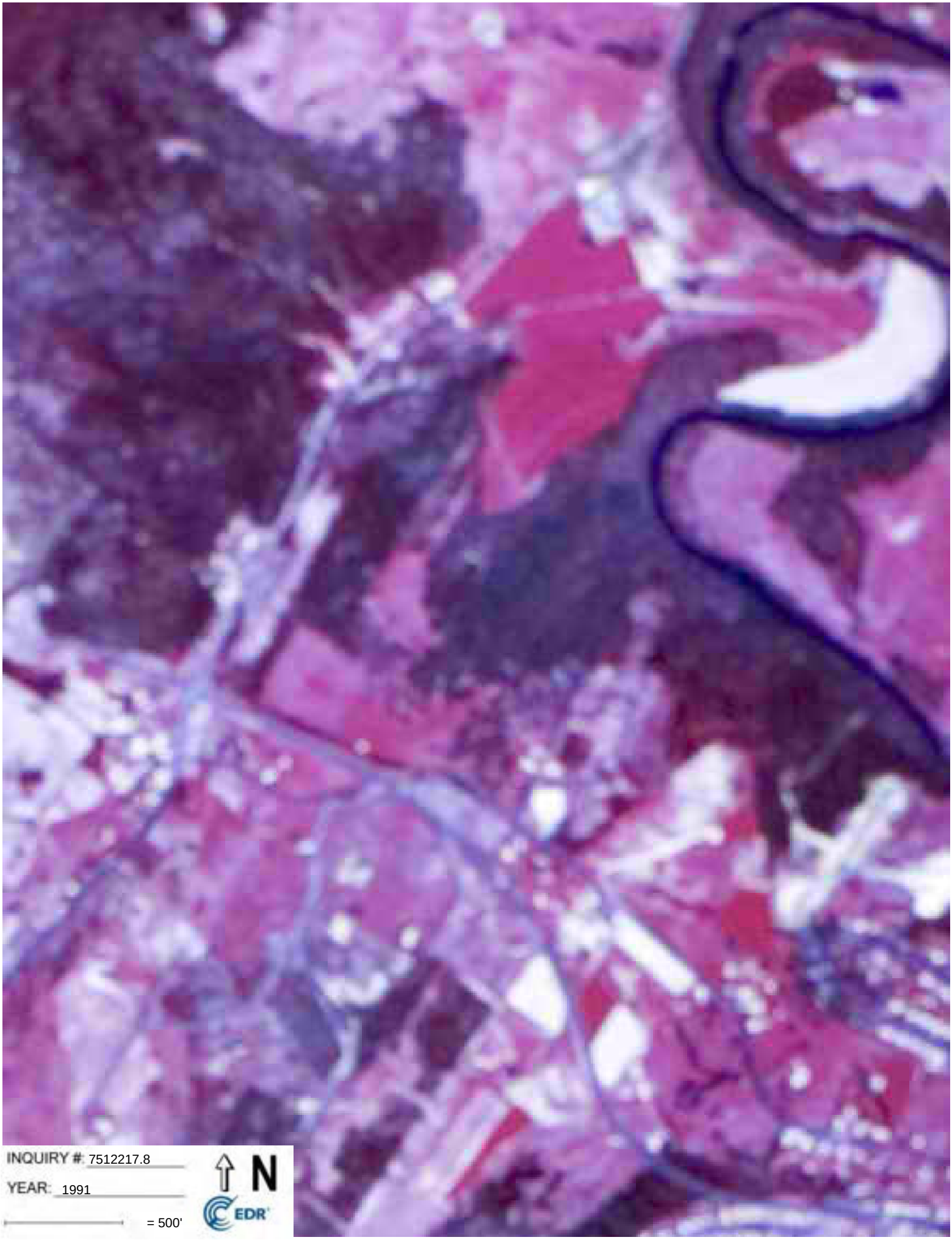

INQUIRY #: 7512217.8
YEAR: 2014
= 500'
N
EDR


INQUIRY #: 7512217.8
YEAR: 2011
= 500'
N
EDR


INQUIRY #: 7512217.8
YEAR: 2005
= 500'
N
EDR


INQUIRY #: 7512217.8
YEAR: 2000
= 500'
N
EDR


INQUIRY #: 7512217.8
YEAR: 1998
= 500'
N
EDR


INQUIRY #: 7512217.8
YEAR: 1991
= 500'
N
EDR


INQUIRY #: 7512217.8
YEAR: 1982
= 500'
N
EDR


INQUIRY #: 7512217.8
YEAR: 1977
= 500'
N
EDR


INQUIRY #: 7512217.8
YEAR: 1972
= 500'
N
EDR


INQUIRY #: 7512217.8
YEAR: 1963
= 500'
N
EDR


INQUIRY #: 7512217.8
YEAR: 1960
= 500'
N
EDR


INQUIRY #: 7512217.8
YEAR: 1941
= 500'
N
EDR

USS Staunton Project
Quicks Mill Road
Verona, VA 24482

Inquiry Number: 7512217.3
December 04, 2023

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

12/04/23

Site Name:

USS Staunton Project
Quicks Mill Road
Verona, VA 24482
EDR Inquiry # 7512217.3

Client Name:

TRC Environmental Corporation
3 Walden Ridge Drive, Suite 250,
Asheville, NC 28803
Contact: Tony Tredway

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by TRC Environmental Corporation were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # D120-485A-916B

PO # 576550.0000.0000

Project USS Staunton Project

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: D120-485A-916B

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
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- ☑ EDR Private Collection

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USS Staunton Project
Quicks Mill Road
Verona, VA 24482

Inquiry Number: 7512217.5
December 07, 2023

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available business directory data at approximately five year intervals.

RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	*Target Street*	*Cross Street*	*Source*
2020	☑	☐	EDR Digital Archive
2017	☑	☐	Cole Information
2014	☑	☐	Cole Information
2010	☑	☐	Cole Information
2005	☑	☐	Cole Information
2000	☑	☐	Cole Information
1995	☑	☐	Cole Information
1992	☐	☐	Cole Information

FINDINGS

TARGET PROPERTY STREET

Quicks Mill Road
Verona, VA 24482

Year	*CD Image*	*Source*	
QUICKS MILL RD			
2020	pg A2	EDR Digital Archive	
2017	pg A4	Cole Information	
2014	pg A5	Cole Information	
2010	pg A6	Cole Information	
2005	pg A7	Cole Information	
2000	pg A8	Cole Information	
QUICKS ML RD			
1995	pg A9	Cole Information	
1992	-	Cole Information	Street not listed in Source

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

QUICKS MILL RD 2020

10	BURGER KING
23	Crystal Case
	Geraldo Jenkins
42	Lesley Rueb
	Thomas Gunn
43	Charles Loughner
	Elyssa Showers
	Lawrence Tickle
56	JONES TREACY D DDS
	Treacy Jones
62	Andrea Nichols
	Gary Toman
	Gregory Nichols
66	Tabitha Cothran
69	Jered Weaver
	Joanna Weaver
74	STUART HALL SCHOOL
81	Russell Maddox
	WONDER LAND ENRICHMENT CTR
125	Brittany Miller
	Dana Diaz
	Jennifer Miller
	Jose Diaz
141	Dorinda Allen
	Dorinda Rosen
145	Betty Beck
	David Blake
	Donna Pulliam
151	Lillie Cash
	Teresa Cash
154	Kristin Jiran
	Paul Hill
	Shane Hill
157	Cynthia Bowman
	Ronald Bowman
167	Brittany Kislek
	Daniel Kislek
170	Jeannia Meeks
173	Michael Stump
176	Leroy Jarvis
179	Charles Botkin
	Ruth Botkin
181	Mamie Faulkner
185	Alicia Clifton
	Cheryl Bennett
	Clark Lisa
	Douglas Bennett
191	Barbara Miller
400	Donna O'Neil
	Michael O'Neil

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

QUICKS MILL RD 2020 (Cont'd)

402 Larry Martin
Teresa Martin
468 Gretchen Schindler
William Schinlder

Target Street	Cross Street	Source
✓	-	Cole Information

QUICKS MILL RD 2017

10	BURGER KING
42	RUEB, LESLEY P
43	FIELDS, MEGHAN
	TICKLE, LAWRENCE
56	TREACY JONES DDS
62	NICHOLS, ANDREA R
66	MATTOX, CHRISTOPHER D
69	WEAVER, JERED U
81	WONDERLAND ENRICHMENT CENTER INC
125	FULK, DANA G
141	ALLEN, DORINDA A
145	BECK, MICHAEL J
151	CASH, LILLIE M
154	HILL, SHANE S
157	BOWMAN, RONALD E
164	DASTOLI, PATRICIA C
167	KISLEK, DANIEL S
170	SORRELLS, JEANNIE L
173	STUMP, MICHAEL N
179	BOTKIN, CHARLES C
181	FAULKNER, MAUREEN P
185	BENNETT, DOUGLAS S
191	MILLER, THOMAS W
400	ONEIL, MICHAEL J

Target Street	Cross Street	Source
✓	-	Cole Information

QUICKS MILL RD 2014

10	BURGER KING
23	HILL, AUBREY C
31	OCCUPANT UNKNOWN,
42	OCCUPANT UNKNOWN,
43	FORTE, NANCY
56	JONES TREACY DDS
62	NICHOLS, ANDREA R
66	OCCUPANT UNKNOWN,
69	WEAVER, JERED U
81	WONDERLAND ENRICHMENT CENTER INC
117	SNYDER, ROXIE L
125	FULK, DANA G
133	OCCUPANT UNKNOWN,
141	ALLEN, DORINDA A
145	BECK, MICHAEL J
151	CASH, LILLIE M
154	HILL, SHANE S
157	BOWMAN, LEONARD L
164	DASTOLI, PATRICIA C
167	KISLEK, DANIEL S
170	SORRELLS, JEANNIE L
173	CLIFTON, LISA R
179	OCCUPANT UNKNOWN,
181	FAULKNER, MAUREEN P
185	WELLER, BARBIE L
191	MILLER, THOMAS W
400	WOODY, BILL N
468	OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
✓	-	Cole Information

QUICKS MILL RD 2010

10	BURGER KING
31	WILFONG, RANDY D
42	GUNN, THOMAS A
43	LOUGHNER, CHARLES E
56	JONES TREACY DDS
66	SCHROEDER, KENNETH M
69	WEAVER, JERED U
74	HUNTER MC GUIRE SCHOOL
81	WONDER LAND ENRICHMENT CTR INC
117	SNYDER, ROXIE L
125	DIAZ, JOSE F
145	PULLIAM, CHRISTOPHER J
151	CASH, WILBUR N
154	HELMICK, OLLIE H
167	HENDRICKS, DOUG R
170	SORRELLS, JEANNIE L
173	STUMP, MICHAEL N
179	BOTKIN, RUTH M
181	FAULKNER, MAUREEN
185	BENNETT, DOUGLAS S
191	MILLER, THOMAS W
400	WOODY, NED G
468	EARHART, CHRISTOPHER C

Target Street	Cross Street	Source
✓	-	Cole Information

QUICKS MILL RD 2005

10	MOUNTAIN VALLEY CORP
31	RICHARDSON, MARY
42	GLASS, MELVIN L
43	EPPARD, RICHARD A
	WHITE, MARILYN S
62	TOMAN, LEONARD W
69	WEAVER, JERED U
74	HUNTER MCGUIRE SCHOOL
115	RUSMISEL, COREY
117	SNYDER, ROXIE L
133	HENDRICKS, DOUG R
141	MILLER, DOUGLAS W
145	BECK, MICHAEL J
151	CASH, WILBUR N
157	BOWMAN, ALYCE M
170	SORRELLS, JEANNIE L
173	SMITH, JENNIFER
181	FAULKNER, MAMIE P
185	BENNETT, DOUGLAS S
191	T & B PAINTING
468	EARHART, CHRISTOPHER C

Target Street	Cross Street	Source
✓	-	Cole Information

QUICKS MILL RD 2000

115 BYERS, R
117 MARRS, E C

Target Street	Cross Street	Source
✓	-	Cole Information

QUICKS ML RD 1995

115 SCHACHT, MICHAEL G

Appendix D:
Photograph Log

Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona, VA	576550

Photo No.	Date
1	12/5/23

Description

Adjacent property photo located to the south. Land cover consists of residential homes and open fields.



Photo No.	Date
2	12/5/23

Description

Adjacent property photo located to the west. Land cover consists of unmanaged forests and open fields. Additionally, a perennial stream parallels the western boundary.



Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona, VA	576550

Photo No.	Date
3	12/5/23

Description

Adjacent property photo located to the north. Land cover consists of unmanaged forested land.



Photo No.	Date
4	12/5/23

Description

Adjacent property photo located to the east. Land cover consists of managed forested areas.



Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona, VA	576550

Photo No.	Date
5	12/5/23

Description

Adjacent property photo located to the east. Land cover consists of a residential home.



Photo No.	Date
6	12/5/23

Description

Electrical box located along the southern boundary of the Study Area. Photo is facing south.



Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona, VA	576550

Photo No.	Date
7	12/5/23

Description

Landcover photo of upland cow pasture located in the central portion of the Study Area. Photo is facing south.



Photo No.	Date
8	12/5/23

Description

Landcover photo of upland cow pasture located in the southern portion of the Study Area. Photo is facing north.



Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona, VA	576550

Photo No.	Date
9	12/5/23

Description

Landcover photo of managed upland forest located in northern portion of the Study Area. Photo is facing east.



Appendix E:
TRC Staff and Environmental Professional Qualifications/Resumes

Tony P. Tredway



EDUCATION
B.S., Biology, Concord University, 2017

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS
SDI Open Water Scuba Diver, Certification #969540
NAUI Advanced Diver, Certification #BE48C18
SSI Full Face Mask Certification, ID #2707437
Swamp School Wetland Delineation and Regional Supplement Certification
WV Certified Herbicide and Pesticide Applicator
SDI Rescue Diver, Cert #1062538

AREAS OF EXPERTISE
Mr. Tony P. Tredway has experience in the following general areas:

- Scientific diving / Rescue diver
- Macroinvertebrate Identification
- Local Flora and Fauna Identification
- Tree and Shrub Winter Identification
- Freshwater and Terrestrial Ecology
- Wetland and Stream Delineations
- Freshwater Mussel Surveys and Identification
- Bat Roost Tree Habitat Surveys
- QGIS
- Excel, Word, Adobe Acrobat
- Freshwater mussel surveying and identification

REPRESENTATIVE EXPERIENCE
Mr. Tredway graduated from Concord University with a degree in biology with emphasis on ecology and has been working as an environmental consultant with TRC for two years. He conducted multiple field studies for different classes while at Concord. He has used an electrofishing backpack unit to stun, capture and identify fish, collected and identified many different reptile species, identified local plant species, collected and identified macroinvertebrates, analyzed water samples, collected soil erosion data from erosion pins, studied freshwater mussels, and collected / analyzed soil samples. At TRC, Mr. Tredway has helped perform multiple mussel relocations/surveys, stream/waterbody delineations, bat roost tree habitat surveys, emergent bat surveys, noise analysis surveys, and post-construction monitoring for multiple pipeline projects. Mr. Tredway is a certified wetland delineator with a certification from the Swamp School, LLC. He is also a certified Rescue SCUBA diver with full face mask training and is the TRC Safety diver.

While at Concord, he conducted independent research for the Morris Creek Watershed Association. He sampled three reaches of Morris Creek where he collected macroinvertebrates, water samples, and placed erosion pins in the banks of the stream to collect soil erosion data. By analyzing the data collected he was able to gather an idea at how sedimentation of the stream caused by invasive plant species, a culvert, and past mining activities affected the macroinvertebrate population in that stream. His research ended up helping the watershed association win a $72,000 grant to remediate the stream, which started in the spring of 2018.

Project Experience

Mussel Experience

West Virginia Department of Transportation, Department of Highway, (WVDOH). Kanawha Falls Bridge Replacement Project, Mussel Survey – Mr. Tredway was a part of the mussel team that worked on the Kanawha Falls Mussel Survey. He worked as a dive tender and helped in the collection / relocation and identification of mussels with the help of other trained divers.

Marathon Petroleum Company. Tressler Fleet Mussel Survey– Mr. Tredway helped with the Mussel Survey by being a dive tender and making sure the umbilical cords did not get tangled while the divers were underwater.

Marathon Petroleum Company. Midland to Vanport Pipeline Delineations. – Mr. Tredway helped with the delineations on potential reroutes of a Marathon gas pipeline. Mr. Tredway collected data on a GPS unit as well as helped in the process of completing the forms for both wetlands and streams.

Ohio Department of Transportation (ODOT). Henry County Bridge Replacement- Mr. Tredway helped with the mussel survey by being on the communication system with the divers, taking down notes, diving to collect mussels, and identified mussels with the help of the divers.

Ohio Department of Transportation (ODOT). Vrooman Bridge Phase 2 Mussel Survey – Mr. Tredway was a part of the team that conducted a Phase II mussel survey for this project. He collected buckets of sediment that were than sieved to find mussels. Mr. Tredway also helped map out a mussel bed in the project area.

Ohio Department of Transportation (ODOT). Muskingum River Mussel Survey – Mr. Tredway was part of the mussel team who conducted a Phase I and II mussel survey for this road slip repair project. He collected and identified mussels in the project area.

Ohio Department of Transportation (ODOT). Scioto River Mussel Survey – Mr. Tredway was part of the mussel team who conducted a mussel salvage for this bridge construction project. He collected and identified mussels in the project area.

West Virginia Department of Transportation, Department of Highways (WVDOH). I-70 Bridge Replacement Project, Wheeling Creek Mussel Survey – Mr. Tredway was a part of the dive team that snorkeled a section of Wheeling Creek to collect, identify, and relocate mussels to an area upstream of the Project area.

West Virginia Department of Transportation, Department of Highways (WVDOH). NEPA Services, WVDOH, I-70 Bridges, State Project S335-70-0.01 00, Federal Project NFA-2317(008) – Ohio County, WV and Belmont County, OH – Mr. Tredway was a part of the dive team that dove the section of Ohio River Back Channel to collect, identify, and relocate mussels to an area upstream of the Project area. TRC prepared project documentation necessary for NEPA compliance for the proposed I-70 Bridges Project. The proposed project was completed on an accelerated schedule and involved the rehabilitation of 24 bridges in West Virginia and Ohio and the replacement of two bridges in WV along the I-70 corridor. TRC was required to reevaluate, revise, and complete new Categorical Exclusion (CE) documents for the project. The project required the completion of and coordination with appropriate state (West Virginia and Ohio) environmental studies and agency coordination. Additionally, section 4(f) impact

determinations were prepared and coordinated for potential impacts associated with the Wheeling Heritage Trail system. An Indiana Bat Conservation Plan (IBCP) was prepared due to proposed tree clearing activities within an environmentally sensitive area. Furthermore, TRC prepared the permits packages for clearance under Nationwide Permit. The proposed project was cleared within the expedited timeframe and is currently under construction.

West Virginia Department of Transportation, Department of Highways (WVDOH). The Jug Structure Project, Tyler County, WV. – Mr. Tredway was part of the mussel team who performed Phase 1 and Phase 2 mussel surveys in the Group 2 Middle Island Creek, where federally endangered snuffbox mussels were found. For this project, Mr. Tredway was diving for and identified mussels, as well as helped write the survey report. Along with the mussel surveys, Mr. Tredway conducted stream and wetland delineations and Environmental Phase 1 field surveys.

West Virginia Department of Transportation, Department of Highways (WVDOH). I-64 Bridge Replacement Project, Kanawha River Mussel Survey – Mr. Tredway was a part of the dive team who dove a section of the Kanawha River and collected, identified, and relocated mussels within the Project area.

West Virginia Department of Transportation, Department of Highways (WVDOH). I-64 Bridge Replacement Project, Guyandotte River Mussel Survey- Mr. Tredway was a part of the dive team who dove and snorkeled a section of the Guyandotte River and collected, identified, and relocated mussels within the Project area.

Other Relative Experience

AEP Kincaid – Pax 69kv Transmission Line – Mr. Tredway was a biological resource team lead responsible for habitat assessments, WOTUS delineations, and Phase 1 resource identification as part of this transmission line project in southern WV.

Schottenstein Property Group – Beckley WV Phase 1 Site Reconnaissance – Mr. Tredway was responsible for completing the field work and report aspects of a Phase 1 Site Reconnaissance at a shopping center as part of this Project.

West Virginia Department of Transportation, Department of Highways, (WVDOH). WV10 – 4f resources – Mr. Tredway went into the field to take pictures and identify possible 4f resources and worked the tablet and GPS to mark the locations of each resource. He also worked with GIS to get mapping of each 4f resource and put together contract documents that described what resources were in which contracts of the site.

NEPA Services, WVDOH, Twin Branch Truss No. 1 and 2 Bridge Project, State Project S244-7-5.32 (2), Federal Project STP-0007(294)D – McDowell Co, WV - TRC has been contracted to prepare the documentation necessary for NEPA compliance for the proposed Twin Branch Truss No. 1 and 2 Bridge projects in McDowell County, West Virginia. The WVDOH has determined that Twin Branch Truss No. 1, Twin Branch Truss No. 2, and the Twin Branch Tunnel are all in need of replacement, rehabilitation, or closure. TRC has completed Cultural Resources, Natural Resources, and Hazardous Materials studies for the project. TRC has completed a modified directional acoustic survey to evaluate the tunnel for the presence of the federally endangered gray bat. A crayfish survey was completed for the project and the

federally endangered Big Sandy crayfish was identified within the project area. A Biological Assessment will be prepared to coordinate potential impacts to the crayfish with the US Fish and Wildlife Service. TRC has prepared all of the informational handouts and poster boards utilized for the initial public meeting and will work to prepare for coordinate the final public meeting. The proposed project is anticipated to consist of an Environmental Assessment (EA) due to potential environmental impacts at the project site. Mr. Tredway helped identify and delineate waterbody resources and write the environmental report for this project. He also collected the information required to perform a noise analysis and help conduct an emergent survey for bats.

AES Laurel Mountain NPDES Services Proposal, Turbines #59 – Mr. Tredway helped to complete the SRA permits for this turbine construction project.

West Virginia Department of Transportation, Department of Highways (WVDOH). WV 35 – field recon – Mr. Tredway helped with the WV 35 project by going into the field to search for and take photos of possible historic sites described in historic documents.

Triad Hunter – Momentive, Tyler County, West Virginia - Wetland Delineation – Mr. Tredway was the tech for a wetland delineation at a future oil field pad site. He helped the lead find and identify streams and ditches on the property. He was in charge of running the GPS and tablet to mark the locations of resources. He also created the notice of avoidance and photolog for this project.

West Virginia Department of Transportation, Division of Highways (WVDOH). Middleway Bridge Replacement. **Berkley and Jefferson Counties, WV** –Wetland delineation, Categorical Exclusion (CE) and Environmental Phase 1 reports – Mr. Tredway worked with his lead to identify streams and drainage ditches at the site. He also identified plant species at the site and worked as an author on both the CE and Environmental Phase 1 documents for this project.

iBV Energy – Rhudes Creek Solar Gen Tie Route - Rhudes Creek, KY – Mr. Tredway was the lead scientist for the stream and wetland delineations, as well as for the Environmental Phase 1 field work.

Mountain Valley Pipeline (MVP) Southgate - Mr. Tredway performed 12 weeks of stream / wetland delineations as well as the identification of invasive and native plants and RTE species habitats. He worked with a lead to map and flag all wetland / streams within the pipeline ROW. He also filled out stream forms in Fulcrum and collected GPS points in WETMAP.

Ohio Division of Transportation (ODOT). ODOT Instructional Video – Mr. Tredway took footage that was collected in the field by a coworker and edited it into an instructional video on Ordinary High-Water Mark for the Ohio Division of Transportation manual.

Invenergy. Hardin Wind and Solar II – Mr. Tredway created photologs for the Hardin Wind and Hardin Solar projects, as well as helping with the wetland delineation report.

Invenergy. Hardin Solar III – Mr. Tredway worked alongside another TRC biologist to delineate streams and wetlands for a solar project in Hardin county, Ohio. Along with the delineations, Mr. Tredway helped with raptor nest surveys, bat roost tree identification, and plant identification.

West Virginia Department of Natural Resources (WVDNR). UNT-Buffalo Remediation – Mr. Tredway

went into the field with his lead scientist to do an annual checkup on a remediation site. He completed a habitat assessment and a high gradient stream form for one of the streams on the property. He also helped identify and count saplings at different test locations at the site. Mr. Tredway has completed the 2017 and 2018 biannual monitoring reports, as well as the 2019 annual monitoring report. Mr. Tredway was the lead scientist for a supplemental planting project at the site in 2020. He collected and planted *Salix sp.* cuttings at the toe-slope of a stream to help with the remediation of the site.

FONSI Re-Evaluation, WVDOH, I-64 Six Lane Widening (Crooked Creek to Nitro), State Project U340-64-41.37 00, Federal Project NH-0641(318) – Putnam Co, WV
TRC has been contracted to prepare the FONSI Re-Evaluation document for the I-64 Six Lane Widening Project in Putnam County, West Virginia under the QAM Services contract. An Environmental Assessment (EA) determined that impacts from the project were not anticipated to be significant, which led to a Finding of No Significant Impact (FONSI) in November 2016. Since the November 2016 FONSI, the WVDOH has revised the project, affecting the footprint of approved project. Therefore, the proposed project was re-evaluated to determine if the proposed changes would now result in a finding of significant impact. Subsequent environmental evaluation has been conducted since approval of the 2016 FONSI and those results were considered in conjunction with the changes to the proposed project. Additionally, TRC is conducting a mussel salvage of the Kanawha River at the proposed bridge replacement location. The Kanawha River is listed as a Group 4 stream and federally listed mussel species are expected.

Reams Solar – Mr. Tredway was a part of a team of biologist that conducted stream and wetland delineations for a potential solar project in Virginia.

SPECIALIZED TRAINING

- Hazwoper 40-hour course
- OSHA 10-hour course
- WV Boaters Safety training
- NASBLA Boater Safety Training
- CPR/First Aid
- SDI Open Water Scuba Diver
- SSI Full Face Mask Certified Diver
- SDI Rescue Diver
- NAUI Advance Open Water Scuba Diver
- WV Wetland Rapid Assessment Method Evaluation Training (WVWRAM)
- Swamp School Wetland Delineation and Regional Supplement Certification

Appendix F:
Environmental Professional Statement

DEFINITION OF ENVIRONMENTAL PROFESSIONAL AND RELEVANT EXPERIENCE THERETO PURSUANT TO 40 CFR 312

(1) a person who possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding conditions indicative of releases or threatened releases (see §312.1(c)) on, at, in, or to a property, sufficient to meet the objectives and performance factors in §312.20(e) and (f).

(2) Such a person must: (i) hold a current Professional Engineer's or Professional Geologist's license or registration from a state, tribe, or U.S. territory (or the Commonwealth of Puerto Rico) and have the equivalent of 3 years of full-time relevant experience; or (ii) be licensed or certified by the federal government, a state, tribe, or U.S. territory (or the Commonwealth of Puerto Rico) to perform environmental inquiries as defined in §312.21 and have the equivalent of 3 years of full-time relevant experience; or (iii) have a Baccalaureate or higher degree from an accredited institution of higher education in a discipline of engineering or science and the equivalent of 5 years of full-time relevant experience; or (iv) have the equivalent of 10 years of full-time relevant experience.

(3) An environmental professional should remain current in his or her field through participation in continuing education or other activities.

(4) The definition of environmental professional provided above does not preempt state professional licensing or registration requirements such as those for a professional geologist, engineer, or site remediation professional. Before commencing work, a person should determine the applicability of state professional licensing or registration laws to the activities to be undertaken as part of the inquiry identified in §312.21(b).

(5) A person who does not qualify as an environmental professional under the foregoing definition may assist in the conduct of all appropriate inquiries in accordance with this part if such person is under the supervision or responsible charge of a person meeting the definition of an environmental professional provided above when conducting such activities.

Relevant experience, as used in the definition of environmental professional in this section, means: participation in the performance of all appropriate inquiries investigations, environmental site assessments, or other site investigations that may include environmental analyses, investigations, and remediation which involve the understanding of surface and subsurface environmental conditions and the processes used to evaluate these conditions and for which professional judgment was used to develop opinions regarding conditions indicative of releases or threatened releases (see §312.1(c)) to the subject property. TRC personnel resume(s) are included in **Appendix E**.

I declare that, to the best of my professional knowledge and belief, I meet the definition of environmental professional as defined in §312.10 of 40 CFR 312.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Signature of Environmental Professional:  Date: 1/12/2024

Wetland Delineation Report

Wetland and Surface Waters Delineation Report

January 2024

TRC Project Number: 576550.0000.0000

USS Staunton Solar LLC Project

Augusta County, Virginia

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Acronym and Abbreviations

Notation	Definition
AJD	Approved Jurisdictional Determination
CFR	Code of Federal Regulations
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
HUC	Hydrologic Unit Code
NCDWQ	North Carolina Division of Water Quality
NHD	National Hydrography Dataset
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
OHWM	Ordinary High-Water Mark
OWSP	Office of Wetland and Stream Protection
PFO	Palustrine Forested
PJD	Preliminary Jurisdictional Determination
PUB	Palustrine Unconsolidated Bottom
Project	USS Staunton Solar LLC Project
SSURGO	Soil Survey Geographic Database
TRC	TRC Environmental Corporation
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VAC	Virginia Administrative Code
VDEQ	Virginia Department of Environmental Quality
VDCR	Virginia Department of Conservation and Recreation
VMRC	Virginia Marine Resources Commission
VWP	Virginia Water Protection
WOTUS	Waters of the United States

1.0 Introduction

1.1 Project Description and Purpose

TRC Environmental Corporation (TRC) was contracted by United States Solar Corporation (US Solar) to conduct a wetland and surface waters delineation for the USS Staunton Solar LLC Project (Project) on an approximate 37.38-acre parcel (Study Area) with a project footprint of approximately 15 acres in an unincorporated area of Augusta County, Virginia. The Project is anticipated to be under three megawatts (MWac), hence falling under the PPA- DER Solar requirements of the 2023 Solar and Onshore Wind RFP Checklist. The Project is located on Augusta County Parcel ID# 036 34P and within the Augusta County General Agriculture (GA) zoning district. The Study Area is located in an unincorporated area of Augusta County. A Site Location Map (Figure 1), U.S. Geological Survey (USGS) Quadrangle Map (Figure 2), and a Parcel Map (Figure 3) are included in Appendix A to depict the location of the Study Area. The wetland and surface waters mapping and classifications provided in this report will be used for design and avoidance purposes, determination of setbacks and buffers from regulated resources, and assessing permitting requirements.

1.2 Study Area Description

The Project Area is an approximately 37.38-acre area with a cleared, approximately 15-acre area (preliminary Project footprint) located within the Study Area. The Study Area consist of mostly forested property with fallow fields in the middle of the parcel. Falling Spring Run borders the northwest side of the Study Area and an anthropogenic pond in the northeast corner of the parcel.

2.0 Regulatory Authorities

2.1 Federal Authority and Waters of the United States

Waters of the United States (WOTUS) include wetlands, streams, and other aquatic resources under the regulatory authority of the U.S. Army Corps of Engineers (USACE) per 33 Code of Federal Regulations (CFR) 328 and/or the U.S. Environmental Protection Agency (USEPA, 2008) per 40 CFR 110, 112, 116 et al. The USACE and USEPA jointly define wetlands as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” The USACE regulates impacts to WOTUS under Section 404 of the Clean Water Act.

The USACE also regulates navigable waters under Section 10 of the Rivers and Harbor Act (33 U.S. Code [U.S.C.] 401 et seq.), which requires a permit from the USACE to construct any structure in or over any navigable WOTUS, as well as any proposed action that would alter or disturb (such as excavation/dredging or deposition of materials) these waters. The USACE requires a permit if the proposed structure or activity affects the course, location, condition, or capacity of the navigable water, even if the proposed activity is outside the boundaries of the waterbody.

2.2 State and Local Authority

Virginia implements a statewide policy for wetlands and streams and has jurisdiction over all surface waters (including wetlands) in the Commonwealth of Virginia. According to §62.1-255 of the Code of Virginia, “State waters” means all water, on the surface and under the ground, wholly

or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands. “Surface water” means all state waters that are not groundwater.

Authority to enact Virginia Water Protection (VWP) permit regulations is given by §62.1-44.15:20 of the Code of Virginia. The Virginia Department of Environmental Quality’s (VDEQ) Office of Wetland and Stream Protection (OWSP) administers the VWP program. The over-arching regulation for the permit program is the VWP permit program regulation (9VAC25-210). Through the VWP permit program, OWSP regulates water withdrawal, excavation, filling, or activities that affect the biological, chemical, or physical properties of surface waters (including streams, lakes, and isolated or connected wetlands). The VWP permit serves as the Water Quality Certification under Section 401 of the Clean Water Act, as required for a federal permit or as a state permit when no federal permit is required. VDEQ can provide Section 401 Certification by either issuing a Virginia Water Protection individual or general permit or by certifying USACE nationwide or regional permits. The type of permit required is specific to the type, location, and amount of impact. Stormwater management plans and/or mitigation for proposed impacts could be a requirement of the permit approval process.

State-owned subaqueous bottomlands beneath rivers, streams, wetlands, that are located within Virginia’s tidal water region are regulated by the Virginia Marine Resources Commission (VMRC). For all other state-owned subaqueous bottomlands that are not within Virginia’s tidal waters, VDEQ will assume jurisdiction and issue its Virginia Water Protection Permit for uses of instream encroachments. Per VMRC, all perennial streams with a drainage basin of greater than five square miles, or a mean annual flow greater than five cubic feet per second, are considered navigable-in-fact until evidence is presented proving non-navigability and require authorization from the VMRC. VMRC does not regulate the land underneath ephemeral and intermittent streams or streams that have a watershed less than five square miles, or with a mean annual flow less than five cubic feet per second. Title 28.2 – 1205 § A of the Code of Virginia provides guidelines for both VDEQ and VMRC when issuing permits for sub aqueous land encroachment activities, including dredging, filling, building on shallow water areas, dumping into, or encroaching on the beds of the bay and ocean, rivers, streams, and creeks which are owned by the Commonwealth.

Under Chapter 13 of Title 28.2 of the Code of Virginia, any activity disturbing a tidal wetland area is regulated and requires approval from the local Wetlands Board. Localities have the option to adopt local ordinances for implementation. The Virginia Tidal Wetlands Act of 1972, in part, authorized a network of local wetland boards to make development decisions on projects within the individual localities of the project location. The state law regulates tidal wetlands, including any vegetated wetland and non-vegetated flats, and is administered by local government wetland boards. If the municipality does not have its own wetlands board, the VMRC administers jurisdiction.

2.3 Joint Permit Application

The USACE, VDEQ, VMRC, and the local Wetlands Boards use a Joint Permit Application process which simplifies permitting by providing permittees a single application and point of contact to obtain multiple authorizations from the participating agencies. The VMRC operates as the lead agency in this process by accepting applications and facilitating independent but concurrent review by the other agencies.

3.0 Desktop Review

3.1 Desktop Data Collection

TRC conducted a desktop review to characterize the Study Area and assess the potential presence of wetlands and surface waters prior to conducting the field delineation. Data sources utilized for the desktop review include:

- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) (FEMA, 2023);
- USGS Topographic Mapping (USGS, 2011);
- USGS National Hydrography Dataset (NHD) (USGS, 2023a);
- USGS Stream Stats Database (USGS, 2023b);
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA NRCS, 2023);
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) (USFWS, 2023);
- Virginia Department of Conservation and Recreation (VDCR) Virginia Hydrologic Unit Explorer (VDCR, 2023);
- VDEQ Environmental Data Mapper (VDEQ, 2023a); and
- Current and historic satellite imagery (Google Earth, 2023).

3.2 Physiography, Vegetation and Topography

The Study Area is located in the Valley and Ridge Physiographic Province. The Ridge and Valley is the most extensive of the Appalachian provinces in Virginia, covering about 25% of the state. Forests cover 63% of the Virginia Ridge and Valley, and 88% of the forests are of deciduous hardwoods; the remainder is mixed or evergreen forest in which *Pinus* spp. (pines), *Tsuga canadensis* (Eastern Hemlock), and, rarely, *Picea rubens* (Red Spruce) are prominent components. The topographic, floristic, and natural community diversity of the Ridge and Valley generally decreases from south to north through the state. The southwestern Virginia portion, lying southwest of Roanoke, contains the largest areas of high-elevation terrain and carbonate-rock (limestone and dolostone) geology in the province. As in the Cumberland Mountains, Southern Appalachian taxa and community types are characteristic of the southwestern Virginia Ridge and Valley. Between the New River and the Roanoke River is a transition zone in which Southern Appalachian vegetation types give way to floristically less diverse communities typical of the Central Appalachian region. The northern two-thirds of the Virginia Ridge and Valley contain extensive lower-slope areas, secondary ridges, and knobs underlain by Ordovician, Silurian, and Devonian shales. The northern part of the province is one of the driest areas of the state, as the high Allegheny Mountains to the west capture much of the precipitation of eastward-moving fronts and air masses. The elevation of the Study Area ranges from approximately 1,350 – 1,600 feet above mean sea level (USGS, 2010).

3.3 Soils

Soil survey maps prepared by the USDA NRCS were reviewed prior to conducting the delineation fieldwork to determine the extent of mapped hydric soils within the Study Area. There are nine soil types occurring within the Study Area. One is hydric (i.e., with a hydric rating of 95), seven are non-hydric (i.e., with a hydric percentage of 0), and one is predominantly non-hydric (i.e., with a hydric percentage of two). Site soils based on the Soil Survey Geographic database (SSURGO) are mapped in Figure 4 and described in Table 1 below.

Table 1: SSURGO Soils within the Study Area

Symbol	Soil Name	Drainage Class	Farmland Classification	Percent Hydric[1]	Hydric Rating[2]	Percentage of Study Area
39	Fluvaquents, Nearly Level	Poorly Drained	Not Prime Farmland	95	Predominantly Hydric	0.74
40C2	Frederick-Christian Silt Loams, 7 to 15 Percent Slopes, Eroded	Well Drained	Not Prime Farmland	0	Non-Hydric	25.56
40D2	Frederick-Christian Silt Loams, 15 to 25 Percent Slopes, Eroded	Well Drained	Not Prime Farmland	0	Non-Hydric	10.78
42C2	Frederick-Christian Gravely Silt Loams, 7 to 15 Percent Slopes, Eroded	Well Drained	Not Prime Farmland	0	Non-Hydric	7.70
42D2	Frederick-Christian Gravely Silt Loams, 15 to 25 Percent Slopes, Eroded	Well Drained	Not Prime Farmland	0	Non-Hydric	30.09
42E2	Frederick-Christian Gravely Silt Loams, 25 to 45 Percent Slopes, Eroded	Well Drained	Not Prime Farmland	0	Non-Hydric	17.05
60	Massanetta Silt Loam	Moderately Well Drained	Not Prime Farmland	2	Predominantly Non-Hydric	0.02
65E	Opequon-Rock Outcrop Complex, 7 to 45 Percent Slopes	Well Drained	Not Prime Farmland	0	Non-Hydric	1.12
70E	Rock Outcrop-Frederick Complex, Steep	-	Not Prime Farmland	0	Non-Hydric	6.42
W	Water	-	-	-	-	0.53
Total						**100.0%**

3.4 Hydrology

The Study Area is wholly contained within the USGS defined Falling Spring Run – Middle River watershed Hydrologic Unit Code 12 (HUC 12) 020700050302 (USGS, 2023). The corresponding VDCR watershed number is PS07 (VDCR, 2023). All drainage occurring within the Study Area drains to Falling Spring Run and its unnamed tributaries.

The Study Area is contained in the FEMA FIRM panel 51015C0334D (effective. 9/28/2007). The Study Area is within Zone X (Area of Minimal Flood Hazard). The nearest FEMA Flood Hazard Area is Zone AE (area that is susceptible to the 1-percent annual flood [100-year floodplain]) located approximately 0.10 miles northwest of the Study Area, associated with Middle River. Appendix A, Figure 5 shows NWI, NHD, and FEMA floodplain resources.

The Study Area is not located within Virginia's Coastal Zone or within a Chesapeake Bay Preservation Area (VDEQ, 2023b).

4.0 Methodology

TRC wetland scientists and ecologists conducted a field investigation of the Study Area on December 5, 2023, to identify wetlands, waterbodies, and other surface waters. The methodology used to conduct the fieldwork is described below.

4.1 Wetland Delineation

Surveys were performed in accordance with criteria set forth in the USACE 1987 Wetlands Delineation Manual (USACE, 1987) and the 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont (Version 2.0) ("Regional Supplement;" USACE, 2012). Data were collected at sample plots in each delineated wetland and recorded on USACE Routine Wetland Determination forms (Appendix B). The boundaries of wetlands were demarcated with survey ribbon and geolocated with a Global navigation satellite system (GNSS) receiver capable of sub-meter accuracy.

Hydrophytic vegetation was assessed by identifying plant species and their assigned wetland indicator rating of obligate, facultative-wet, facultative, facultative-upland, and upland according to the 2020 National Wetland Plant List (USACE, 2020). Vegetation in both upland and wetland communities was characterized using the areal dominance method, with a radius of 30 feet around the soil sample location for trees and woody vines, 15 feet for saplings and shrubs, and five feet for herbaceous plants.

Hydric soil indicators were determined according to the USDA's Field Indicators of Hydric Soils in the U.S. Version 8.2 (USDA NRCS, 2018), using soil characteristics such as color matrix, hue, evidence of redox features which may include indicators such as saturation, gleyed matrix, mottling, hydrogen sulfide odor, and organic/peat layers present. Soil test pits were dug using a shovel to a depth of approximately 20 inches or refusal due to the presence of hard pan layer, rock, or hard fill materials. Soil color was described using the Munsell Color book (Munsell Color, 2010), texture using USDA hand-texture methods, and the presence/absence of redoximorphic features, including depletions and concentrations, was recorded.

Hydrology was determined based on a number of indicators that are divided into two categories, primary and secondary. The USACE manual (USACE, 1987) and Regional Supplement (USACE, 2012) define wetland hydrology as present when at least one primary indicator or two secondary indicators are identified. Representative photographs were taken of each delineated wetland community and are included in Appendix B with the USACE upland and wetland data sheets.

4.2 Surface Waters Delineation

Surface waters such as streams, ditches, and lakes encountered during the field survey were further investigated to determine the presence of an ordinary-high-water-mark (OHWM) as defined in 33 CFR 328.3 as "*that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*" Surface waters having an OHWM greater than 10 feet in width (ponds and larger streams) were delineated along the OHWM. Surface waters having an OHWM less than 10 feet in width (small streams) were delineated along the center line between the OHWM. Ponds with an observable OHWM were classified as Palustrine Unconsolidated Bottom (PUB) wetlands.

Delineated streams were characterized using TRC's Stream Inventory data forms which are adopted from the North Carolina Division of Water Quality (NCDWQ) Methodology for Identification of Intermittent and Perennial Streams and their Origins (Version 4.11) (NCDWQ, 2010) and the USACE Norfolk District's and VDEQ's Unified Stream Methodology (USACE and VDEQ, 2007). Each stream or other surface water was also characterized by standard measurements such as bank height and stability, channel width and substrate, and direction/presence of water flow. Delineated streams were further classified according to Virginia Water Quality Standards specified in the Virginia Administrative Code (VAC) in 9VAC25-260; assigned the classification of the appropriate water specified in 9VAC25-260-50; and assessed to determine if it is listed as an Exceptional State Water in 9VAC25-260-30 (VAC, 2010, 2017).

5.0 Results

TRC wetland scientists conducted fieldwork to delineate all wetlands and surface waters within the Study Area on December 5, 2023. See Appendix A, Figure 6 for delineated features.

5.1 Wetlands

A palustrine emergent wetland (PEM) W-TPT-01 was identified alongside the perennial stream S-TPT-01. A Wetland Determination Data Form was completed within the PEM wetland to characterize the wetland features. The wetland connects onsite to S-TPT-01, Falling Spring Run, which is a jurisdictional feature. Falling Spring Run connects offsite to Middle River. Based on the onsite connection, TRC classified the wetland as jurisdictional and therefore protected by the USACE and VDEQ. Additionally, a 0.075-acre non-jurisdictional, anthropogenic pond (P-TPT-01) was identified and corresponds to Photograph 4 of Appendix D. See additional information in Table 2 below and the wetland data forms in Appendix B.

No wetlands were identified within the buildable area in the central and southern portion of the Study Area.

Table 2: Delineated Wetlands within the Study Area

Resource ID	Acreage by Wetland Type[1]					Jurisdictional Status[2]		Comments
	PEM	PSS	PFO	PUB	Total	Federal	State	
W-TPT-01	0.02	-	-	-	0.02	Yes	Yes	Emergent wetland fringe alongside the perennial stream S-TPT-01.
Sum Total:	**0.02**	-	**-**	**-**	**0.02**			

1: Wetland Type refers to the Cowardin Classification; PEM = palustrine emergent wetland; PSS = palustrine scrub/shrub wetland; PFO = palustrine forested wetland; PUB = palustrine unconsolidated bottom wetland (ponds are considered PUB wetlands) (Cowardin, 1979).
2: Only the relevant federal and state agencies (typically the USACE, VMRC and VDEQ) have the authority to claim jurisdiction over wetlands and surface waters. The jurisdictional status listed here is TRC's opinion of what the ultimate agency determination would likely be, and it is included only for preliminary planning purposes. This opinion is based on an analysis of the underlying regulations and a field assessment of each delineated feature.

5.2 Surface Waters

One USACE jurisdictional surface water was identified within the Study Area. The perennial stream (S-TPT-01) enters the Project in the southwestern portion of the Study Area. The stream flows along the entire length of the northwestern side of the Study Area. Stream Photograph 9 within Appendix D provides details of the feature. NWI mapping and aerial imagery shows the offsite connection of the feature to Middle River. Based on the offsite connection, TRC classified the surface water as jurisdictional and therefore protected by the USACE and VDEQ.

No surface waters were identified within the buildable area in the central and southern portion of the Study Area.

Additionally, two non-jurisdictional drainages (NJD-TPT-01 and NJD-TPT-02) were identified. NJD-TPT-01 drains P-TPT-01 during high water events. NJD-TPT-01 did not have a defined bed or bank and was therefore determined to be a non-jurisdictional feature. NJD-TPT-02 is a roadside drainage that occurs on the south end of the Study Area and connects via surface flow to S-TPT-01. Photographs 7, 8, and 11 of Appendix D show these features. Both non-jurisdictional drainage features lack evidence of an ordinary high watermark; therefore, it is TRC's opinion that they are non-jurisdictional by the USACE and VDEQ. See additional information in Table 3 below and in the stream data forms in Appendix C.

Table 3: Delineated Surface Waters within the Study Area

Stream ID	Stream Name	Flow Type[1]	NC DWQ Score[2]	Reach Length (LF)[3]	OHWM Width (LF)[4]	VA WQS Class[5]	ESW[6]	Location[7]		Jurisdictional Status[8]		Comments
								Lat	Long	Federal	State	
S-TPT-01	-	Per	32.25	22	7	III	No	38.21331	-79.02844	Yes	Yes	Perennial stream that flows northeast until it exits the Study Area boundary.
NJD-TPT-01	-	-	-	208	-	-	-	38.21589	-79.02304	No	No	Pond outflow that flows offsite.
NJD-TPT-02	-	-	-	26	-	-	-	38.21314	-79.02796	No	No	Roadside drainage that flows into S-TPT-01 via surface flow.
Totals:	**PER:** 22 LF			**INT:** 0 LF		**EPH:** 0 LF						

1: Flow Type: Per = Perennial; Int = Intermittent; Eph = Ephemeral
2: North Carolina Division of Water Quality Methodology for Identification of Intermittent and Perennial Streams and their Origins. Scores the stream condition from: (Ephemeral: 0 < 19), (Intermittent: 19 ≤ 30), (Perennial: 30 ≤) (NCDWQ, 2010)
3: Reach length is the length of the delineated stream within the Study Area in linear feet.
4: OHWM Width is the average width of the stream's Ordinary High Water Mark in linear feet.
5: VA WQS Class is the Virginia Water Quality Standards Classification; Class I = Open Ocean; Class II = Tidal Waters; Class III (Coastal and Piedmont Zones); Class IV = Mountainous Zones Waters; Class V = Stackable Trout Waters; Class VI = Natural Trout Waters; Class VII = Swamp Waters. (9VAC25-260-50, 2017)
6: Exceptional State Waters which are individually listed in Virginia's Antidegradation Policy and have the highest protection level (9VAC25-260-30, 2010).
7: Location based on the centroid of the surface water.
8: Only the relevant federal and state agencies (typically the USACE, VMRC and VDEQ) have the authority to claim jurisdiction over wetlands and surface waters. The jurisdictional status listed here is TRC's opinion of what the ultimate agency determination would likely be, and it is included only for preliminary planning purposes. This opinion is based on an analysis of the underlying regulations and a field assessment of each delineated feature.

6.0 Summary and Recommendations

TRC confirmed the presence of one USACE-jurisdictional stream, and one USACE-jurisdictional wetland within the Study Area during the December site visit. No features were identified within the buildable area in the central portion of the parcel. TRC recommends that US Solar avoids ground disturbance within the delineated features. If impacts within the features are avoidable, no consultation with the USACE would be required. However, TRC recommends obtaining a No Permit Required letter from the USACE Norfolk District to notify that the Project does not intend to impact potential WOTUS.

If disturbance is unavoidable, TRC recommends that US Solar obtain a Preliminary Jurisdictional Determination (PJD) and a USACE 404 permit from the USACE Norfolk District. PJDs provide a non-binding statement from the USACE regarding whether a review area could contain potentially jurisdictional WOTUS. If a binding statement regarding the jurisdictional status of a resource is preferred, acquiring an Approved Jurisdictional Determination (AJD) from the USACE would be recommended. An AJD states with certainty whether each resource within a review area is within USACE jurisdiction. AJDs are valid for a period of five years following approval. An AJD can be preferable to a PJD in circumstances where the jurisdictional status of an aquatic resource is unclear. However, due to the level of background and field data review required, the agency review period for an AJD can extend much longer than that of a PJD.

Based on the results of the PJD and /or AJD, an USACE 404 permit may be required, if impacts to WOTUS are unavoidable. An USACE 404 permit allows for the discharge of dredged or fill material into all waters of the United States, including wetlands. A USACE permit is required whether the work is permanent or temporary and are valid for five years.

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Appendix A:
Figures



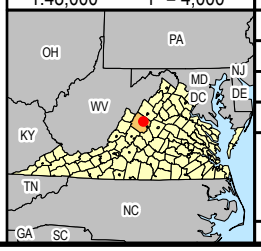
PROJECT AREA

PROJECT FOOTPRINT

0 2,000 4,000

FEET

1:48,000 1" = 4,000'



BASE MAP: ESRI "WORLD STREET MAP" ONLINE SERVICE LAYER
DATA SOURCES: TRC, ESRI

PROJECT: **US SOLAR**
STAUNTON SOLAR PROJECT
AUGUSTA COUNTY, VIRGINIA

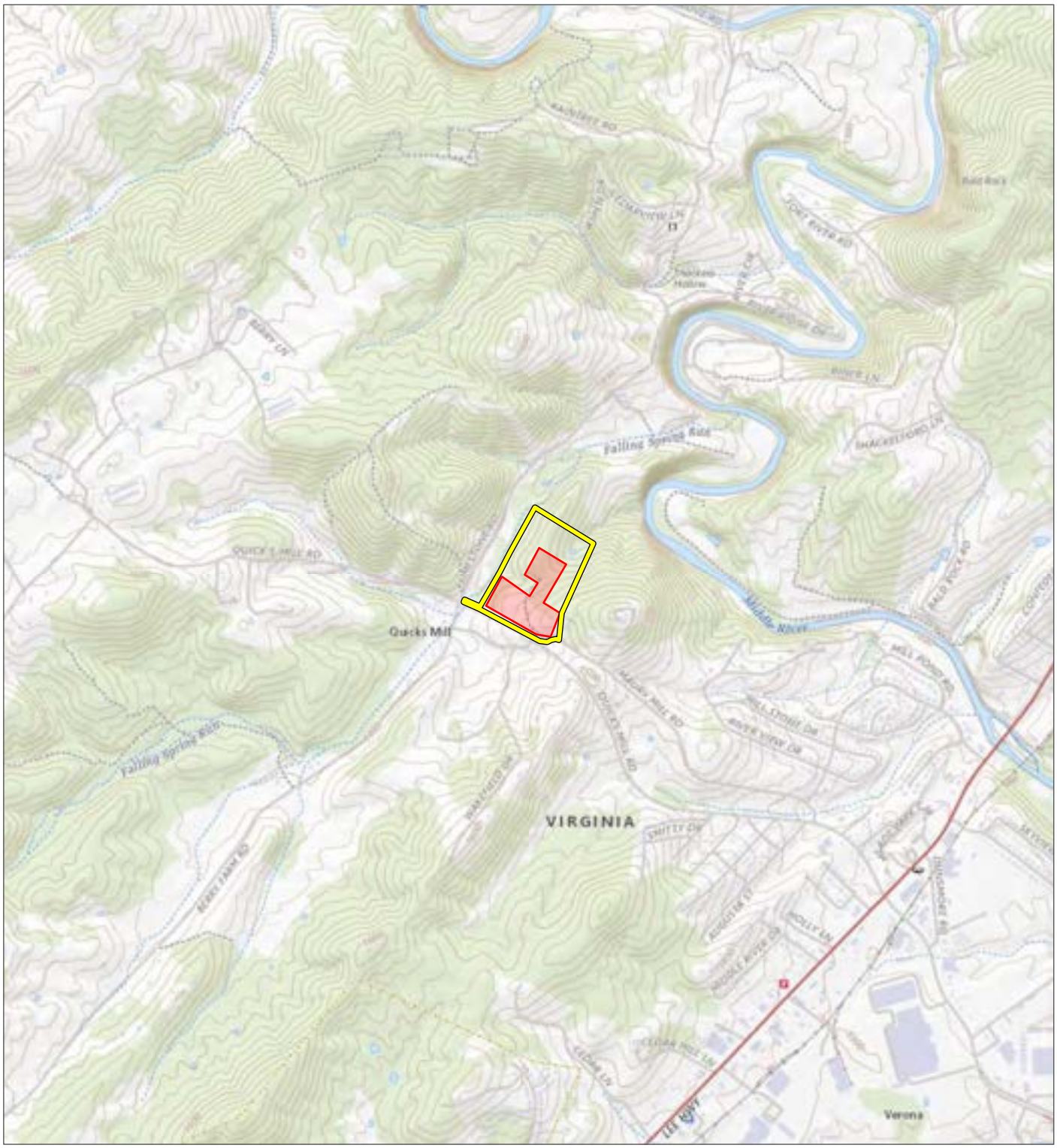
TITLE: **SITE LOCATION MAP**

DRAWN BY:	H. BEST	PROJ. NO.:	576550
CHECKED BY:	R. SPRING		
APPROVED BY:	T. TREDWAY		**FIGURE 1**
DATE:	DECEMBER 2023		

TRC
1030 WILMER AVE
STE. 100
RICHMOND, VA 23227
PHONE: 804.264.2228

FILE: STAUNTON_SOLAR

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE VIRGINIA NORTH FIPS 4501 FT US; MAP ROTATION: 0
-- SAVED BY: HBEST ON 12/15/2023, 09:47:59 AM; FILE PATH: \\EMPLOYEES\GIS\ARCGISPRO\1-PROJECTS\US_SOLAR\576550_STAUNTON\2-APRX\STAUNTON_SOLAR.APRX; LAYOUT NAME: WDR FIG 1 LOCATOR



PROJECT AREA

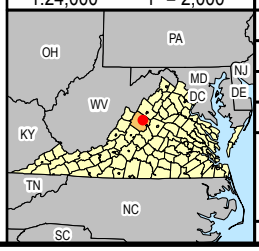
PROJECT FOOTPRINT

N

0 1,000 2,000

FEET

1:24,000 1" = 2,000'



BASE MAP: ESRI "USGS TOPO" ONLINE SERVICE LAYER
USGS 7.5' QUADRANGLE: STAUNTON, VIRGINIA
DATA SOURCES: TRC, ESRI, USGS

PROJECT: **US SOLAR**

STAUNTON SOLAR PROJECT
AUGUSTA COUNTY, VIRGINIA

TITLE:

USGS TOPOGRAPHIC MAP

DRAWN BY:	H. BEST	PROJ. NO.:	576550
CHECKED BY:	R. SPRING		
APPROVED BY:	T. TREDWAY		**FIGURE 2**
DATE:	DECEMBER 2023		

TRC

1030 WILMER AVE
STE. 100
RICHMOND, VA 23227
PHONE: 804.264.2228

FILE: STAUNTON_SOLAR

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE VIRGINIA NORTH FIPS 4501 FT US; MAP ROTATION: 0
--SAVED BY: HBEST ON 12/15/2023, 09:47:59 AM-- FILE PATH: \\EMPLOYEES\GIS\ARCGIS\PRO\1-PROJECTS\US_SOLAR\576550_STAUNTON\2-APRX\STAUNTON_SOLAR.APRX-- LAYOUT NAME: WDR FIG 2 TOPO



PROJECT AREA

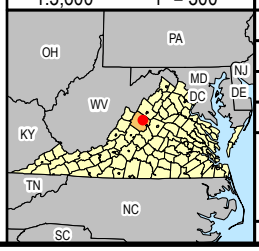
PROJECT FOOTPRINT

PARCEL BOUNDARY

0 150 300

FEET

1:3,600 1" = 300'



BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER
IMAGERY DATE : 11/04/2018
DATA SOURCES: TRC, ESRI, VIRGINIA PARCEL SERVICE

PROJECT: **US SOLAR**
STAUNTON SOLAR PROJECT
AUGUSTA COUNTY, VIRGINIA

TITLE: **PARCEL MAP**

DRAWN BY:	H. BEST	PROJ. NO.:	576550
CHECKED BY:	R. SPRING		
APPROVED BY:	T. TREDWAY		
DATE:	DECEMBER 2023		

FIGURE 3

TRC
1030 WILMER AVE
STE. 100
RICHMOND, VA 23227
PHONE: 804.264.2228

FILE: STAUNTON_SOLAR

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE VIRGINIA NORTH FIPS 4501 FT US; MAP ROTATION: 0
-- SAVED BY: HBEST ON 12/15/2023, 09:47:59 AM -- FILE PATH: \\EMPLOYEES\GIS\ARCGIS\PRO\1-PROJECTS\US_SOLAR\576550_STAUNTON\2-APRX\STAUNTON_SOLAR.APRX -- LAYOUT NAME: WDR FIG 3 PARCEL



SYMBOL	MAP UNIT NAME	DRAINAGE CLASS	HYDRIC RATING	ACRES
39	FLUVAQUENTS, NEARLY LEVEL	POORLY DRAINED	95	0.277
40C2	FREDERICK-CHRISTIAN SILT LOAMS, 7 TO 15 PERCENT SLOPES, ERODED	WELL DRAINED	0	9.555
40D2	FREDERICK-CHRISTIAN SILT LOAMS, 15 TO 25 PERCENT SLOPES, ERODED	WELL DRAINED	0	4.022
42C2	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS, 7 TO 15 PERCENT SLOPES, ERODED	WELL DRAINED	0	2.879
42D2	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS, 15 TO 25 PERCENT SLOPES, ERODED	WELL DRAINED	0	11.248
42E2	FREDERICK-CHRISTIAN GRAVELLY SILT LOAMS, 25 TO 45 PERCENT SLOPES	WELL DRAINED	0	6.372
60	MASSANETTA SILT LOAM	MODERATELY WELL DRAINED	2	0.007
65E	OPEQUON-ROCK OUTCROP COMPLEX, 7 TO 45 PERCENT SLOPES	WELL DRAINED	0	0.418
70E	ROCK OUTCROP-FREDERICK COMPLEX, STEEP		0	2.401
W	WATER		0	0.201

PROJECT AREA

PROJECT FOOTPRINT

NRCS SSURGO SOIL BOUNDARY

NON-HYDRIC SOIL

PREDOMINANTLY NON-HYDRIC SOIL

PREDOMINANTLY HYDRIC SOIL

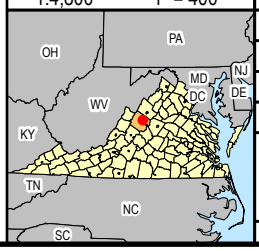
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER
IMAGERY DATE : 11/04/2018
DATA SOURCES: TRC, ESRI, NRCS SSURGO

N

0 200 400

FEET

1:4,800 1" = 400'



PROJECT: **US SOLAR**
STAUNTON SOLAR PROJECT
AUGUSTA COUNTY, VIRGINIA

TITLE: **NRCS SSURGO SOILS MAP**

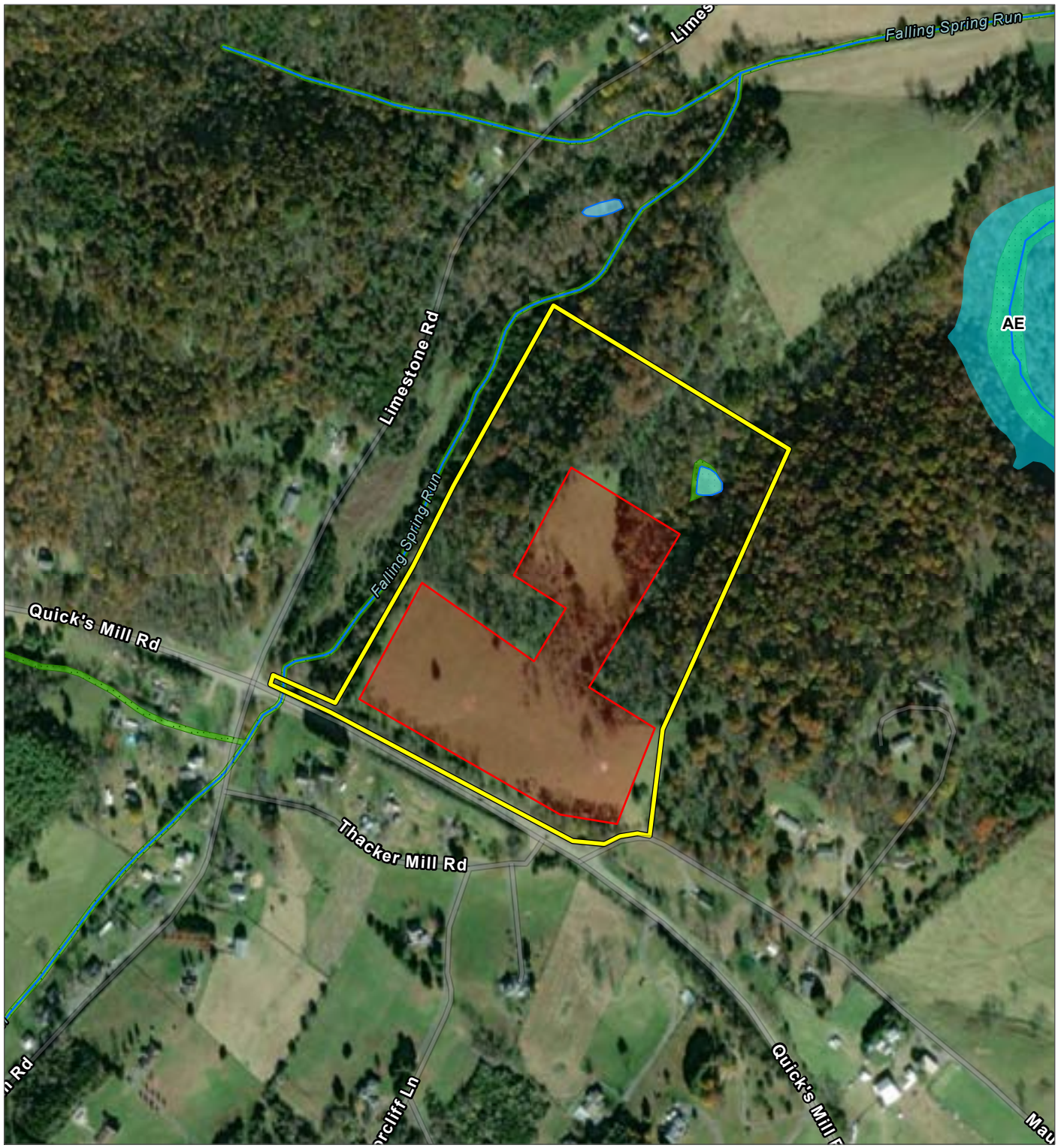
DRAWN BY:	H. BEST	PROJ. NO.:	576550
CHECKED BY:	R. SPRING		
APPROVED BY:	T. TREDWAY		
DATE:	DECEMBER 2023		

FIGURE 4

TRC
1030 WILMER AVE
STE. 100
RICHMOND, VA 23227
PHONE: 804.264.2228

FILE: STAUNTON_SOLAR

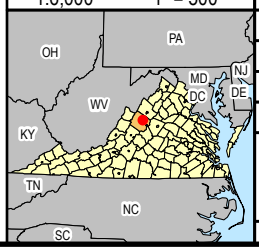
COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE VIRGINIA NORTH FIPS 4501 FT US; MAP ROTATION: 0
-- SAVED BY: HBEST ON 12/15/2023, 09:47:59 AM; FILE PATH: \\EMPLOYEES\GIS\ARCGISPRO\1-PROJECTS\US_SOLAR\576550_STAUNTON\2-APRX\STAUNTON_SOLAR.APRX; LAYOUT NAME: WDR FIG 4 SOIL



PROJECT AREA
PROJECT FOOTPRINT
NHD STREAM
NHD WATERBODY
NWI WETLAND
FEMA FLOOD ZONE:
AE: 1% ANNUAL CHANCE OF FLOODING, WITH BFE

N

0 250 500
FEET
1:6,000 1" = 500'



NOTE: HUC-12 FALLING SPRING RUN-MIDDLE RIVER
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER
IMAGERY DATE : 11/04/2018
DATA SOURCES: TRC, ESRI, NHD, NWI, FEMA

PROJECT: **US SOLAR**
STAUNTON SOLAR PROJECT
AUGUSTA COUNTY, VIRGINIA

TITLE:
NWI, NHD, & FEMA FLOODPLAIN MAP

DRAWN BY:	H. BEST	PROJ. NO.:	576550
CHECKED BY:	R. SPRING		
APPROVED BY:	T. TREDWAY		**FIGURE 5**
DATE:	DECEMBER 2023		

TRC
1030 WILMER AVE
STE. 100
RICHMOND, VA 23227
PHONE: 804.264.2228

FILE: STAUNTON_SOLAR

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE VIRGINIA NORTH FIPS 4501 FT US; MAP ROTATION: 0
-- SAVED BY: HBEST ON 12/15/2023, 09:47:59 AM; FILE PATH: \\EMPLOYEES\GIS\ARCGIS\PRO\1-PROJECTS\US_SOLAR\576550_STAUNTON\2-APRX\STAUNTON_SOLAR.APRX; LAYOUT NAME: WDR FIG 5 FLOODPLAIN

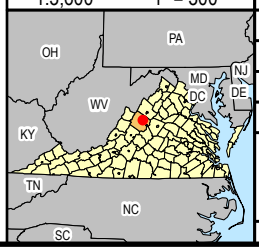


PROJECT AREA
PROJECT FOOTPRINT
CULVERT
STREAM PLOT
NON-JD DRAINAGE PLOT
WETLAND PLOT
UPLAND PLOT
NON-JD DRAINAGE
PERENNIAL STREAM
WATER BODY
PEM WETLAND

NOTE: FEATURES IN MAP DELINEATED BY TRC ON 12/05/2023
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER
IMAGERY DATE : 11/04/2018
DATA SOURCES: TRC, ESRI

N

0 150 300
FEET
1:3,600 1" = 300'



PROJECT: **US SOLAR**
STAUNTON SOLAR PROJECT
AUGUSTA COUNTY, VIRGINIA

TITLE:
WETLAND AND STREAM DELINEATION MAP

DRAWN BY:	H. BEST	PROJ. NO.:	576550
CHECKED BY:	R. SPRING		
APPROVED BY:	T. TREDWAY		**FIGURE 6**
DATE:	DECEMBER 2023		

TRC
1030 WILMER AVE
STE. 100
RICHMOND, VA 23227
PHONE: 804.264.2228

FILE: STAUNTON_SOLAR

COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE VIRGINIA NORTH FIPS 4501 FT US; MAP ROTATION: 0
-- SAVED BY: HBEST ON 12/15/2023, 09:47:59 AM; FILE PATH: \\EMPL OYEES\GIS\ARCGISPRO\1-PROJECTS\US_SOLAR\576550_STAUNTON\2-APRX\STAUNTON_SOLAR.APRX; LAYOUT NAME: WDR FIG 6 DELINEATION

Appendix B:
USACE Wetland Datasheets & Photographs

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Staunton Solar City/County: Verona, Augusta County Sampling Date: 2023-12-5
Applicant/Owner: US Solar State: VA Sampling Point: W-TPT-01_PEM-1
Investigator(s): Tony Tredway, Jared Kunkel Section, Township, Range: NA
Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 147 of LRR S Lat: 38.2134183 Long: -79.0285354 Datum: WGS84
Soil Map Unit Name: Fluvaquents, nearly level NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✘ No ____ (If no, explain in Remarks.)
Are Vegetation ✘ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✘
Are Vegetation ____ , Soil ____ , or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✘	No ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PEM. Circumstances are not normal due to mowing of vegetation.

HYDROLOGY

Wetland Hydrology Indicators:
Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ✘ High Water Table (A2)
- ✘ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ✘ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✘ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ✘ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✘	No ____	Depth (inches): 5
Water Table Present?	Yes ✘	No ____	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes ✘	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes ✘ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology comments.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: W-TPT-01_PEM-1

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
50% of total cover: 0	20% of total cover: 0		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0	= Total Cover	
50% of total cover: 0	20% of total cover: 0		
Herb Stratum (Plot size: 5 ft radius)			
1. *Festuca ovina*	25	Yes	UPL
2. *Juncus effusus*	10	Yes	FACW
3. *Carex lurida*	5	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	40	= Total Cover	
50% of total cover: 20	20% of total cover: 8		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	25	x 5 =	125
Column Totals:	40 (A)		150 (B)

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree–Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub–Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb–All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines–All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ✘ **No** __

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation is significantly disturbed as a result of mowing.

SOIL Sampling Point: W-TPT-01_PEM-1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 to 2	10YR 5/2	95	7.5YR 5/8	5	C	M/PL	Clay	
2 to 16	10YR 5/2	80	10YR 5/6	20	C	M/PL	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5)
- __ 2 cm Muck (A10) **(LRR N)**
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Dark Surface (S7)
- __ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- __ Thin Dark Surface (S9) **(MLRA 147, 148)**
- __ Loamy Gleyed Matrix (F2)
- ✘ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- __ Umbric Surface (F13) **(MLRA 136, 122)**
- __ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- __ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- __ 2 cm Muck (A10) **(MLRA 147)**
- __ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- __ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- __ Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: Not present
Depth (inches): _____

Hydric Soil Present? Yes ✘ **No** _____

Remarks:
No soil comments.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - S:



Plot Photo(s) - E:



Plot Photo(s) - W:



Plot Photo(s) - Hydrology:







Plot Photo(s) - Vegetation:





Plot Photo(s) - Soil:





WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Staunton Solar City/County: Verona, Augusta County Sampling Date: 2023-12-5
Applicant/Owner: US Solar State: VA Sampling Point: W-TPT-01_UPL-1
Investigator(s): Tony Tredway, Jared Kunkel Section, Township, Range: NA
Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): Convex Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 147 of LRR S Lat: 38.2132592 Long: -79.0277614 Datum: WGS84
Soil Map Unit Name: Frederick-Christian silt loams, 15 to 25 percent slopes, eroded NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✘ No _____ (If no, explain in Remarks.)
Are Vegetation ✘ , Soil _____ , or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✘
Are Vegetation _____ , Soil _____ , or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✘	**Is the Sampled Area within a Wetland?** Yes _____ No ✘
Hydric Soil Present?	Yes _____	No ✘	
Wetland Hydrology Present?	Yes _____	No ✘	

Remarks:
Covertype is UPL. Circumstances are not normal due to mowing of vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✘	Depth (inches): _____
Water Table Present?	Yes _____	No ✘	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✘	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✘

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology comments.

VEGETATION (Four Strata) — Use scientific names of plants. Sampling Point: W-TPT-01_UPL-1

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juniperus virginiana*	25	Yes	FACU
2. *Prunus serotina*	15	Yes	FACU
3. *Platanus occidentalis*	10	Yes	FACW
4.			
5.			
6.			
7.			
	50	= Total Cover	
50% of total cover: 25	20% of total cover: 10		

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Berberis thunbergii*	15	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	15	= Total Cover	
50% of total cover: 7.5	20% of total cover: 3		

Herb Stratum (Plot size: 5 ft radius)			
1. *Festuca ovina*	30	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	30	= Total Cover	
50% of total cover: 15	20% of total cover: 6		

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	55	x 4 =	220
UPL species	30	x 5 =	150
Column Totals:	95 (A)		390 (B)

Prevalence Index = B/A = 4.1

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree—Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub—Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb—All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines—All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ____ No ✘

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation is significantly disturbed as a result of mowing.

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 to 5	10YR 6/6	100					Sandy Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5)
- __ 2 cm Muck (A10) **(LRR N)**
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Dark Surface (S7)
- __ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- __ Thin Dark Surface (S9) **(MLRA 147, 148)**
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- __ Umbric Surface (F13) **(MLRA 136, 122)**
- __ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- __ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- __ 2 cm Muck (A10) **(MLRA 147)**
- __ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- __ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- __ Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Gravel

Depth (inches): 5

Hydric Soil Present? Yes ____ **No** ✘

Remarks:

No soil comments.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - S:



Plot Photo(s) - E:



Plot Photo(s) - W:



Plot Photo(s) - Hydrology:





Plot Photo(s) - Vegetation:





Plot Photo(s) - Soil:





Appendix C:
Surface Water Datasheets & Photographs

NC DWQ Stream Identification Form Version 4.11 — NJD-TPT-01

Date: 2023-12-05	**Project/Site:** US Solar, Staunton Solar Project	**Latitude:** 38.2158907
Evaluator: Tony Tredway	**County:** Augusta County	**Longitude:** -79.0230479
Total Points: 11 *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30**	**Stream Determination (circle one)** **Ephemeral** **Intermittent** **Perennial**	**Other** *e.g. Quad Name:*

A. Geomorphology (Subtotal = 8)	Absent	Weak	Moderate	Strong
1[a.] Continuity of channel bed and bank	0	1	**2**	3
2. Sinuosity of channel along thalweg	**0**	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	**1**	2	3
4. Particle size of stream substrate	0	1	**2**	3
5. Active/relict floodplain	0	**1**	2	3
6. Depositional bars or benches	**0**	1	2	3
7. Recent alluvial deposits	**0**	1	2	3
8. Headcuts	**0**	1	2	3
9. Grade control	0	**0.5**	1	1.5
10. Natural valley	0	0.5	1	**1.5**
11. Second or greater order channel	**No = 0**		Yes = 3	

[a]artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 0)				
12. Presence of Baseflow	**0**	1	2	3
13. Iron oxidizing bacteria	**0**	1	2	3
14. Leaf litter	1.5	1	0.5	**0**
15. Sediment on plants or debris	**0**	0.5	1	1.5
16. Organic debris lines or piles	**0**	0.5	1	1.5
17. Soil-based evidence of high water table?	**No = 0**		Yes = 3	

C. Biology (Subtotal = 3)				
18. Fibrous roots in streambed	3	2	**1**	0
19. Rooted upland plants in streambed	3	**2**	1	0
20. Macrobenthos (note diversity and abundance)	**0**	1	2	3
21. Aquatic Mollusks	**0**	1	2	3
22. Fish	**0**	0.5	1	1.5
23. Crayfish	**0**	0.5	1	1.5
24. Amphibians	**0**	0.5	1	1.5
25. Algae	**0**	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75 OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Upland saddle creating a non jd drainage

Sketch:

ADDITIONAL STREAM MEASUREMENTS AND CONDITIONS

Virginia Unified Stream Methodology

STREAM CONDITIONS	
Water Flow Velocity	Dry or Minimal
Direction of Flow	NE
Channel Conditions	Marginal (2)
In-stream Habitat	Poor (0.5)
Observed Use	Drainage
Observed Wildlife	–

STREAM MEASUREMENTS	
OHWM Width (ft)	
Average Water Width (ft)	0
Bank to Bank (ft)	5
Bankfull Width (ft)	5
Probed Stream Depth	0 to 6 inches

BANK MEASUREMENTS AND CONDITIONS		
	LEFT BANK	**RIGHT BANK**
Bank Height (ft)	2	2
Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping	15 to 25% (9 to 14 deg) Steeply Sloping
Erosion Potential	Low	Low
Substrate	Vegetated	Vegetated

UPSTREAM PHOTO:



DOWNSTREAM PHOTO:



ACROSS STREAM PHOTO:



NC DWQ Stream Identification Form Version 4.11 — S-TPT-01

Date: 2023-12-05	**Project/Site:** US Solar, Staunton Solar Project	**Latitude:** 38.2133138
Evaluator: Tony Tredway	**County:** Augusta County	**Longitude:** -79.0284387
Total Points: 32.25 *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30**	**Stream Determination (circle one)** Ephemeral Intermittent **Perennial**	**Other** *e.g. Quad Name:*

A. Geomorphology (Subtotal = 16)	Absent	Weak	Moderate	Strong
1[a.] Continuity of channel bed and bank	0	1	2	**3**
2. Sinuosity of channel along thalweg	0	1	**2**	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	**1**	2	3
4. Particle size of stream substrate	0	1	**2**	3
5. Active/relict floodplain	0	1	**2**	3
6. Depositional bars or benches	0	**1**	2	3
7. Recent alluvial deposits	0	**1**	2	3
8. Headcuts	**0**	1	2	3
9. Grade control	**0**	0.5	1	1.5
10. Natural valley	0	0.5	**1**	1.5
11. Second or greater order channel	No = 0		**Yes = 3**	

[a]artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 8.5)				
12. Presence of Baseflow	0	1	2	**3**
13. Iron oxidizing bacteria	**0**	1	2	3
14. Leaf litter	**1.5**	1	0.5	0
15. Sediment on plants or debris	0	**0.5**	1	1.5
16. Organic debris lines or piles	0	**0.5**	1	1.5
17. Soil-based evidence of high water table?	No = 0		**Yes = 3**	

C. Biology (Subtotal = 7.75)				
18. Fibrous roots in streambed	3	**2**	1	0
19. Rooted upland plants in streambed	3	**2**	1	0
20. Macrobenthos (note diversity and abundance)	**0**	1	2	3
21. Aquatic Mollusks	**0**	1	2	3
22. Fish	0	0.5	1	**1.5**
23. Crayfish	**0**	0.5	1	1.5
24. Amphibians	**0**	0.5	1	1.5
25. Algae	0	0.5	1	**1.5**
26. Wetland plants in streambed	FACW = 0.75	OBL = 1.5	Other = 0	

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

ADDITIONAL STREAM MEASUREMENTS AND CONDITIONS

Virginia Unified Stream Methodology

STREAM CONDITIONS	
Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	N
Channel Conditions	Marginal (2)
In-stream Habitat	Marginal (0.9)
Observed Use	Drainage
Observed Wildlife	Fish

STREAM MEASUREMENTS	
OHWM Width (ft)	7
Average Water Width (ft)	8
Bank to Bank (ft)	10
Bankfull Width (ft)	10
Probed Stream Depth	6 to 12 inches

BANK MEASUREMENTS AND CONDITIONS		
	LEFT BANK	**RIGHT BANK**
Bank Height (ft)	1	1
Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping	8 to 15% (5 to 9 deg) Moderately Sloping
Erosion Potential	Moderate	Moderate
Substrate	Silt-Mud,Vegetated	Silt-Mud,Vegetated

UPSTREAM PHOTO:



DOWNSTREAM PHOTO:



ACROSS STREAM PHOTO:



Appendix D:
Study Area Photo Log

Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona, VA	576550

Photo No.	Date
1	12/5/23

Description

Landcover photo of upland cow pasture. Photo taken in southern portion of the Study Area, facing west.



Photo No.	Date
2	12/5/23

Description

Landcover of upland mixed hardwood consisting of Black Walnut (*Juglans nigra*), Red Cedar (*Juniperus virginiana*) Red Oak (*Quercus rubrua*), and White Oak (*Quercus alba*). Photo taken in northern portion of the Study Area, facing east.



Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona, VA	576550

Photo No.	Date
3	12/5/23

Description

Perennial stream Falling Spring Run, S-TPT-01, located in the south western portion of the Study Area. Stream is running north to south along the western boundary. Photo is facing north.



Photo No.	Date
4	12/5/23

Description

Emergent wetland (W-TPT-01) located within the southwestern portion of the Study Area. Falling Spring Run splits the wetland in half. Photo is facing east.



Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona, VA	576550

Photo No.	Date
5	12/5/23

Description

Rain water fed pond (P-TPT-01) located within the northeastern portion of the Study Area. Photo is facing south.



Photo No.	Date
6	12/5/23

Description

Additional photo of the pond, facing east.



Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona, VA	576550

Photo No.	Date
7	12/5/23

Description

Overflow culvert for the pond. Photo is facing north.



Photo No.	Date
8	12/5/23

Description

Non jurisdictional upland drainage (NJD-TPT-01) located in the northeastern portion of the Study Area. Photo is facing north.



Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona, VA	576550

Photo No.	Date
9	12/5/23

Description

Landcover photo of upland cow pasture located in the central portion of the Study Area. Photo is facing south.



Photo No.	Date
10	12/5/23

Description

Upland swale located within the central portion of the Study Area. The swale runs east to west and contains no evidence of an Ordinary High Water Mark.



Study Area Photographs

Project Name	Site Location	Project No.
USS Staunton Solar LLC	Verona, VA	576550

Photo No.	Date
11	12/5/23

Description

Upland roadside drainage (NJD-TPT-01) along the southern boundary. Drainage contains a concrete base. Photo is facing west. Drainage loses definition further towards the stream.



Permit Matrix

USS Staunton Solar Project Permit Matrix					
Regulatory Agency	**Permit / Approval**	**When Required**	**Estimated Agency Review Time**	**Potential Studies & Application Requirements**	**Comments**
Federal Permits					
United States Army Corps of Engineers (USACE) - Norfolk District 803 Front St Norfolk, VA 23510-1096 757.201.7606	Clean Water Act (CWA) Section 404 Nationwide Permit (NWP)	Impacts to Waters of the U.S. (WOTUS), provided the activity does not result in the loss of greater than one-half acre of WOTUS. Pre-construction notification (PCN) is required for any activity for impacts to WOTUS of more than one-tenth of an acre.	90 to 120 days for NWP; potentially up to one year or more for Individual permit – Additional delays are possible due to staffing constraints	• Wetland and Stream Delineation • Jurisdictional Determination • PCN if Pre-Construction Notification (PCN) if the discharge results in the loss of more than 1/10 acre of WOTUS. Mitigation if the discharge results in the loss of more than 1/10 acre of WOTUS.	TRC performed a wetland delineation for the USS Staunton Solar Project in December 2024. Based on the concept plan, development appears to avoid wetlands. Impacts to WOTUS are not anticipated at this time.
United States Fish and Wildlife Service (USFWS) VA Ecological Field Office 6669 Short Ln, Gloucester, VA 23061 804.693.6694	Endangered Species Act (ESA) – Section 7 Consultation	Under Section 7 of the ESA, any project requiring a federal permit or approval or federal funding (or other federal nexus) must consult with USFWS to ensure activities are not likely to jeopardize the continued existence of federally listed species or destroy or adversely modify designated critical habitat.	30 to 60 days Incidental Take Permit: 12–16 months	• USFWS Information for Planning and Consultation (IPaC) review. • Section 7 Consultation: Informal consultation • Formal consultation required for May Affect determinations. • If requested by USFWS, species-specific surveys, avoidance and/or mitigation measures. • Habitat Assessment. Note: The USACE 404 authorization cannot be issued until the USFWS review process has been completed.	TRC performed a habitat assessment in December 2023. A desktop analysis was completed using the Information Planning and Consultation tool (IPaC). Based on the results from the desktop research and field visit, potential summer roosting habitat for the Indiana bat (*Myotis sodalist)* is present within the site. A presence or absence survey may be conducted to determine if the species is present. If presence is assumed, tree clearing would only be permitted from November 15 – March 31 due to Time of Year restrictions.
USFWS VA Ecological Field Office 6669 Short Ln, Gloucester, VA 23061 804.693.6694	Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act (BGEPA) Compliance and Consultation	When construction or operation of a proposed facility could impact migratory birds or threatened or endangered species (including tree clearing activities). If impacts to eagles may occur, an Eagle Take Permit may be required.	30 – 45 days for each consultation submittal	• Habitat Assessment. • Avian nest surveys / Raptor nest surveys (if agencies request). • Surveying of wildlife species submitted to USFWS within two months of the completion of a field season (if agencies request). • Pre-Construction and Post-Construction Bat and Bird Monitoring (if agencies request).	Note: The USACE 404 authorization cannot be issued until the USFWS review process has been completed.
Federal Aviation Administration (FAA) 1600 Stewart Avenue, Suite 410 Westbury, NY 11590 516.228.7300	Determination of No Hazard to Air Navigation	Required for temporary or permanent construction or alternation 200 feet or more above ground at any location, and lower if within 20,000 feet of an airport.	45 days	Submittal of FAA Form 7460-1 including proposed work information.	--
United States Army Corps of Engineers (USACE) - Norfolk District 803 Front St. Norfolk, VA 23510-1096 757.201.7606	National Historic Preservation Act (NHPA) - Section 106 Consultation	If the project requires a federal permit, such as a 404, as described above, the NHPA requires the USACE to determine the effects the project would have on historic properties.	30 to 60 days	• Consultation with the USACE. • Consultation with the Viriginia State Historic Preservation Office. Phase I Cultural Resources Survey (if necessary).	--

USS Staunton Solar Project Permit Matrix					
Regulatory Agency	**Permit / Approval**	**When Required**	**Estimated Agency Review Time**	**Potential Studies & Application Requirements**	**Comments**
State Permits					
Virginia Marine Resources Commission (VMRC) Building 96, 380 Fenwick Road Ft. Monroe, VA 23651 757.247.2200	Permit for Encroachment to State-owned Subaqueous Lands	Any structures or activities that are located in, on, under, or over State-owned submerged lands.	60 to 90 days	Submittal of Standard Joint Permit Application	--
Virginia Department of Environmental Quality (VA DEQ) P.O. Box 1105 Richmond, VA 23218	Solar Renewable Energy Permit by Rule (PBR) Notice of Intent (NOI) for Solar Energy Project de minimis (9VAC15-60-130.B)	Small solar projects ≤ 5 MW or ≤10 acres	30 to 60 days	NOI submission Submittal of certification by the governing body of the locality that the Project complies with all applicable land use ordinances.	NOI application is to be submitted to DEQ along with associated information listed within the application checklist. Submittal of application checklist along with application is advised.
VA DEQ P.O. Box 1105 Richmond, VA 23218 571.866.6091	Construction General Permit (CGP)	For Projects that will result in land disturbance equal to or greater than one acre.	30-60 days	Permit will need to be acquired through Augusta County's local program. Submittal of the application to the county will include: • Completed VSMP registration statement/ Land disturbance application form • 8 copies of an approved Site Plan • 2 copies of a narrative portion of the plan • Stormwater Pollution Prevention Plan • Erosion and Sediment Control Plan • Plan review fees • VSMP fee and performance bond.	Augusta County administers a Virginia Erosion and Stormwater Management Program. Submittal of the local Land Disturbance Application and associated information to the County will grant permit coverage. Stormwater runoff from construction activities are managed under Virginia Pollutant discharge Elimination System (VPDES) which is administered by certain localities.
VA DEQ Water Division Valley Office P.O. Box 3000 Harrisonburg, Virginia 22801 540.217.7483	CWA Section 401 Water Quality Certification (WQC)	For Projects that will result in the discharge of dredged or fill material into WOTUS. VA DEQ can provide Section 401 Certification through issuing a Virginia Water Protection Individual or General Permit or by certifying U.S. Army Corps of Engineers Nationwide or Regional Permits.	30 to 60 days for verification of NWP 6 to 24 months for Water Protection Permit (WPP)	Wetland and Stream Delineation. After submission of a Section 404 permit to the USACE Norfolk District, the USACE will review the application and send the application to VADEQ as part of the state's Joint Process. VADEQ will go through their review process and send their final State Certification or permit to the applicant and the USACE.	DEQ provides the Section 401 Certification through issuing a Virginia Water Protection Permit; Automatic under specific NWPs. Based on the concept plan, development appears to avoid wetlands. Impacts to WOTUS are not anticipated at this time.
Virginia Department of Wildlife Resources (VA DWR) P.O. Box 996, Verona, VA 24482 540.248.9360	Coordination for state protected wildlife species	Federal nexus; requirement of Endangered Species Act	Initial Consult: 1 to 2 months	DWR does not issue any permits or approvals. Coordination is completed through regulatory permit applications coordinated through DEQ, VMRC, VDOT, FERC, USACE, and other state or federal agencies only. PCN is not required to be submitted to DWR. DWR does not accept stand-alone coordination/consultation.	DWR does not issue any permits or approvals. Coordination is completed through regulatory permit applications coordinated through DEQ, VMRC, VDOT, FERC, USACE, and other state or federal agencies only. PCN is not required to be submitted to DWR. DWR does not accept stand-alone coordination/consultation. DWR may recommend species-specific seasonal surveys for protected species, any likely impacts to wildlife resources and habitats, and may recommend any appropriate avoidance measures. As part of a separate Critical Issues Analysis submittal and site visit, a desktop analysis was completed using VAFWIS, bald eagle nest information from Center for Conservation Biology (CCB), DWR bat

USS Staunton Solar Project Permit Matrix					
Regulatory Agency	**Permit / Approval**	**When Required**	**Estimated Agency Review Time**	**Potential Studies & Application Requirements**	**Comments**
					hibernacula and roots maps for Northern Long-eared, Little Brown, and Tricolored bats, and DWR Wildlife Mapping and Environmental Review Map Service (WERMS) map. Results from the desktop research and field visit indicated potential habitat for the Northern long-eared bat (Myotis septentrionalis), Little brown bat (Myotis lucifugus), tricolored bat (Perimyotis subflavus), loggerhead shrike (Lanius ludovicianus), Migrant loggerhead shrike (*Lanius ludovicianus migrans),* Brook floater (*Alasmidonta varicose),* eastern tiger salamander (*Ambystoma trigrinum)*, and the Beswick's wren (*Thryomanes bewickii)* on the site. Based on the concept design plans, the Project intends to avoid aquatic resources therefore avoiding impacts to the aquatic species listed above. Time of year restrictions may be used for the Beswick's wren, migrant loggerhead shrike, loggerhead shrike to minimize impacts to their habitats. Clearing activities would be permitted outside of a typical nesting season occurring between March 15 and September 10. Time of year restrictions may be used for the bat species above. Tree clearing would be allowed from November 15 – March 31 for the Northern long eared bat. Tree clearing for the tricolored and little brown bat would allowed any time of the year as the project is not located within the vicinity of a hibernaculum or known roost tree.
Virginia Department of Conservation and Recreation (VA DCR), Division of Natural Heritage 600 E. Main St., 24th Floor, Richmond, VA 23219 804.786.7951	Coordination for state threatened and endangered species and natural heritage resources	Federal nexus; requirement of Endangered Species Act	Initial Consult: 1 to 2 months	DCR project review identifies potential impacts to natural heritage resources (rare animals, rare plants, exemplary natural communities and significant geologic features). Project reviews are a fee-based service.	VA DCR is part of the parks and recreation system, no regulatory authority- their review is recordation of species only. DCR project review identifies potential impacts to natural heritage resources (rare animals, rare plants, exemplary natural communities and significant geologic features). Project reviews are a fee-based service. TRC conducted a desktop review utilizing the natural heritage database explorer for protected plants within the site's HUC 12 watershed. No protected species were identified during the search.
Virginia Department of Historic Resources – State Historic Preservation Office (VA DHR – SHPO) Northern Office PO Box 519 5357 Main St., Stephens City, VA 22655 540.868.7029	Section 106 – National Historic Preservation Act (NHPA) Compliance	Section 106 consultation could be required if county/city, state, or federal permits other than a PBR de minimis permit are necessary to identify historic properties that may be affected by the proposed undertaking.	2 to 4 months if no significant historic properties are affected by the Project; 6 to 8 months if significant historic properties will be affected by the Project.	Conduct background research and cultural resources field investigations to determine whether the activity will affect previously identified historic or culturally significant properties. Professional archeologists may obtain site information by accessing online information databases. Investigations of cultural resources in an area must begin with a review of information on previously recorded cultural resources; research should be completed before conducting fieldwork since it will provide guidance for the archeological work to follow. Preliminary review of the Virginia database will indicate potential historic resources and/or archaeologically sensitive areas in the vicinity of the Study Area. A Phase I Cultural Resources Survey and/or visual evaluation may be required after initial Project consultation.	TRC performed a desktop Cultural Resources Survey for the Staunton Solar Project in January 2024. Based on the review, the Project is considered to have a low risk for the potential to affect National Register of Historic Places (NRHP) eligible historic architectural properties.

USS Staunton Solar Project Permit Matrix					
Regulatory Agency	**Permit / Approval**	**When Required**	**Estimated Agency Review Time**	**Potential Studies & Application Requirements**	**Comments**
Virginia Department of Transportation (VDOT) Staunton district 811 Commerce Road, Staunton, VA 24401 540.332.9075	Land Use Permit – Utility Installations	Any planned work or activity on or crossing any right-of-way under VDOT jurisdiction such as construction of private and commercial entrances, temporary use of the right-of-way, installation of utilities, or modifications to an existing entrance due to a change in land use, traffic volume, or type of traffic. All work on, or connecting to, the system of state highways requires a land use permit.	30 days	Electronic application form Surety Site Plan Fee: Base fee is $100. Additional fees are then applied to the base application fee based on the scope of work.	Application is to be submitted to the VDOT Staunton district.
VDOT Staunton District 811 Commerce Road, Staunton, VA 24401 540.332.9075	Land Use Permit – Commercial entrance installation (for the proposed temporary construction entrance)	The installation of a street connection, commercial entrance or other access onto VDOT maintained ROW, including the construction of road improvements necessary to accommodate the proposed access.	30 days	Electronic application form Surety Site Plan Fee: Base fee is $100. Additional fees are then applied to the base application fee based on the scope of work.	Application is to be submitted to the VDOT Staunton District.
Local Permits					
Department of Community Development P.O. Box 590 Verona, VA 24482 540.245.5700	Site Plan Approval	Needed for proposed new developments.	10 business days	The Site Plan should follow the standards applicable to small scale solar energy systems listed in Chapter 25 §25-70.4C including: • Setback requirements • Buffer requirements • Height requirements • Sign requirements • Glare requirements • DOT requirements • Building and structure requirements • Location to nearby solar systems Site Plan must be approved before issuance of a building permit, zoning permit, or zoning certificate approval. Site Plan should include everything listed in Site Plan Contents within Chapter 25 §25-673 of the Augusta County Code. Fees: $200 for new construction in agriculture district.	8 copies of each site plan along with appropriate checklists will be submitted to the Director of the Community Development Department. Checklists and supplemental information include: • Erosion and Sediment Control (ESC) checklist • Design calculations • Decommissioning Plan • A form of Bonding • Traffic Impact Analysis worksheet If the Project meets the threshold requirements, a traffic impact analysis will need to be conducted.
Department of Community Development P.O. Box 590 Verona, VA 24482 540.245.5700	Construction General Permit / Stormwater Permit	For land disturbance that is greater than or equal to 1 acre.	10 – 45 business days	Submittal includes: • Completed VSMP registration statement/ Land disturbance application form • 8 copies of an approved Site Plan • 2 copies of a narrative portion of the plan • Stormwater Pollution Prevention Plan (SWPPP) • Plan review fees • VSMP fee and performance bond.	This permit establishes a Virginia Stormwater Management Program (VSMP) for Augusta County and follows the standards for VSMPs set forth by the state. Fees: $4,500 for construction activities greater than or equal to 10 acres but less than 50 acres. A SWPPP must be prepared in accordance with the requirements of the General VPDES Permit for Discharges of Stormwater from Construction Activities *The department of Community Development is considered the Virginia Erosion and Sediment Control Program Authority (VESCP) for Augusta County.

USS Staunton Solar Project Permit Matrix					
Regulatory Agency	**Permit / Approval**	**When Required**	**Estimated Agency Review Time**	**Potential Studies & Application Requirements**	**Comments**
Department of Community Development P.O. Box 590 Verona, VA 24482 540.245.5700	Land Disturbance Permit	For land disturbance that is greater than or equal to 10,000 square feet (0.230 acres).	10 – 45 business days	Submittal includes: • Completed VSMP registration statement/ Land disturbance application form • 8 copies of an approved Site Plan • Erosion and Sediment Control Plan (ESC), • 2 copies of a narrative portion of the plan addressing all of the items listed on the ESC checklist • Plan review fees, • VSMP fee and performance bond.	No land disturbing activities can occur until the permit has been issued by the county. The ESC Plan should follow requirements listed within the "Virginia Erosion and Sediment Control Regulations" and the Virginia Erosion and Sediment Control Handbook. Fees: • Land Disturbance: where no more than one acre are disturbed -- $500.00 • Fees for applications requiring sediment basins -- $100.00 each basin • Fees for applications requiring stream crossings -- $100.00 each crossing • Fee for application requiring stormwater detention or retention facilities -- $250.00 each facility • Additional fee for applications requiring newly constructed storm water conveyance channels -- $50.00 for each channel
Department of Community Development Board of Zoning Appeals (BZA) P.O. Box 590 Verona, VA 24482 540.245.5700	Special Use Permit (SUP)	For development of Small-Scale Solar Energy Systems within permitted zoning districts.	60 days	Submittal of the SUP requires a Site Plan containing design an supplemental information such as: • property lines and setbacks • existing and proposed building locations with dimensions, names of adjoining properties, • existing and proposed access roads and parking • location of substations, electrical cabling • areas of accessory equipment • location of entrances and exits • any additional information that may be requested by the Zoning Administrator such as photos or modeling. • Landscaping Plan and Screening Plan Fees: $1,000 for Small Scale Solar Energy System Application	Project is within the General Agricultural District. Small Scale Solar Energy Systems are those that occupy less than or equal to 25 acres.
Augusta County Building Inspection 18 Government Center Lane Verona, VA 24482 540.245.5717	Building Permit	Permits must be obtained to construct, enlarge, alter, repair, convert, or demolish any building in Augusta County.	Unknown	Applications must be submitted with an approved Site Plan and two sets of specifications and plans drawn to scale showing the work to be performed. Prior to issuance of a building permit, an itemized cost estimate of the cost of decommissioning the solar energy system plus 25% of estimated costs will be submitted to the Zoning Administrator in the form of a bond or irrevocable Letter of Credit. An approved Site Plan is required before a building permit can be issued.	Based on conversation with Julia Hensley from the County's Planning Department, small scale solar systems are considered utilities, which means they are exempt from local inspections and permits except for a special use permit. Any buildings and structures associated with or part of the solar energy system should comply with applicable sections of the Virginia Uniform Statewide Building Code. This requirement includes all electrical components of the solar energy system.

USS Staunton Solar Project Permit Matrix					
Regulatory Agency	**Permit / Approval**	**When Required**	**Estimated Agency Review Time**	**Potential Studies & Application Requirements**	**Comments**
				No signs or advertising of any type are allowed on the small-scale solar energy system unless required by state or federal agency. Fees: varies on project development requirements.	
Augusta County Building Inspection 18 Government Center Lane Verona, VA 24482 540.245.5717	Electrical Permit	Required for the installation or changes to electrical systems in Augusta County.	Unknown	Electrical permit application with project information including: • Applicant information • Estimated job value • Power company • And detailed description of the work being done	Based on conversation with Julia Hensley from the County's Planning Department, small scale solar systems are considered utilities, which means they are exempt from local inspections and permits except for a special use permit.
Agency review times may be delayed due to workload and staffing constraints at the agency level.					

Appendix D
Glint and Glare Analysis Report

Glint and Glare Analysis Report

Staunton Solar

July 2026

Prepared For:

United States Solar Corporation
3 Arch Street
Boston, Massachusetts 02110

Prepared By:

TRC
999 Fourier Dr., Suite 101
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APPENDICES

Appendix A: Analysis Results

1.0 Introduction

United States Solar Corporation (US Solar) proposes to construct and operate Staunton Solar (Facility). The Facility includes development of a 3-megawatt (MW) alternating current (AC) ground-mounted photovoltaic solar generation facility covering an area of 14.6 acres. The Facility is north of Virginia Avenue (also known as Quick Mill Road) and east of Limestone Road in Verona, Augusta County, Virginia. The array areas will be secured via security fencing that will be installed in proximity to the final panel array locations. The Facility is proposed to be accessed through security gates and access roads via Quick Mill Road.

1.1 Permitting and Regulatory Requirements

1.1.1 Augusta County Ordinance

Chapter 25 Zoning, Division A "In General", Article VI.D "Solar Energy Systems" of the Augusta County Ordinance dictate the requirements of solar energy systems including glare.

> *Section 25-70.4(C)(8), which is applicable to small solar energy systems, requires that "any glare generated by the system must be mitigated or directed away from an adjoining property or from any road when it creates a nuisance or safety hazard."*
>
> *Section 25-70.8 – Ocular Impact Study notes that an "ocular impact study shall be performed for airports within five miles of the project sites, public roads within site of the system, and from scenic highways and overlooks. The analysis shall be performed using FAA Solar Glare Hazard Analysis Tool (SGHAT) to demonstrate compliance with FAA standards for measuring ocular impact."*

This glare analysis was performed to determine the potential glare from the Facility along the adjacent roadways, adjoining properties, and nearby scenic highways in order to meet this ordinance requirement. Additional information about scenic highways is included in **Section 2.3**. Airports in the vicinity of the Facility is detailed in **Section 1.1.2**.

1.1.2 Federal Aviation Administration Policy

In May 2021, the Federal Aviation Administration (FAA) issued a policy in 86 Federal Register 25801 for the development of solar projects on federally-obligated airports (FAA 2021). The final policy is typically adopted by the industry for solar projects off airport property but within proximity of airports.

It was determined that, in most cases, glint and glare from solar energy systems affect pilots similarly to the glint and glare that pilots routinely experience from water bodies, glass façade buildings, etc. Therefore, evaluation of the final approach path for federally-obligated airports is no longer required. However, solar projects located on airport property are required to confirm that there is no potential for ocular impact to the airport's ATCT cab from glint or glare.

The 2021 policy identified project criteria where the policy requirements do not apply. These include:

1. Solar energy systems on airports that do not have an air traffic control tower (ATCT);
2. Airports that are not federally obligated; or
3. Solar energy systems not located on airport property.

This Project is located over 6.5 nautical miles from an airport based on the FAA's Airport Search Tool (FAA 2026), as such an evaluation of airports is not necessary according to the FAA guidance and the Augusta County code.

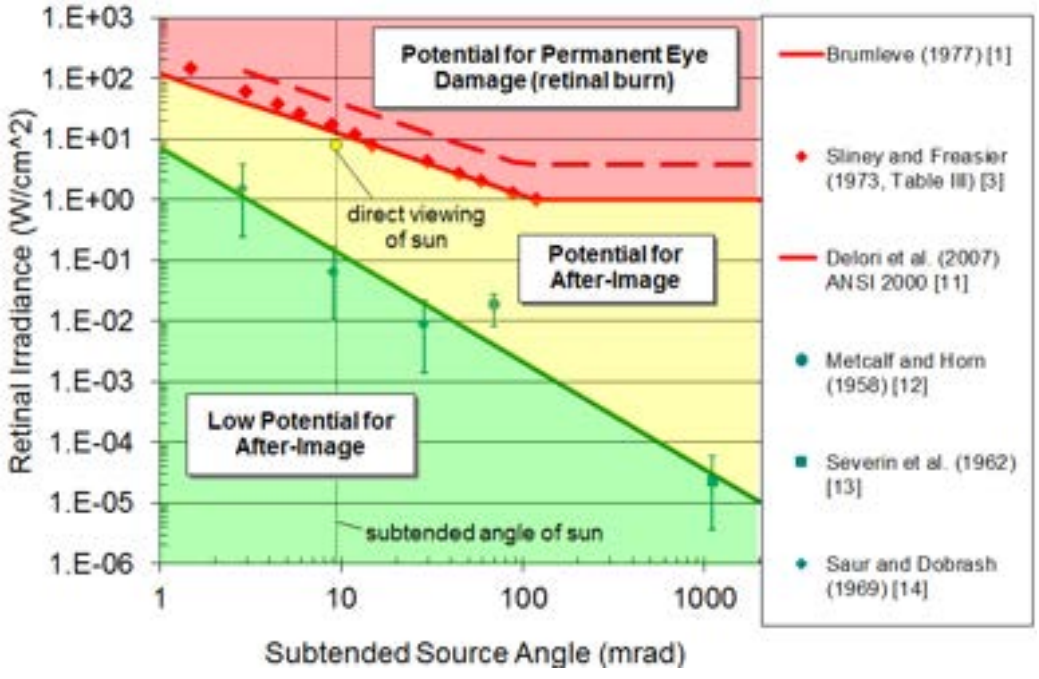
2.0 Approach/Methods

2.1 Glare Hazard Analysis Tool

To conduct the glint and glare analysis, TRC used methods developed by Sandia National Laboratories and described in the SGHAT User's Manual (Ho and Sims 2016). The SGHAT-compliant software used in this analysis is under license to TRC by ForgeSolar.

The SGHAT analyzes the potential for glare over the entire calendar year from when the sun rises above the horizon until the sun sets below the horizon. The magnitude of glint and glare depends on several factors such as the sun's position, the location of the observer, and characteristics of the solar PV array including location, orientation, tilt, and optical properties of the modules used. Glare visibility from an observer's location was analyzed once array characteristics were determined. Ocular hazard potential was estimated based on the retinal irradiance and subtended angle (size/distance) of the predicted glare (Ho et al, 2011). Potential ocular hazards range from temporary after-image to retinal burn depending on the retinal irradiance and subtended angle, as shown in **Figure 2-1**. The SGHAT classifies solar glare into three categories, denoted as "green," "yellow," or "red" glare.

- Green glare is the mildest of the classifications and has low potential to cause after-image and no potential to cause retinal burn.
- Yellow glare is a moderate level of glare and has some potential for temporary after-image and no potential to cause retinal burn.
- Red glare is a serious and significant form of glare with potential to cause retinal burn and/or permanent eye damage.



Source Ho et al, 2011

Figure 2-1: Potential Glare Impacts

In general, modern solar modules are designed to absorb the sun's energy to produce electricity. Solar modules are constructed from high transmission, low iron glass and are typically covered with anti-reflective coatings. Solar modules produce specular reflections, as the sun is reflecting off the generally smooth surface of the solar module. This reflection bounces off the solar module at specific angles, dependent on the sun's position and module angle, and can be observed as glint or glare by an observer that intersects the reflective angle.

Assumptions of the SGHAT are as follows. Additional assumptions noted by ForgeSolar are provided in **Appendix A**.

- The SGHAT does not rigorously represent the detailed geometry of a solar panel array; detailed features such as gaps between modules, variable heights of the PV array, and support structures may impact actual glare results.
- The glare spot is constrained by the PV array footprint size. Partitioning large arrays into smaller sections may reduce the maximum potential subtended angle (glare spot), potentially impacting results if actual glare spots are larger than the sub-array size.
- The variable direct normal irradiance (DNI) feature scales the user-prescribed peak DNI using a typical clear-day irradiance profile. This DNI is indicative for the amount of solar radiation received on a surface normal to the sun within a 60-minute period. This variable profile provides a lower DNI in the mornings and evenings and a maximum (1,000 watts per square meter [W/m^2] as recommended by ForgeSolar) at solar noon. The scaling uses a clear-day irradiance profile all year round. However, the actual DNI on any given day can be reduced by many factors, such as atmospheric conditions like overcast skies or atmospheric attenuation from humidity and particulates (Ho and Sims 2013).
- The model does not automatically consider obstacles (either natural or artificial, existing, or proposed) between the observation points and panel arrays, which may limit glare. To view glare, there must be a clear line of site from the panels to the receptor location.
- The ocular (visual) hazard, as shown in **Figure 2-1**, predicted by the tool is also dependent on several environmental, optical, and human factors, which can be uncertain.

The following additional assumptions have been used for the analysis:

- Time zone for the Project was set at UTC-5 (Eastern Standard Time).
- Subtended angle of the sun of 9.3 milliradian, as recommended by the SGHAT. This is the average angle of the sun as viewed from earth as it moves throughout the course of the day.
- The time interval for the analysis was set to run at 1-minute increments.

Inputs, outputs, and other assumptions used in the analysis are documented in the solar glare hazard analysis reports (**Appendix A**).

2.2 Project Specifications

2.2.1 Array Area Specifications

The Facility was evaluated as a two array areas, with Array 1 representing the northern array and Array 2 representing the southern array. The arrays are proposed to be mounted on a single-axis tracking system with axes that are positioned in a northeast-southwest orientation (210°), generally tracking east to west with a maximum tracking angle range of 52° to -52°. The resting angle, is defined as the shallowest angle of rotation of the panels when the sun is outside the panels' tracking range, was modeled starting at 0°.

Single-axis tracking systems are programmed for the panels to remain perpendicular to the sun's location as the sun moves across the sky throughout the day via solar data from ephemeris tables, which predict the sun's path across the sky. The tracking system begins when the sun's location is perpendicular with the maximum tracking angle of the system and continues until the sun enters a range where the panel can no longer remain perpendicular with the sun. When the sun is outside the tracking range of the system, backtracking begins either starting at or ending at the resting angle depending on the time of day.

The Facility will utilize backtracking at the site to reduce the impacts from shading during the morning and evening hours of the day. ForgeSolar utilizes four methods to model backtracking which include "shade-slope," "shade," "interval," and "instant." Because the Facility is not located on flat ground and the primary goal of the backtracking is to minimize impacts to the system from shading, a "shade-slope" method was utilized in this model. For the backtracking analysis, a ground coverage ratio of 40 percent was used.

The panels are proposed to be mounted to the single axis tracking system at a typical height, approximate midpoint of the panel, of 6 feet. Panels are proposed to be smooth glass with anti-reflective coating on the panel surface. Ground elevations reported in the ForgeSolar program were updated to reflect available LiDAR data.

Figure 2-2 depicts the location of each array area.

2.2.2 Visual Obstructions

An existing dense, wooded area lies west/northwest of the Facility, between the Facility and Limestone Road, based on available aerial imagery. Examples of the existing vegetation obtained from available Google Earth "Street View" imagery are shown in **Figure 2-2A**. Existing vegetation was modeled at a height of 40 feet tall, based on estimated minimum height estimates from available Street View imagery. On **Figure 2-2**, existing vegetation included in the model is shown in yellow.



Figure 2-2A: Google Street View Image of Dense Tree Line Located West of Facility (Imagery date: 02/2023)

As noted in **Section 2.1**, natural or man-made obstructions are not automatically included in the model; however, obstruction modeling can be included into the analysis manually. In ForgeSolar, obstruction modeling is treated as an opaque parallelogram which block incoming sunlight or emanating glare reflections if they intersect the obstruction face. This obstruction modeling was included to account for the mitigating impact of the existing vegetation. The approximate locations of the modeled obstructions are shown in **Figure 2-2**.

These modeled obstructions do not account for all obstructions potentially seen within the vicinity of the Facility, only the array areas identified in **Figure 2-2**. The presented visual obstruction modeling herein estimates the potential effects of existing vegetation.



Figure 2-2: Preliminary Array Locations and Labels

2.3 Observer Parameters

2.3.1 Residential Locations

Per the Ordinance, glare generated from small solar energy systems must be mitigated or directed away from adjoining property when it creates a nuisance or safety hazard. Therefore, adjacent/adjoining parcels with residential buildings included in the model for glare evaluation. Properties included in the evaluation were identified via aerial imagery and Google "Street View" photos (Google Earth Pro 2026). The analysis was conducted using ForgeSolar's Observation Point (OP) tool to model glare visible from single locations. Assumed heights of six feet and sixteen feet were used to represent an observer in the window of a single-story or second-story building, respectively.

Fourteen observation points (equating to ten unique buildings) were identified. **Table 2-1** summarizes the modeled characteristics of the evaluated OPs and their corresponding labels. **Figure 2-3** shows the locations of the evaluated OPs in relation to the Facility.

Table 2-1: Observation Point

Observation Point Label	Number of Floors in Residence	Height (ft)
OP1	Assumed one story residence	6
OP2/OP3	Assumed two story business	6/16
OP4	Assumed one story residence	6
OP5/OP6	Assumed two story business	6/16
OP7/OP8	Assumed two story business	6/16
OP9	Assumed one story residence	6
OP10	Assumed one story residence	6
OP11	Assumed one story residence	6
OP12	Assumed one story residence	6
OP13/OP14	Assumed two story business	6/16



Figure 2-3: Observation Point Locations

2.3.2 Route Parameters

Per the Ordinance, glare generated from small solar energy systems must be mitigated or directed away from roadways when it creates a nuisance or safety hazard. In addition, public roads within site of the system and from scenic highways and overlooks are to be included in the analysis. Therefore, nearby roadways were included in the model for glare evaluation and scenic roadways within Augusta County were evaluated for inclusion.

Scenic roadways within Augusta County include:

- VA Route 11 (Lee Highway) –located approximately 1 mile to the east of the Facility. Though it is unlikely that the Facility will be visible from this roadway, as the closest scenic road, it was included in the analysis.
- Staunton-Parkersburg Turnpike (US Rt. 250) – located at least 5 miles east of the Facility. Due to the distance of the roadway from the Facility it was not included in the analysis.
- VA Route 252 (Middlebrook Road) – located at least 5 miles south of the Facility. Due to the distance of the roadway from the Facility it was not included in the analysis.
- Skyline Drive/Blue Ridge Parkway (Rockfish Gap) – located 15-20 miles east of the Facility. Due to the distance of the roadway from the Facility it was not included in the analysis.

Public roadways included in the model are located adjacent to the Facility and were identified via Google Maps. Analysis for the roadways was conducted utilizing the Route Receptor in ForgeSolar. The Route Receptor provides a multi-line representation that simulates observers traveling along continuous paths such as roads, railways, helicopter paths, and multi-segment flight tracks. Segments of the following roadways were identified in the vicinity to the Facility:

- Limestone Road
- Maury Mill Road
- Quick's Mill Road
- Thacker Mill Road
- Scenic Road – Lee Highway

Figure 2-4 illustrates the locations of the evaluated routes in relation to the Project.

The viewing angle for observers traveling along the roadways was presumed to be -50 to 50° field of view (total viewing angle of 100°). Per ForgeSolar's guidance, a downward view angle of 90° was used to disable downward view restrictions and include all estimated glare. The height for observers traveling along the roadway was assumed to be 4.5 feet for passenger cars or 9 feet for commercial vehicles. Commercial vehicles were considered for Quick's Mill Road.



Figure 2-4: Route Receptor Location

3.0 Results

TRC conducted the solar glare hazard analysis using the SGHAT tool, licensed by ForgeSolar, to evaluate potential glare impacts of the proposed Facility on the selected receptors detailed in **Section 2.0**. TRC evaluated the potential solar glare impact of the proposed PV panels using the specifications detailed in **Section 2.2.1**. Detailed glare results are provided in **Appendix A**.

Based on a resting angle of 0°, green and yellow glare is estimated from the southern array (Array 02). The results of the analysis are provided in **Table 3-1**. No glare was estimated to be observed from Array 01 or at the remaining nearby evaluated receptors.

Table 3-1: Glare Study Results

Receptor	Green Glare (min/yr)	Yellow Glare (min/yr)
OP4	327[2]	--
OP6	249	--
OP13	61	--
OP14	315	--
Quick's Mill Road[1]	968 1,413	223 732

Footnotes:

[1] The top number indicates glare observed by passenger car and the bottom number indicates glare observed by a larger commercial vehicle (e.g. semi-truck).

The summary below details the estimated occurrence of glare at the receptors identified in **Table 3-1**.

- Residential receptor OP4: Minor green glare is estimated to be observed for less than 5 minutes per day from October to February during the morning hours (between 7:00 AM and 9:00 AM). Due to the existing vegetation (not included in the model) near the residential structure and along Limestone Road, it is unlikely that array area will be visible from this location.
- Residential receptor OP6: Minor green glare is estimated to be observed for up to 5 minutes per day from May to July during the morning hours (between 5:00 AM and 6:00 AM) from the second-floor receptor (OP6). Glare was not estimated to be observed from the first-floor receptor (OP5).
- Residential receptors OP13/OP14: Minor green glare is estimated to be observed for less than 5 minutes per day from June to July during the morning hours (between 5:00 AM and 6:00 AM) from the first-floor receptor (OP13). From the second-floor receptor, minor green glare is estimated to be observed for less than 10 minutes per day from May to July during the morning hours (between 5:00 AM and 6:00 AM).
- Quick's Mill Road: Green and yellow glare is estimated to be observed for less than 30 minutes per day from April to August during the morning hours (between 5:00 AM and 7:00 AM).

In general, single axis tracking systems are effective in mitigating potential glare from receptors close to the ground (residencies/commercial properties and vehicular traffic from adjacent roadways) and for aircraft than fixed tilt designs. This is because, in single axis tracking systems, the panel is designed to be generally perpendicular to the sun as it moves across the sky during the day. Therefore, light is reflected towards the sun and not receptors. However, the angle at which the panels start and stop tracking/backtracking at known as the resting angle is an important element in the mitigation of potential glare impacts in the model. Due to the low angle of the sun in the morning and evening, light reflected from the array surfaces during these times are more likely to be visible near ground level when flat rest angles are used (0°).

To evaluate changes that may mitigate the presence of glare from the Facility in the model, the resting angle was adjusted to 5°. As shown in **Table 3-2**, the results of this secondary evaluation noted that glare is not estimated to be observed at the evaluated receptors in this configuration. Detailed glare results are provided in **Appendix A.**

Table 3-2: Glare Study Results

Receptor	Green Glare (min/yr)	Yellow Glare (min/yr)
OP4	--	--
OP6	--	--
OP13	--	--
OP14	--	--
Quick's Mill Road(1)	-- --	-- --

Footnotes:

(1) The top number indicates glare observed by passenger car and the bottom number indicates glare observed by a larger commercial vehicle (e.g. semi-truck).

4.0 Conclusions

As modeled with a resting angle of 0°, which assumes the Facility will backtrack to a flat panel condition, green and yellow glare may be visible from the Facility. The results are subject to the limitations and assumptions presented in **Section 2.0**.

An adjustment of the resting angle from 0° to 5° was shown to mitigate glare impacts to adjacent residential and roadway receptors evaluated in this model. Utilizing steeper resting angles, would be an effective strategy for the Facility to mitigate potential glare, as required by the Augusta County Ordinance.

5.0 References

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Appendix A: Analysis Results

Initial Analysis (Rest Angle = 0°)

FORGESOLAR GLARE ANALYSIS

Project: **Staunton Solar**

Staunton Solar is an approximately 3.0 MW facility located along Quicks Mill Road in Augusta County, VA.

Site configuration: **Staunton Solar**

Calculated via ForgeSolar Radiometric Physics Engine v3.1.3

Client: US Solar

Created 27 May, 2026
Updated 04 Jun, 2026
Time-step 1 minute
Timezone offset UTC-5
Minimum sun altitude 0.0 deg
DNI peaks at 1,000.0 W/m^2
Category 1 MW to 5 MW
Site ID 179307.29626

Ocular transmission coefficient 0.5
Pupil diameter 0.002 m
Eye focal length 0.017 m
Sun subtended angle 9.3 mrad



Summary of Results

Glare with potential for temporary after-image predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
Array 01	SA tracking	SA tracking	0	0.0	0	0.0	-
Array 02	SA tracking	SA tracking	3,333	55.5	955	15.9	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Limestone Road	0	0.0	0	0.0
Maury Mill Road	0	0.0	0	0.0
Quicks Mill Road_commercial	1,413	23.6	732	12.2
Quicks Mill Road_passenger	968	16.1	223	3.7
Scenic Road - Lee Highway	0	0.0	0	0.0
Thacker Mill Road	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	327	5.5	0	0.0

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 5	0	0.0	0	0.0
OP 6	249	4.2	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	61	1.0	0	0.0
OP 14	315	5.2	0	0.0

Component Data

PV Arrays

Name: Array 01
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 210.0°
Max tracking angle: 52.0°
Resting angle: 0.0°
Ground Coverage Ratio: 0.4
Rated power: -
Panel material: Smooth glass with AR coating (revised)



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.215733	-79.024748	1432.36	6.00	1438.36
2	38.215646	-79.024556	1424.46	6.00	1430.46
3	38.215387	-79.024743	1430.08	6.00	1436.08
4	38.215233	-79.024405	1413.75	6.00	1419.75
5	38.214725	-79.024772	1433.05	6.00	1439.05
6	38.214649	-79.024602	1427.30	6.00	1433.30
7	38.214444	-79.024751	1431.39	6.00	1437.39
8	38.214290	-79.024412	1434.19	6.00	1440.19
9	38.214032	-79.024599	1440.76	6.00	1446.76
10	38.213904	-79.024316	1449.87	6.00	1455.87
11	38.213419	-79.024667	1462.50	6.00	1468.50
12	38.213861	-79.025650	1415.84	6.00	1421.84
13	38.214326	-79.025315	1416.61	6.00	1422.61
14	38.214478	-79.025654	1416.93	6.00	1422.93

Name: Array 02
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 210.0°
Max tracking angle: 52.0°
Resting angle: 0.0°
Ground Coverage Ratio: 0.4
Rated power: -
Panel material: Smooth glass with AR coating (revised)



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.214224	-79.026811	1378.24	6.00	1384.24
2	38.213351	-79.024866	1460.53	6.00	1466.53
3	38.213145	-79.025015	1465.70	6.00	1471.70
4	38.212813	-79.024281	1496.59	6.00	1502.59
5	38.212329	-79.024630	1477.92	6.00	1483.92
6	38.212481	-79.024970	1480.37	6.00	1486.37
7	38.212222	-79.025157	1471.13	6.00	1477.13
8	38.213274	-79.027497	1391.23	6.00	1397.23

Route Receptors

Name: Limestone Road
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.218242	-79.025805	1361.84	4.50	1366.34
2	38.217879	-79.026197	1364.84	4.50	1369.34
3	38.217643	-79.026376	1373.26	4.50	1377.76
4	38.216977	-79.026653	1369.22	4.50	1373.72
5	38.216547	-79.026850	1381.74	4.50	1386.24
6	38.216077	-79.027121	1374.07	4.50	1378.57
7	38.215543	-79.027517	1364.50	4.50	1369.00
8	38.214898	-79.028032	1367.02	4.50	1371.52
9	38.213315	-79.028889	1368.44	4.50	1372.94
10	38.212919	-79.029071	1362.17	4.50	1366.67
11	38.211772	-79.029398	1383.99	4.50	1388.49

Name: Maury Mill Road
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.211704	-79.024862	1443.55	4.50	1448.05
2	38.211817	-79.024699	1449.48	4.50	1453.98
3	38.211904	-79.024473	1454.46	4.50	1458.96
4	38.211935	-79.024157	1451.77	4.50	1456.27
5	38.211870	-79.023910	1459.83	4.50	1464.33
6	38.211596	-79.023382	1477.73	4.50	1482.23
7	38.211206	-79.022641	1491.28	4.50	1495.78
8	38.210989	-79.022116	1479.84	4.50	1484.34

Name: Quicks Mill Road_commercial
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.213813	-79.030437	1395.44	9.00	1404.44
2	38.213380	-79.028992	1368.51	9.00	1377.51
3	38.213043	-79.027994	1381.33	9.00	1390.33
4	38.211947	-79.025315	1442.88	9.00	1451.88
5	38.211344	-79.024172	1460.28	9.00	1469.28
6	38.210636	-79.023228	1487.20	9.00	1496.20
7	38.210265	-79.022842	1489.47	9.00	1498.47

Name: Quicks Mill Road_passenger
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.213812	-79.030436	1395.44	4.50	1399.94
2	38.213374	-79.028993	1368.54	4.50	1373.04
3	38.213041	-79.027995	1381.33	4.50	1385.83
4	38.211940	-79.025313	1442.25	4.50	1446.75
5	38.211336	-79.024171	1460.28	4.50	1464.78
6	38.210632	-79.023222	1487.35	4.50	1491.85
7	38.210261	-79.022836	1489.97	4.50	1494.47

Name: Scenic Road - Lee Highway
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.199235	-79.011984	1307.64	4.50	1312.14
2	38.201933	-79.008658	1283.49	4.50	1287.99
3	38.204126	-79.006019	1271.42	4.50	1275.92
4	38.204847	-79.005364	1266.24	4.50	1270.74
5	38.206441	-79.004377	1241.04	4.50	1245.54
6	38.207967	-79.002971	1211.82	4.50	1216.32
7	38.209290	-79.001630	1211.91	4.50	1216.41
8	38.210310	-79.000761	1229.41	4.50	1233.91
9	38.212350	-78.999291	1269.99	4.50	1274.49
10	38.213851	-78.998347	1295.95	4.50	1300.45

Name: Thacker Mill Road
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.212347	-79.029233	1368.13	4.50	1372.63
2	38.212305	-79.028839	1373.56	4.50	1378.06
3	38.212235	-79.028184	1380.98	4.50	1385.48
4	38.212178	-79.028031	1385.73	4.50	1390.23
5	38.211909	-79.027592	1392.32	4.50	1396.82
6	38.211788	-79.027392	1394.04	4.50	1398.54
7	38.211724	-79.027223	1395.05	4.50	1399.55
8	38.211680	-79.027027	1397.17	4.50	1401.67
9	38.211659	-79.026721	1405.38	4.50	1409.88
10	38.211632	-79.025852	1420.53	4.50	1425.03
11	38.211649	-79.025662	1425.49	4.50	1429.99
12	38.211714	-79.025522	1429.42	4.50	1433.92
13	38.211851	-79.025426	1436.29	4.50	1440.79
14	38.211958	-79.025348	1441.84	4.50	1446.34

Discrete Observation Point Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
OP 1	1	38.215679	-79.027813	1381.38	6.00
OP 2	2	38.215087	-79.028427	1397.73	6.00
OP 3	3	38.215087	-79.028427	1397.73	16.00
OP 4	4	38.214717	-79.028951	1423.72	6.00
OP 5	5	38.212500	-79.028255	1385.18	6.00
OP 6	6	38.212500	-79.028255	1385.18	16.00
OP 7	7	38.212039	-79.027477	1399.11	6.00
OP 8	8	38.212039	-79.027477	1399.11	16.00
OP 9	9	38.212005	-79.026353	1431.13	6.00
OP 10	10	38.211328	-79.023387	1478.09	6.00
OP 11	11	38.213123	-79.022909	1537.29	6.00
OP 12	12	38.213293	-79.029957	1375.61	6.00
OP 13	13	38.212357	-79.029485	1376.78	6.00
OP 14	14	38.212357	-79.029485	1376.78	16.00

Obstruction Components

Name: Existing Tree Line
Top height: 40.00 ft



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)
1	38.213427	-79.027879	1377.54
2	38.215408	-79.026581	1382.49
3	38.216993	-79.025476	1383.60

Glare Analysis Results

Summary of Results

Glare with potential for temporary after-image predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
Array 01	SA tracking	SA tracking	0	0.0	0	0.0	-
Array 02	SA tracking	SA tracking	3,333	55.5	955	15.9	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Limestone Road	0	0.0	0	0.0
Maury Mill Road	0	0.0	0	0.0
Quicks Mill Road_commercial	1,413	23.6	732	12.2
Quicks Mill Road_passenger	968	16.1	223	3.7
Scenic Road - Lee Highway	0	0.0	0	0.0
Thacker Mill Road	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	327	5.5	0	0.0
OP 5	0	0.0	0	0.0
OP 6	249	4.2	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	61	1.0	0	0.0
OP 14	315	5.2	0	0.0

PV: Array 01 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Limestone Road	0	0.0	0	0.0
Maury Mill Road	0	0.0	0	0.0
Quicks Mill Road_commercial	0	0.0	0	0.0
Quicks Mill Road_passenger	0	0.0	0	0.0
Scenic Road - Lee Highway	0	0.0	0	0.0
Thacker Mill Road	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0

Array 01 and Route: Limestone Road

No glare found

Array 01 and Route: Maury Mill Road

No glare found

Array 01 and Route: Quicks Mill Road_commercial

No glare found

Array 01 and Route: Quicks Mill Road_passenger

No glare found

Array 01 and Route: Scenic Road - Lee Highway

No glare found

Array 01 and Route: Thacker Mill Road

No glare found

Array 01 and OP 1

No glare found

Array 01 and OP 2

No glare found

Array 01 and OP 3

No glare found

Array 01 and OP 4

No glare found

Array 01 and OP 5

No glare found

Array 01 and OP 6

No glare found

Array 01 and OP 7

No glare found

Array 01 and OP 8

No glare found

Array 01 and OP 9

No glare found

Array 01 and OP 10

No glare found

Array 01 and OP 11

No glare found

Array 01 and OP 12

No glare found

Array 01 and OP 13

No glare found

Array 01 and OP 14

No glare found

PV: Array 02 potential temporary after-image

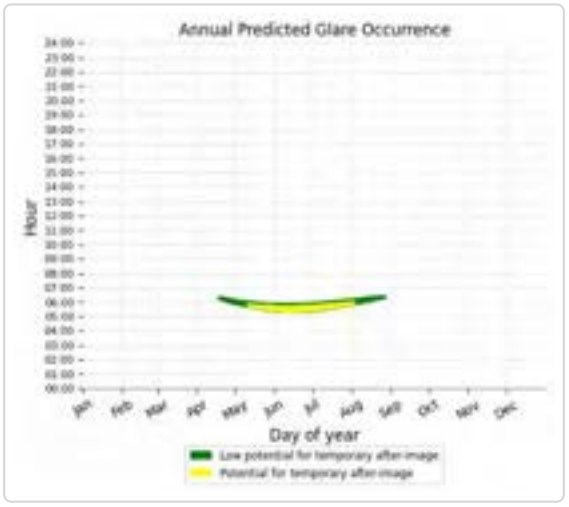
Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Quicks Mill Road_commercial	1,413	23.6	732	12.2
Quicks Mill Road_passenger	968	16.1	223	3.7
Limestone Road	0	0.0	0	0.0
Maury Mill Road	0	0.0	0	0.0
Scenic Road - Lee Highway	0	0.0	0	0.0
Thacker Mill Road	0	0.0	0	0.0
OP 4	327	5.5	0	0.0
OP 6	249	4.2	0	0.0
OP 13	61	1.0	0	0.0
OP 14	315	5.2	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0

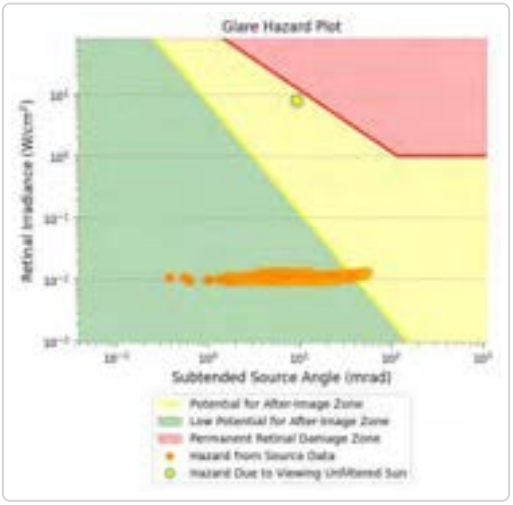
Array 02 and Route: Quicks Mill Road_commercial

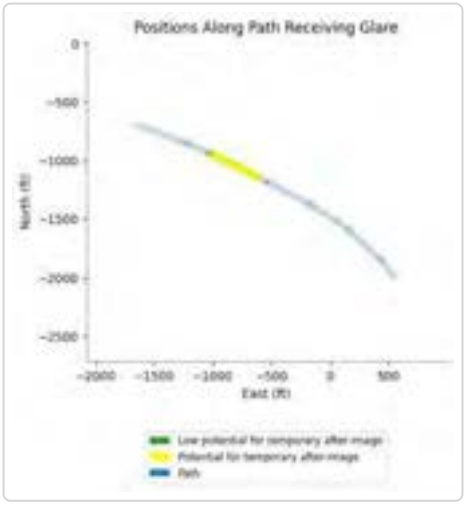
Yellow glare: 732 min.

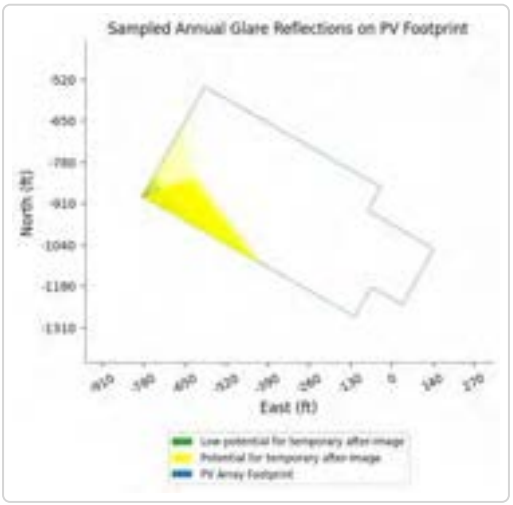
Green glare: 1,413 min.







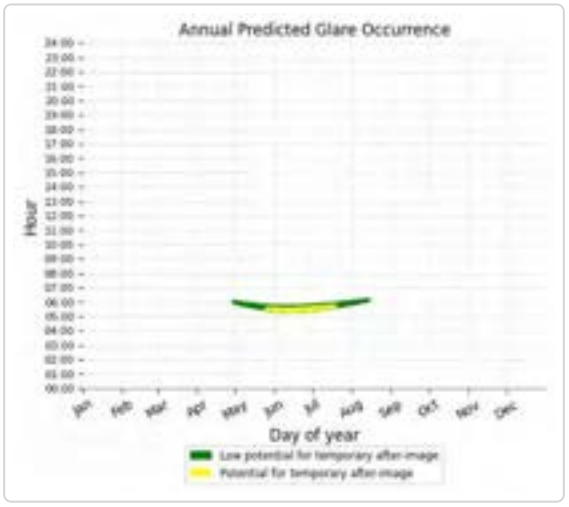


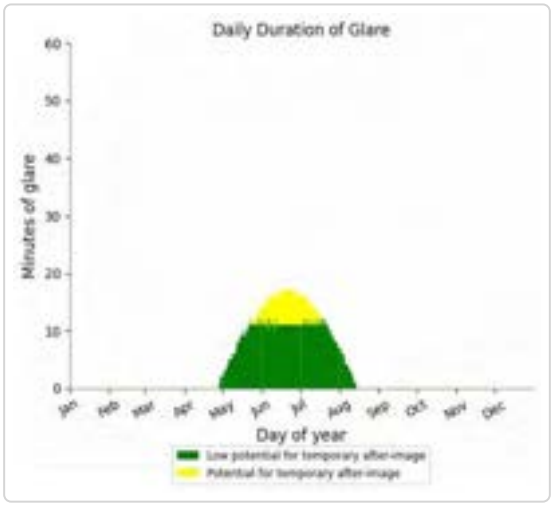


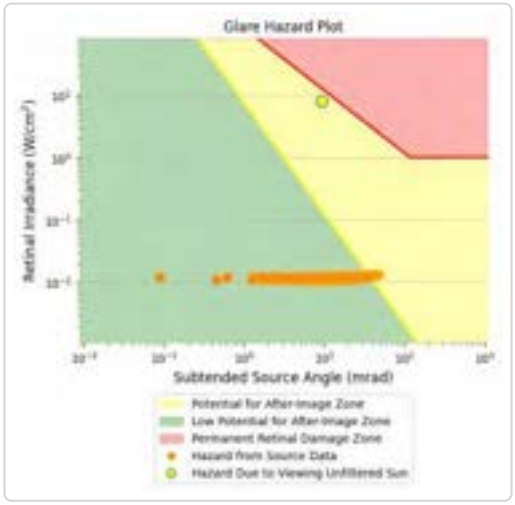
Array 02 and Route: Quicks Mill Road_passenger

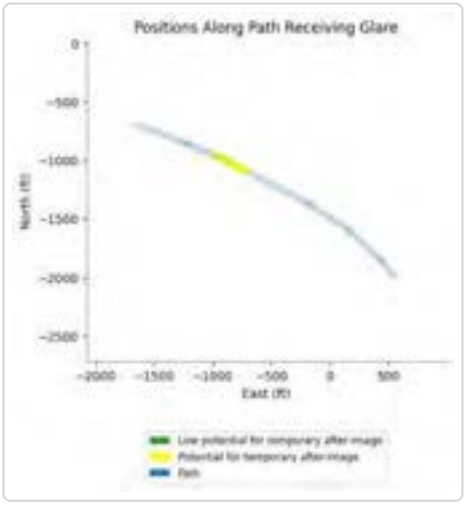
Yellow glare: 223 min.

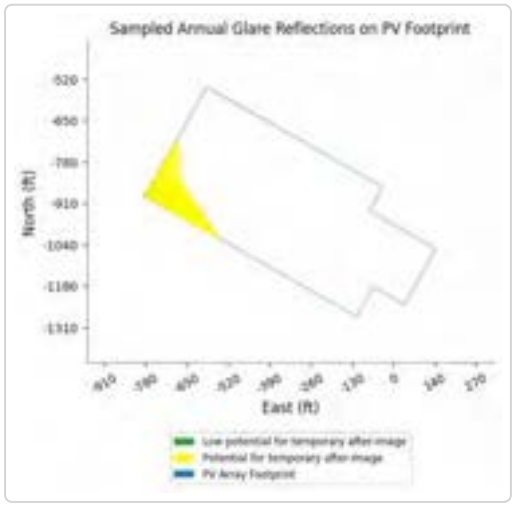
Green glare: 968 min.











Array 02 and Route: Limestone Road

No glare found

Array 02 and Route: Maury Mill Road

No glare found

Array 02 and Route: Scenic Road - Lee Highway

No glare found

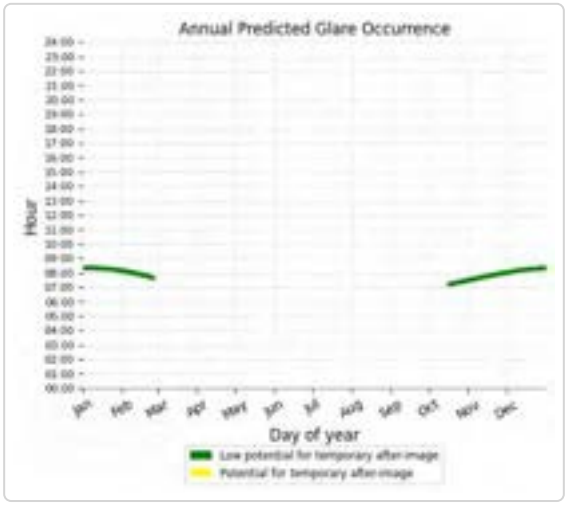
Array 02 and Route: Thacker Mill Road

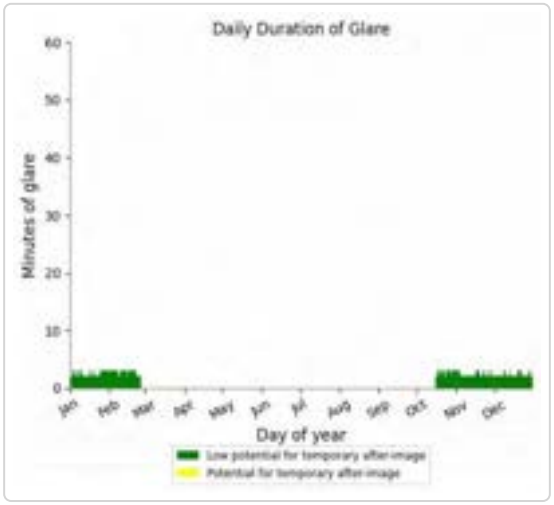
No glare found

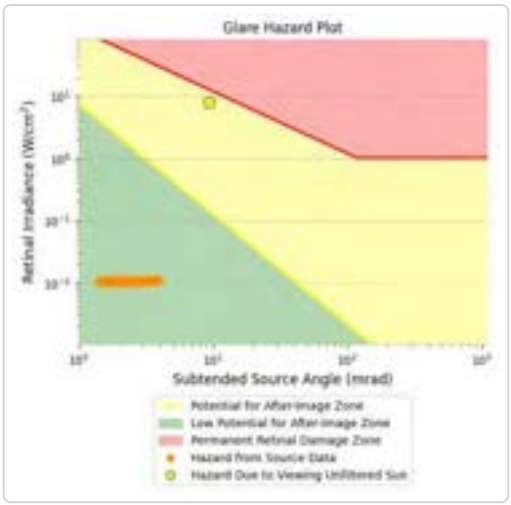
Array 02 and OP 4

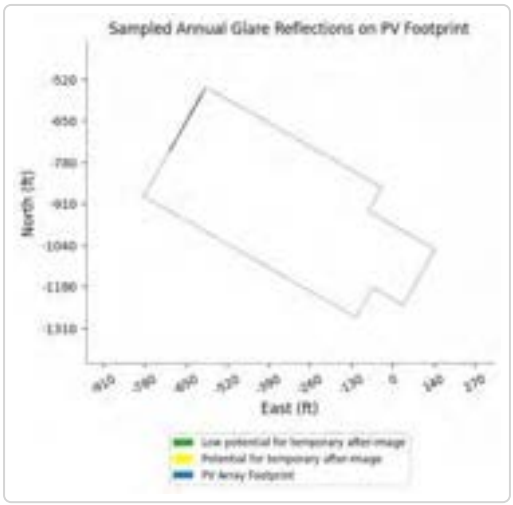
Yellow glare: none

Green glare: 327 min.





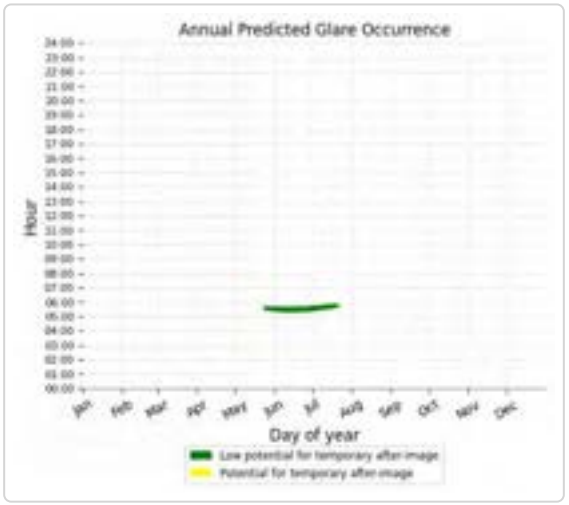




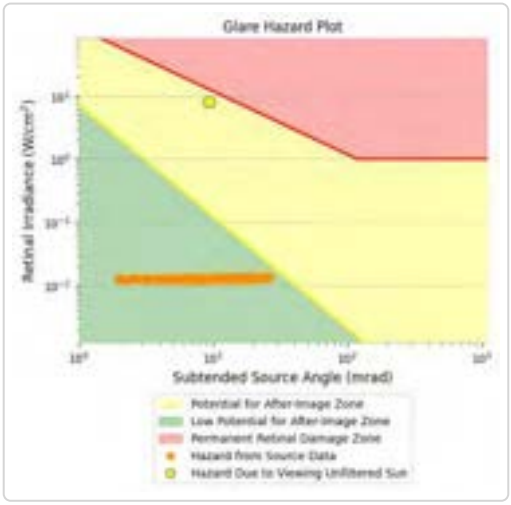
Array 02 and OP 6

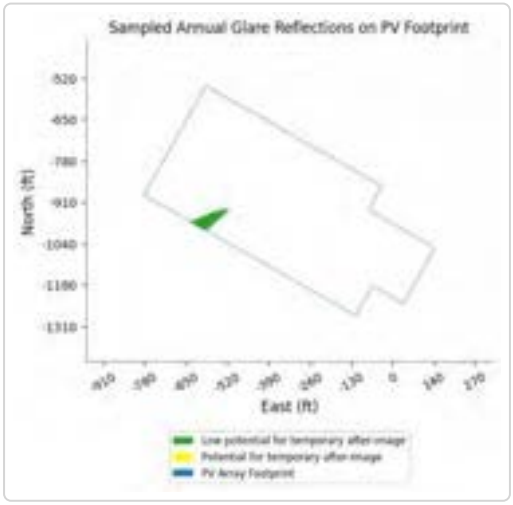
Yellow glare: none

Green glare: 249 min.





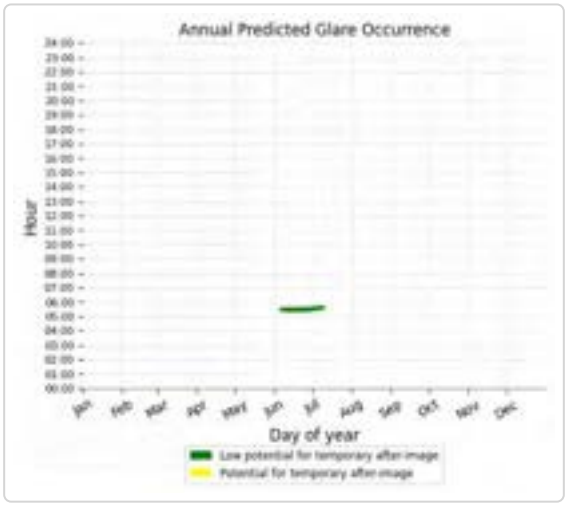


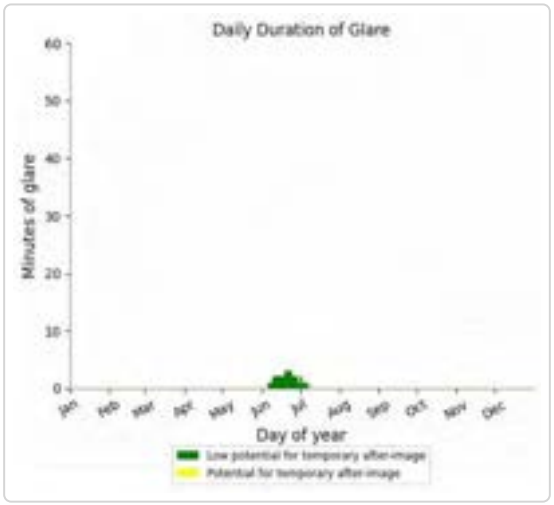


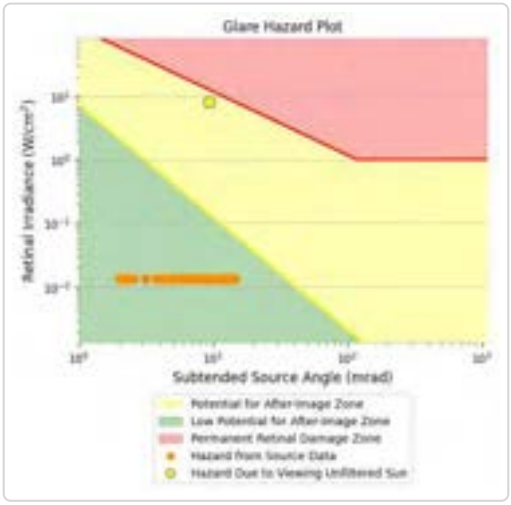
Array 02 and OP 13

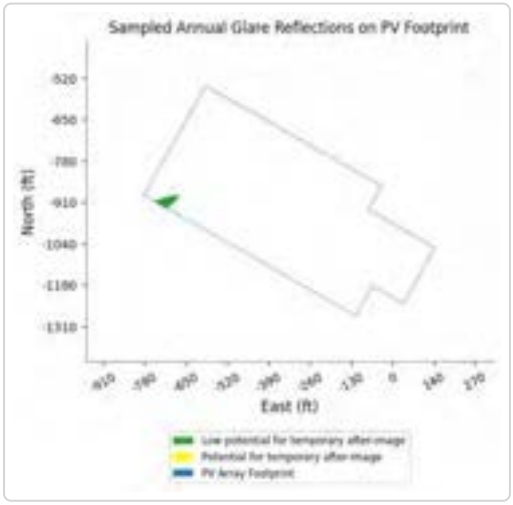
Yellow glare: none

Green glare: 61 min.





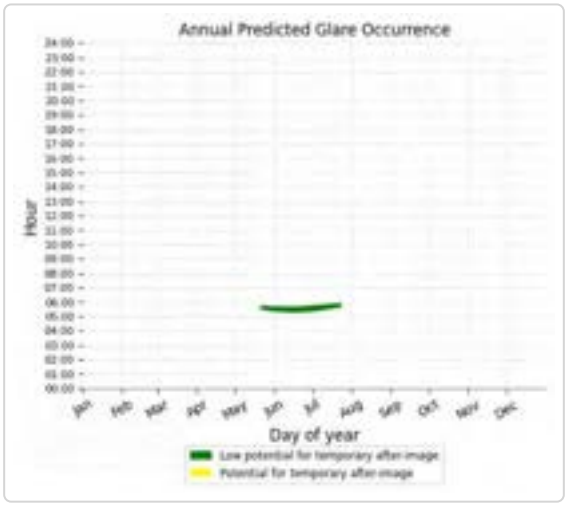


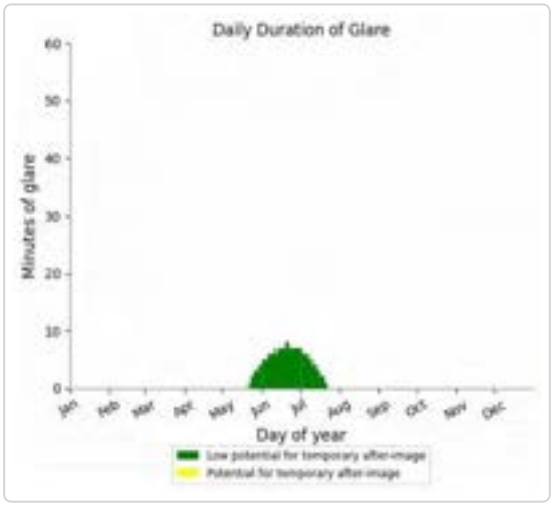


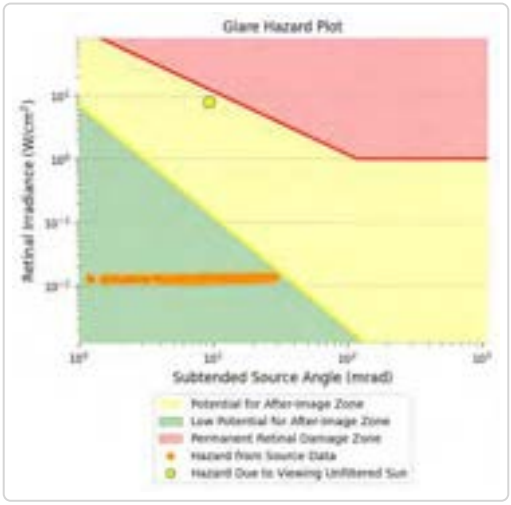
Array 02 and OP 14

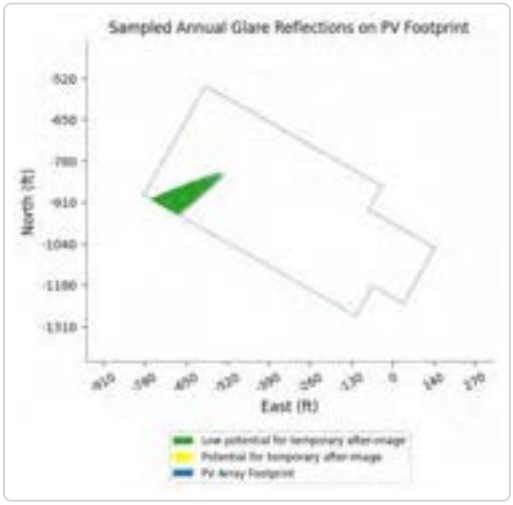
Yellow glare: none

Green glare: 315 min.









Array 02 and OP 1

No glare found

Array 02 and OP 2

No glare found

Array 02 and OP 3

No glare found

Array 02 and OP 5

No glare found

Array 02 and OP 7

No glare found

Array 02 and OP 8

No glare found

Array 02 and OP 9

No glare found

Array 02 and OP 10

No glare found

Array 02 and OP 11

No glare found

Array 02 and OP 12

No glare found

Assumptions

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
"Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
The algorithm does not rigorously represent the detailed geometry of a system; detailed features such as gaps between modules, variable height of the PV array, and support structures may impact actual glare results. However, we have validated our models against several systems, including a PV array causing glare to the air-traffic control tower at Manchester-Boston Regional Airport and several sites in Albuquerque, and the tool accurately predicted the occurrence and intensity of glare at different times and days of the year.
Random number computations are utilized by various steps of the annual hazard analysis algorithm. Predicted minutes of glare can vary between runs as a result. This limitation primarily affects analyses of Observation Point receptors, including ATCTs. Note that the SGHAT/ ForgeSolar methodology has always relied on an analytical, qualitative approach to accurately determine the overall hazard (i.e. green vs. yellow) of expected glare on an annual basis.
The analysis does not automatically consider obstacles (either man-made or natural) between the observation points and the prescribed solar installation that may obstruct observed glare, such as trees, hills, buildings, etc.
The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
The variable direct normal irradiance (DNI) feature (if selected) scales the user-prescribed peak DNI using a typical clear-day irradiance profile. This profile has a lower DNI in the mornings and evenings and a maximum at solar noon. The scaling uses a clear-day irradiance profile based on a normalized time relative to sunrise, solar noon, and sunset, which are prescribed by a sun-position algorithm and the latitude and longitude obtained from Google maps. The actual DNI on any given day can be affected by cloud cover, atmospheric attenuation, and other environmental factors.
The ocular hazard predicted by the tool depends on a number of environmental, optical, and human factors, which can be uncertain. We provide input fields and typical ranges of values for these factors so that the user can vary these parameters to see if they have an impact on the results. The speed of SGHAT allows expedited sensitivity and parametric analyses.
The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
Refer to the Help page at **www.forgesolar.com/help/** for assumptions and limitations not listed here.

Default glare analysis parameters and observer eye characteristics (for reference only):

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

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This analysis was conducted using the best available radiometric modeling at the time of generation. Future updates to the modeling methodology may yield different results.

Revised Analysis (Rest Angle = 5°)

FORGESOLAR GLARE ANALYSIS

Project: **Staunton Solar**

Staunton Solar is an approximately 3.0 MW facility located along Quicks Mill Road in Augusta County, VA.

Site configuration: **Staunton Solar_rest angle 1**

Calculated via ForgeSolar Radiometric Physics Engine v3.1.3

Client: US Solar

Created 03 Jun, 2026
Updated 04 Jun, 2026
Time-step 1 minute
Timezone offset UTC-5
Minimum sun altitude 0.0 deg
DNI peaks at 1,000.0 W/m^2
Category 1 MW to 5 MW
Site ID 179778.29626

Ocular transmission coefficient 0.5
Pupil diameter 0.002 m
Eye focal length 0.017 m
Sun subtended angle 9.3 mrad



Summary of Results No glare predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
Array 01	SA tracking	SA tracking	0	0.0	0	0.0	-
Array 02	SA tracking	SA tracking	0	0.0	0	0.0	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Limestone Road	0	0.0	0	0.0
Maury Mill Road	0	0.0	0	0.0
Quicks Mill Road_commercial	0	0.0	0	0.0
Quicks Mill Road_passenger	0	0.0	0	0.0
Scenic Road - Lee Highway	0	0.0	0	0.0
Thacker Mill Road	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0

Component Data

PV Arrays

Name: Array 01
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 210.0°
Max tracking angle: 52.0°
Resting angle: 5.0°
Ground Coverage Ratio: 0.4
Rated power: -
Panel material: Smooth glass with AR coating (revised)



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.215733	-79.024748	1432.36	6.00	1438.36
2	38.215646	-79.024556	1424.46	6.00	1430.46
3	38.215387	-79.024743	1430.08	6.00	1436.08
4	38.215233	-79.024405	1413.75	6.00	1419.75
5	38.214725	-79.024772	1433.05	6.00	1439.05
6	38.214649	-79.024602	1427.30	6.00	1433.30
7	38.214444	-79.024751	1431.39	6.00	1437.39
8	38.214290	-79.024412	1434.19	6.00	1440.19
9	38.214032	-79.024599	1440.76	6.00	1446.76
10	38.213904	-79.024316	1449.87	6.00	1455.87
11	38.213419	-79.024667	1462.50	6.00	1468.50
12	38.213861	-79.025650	1415.84	6.00	1421.84
13	38.214326	-79.025315	1416.61	6.00	1422.61
14	38.214478	-79.025654	1416.93	6.00	1422.93

Name: Array 02
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 210.0°
Max tracking angle: 52.0°
Resting angle: 5.0°
Ground Coverage Ratio: 0.4
Rated power: -
Panel material: Smooth glass with AR coating (revised)



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.214224	-79.026811	1378.24	6.00	1384.24
2	38.213351	-79.024866	1460.53	6.00	1466.53
3	38.213145	-79.025015	1465.70	6.00	1471.70
4	38.212813	-79.024281	1496.59	6.00	1502.59
5	38.212329	-79.024630	1477.92	6.00	1483.92
6	38.212481	-79.024970	1480.37	6.00	1486.37
7	38.212222	-79.025157	1471.13	6.00	1477.13
8	38.213274	-79.027497	1391.23	6.00	1397.23

Route Receptors

Name: Limestone Road
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.218242	-79.025805	1361.84	4.50	1366.34
2	38.217879	-79.026197	1364.84	4.50	1369.34
3	38.217643	-79.026376	1373.26	4.50	1377.76
4	38.216977	-79.026653	1369.22	4.50	1373.72
5	38.216547	-79.026850	1381.74	4.50	1386.24
6	38.216077	-79.027121	1374.07	4.50	1378.57
7	38.215543	-79.027517	1364.50	4.50	1369.00
8	38.214898	-79.028032	1367.02	4.50	1371.52
9	38.213315	-79.028889	1368.44	4.50	1372.94
10	38.212919	-79.029071	1362.17	4.50	1366.67
11	38.211772	-79.029398	1383.99	4.50	1388.49

Name: Maury Mill Road
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.211704	-79.024862	1443.55	4.50	1448.05
2	38.211817	-79.024699	1449.48	4.50	1453.98
3	38.211904	-79.024473	1454.46	4.50	1458.96
4	38.211935	-79.024157	1451.77	4.50	1456.27
5	38.211870	-79.023910	1459.83	4.50	1464.33
6	38.211596	-79.023382	1477.73	4.50	1482.23
7	38.211206	-79.022641	1491.28	4.50	1495.78
8	38.210989	-79.022116	1479.84	4.50	1484.34

Name: Quicks Mill Road_commercial
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.213813	-79.030437	1395.44	9.00	1404.44
2	38.213380	-79.028992	1368.51	9.00	1377.51
3	38.213043	-79.027994	1381.33	9.00	1390.33
4	38.211947	-79.025315	1442.88	9.00	1451.88
5	38.211344	-79.024172	1460.28	9.00	1469.28
6	38.210636	-79.023228	1487.20	9.00	1496.20
7	38.210265	-79.022842	1489.47	9.00	1498.47

Name: Quicks Mill Road_passenger
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.213812	-79.030436	1395.44	4.50	1399.94
2	38.213374	-79.028993	1368.54	4.50	1373.04
3	38.213041	-79.027995	1381.33	4.50	1385.83
4	38.211940	-79.025313	1442.25	4.50	1446.75
5	38.211336	-79.024171	1460.28	4.50	1464.78
6	38.210632	-79.023222	1487.35	4.50	1491.85
7	38.210261	-79.022836	1489.97	4.50	1494.47

Name: Scenic Road - Lee Highway
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.199235	-79.011984	1307.64	4.50	1312.14
2	38.201933	-79.008658	1283.49	4.50	1287.99
3	38.204126	-79.006019	1271.42	4.50	1275.92
4	38.204847	-79.005364	1266.24	4.50	1270.74
5	38.206441	-79.004377	1241.04	4.50	1245.54
6	38.207967	-79.002971	1211.82	4.50	1216.32
7	38.209290	-79.001630	1211.91	4.50	1216.41
8	38.210310	-79.000761	1229.41	4.50	1233.91
9	38.212350	-78.999291	1269.99	4.50	1274.49
10	38.213851	-78.998347	1295.95	4.50	1300.45

Name: Thacker Mill Road
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.212347	-79.029233	1368.13	4.50	1372.63
2	38.212305	-79.028839	1373.56	4.50	1378.06
3	38.212235	-79.028184	1380.98	4.50	1385.48
4	38.212178	-79.028031	1385.73	4.50	1390.23
5	38.211909	-79.027592	1392.32	4.50	1396.82
6	38.211788	-79.027392	1394.04	4.50	1398.54
7	38.211724	-79.027223	1395.05	4.50	1399.55
8	38.211680	-79.027027	1397.17	4.50	1401.67
9	38.211659	-79.026721	1405.38	4.50	1409.88
10	38.211632	-79.025852	1420.53	4.50	1425.03
11	38.211649	-79.025662	1425.49	4.50	1429.99
12	38.211714	-79.025522	1429.42	4.50	1433.92
13	38.211851	-79.025426	1436.29	4.50	1440.79
14	38.211958	-79.025348	1441.84	4.50	1446.34

Discrete Observation Point Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
OP 1	1	38.215679	-79.027813	1381.38	6.00
OP 2	2	38.215087	-79.028427	1397.73	6.00
OP 3	3	38.215087	-79.028427	1397.73	16.00
OP 4	4	38.214717	-79.028951	1423.72	6.00
OP 5	5	38.212500	-79.028255	1385.18	6.00
OP 6	6	38.212500	-79.028255	1385.18	16.00
OP 7	7	38.212039	-79.027477	1399.11	6.00
OP 8	8	38.212039	-79.027477	1399.11	16.00
OP 9	9	38.212005	-79.026353	1431.13	6.00
OP 10	10	38.211328	-79.023387	1478.09	6.00
OP 11	11	38.213123	-79.022909	1537.29	6.00
OP 12	12	38.213293	-79.029957	1375.61	6.00
OP 13	13	38.212357	-79.029485	1376.78	6.00
OP 14	14	38.212357	-79.029485	1376.78	16.00

Obstruction Components

Name: Existing Tree Line
Top height: 40.00 ft



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)
1	38.213427	-79.027879	1377.54
2	38.215408	-79.026581	1382.49
3	38.216993	-79.025476	1383.60

Glare Analysis Results

Summary of Results No glare predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
Array 01	SA tracking	SA tracking	0	0.0	0	0.0	-
Array 02	SA tracking	SA tracking	0	0.0	0	0.0	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Limestone Road	0	0.0	0	0.0
Maury Mill Road	0	0.0	0	0.0
Quicks Mill Road_commercial	0	0.0	0	0.0
Quicks Mill Road_passenger	0	0.0	0	0.0
Scenic Road - Lee Highway	0	0.0	0	0.0
Thacker Mill Road	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0

PV: Array 01 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Limestone Road	0	0.0	0	0.0
Maury Mill Road	0	0.0	0	0.0
Quicks Mill Road_commercial	0	0.0	0	0.0
Quicks Mill Road_passenger	0	0.0	0	0.0
Scenic Road - Lee Highway	0	0.0	0	0.0
Thacker Mill Road	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0

Array 01 and Route: Limestone Road

No glare found

Array 01 and Route: Maury Mill Road

No glare found

Array 01 and Route: Quicks Mill Road_commercial

No glare found

Array 01 and Route: Quicks Mill Road_passenger

No glare found

Array 01 and Route: Scenic Road - Lee Highway

No glare found

Array 01 and Route: Thacker Mill Road

No glare found

Array 01 and OP 1

No glare found

Array 01 and OP 2

No glare found

Array 01 and OP 3

No glare found

Array 01 and OP 4

No glare found

Array 01 and OP 5

No glare found

Array 01 and OP 6

No glare found

Array 01 and OP 7

No glare found

Array 01 and OP 8

No glare found

Array 01 and OP 9

No glare found

Array 01 and OP 10

No glare found

Array 01 and OP 11

No glare found

Array 01 and OP 12

No glare found

Array 01 and OP 13

No glare found

Array 01 and OP 14

No glare found

PV: Array 02 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Limestone Road	0	0.0	0	0.0
Maury Mill Road	0	0.0	0	0.0
Quicks Mill Road_commercial	0	0.0	0	0.0
Quicks Mill Road_passenger	0	0.0	0	0.0
Scenic Road - Lee Highway	0	0.0	0	0.0
Thacker Mill Road	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0

Array 02 and Route: Limestone Road

No glare found

Array 02 and Route: Maury Mill Road

No glare found

Array 02 and Route: Quicks Mill Road_commercial

No glare found

Array 02 and Route: Quicks Mill Road_passenger

No glare found

Array 02 and Route: Scenic Road - Lee Highway

No glare found

Array 02 and Route: Thacker Mill Road

No glare found

Array 02 and OP 1

No glare found

Array 02 and OP 2

No glare found

Array 02 and OP 3

No glare found

Array 02 and OP 4

No glare found

Array 02 and OP 5

No glare found

Array 02 and OP 6

No glare found

Array 02 and OP 7

No glare found

Array 02 and OP 8

No glare found

Array 02 and OP 9

No glare found

Array 02 and OP 10

No glare found

Array 02 and OP 11

No glare found

Array 02 and OP 12

No glare found

Array 02 and OP 13

No glare found

Array 02 and OP 14

No glare found

Assumptions

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
"Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
The algorithm does not rigorously represent the detailed geometry of a system; detailed features such as gaps between modules, variable height of the PV array, and support structures may impact actual glare results. However, we have validated our models against several systems, including a PV array causing glare to the air-traffic control tower at Manchester-Boston Regional Airport and several sites in Albuquerque, and the tool accurately predicted the occurrence and intensity of glare at different times and days of the year.
Random number computations are utilized by various steps of the annual hazard analysis algorithm. Predicted minutes of glare can vary between runs as a result. This limitation primarily affects analyses of Observation Point receptors, including ATCTs. Note that the SGHAT/ ForgeSolar methodology has always relied on an analytical, qualitative approach to accurately determine the overall hazard (i.e. green vs. yellow) of expected glare on an annual basis.
The analysis does not automatically consider obstacles (either man-made or natural) between the observation points and the prescribed solar installation that may obstruct observed glare, such as trees, hills, buildings, etc.
The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
The variable direct normal irradiance (DNI) feature (if selected) scales the user-prescribed peak DNI using a typical clear-day irradiance profile. This profile has a lower DNI in the mornings and evenings and a maximum at solar noon. The scaling uses a clear-day irradiance profile based on a normalized time relative to sunrise, solar noon, and sunset, which are prescribed by a sun-position algorithm and the latitude and longitude obtained from Google maps. The actual DNI on any given day can be affected by cloud cover, atmospheric attenuation, and other environmental factors.
The ocular hazard predicted by the tool depends on a number of environmental, optical, and human factors, which can be uncertain. We provide input fields and typical ranges of values for these factors so that the user can vary these parameters to see if they have an impact on the results. The speed of SGHAT allows expedited sensitivity and parametric analyses.
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Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
Refer to the Help page at **www.forgesolar.com/help/** for assumptions and limitations not listed here.

Default glare analysis parameters and observer eye characteristics (for reference only):

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

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This analysis was conducted using the best available radiometric modeling at the time of generation. Future updates to the modeling methodology may yield different results.

Appendix E
Solar Decommissioning Report

Preliminary Decommissioning Plan

USS Staunton Solar Project
2.925 MW (AC) Solar Facility
(38.213705, -79.025629)

June 2026

Prepared For:

USS Staunton Solar, LLC
4201 Wilson Blvd
3rd Floor
Arlington, VA 22203

Prepared By:

TRC
230 W Monroe St
Suite 1840
Chicago, IL 60640



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APPENDICES

Appendix A Decommissioning Estimate

1.0 Background

On behalf of USS Staunton Solar, LLC (Developer and Operator/Owner), TRC has prepared this decommissioning plan (Plan) for the USS Staunton Solar facility (Facility), a photovoltaic (PV) facility, or solar energy system (SES) located north of Quick Mill Rd, east of Limestone Rd, and west of Maury Mill Rd in Verona, Augusta County, Virginia. The Facility will consist of a 2.925-megawatt (MW) alternating current (AC) solar electrical array covering a fenced area of approximately 14.6 acres of agricultural land. The Facility will include ground-mounted solar arrays, perimeter security fencing, inverters, transformers and gravel access roads. Power will be produced by the Facility using PV panels, mounted on ground support galvanized piles.

The purpose of this Plan is to provide the general scope of decommissioning work as well as a construction cost estimate (Estimate) for a decommissioning assurance mechanism of the Facility as described herein and subject to the Augusta County Solar Ordinance Chapter 25 regulating the development of solar energy systems and facilities. This document outlines the decommissioning activities required to remove above-ground structures, debris, underground foundations, and cables and restore soil and vegetation after termination of operations of the solar farm. This Plan and Estimate has been prepared in accordance with the Augusta County Solar Ordinance for approval of Special Use Permit.

The Estimate was prepared under the supervision of a professional engineer licensed by Virginia. The Estimate is based on estimated quantities of site features, panels, racking, and electrical equipment from the conceptual layout and details provided to TRC by USS Staunton Solar, LLC, supplemented by TRC's prior experience in the design and construction of energy facilities. The Plan and Estimate are subject to final engineering. Costs generally include contractor fees, sitework removal & restoration, racking & module removal, power conditioning equipment removal which reflect the overall decommissioning process. The reported costs include labor, materials, taxes, insurance, transport costs, disposal fees, equipment rental, contractor's overhead, and contractor's profit. The labor costs have been estimated using RS Means labor rates along with previous decommissioning plan estimates completed for other similar projects.

1.1 Owner/Operator

USS Staunton Solar, LLC is the owner/operator and will be responsible for ensuring completion of final civil and electrical engineering plans. TRC is the consultant responsible for the preparation of the independent decommissioning plan.

1.2 Facility Description

The Facility will consist of a 2.925 MW AC solar electricity generation complex with associated equipment. The Facility will be secured within a security fence surrounding the solar panels and electrical equipment. The site can be accessed via lock-controlled gates located on the proposed gravel access roads. The Facility will include the following site features:

- Total site development area with solar panels, associated electrical equipment, racking, and gravel access road of approximately 14.6 acres (fenced area with approximately 6,864 solar panels);
- Two (2) - equipment pads with two (2) transformers;
- Thirteen (13) inverters;
- Twelve (12) -foot-wide gravel access roads and turnarounds;
- Security fencing (around the perimeter of the entire project area);
- Above-ground electrical wire conduits; and
- Underground electrical wire conduits.

2.0 Decommissioning Activity

The Facility will be decommissioned by completing the following major steps:

1. Installation of soil erosion and sediment controls, as necessary;
2. Disconnecting power and other utilities;
3. Removal of modules, racking, and piles;
4. Removal of cabling, trays, and electrical equipment;
5. Removal of concrete pad, foundations, fence, and debris;
6. Removal of the gravel access road (if required by the landowner);
7. Site stabilization by placing soil and reseeding;
8. Removal and disposal or recycling of materials; and
9. Demobilization and removal of soil erosion and sediment controls following final inspection and approval.

The procedures for decommissioning of the project will involve restoring soils and vegetation to pre-existing conditions, per the Ordinance.

2.1 Schedule

The decommissioning process is estimated to take approximately one (1) month but may change depending on weather and soil moisture conditions and is intended to occur outside of the winter season.

2.2 Decommissioning During Construction (Abandonment of Project)

If construction or operation activities cease prior to Facility completion, and the Facility is abandoned as defined by applicable law or other agreements, the Facility would be decommissioned as follows in this Plan. Any installed components will be removed and managed, as per the following sections, and the Facility site will be restored to a vegetated condition. This deconstruction shall be completed within twelve (12) months after the end of the useful life of the Facility.

2.3 Decommissioning After Ceasing Operation

Properly maintained PV panels have an expected lifespan of thirty-five (35) years. After operating for such a period of time, or if no electricity is generated for a continuous period of twelve (12) months, the Facility will be presumed to be “at the end of its useful life”. In addition, if the Facility owner dissolves or abandons the site without transferring the Facility to a successor in interest, if the Facility falls into a state of disrepair, or if the Facility creates a health and safety issue, it shall be considered a discontinuation or abandonment of operations. Installed components will be removed and reused/recycled where possible, and the site restored in accordance with the activities discussed below.

The applicant, owner, or operator shall provide financial security in the form and amount acceptable to Augusta County. The amount of financial security shall be updated every five (5)

years utilizing decommissioning costs estimated by the owner and validated by Augusta County. Augusta County shall have access to the project and to the funds to effect or complete decommissioning in the event an applicant, owner, or operator fails to complete decommissioning activities. In the event that the applicant, owner, or operator fails to complete decommissioning activities, the County and/or Township, as applicable, shall have the legal right to transfer applicable commercial solar facility materials to salvage firms.

2.4 Offsite Impacts During Decommissioning

Similar to the project's construction period, noise levels during the decommissioning work will increase. Proper steps will be followed to minimize the disturbance. Work hours are assumed to be eight (8) hours a day, during daylight. Road traffic in the area may increase temporarily due to crews and equipment movements. Further details of the on-site restoration are included in subsequent sections.

2.5 Dismantlement and Demolition

Decommissioning shall include removal of all solar electric systems, buildings, cabling, electrical components, roads, foundations, pilings, and any other associated facilities as identified by applicable laws, including the Ordinance. This will include removal of all items identified in the decommissioning activities above

A significant amount of the components of the PV system at the Facility will include recyclable or re-saleable components, including copper, aluminum, galvanized steel, and panels. Due to their monetary value, these components will be dismantled and disassembled rather than being demolished and disposed of.

The owner shall complete decommissioning activities within twelve (12) months of the end of its useful life or of discontinuation or abandonment of operations.

Following coordination with the local utility company regarding timing and required procedures for disconnecting the Facility from the utility, all electrical connections to the system will be disconnected and all connections will be tested locally to confirm that no electric current is present before proceeding. All electrical connections to the panels will be cut at the panel and then removed from their framework by cutting or dismantling the connections to the supports. Next, panels, inverters, transformers, meters, fans, lighting fixtures, and other electrical structures will be removed. Disposal of these materials at a licensed landfill or disposal facility will be in accordance with state and local laws, including the Code of Virginia Regulations governing waste disposal at licensed local area landfills, which may be amended from time to time. Any materials deemed to be hazardous at the time of disposal will be handled and disposed according to applicable local, state, and federal solid waste disposal regulations.

The PV mounting system framework will be dismantled and recycled. The galvanized support piles will be completely removed and recycled.

Finally, all associated structures will be demolished and removed from the site for recycling or disposal at a licensed disposal facility. This will include the site fence, gates, access roads, equipment foundations, and underground cables, which will likely be removed or recycled.

Consultation with the landowner will determine if the access roads should be left in place for continued use. If the access roads are deemed unnecessary by the landowner, the contractor will remove them and all non-adaptable parts of the Facility and restore this area with native soils and seeding. On-site concrete associated with the Facility will be broken and removed in its entirety, and clean concrete will be crushed and disposed or recycled off-site with a licensed concrete disposal facility. Below grade structure, such as underground collection cabling, mounting beams, footers, and all other equipment shall be completely removed; however, these structures may be allowed to remain if a written request is submitted by the landowners and a waiver is granted by the Board of Supervisors per the Ordinance. Final stabilization thresholds on the entire site shall be met prior to approval of site decommissioning. Underground conduits and raceways are to be removed. Above ground lines and poles that are not owned by the utility will be removed, along with associated equipment (isolation switches, fuses, metering) and holes will be filled with clean topsoil. Temporary sanitary facilities will be provided on-site for the workers conducting the decommissioning of the Facility.

Construction erosion and sediment control measures are required during the decommissioning process. These measures include construction access, silt fence, runoff control and sediment BMPs, concrete washout stations, and land stabilization. The owner/operator will restore the project location to a vegetated condition consistent with pre-construction conditions.

2.6 Disposal or Recycle

During the decommissioning phase, a variety of excess materials can be salvaged. A significant amount of the materials used in a solar facility are reusable, including copper, aluminum, galvanized steel, and the PV panels. Due to their monetary value, these components will be dismantled and disassembled rather than being demolished and disposed. Any remaining materials will be removed and disposed of off-site at an appropriate licensed disposal facility. The project general contractor will maximize recycling and reuse and will work with manufacturers, local subcontractors and waste firms to segregate material to be recycled, reused and/or properly disposed of.

The project developer will be responsible for arranging the collection or recycling of fence, racking piles, PV panels, panel tracker equipment, AC and DC wiring, inverters, and miscellaneous equipment for salvage value.

Gravel may be reused as general fill on site with landowner approval. Remaining gravel, geotextile fabric, concrete, and debris shall be separated and transported off-site to the appropriate licensed facilities for recycling and disposal in accordance with federal, state, and local waste management regulations.

A final site walkthrough with the appropriate local authorities will be conducted to verify removal of debris and/or trash generated within the site during the decommissioning process. This will

include removal and proper disposal of any debris that may have been wind-blown to areas outside the immediate footprint of the Facility.

2.7 Restoration and Site Stabilization

The areas of the Facility that are disturbed (during decommissioning) will be subject to minor grading where necessary (no imported soil is anticipated), and application of a selected grass seed mix to surfaces disturbed (estimated to be 50% of the site) during the decommissioning process. The seed mix is expected to be a blend of various fescue and/or rye grass seeds. The actual seed blend will depend on factors including availability and time of year that planting will occur. It is not anticipated that weed control equipment will be stored onsite, so costs for its removal have not been included.

It is expected that soil restoration will be limited to stabilization via application of grass seed mixes, as recommended by relevant state or local planting and seeding guidelines. Details will be discussed with the property owner and local authorities at the time of decommissioning. Planting trees, shrubs, and other woody vegetation (re-forestation) or other beautification are not expected to be required and are not included in the Estimate. Only minor grading is anticipated with regards to site restoration (from construction, demolition, and traffic damage) and access road removal. Imported fill will be provided, if necessary, to restore to original conditions. Per the Ordinance, compacted soils shall be decompacted as agreed to by the Owner. All site stabilization activities will be completed in accordance with regulatory requirements and the approved Storm Water Pollution Prevention Plan (SWPPP) and NPDES Construction General Permit in place at the time of decommissioning.

3.0 Permitting Requirements for Decommissioning

Approvals are currently required prior to initiation of ground-disturbing activity. The Estimate assumes the same approvals are required when decommissioning occurs in the future. The permitting requirements listed below will be reviewed and might be subject to revisions based on local, state, and federal regulations at the time of decommissioning.

3.1 National Pollutant Discharge Elimination System (NPDES) Construction General Permit

U.S. Environmental Protection Agency - Ground disturbance of greater than 1 acre requires preparation of a Storm Water Pollution Prevention Plan, including erosion and sedimentation controls.

3.2 Building Permit

A building permit from Verona Township or Augusta County is required to construct the Facility. A building permit may also be required for any construction, alteration, repair, demolition, or change to the use of the Facility.

3.3 Road Use Agreement

A Road Use Agreement will be required with the Virginia Department of Transportation, and potentially Augusta County Road Commission to use roadways for decommissioning activity and transport of materials.

3.4 Permit Requirement Assumptions

No significant ground disturbance or grading associated with decommissioning, including temporary laydown areas, are required within areas subject to additional local, state, or federal permitting.

4.0 Solar Decommissioning Estimate

The following items can be recycled: fence material, racking piles, PV panels, miscellaneous tracker equipment, AC and DC wiring, combiner boxes, inverters, transformers, medium voltage equipment, electrical equipment posts, and customer owned utility poles.

The Estimate is based on the most recent available RS Means labor rates, as well as equipment rates in 2026. The equipment rates have been estimated using publicly available data from FEMA's published Schedule of Equipment Rates and equipment retailers. Per the Ordinance, salvage value was not considered in this cost estimation.

The estimated costs utilize hourly and monthly rates listed below:

2026 Wages

- Labor at $47.94/hr;
- Operating engineer at $68.50/hr;
- Truck driver at $57.28/hr;
- Electrician at $72.26/hr;
- Skid steer rental at $2,950.00/month;
- Excavator rental at $9,300.00/month; and
- Dump truck rental at $55.28/hr

The estimated cost of construction activities associated with decommissioning using current wages is $294,586 for the year 2026, $358,463 for the year 2036, and $404,484 for the year 2041. An annual inflation rate of 2.8% was used to determine future cost estimation which is based on the 2026 Cost of Living Adjustment rate. The detailed costs are attached.

The Estimate is based on the Preliminary Site Plan provided to TRC, dated May 4th, 2026. Changes to the plans and construction details may affect the scope and costs of Facility decommissioning. The Estimate was prepared under the supervision of a licensed professional engineer by the State of Virginia. The opinion of probable costs is based on experience in the design and construction of energy facilities and are subject to final engineering/construction.

If at any time in the future, the prevailing professionally accepted standards of economic feasibility of recycling and or environmental implications of hazardous waste changes to increase the costs associated with decommissioning, the Estimate will be revised. Revisions may require bonds to be modified accordingly to cover said cost. This opinion assumes a third-party contractor, experienced in the construction and decommissioning of photovoltaic facilities will lead the effort.

USS Staunton Solar, LLC by its duly authorized representative's signature below, hereby acknowledges that it has reviewed this Plan and Estimate, approves of the same, and agrees to be bound by the terms and conditions contained therein. USS Staunton Solar, LLC also

acknowledges that the terms of this Plan shall be binding upon themself as the applicant, as well as any of their successors-in-interest and assigns.

Authorized Representative:_____

Print Name:_____

Title:_____

Date:_____

Appendix A
Decommissioning Estimate

Preliminary Decommissioning Cost Estimate
USS Staunton Solar Facility
USS Staunton Solar, LLC

Task	Unit	Estimated Quantity	Cost per Unit 2026	Cost per Unit 2036	Total Gross Cost 2026	Total Gross Cost 2036	Total Gross Cost 2041
Initial Engineering and Site Preparation							
Engineering & Permitting	LS	1	$ 11,250.00	$ 14,828.04	$ 11,250.00	$ 14,828.04	$ 17,023.52
Mobilization	LS	1	$ 15,024.57	$ 18,154.34	$ 15,024.57	$ 18,154.34	$ 20,842.32
Silt Fence	LF	4,300	$ 2.97	$ 3.28	$ 12,792.08	$ 14,091.77	$ 16,178.24
Electrical Disconnect	EA	13	$ 289.02	$ 380.95	$ 3,757.31	$ 4,952.32	$ 5,685.57
Site Work and Restoration							
Access Road Excavation	CY	338	$ 106.96	$ 117.16	$ 36,153.50	$ 39,601.36	$ 45,464.84
Access Road Area Restoration	CY	338	$ 49.76	$ 52.56	$ 16,819.26	$ 17,765.54	$ 20,395.95
Equipment Pad Restoration	EA	2	$ 942.48	$ 1,091.78	$ 1,884.95	$ 2,183.55	$ 2,506.85
Seeding (50% disturbed area)	AC	10	$ 976.51	$ 1,061.40	$ 9,765.10	$ 10,614.01	$ 12,185.54
Fence Removal	LF	4,300	$ 3.65	$ 4.75	$ 15,683.23	$ 20,429.02	$ 23,453.79
Site Clean Up	AC	16	$ 295.01	$ 321.19	$ 4,602.67	$ 5,011.03	$ 5,752.98
Electrical Component Removal							
Rack and Post Removal	EA	1,134	$ 54.51	$ 70.40	$ 61,815.84	$ 79,834.09	$ 91,654.53
Remove Panels	EA	6,864	$ 3.89	$ 5.08	$ 26,687.73	$ 34,855.62	$ 40,016.44
AC Wiring-Direct Burial and Overhead	LF	5,000	$ 0.64	$ 0.82	$ 3,194.99	$ 4,101.74	$ 4,709.05
DC Wire Removal	LF	25,500	$ 0.67	$ 0.86	$ 16,968.63	$ 21,988.89	$ 25,244.63
Combiner Box	EA	13	$ 296.10	$ 368.65	$ 3,849.27	$ 4,792.49	$ 5,502.08
Inverter	EA	13	$ 674.10	$ 746.65	$ 8,763.27	$ 9,706.49	$ 11,143.66
Transformer	EA	2	$ 1,435.04	$ 1,727.09	$ 2,870.08	$ 3,454.17	$ 3,965.60
SUBTOTAL					**$ 256,161.40**	**$ 311,707.10**	**$ 351,725.60**
Contractor Costs							
Contractor Profit	%	8%			$ 20,492.91	$ 24,936.57	$ 28,138.05
Contractor Overhead & Management	%	5%			$ 12,808.07	$ 15,585.35	$ 17,586.28
Contractor Insurance	%	2%			$ 5,123.23	$ 6,234.14	$ 7,034.51
SUBTOTAL					**$ 38,424.21**	**$ 46,756.06**	**$ 52,758.84**
DECOMMISSIONING TOTAL					**$ 294,585.61**	**$ 358,463.16**	**$ 404,484.44**

Notes:

1) Unit costs shown are displayed to only two decimal places to fit the currency format. Totals calculated by hand may differ slightly to totals shown in this table due to rounding.

2) Material, equipment and labor cost estimated utilizing labor rates from RS Means, representative midwest dealer rates, FEMA 2025 schedule of equipment rates, and the RS Means Heavy Site Estimating Manual.

3) Annual inflation rate assumed to be 2.8%.to account for the Cost of Living Adjusment

Appendix F
Cost Benefit Analysis

United States Solar Corporation
4201 Wilson Blvd, 3rd Floor
Arlington, VA 22203

Fiscal Impact Analysis

Executive Summary

USS Staunton Solar LLC is a 3 megawatt (MW) solar photovoltaic system located on Karen and Rick Fauber's property at Quicks Mill Road in Staunton. The fenced in project will encompass roughly 14 acres of land on the 37-acre parcel. The project will generate the bulk of its economic benefits during the construction period. Following construction, tax benefits and operation and maintenance will be the main driver of economic benefits delivered to the locality. Additionally, the interconnection upgrades required will bolster Dominion's local infrastructure. The project will not terminate any current jobs associated with its installation.

1. Construction Phase:

- Construction of the array will result in the temporary employment of local general contractors, civil engineers and electricians.
- USS Staunton Solar will strengthen and modernize the grid in order to successfully interconnect. The project will upgrade the local distribution feeders, substations and install new fiber.

2. Operation Phase:

- Per Virginia Code 58.1-2636, the array will participate in a revenue share with the County at a rate of $1,400/MWac. This will increase at a 10% rate every five years. Over the course of 25 years, this will bring in $179,678 to the County. Please note that the array's life will likely run to 35 years.
    - Total Tax benefit: $179,678
- The 38-acre parcel is currently assessed as agriculture. Following the construction of the array, 14.5 acres of the parcel will be assessed as commercial. This will result in an increase in real estate taxes. The applicant has reached out to the County Assessor's office to confirm what this value would be an is waiting to hear back.
- The project electricity rate to be subsequently sold to the rate payer has been approved by the Virginia SCC.