

**Natural Resources Assessment
2.75 MW Photovoltaic
Electric Generation Facility
Savage Solar Project**

Chester, Vermont

Prepared by:

Arrowwood Environmental, LLC

March 5, 2026



**Natural Resources Assessment for
2.75 MW Photovoltaic Electric Generation Facility
Savage Solar Project**

Contents

I.	Summary Findings	2
II.	Introduction and Project Description	3
III.	Site Characterization.....	4
IV.	Criterion 1(A) Headwaters	5
V.	Criteria 1(E) Streams and Section 248(b)(8) Outstanding Resource Waters	6
VI.	Criterion 1(F) Shorelines	7
VII.	Criterion 1(G) Wetlands.....	7
VIII.	Criterion 8 Rare and Irreplaceable Natural Areas	10
IX.	Criterion 8(A) Necessary Wildlife Habitat and Rare, Threatened and Endangered Species.....	10
X.	References.....	13
	Appendix 1.....	14

**Natural Resources Assessment for
2.75 MW Photovoltaic Electric Generation Facility
Savage Solar Project**

I. Summary Findings

Arrowwood Environmental, LLC (AE) conducted a natural resources assessment for the proposed Savage Solar Project (“Project”) located off Route 103 in Chester, Vermont. The field assessment was conducted in 2023 and 2024. The Project limits of disturbance for the solar array and temporary staging are ~15.08 acres of a ~25.72 acre parcel. The Project site is located within existing agricultural corn field. AE assessed natural resources criteria under 30 V.S.A. § 248(b)(5) incorporated by the Public Utility Commission into the review of solar projects, including streams and headwaters, outstanding resource waters, shorelines, wetlands, rare and irreplaceable natural areas, necessary wildlife habitat, and rare, threatened, and endangered species.

There are no outstanding resource waters, headwaters, shorelines, rare and irreplaceable natural areas, necessary wildlife habitat or rare, threatened, and endangered animal or plant species at the Project site. AE concludes that the Project has been sited and designed to avoid undue adverse impacts to these resources.

The new Project access road involves approximately 1,224 square feet of impacts to a Class II wetland buffer. The wetland buffer crossing has been designed to avoid direct wetland impacts and to avoid adverse impacts to wetland functions and values. Savage Solar Energy LLC (“Petitioner”) is working closely with Vermont Wetland Program on developing a wetland permit application for these impacts. The Petitioner will file a Vermont Wetland Permit application for the Project and expects a permit to be issued in support of Criterion (G).

In summary, AE concludes that the Project has been sited and designed to avoid undue adverse impacts to natural resources including streams and headwaters, outstanding resource waters, shorelines, wetlands, rare and irreplaceable natural areas, necessary wildlife habitat, and rare, threatened, and endangered species.

II. Introduction and Project Description

Arrowwood Environmental, LLC (AE) performed a natural resources assessment for a proposed 2.75 MW photovoltaic electric generation facility located off Route 103 in Chester, Vermont (“Project”). The Project will result in a Limit of Disturbance of ~15.08 acres. The array area will occupy ~14.18 acres and be enclosed by a fence. The Project area is characterized as an agricultural corn field. The Project will be accessed off Route 103 with a new 12’ wide gravel access road into the northwest portion of the Project site.



Project Area (5/12/23)

This report outlines AE’s findings related to natural resources criteria incorporated by the Public Utility Commission into the review of solar projects, including streams and headwaters, outstanding resource waters, shorelines, wetlands, rare and irreplaceable natural areas, necessary wildlife habitat, and rare, threatened, and endangered species. The natural resources assessment involved both a remote review of available digital

databases as well as field investigations at the Project site on May 12, October 5, 2023, April 18, and November 1, 2024.

III. Site Characterization

Ecologically the site is within the Southern Vermont Piedmont biophysical region of the state (Thompson, Sorenson, and Zaino, 2019). The Project is located at approximately 550 feet above mean sea level according to U.S. Geologic Survey (“USGS”) topographic data. The mapped bedrock that is underlying the site is biotite-granitic gneiss and amphibolites from the Mount Holly Formation (Ratcliffe et al. 2011). The soils consist of Ondawa and Podunk fine sandy loams in the Project area (NRCS Soil Survey). The Project site is located within existing agricultural corn field.

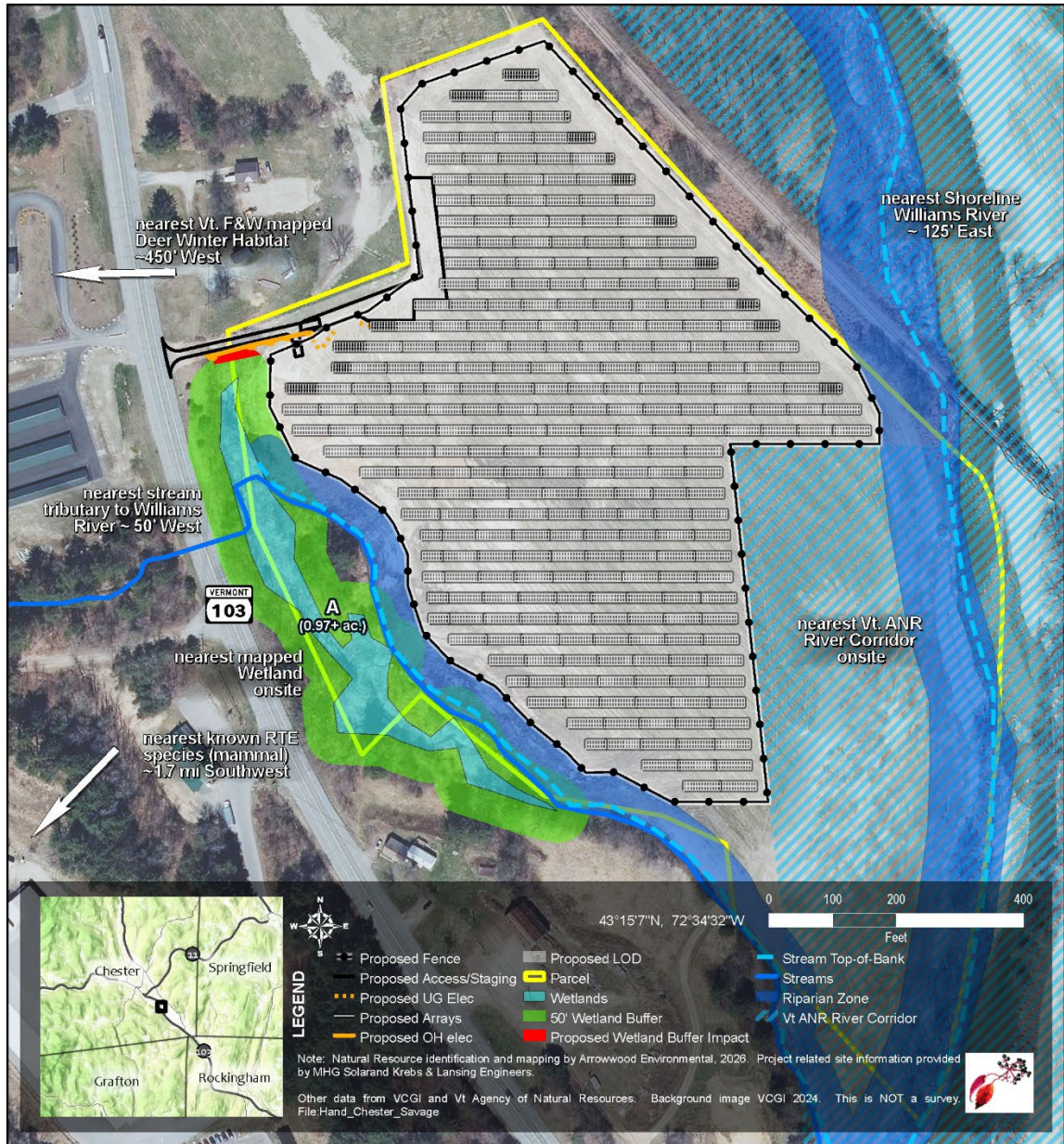


Figure 1. Project Site and Nearby Natural Resources.

IV. Criterion 1(A) Headwaters

A site is considered to be a Headwater if it meets any of the following criteria: it is characterized by steep slopes and shallow soils; it is above 1,500 feet in elevation; it has a drainage area of less than 20 square miles; it is within the watershed of public water

supplies; or if it provides significant recharge to aquifers. The headwaters assessment involved both a remote review of the USGS topographic map, Agency of Natural Resources (ANR) Atlas, and Vermont Hydrography Dataset (streams, rivers, and waterbodies) and field investigations. The Project site does not meet any of the criteria for a headwater and therefore will have no adverse impact on headwater areas.

Nonetheless, the Project will comply with applicable health and environmental regulations. The Project will be constructed in accordance with the Vermont Standards & Specifications for Erosion and Prevention and Sediment Control, 2025. The Project will apply for coverage under the ANR Department of Environmental Conservation Construction General Permit. The Project site, including space between the solar panels, will remain vegetated and maintained. The Project has no onsite sanitary wastewater systems, and therefore no associated injection of sanitary wastewater into the ground. The Project will use a pad mounted transformer with a secondary containment system. The proposed Project will not result in a reduction in the quality of ground or surface waters in the area.

V. Criteria 1(E) Streams and Section 248(b)(8) Outstanding Resource Waters

The stream assessment involved both a remote review of the USGS topographic map, Vermont Hydrography Dataset (streams, rivers, and waterbodies), LiDAR derived topography, and field investigations in May 2024.

The nearest stream is a tributary to the Williams River located ~50' west of the Project area. The Williams River is located ~125' east of the Project area.

The Project will not result in any clearing of forest vegetation within the riparian buffer zones of stream and river resources (as measured 50' from top of bank/top of slope of streams and edge wetland; 100' from top of bank/top of slope of the Williams river).

For these reasons, we conclude that the Project will have no undue adverse impact on streams.

The ANR has listed four waterways as Outstanding Resource Waters (ORW): Batten Kill River in towns of East Dorset and Arlington; Pike's Falls/Ball Mountain in the town of Jamaica; Poultney River in the towns of Poultney and Fair Haven; and Great Falls, Ompompanoosuc in the town of Thetford. There are no waters which intersect the Project that have been designated as an ORW. Therefore, the Project will not result in any impact on ORWs.

VI. Criterion 1(F) Shorelines

AE reviewed USGS topographic maps, the Vermont Hydrography Dataset (streams, rivers, and waterbodies), and digital orthophotography. The site of the proposed Project is not located on a shoreline of a river, lake, pond, or reservoir. The closest shoreline to the Project is that of the Williams River ~125' to the east of the Project. The Project will not result in any clearing of forest vegetation along the shores of the River. The Project will retain the shoreline in its existing condition. The proposed Project will result in no adverse impact to shorelines.

VII. Criterion 1(G) Wetlands

The wetland assessment involved both a remote review of available maps (including Vermont Significant Wetland Inventory Maps and the NRCS Soil Survey) and a field inventory component conducted on May 12, 2023 and April 18, 2024. The protocols put forth in the USACE's *Corp of Engineers Wetlands Delineation Manual* (2009 Regional Supplement for the Northcentral and Northeast Region) were employed for delineating wetlands as is the standard practice in Vermont.

AE field review confirmed the presence of a Class II wetland west of the Project area. Per the wetland survey protocol, AE flagged wetland boundaries in the field and mapped the boundary with a GPS unit capable of sub-meter accuracy. The wetland delineation is shown on the Project site plans (Exh. SSE-TH-2) and in Figure 1. Vermont Wetlands Program representatives have conducted a field visit and will provide final confirmation of AE's delineations during the spring field season.

The Project array has been designed to avoid the Class II wetland and associated 50' buffer. The new Project gravel access road will result in crossing the buffer of the Class II wetland at its northern extent. Overhead power between the Project and the point of interconnection will be collocated along the new access road involving limited vegetative clearing and management (0.06 acres), a portion of which is within the buffer area. The wetland buffer crossing has been designed to avoid direct wetland impacts, minimize wetland buffer impacts to the extent practical, and to avoid adverse impacts to wetland functions and values. This activity will result in minor impacts to the wetland buffer zone (approximately 1,224 square feet of total impact for access road, grading, and vegetation management). Petitioner will file a Vermont Wetland Permit application for the Project and expects a permit to be issued in support of Criterion (G).

Additionally, during a 2023 flood, prior to Project development, the tributary to the Williams River (west of the Project area) changed course and entered the existing agricultural corn field. On site work was conducted to re-route the stream back to its original location which included vegetation clearing and grading in the Class II wetland and riparian buffers. The grading has since been restored to pre-disturbance conditions. As part of the Project, Savage Solar Energy LLC has agreed to conduct a planting restoration of approximately 26,296 square feet of wetland and riparian buffer areas that were affected by this prior work and is working closely with ANR personnel on development of that restoration plan which will be incorporated into the Vermont Wetland Permit application. The proposed wetland and riparian buffer restoration areas are indicated on the Site Plan and in Figure 2, below.

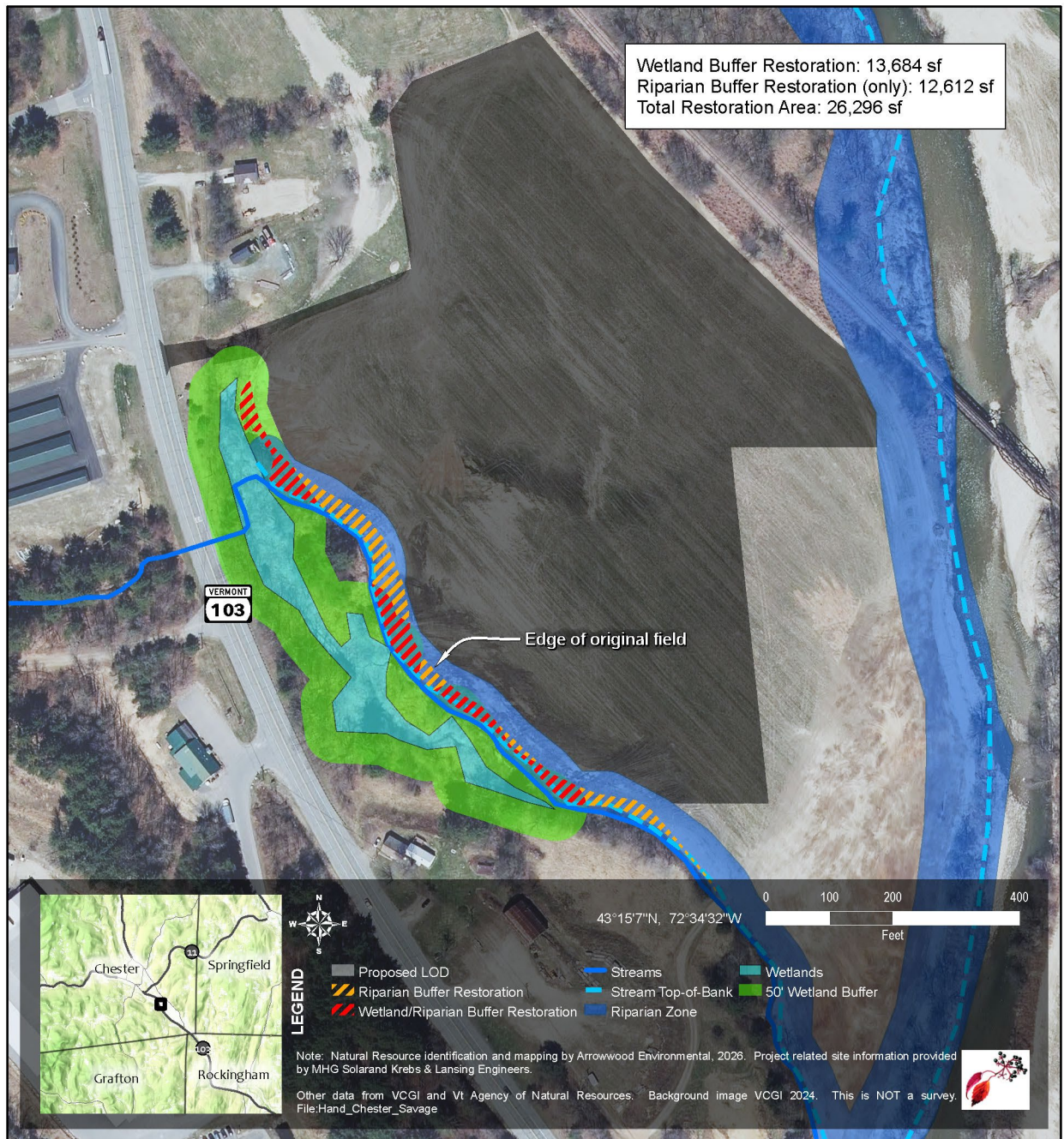


Figure 2. Planting restoration areas within disturbed Class II wetland and riparian buffers

For these reasons, we conclude that the proposed Project will have no undue adverse impact on wetland resources. In addition, due to the planned restoration along the tributary, the amount of naturally vegetated wetland buffer will increase, thereby increasing the wetland functioning in this area.

VIII. Criterion 8 Rare and Irreplaceable Natural Areas

The Rare and Irreplaceable Natural Areas assessment involved both a remote review of available digital maps for the Project area and a field review in May 2024. AE reviewed digital orthophotography, the NRCS Soil Survey, the 2011 Bedrock Geologic Map of Vermont, and the Wildlife Natural Heritage Inventory (NHI) Rare, Threatened and Endangered Species digital database.

The Project area is characterized as agricultural corn field. This area does not constitute a significant natural community or a Rare and Irreplaceable Natural Area (RINA). No RINAs are present within the Project area. Since there are not Rare and Irreplaceable Natural Areas in the Project area, there will be no adverse impacts on any Rare and Irreplaceable Natural Areas.

IX. Criterion 8(A) Necessary Wildlife Habitat and Rare, Threatened and Endangered Species

The wildlife habitat assessment involved both a remote review of available digital maps for the Project area and a field inventory component. A remote review of available digital databases was conducted to identify and map necessary wildlife habitat (including State of Vermont Deeryard data layer, USGS Topographic map, “VT HYDRODEM” elevation data, and State of Vermont Bear Habitat data layers) in the Project area. The field inventory component involved characterizing vegetation natural communities and recording observations of wildlife signs or sightings during field surveys.

Site assessments were conducted in May 2024 to assess wildlife, wildlife habitats, and threatened and endangered animal species.

A. Necessary Wildlife Habitats

1. White-tailed Deer Wintering Habitats

There are no mapped VT Fish and Wildlife Department white-tailed deer (*Odocoileus virginianus*) winter habitats (DWA) within the Project area. The closest DWA is location ~450' west of the Project. AE confirmed the absence of historic or recent deer wintering activity as well as lack of forested areas containing significant enough softwood canopy closure to be considered DWA habitat within the Project area.

For these reasons, the proposed Project will have no undue adverse impact on DWA resources.

2. Black Bear Habitat

There is no bear habitat identified by the Vermont Fish and Wildlife Department within the Project area and no observations of bear use or feeding (including bear claw scarring, bear dens, scat) were made during the field inventories. No potential black bear spring feeding wetlands were identified. The Project will therefore have no adverse impact on black bear habitat.

3. Grassland Bird Habitat

The Vermont Fish and Wildlife Department (VFWD) considers grassland bird habitat to be easily identifiable, concentrated, and essential for the reproductive success and survival of a suite of birds. Grasslands used by many species of grassland birds consist of large expanses (minimum of 20 acres) of native grasses with little or no woody vegetation. The Project site is characterized as an active agricultural corn field and does not meet the criteria for grassland bird habitat.

Since no grassland bird habitat is present in the Project area, the Project will have no undue adverse impact on grassland bird habitat.

4. Amphibian Breeding Habitat/Vernal Pools

The VFWD considers intact well-functioning breeding pools that are interconnected to intact upland forest necessary wildlife habitat for pool-breeding amphibians. Field assessments conducted in May 2024 did not identify any functioning or potentially functioning vernal pools in the Project area. The Project will have no undue adverse impact on vernal pools.

B. Rare, Threatened and Endangered (RTE) Species

The RTE species review involved both a remote review of available digital maps for the Project area as well as a field survey. AE reviewed digital orthophotography, the NRCS Soil Survey, the 2011 Bedrock Geologic Map of Vermont, and the Wildlife Natural Heritage Inventory (NHI) Rare, Threatened and Endangered Species digital database.

In reviewing the NHI digital database, there are no records or occurrences of RTE plant or animal species in or directly adjacent to the Project site.

1. RTE Animal Species

The Project area is within predicted summer ranges for both Northern long-eared bat (State and Federally listed) and Tricolored bat (State listed). The VFWD has issued guidance that project clearing constituting greater than 1% of the total forested area within a 1 square mile radius of a project triggers review for habitat loss of this endangered species. The Project will result in minor vegetative clearing and management of ~0.06 acres. According to VFWD guidance, the proposed clearing is minimal in nature and does not trigger additional conservation measures.

The Project is not in an area that potentially provides summer roosting habitat for Indiana bat, there are no old or abandoned buildings potentially providing roosting habitat for little brown bat proposed for demolition, and there are no known bat hibernacula or maternity roosts within 1 mile of the Project site. The Project will have no adverse impact on RTE animal species.

2. RTE Plant Species

There are no known records or occurrences of RTE plant species at the site. The Project array is located in an agricultural corn field and VFWD botanist indicated that a rare plant survey would not be required for this area (Everett Marshall, personal communication 9/18/2023). A rare plant survey was conducted for the area of the proposed access road, which is naturally vegetated. The inventory was conducted by botanist Michael Lew-Smith on October 5, 2023. No uncommon or RTE plant species

were documented during that survey. The RTE plant survey species list is attached. The Project will have no adverse impact on RTE plant species.

X. References

- Argentine, Cindy Corlett. Vermont Act 250 Handbook. Putney Press. 2008.
- Natural Resources Board. Vermont Wetland Rules. Effective February 10, 2023.
- Natural Resources Conservation Service. Soil Survey Maps.
- Ratcliffe, N.M., Stanley, R.S., Gale, M.H., Thompson, P.J., and Walsh, G.J., 2011, Bedrock geologic map of the Vermont: U. S. Geological Survey Scientific Investigations Map 3184, scale 1:100,000.
- Thompson, Elizabeth H. and Eric R. Sorenson, and Robert J. Zaino. Wetland, Woodland, and Wildland: A Guide to the Natural Communities of Vermont. The Nature Conservancy of Vermont, 2019.
- Vermont Center for Geographic Information (VCGI). EcologicHabitat_DEERWN GIS data layer. Provided by Vt. Dept. of Fish and Wildlife, release date April 1, 2011.
- Vermont Fish and Wildlife Department Regulatory Review Guidance for Protecting Northern Long-eared Bats and Their Habitats. February 201

Appendix 1

Plant Species List

Rare, Threatened and Endangered Plant Inventory

Report Date: 3/6/2026

Project Name Savage Solar

Botanist Michael Lew-Smith

Survey Date 10/5/2023

Description Road shoulder and disturbed shrubby area along proposed access road.

Plant List

**note: plants with no listed S-Ranks are considered common in Vermont.*

Plant Name	Common Name	S-Rank*	T/E	Plant Family
<i>Rhus typhina</i>	staghorn sumac			Anacardiaceae
<i>Toxicodendron rydbergii</i>	creeping poison-ivy			Anacardiaceae
<i>Daucus carota</i>	Queen Anne's lace			Apiaceae
<i>Achillea millefolium</i>	yarrow			Asteraceae
<i>Ambrosia artemisiifolia</i>	common ragweed			Asteraceae
<i>Anaphalis margaritacea</i>	pearly everlasting			Asteraceae
<i>Erigeron canadensis</i>	horseweed			Asteraceae
<i>Erigeron strigosus</i>	daisy fleabane			Asteraceae
<i>Rudbeckia hirta</i>	black-eyed Susan			Asteraceae
<i>Solidago gigantea</i>	large goldenrod			Asteraceae
<i>Solidago juncea</i>	early goldenrod			Asteraceae
<i>Symphyotrichum lateriflorum</i>	calico aster			Asteraceae
<i>Tussilago farfara</i>	colt's-foot			Asteraceae
<i>Carpinus caroliniana</i>	hornbeam			Betulaceae
<i>Alliaria petiolata</i>	garlic mustard			Brassicaceae
<i>Turritis glabra</i>	tower mustard			Brassicaceae
<i>Lonicera tatarica</i>	Tartarian honeysuckle			Caprifoliaceae
<i>Calystegia sepium</i>	hedge bindweed			Convolvulaceae
<i>Echinocystis lobata</i>	wild cucumber			Cucurbitaceae
<i>Dryopteris intermedia</i>	intermediate woodfern			Dryopteridaceae
<i>Equisetum hyemale</i>	scouring-rush			Equisetaceae
<i>Equisetum sylvaticum</i>	woodland horsetail			Equisetaceae
<i>Apios americana</i>	ground-nut			Fabaceae
<i>Lotus corniculatus</i>	bird's-foot trefoil			Fabaceae
<i>Medicago sativa</i>	alfalfa			Fabaceae
<i>Trifolium pratense</i>	red clover			Fabaceae
<i>Trifolium repens</i>	white clover			Fabaceae
<i>Vicia cracca</i>	cow vetch			Fabaceae
<i>Quercus rubra</i>	red oak			Fagaceae
<i>Abutilon theophrasti</i>	velvet leaf			Malvaceae



Rare, Threatened and Endangered Plant Inventory

Report Date: 3/6/2026

Plant Name	Common Name	S-Rank*	T/E	Plant Family
<i>Fraxinus americana</i>	white ash			Oleaceae
<i>Oenothera biennis</i>	common evening primrose			Onagraceae
<i>Matteuccia struthiopteris</i>	ostrich fern			Onocleaceae
<i>Oxalis stricta</i>	tall yellow wood-sorrel			Oxalidaceae
<i>Phytolacca americana</i>	pokeweed			Phytolaccaceae
<i>Pinus strobus</i>	white pine			Pinaceae
<i>Plantago lanceolata</i>	buckhorn plantain			Plantaginaceae
<i>Agrostis gigantea</i>	red-top			Poaceae
<i>Bromus inermis</i>	Hungarian brome			Poaceae
<i>Dactylis glomerata</i>	orchard grass			Poaceae
<i>Dichanthelium clandestinum</i>	deer-tongue			Poaceae
<i>Digitaria ischaemum</i>	smooth crabgrass			Poaceae
<i>Panicum capillare</i>	old witch-grass			Poaceae
<i>Schedonorus arundinaceus</i>	tall fescue			Poaceae
<i>Setaria pumila</i>	yellow foxtail			Poaceae
<i>Sporobolus vaginiflorus</i>	sheathed dropseed			Poaceae
<i>Fallopia convolvulus</i>	black bindweed			Polygonaceae
<i>Fallopia japonica</i>	Japanese knotweed			Polygonaceae
<i>Persicaria pensylvanica</i>	Pennsylvania smartweed			Polygonaceae
<i>Persicaria punctata</i>	dotted smartweed			Polygonaceae
<i>Lysimachia ciliata</i>	fringed loosestrife			Primulaceae
<i>Lysimachia nummularia</i>	moneywort			Primulaceae
<i>Frangula alnus</i>	glossy buckthorn			Rhamnaceae
<i>Rhamnus cathartica</i>	buckthorn			Rhamnaceae
<i>Geum canadense</i>	white avens			Rosaceae
<i>Prunus serotina</i>	black cherry			Rosaceae
<i>Prunus virginiana</i>	choke cherry			Rosaceae
<i>Rubus idaeus</i>	red raspberry			Rosaceae
<i>Rubus occidentalis</i>	black raspberry			Rosaceae
<i>Populus deltoides</i>	eastern cottonwood			Salicaceae
<i>Ulmus americana</i>	American elm			Ulmaceae
<i>Parthenocissus quinquefolia</i>	woodbine			Vitaceae
<i>Vitis riparia</i>	riverbank grape			Vitaceae