

Exhibit AHS-INFO-ANR-1

RTE Transplant and Monitoring Report

Apple Hill Solar Rare Plant Transplantation and Monitoring Report

I. Introduction

The Apple Hill Solar Project (Project) is a proposed 2.0 MW solar electric generation facility at 1133 Willow Road in Bennington, Vermont. An application for a Certificate of Public Good was submitted in 2014. Arrowwood Environmental (AE) conducted an environmental review for the project in 2014 and submitted a report documenting the findings of that review (AE, 2014). At that time, multiple species of uncommon and rare plant species were documented on the site, including arrow-leaved aster (*Symphotrichum urophyllum*) and nimblewill muhly (*Muhlenbergia schreberii*). Site redesign resulted in the avoidance of many of the uncommon and rare plant occurrences. As part of the application process the Project obtained a Memorandum of Understanding (MOU) with the Vermont Agency of Natural Resources (MOU) which, among other things, outlined the establishment of a Conservation Area and included the transplantation of nimblewill muhly plants that were proposed to be impacted by the Project. At that time, no individuals of arrow-leaved aster were documented in the area of disturbance.

AE conducted an update to the rare plant species inventory for the Project in the fall of 2017. A species list compiled during that and previous inventories as well as inventory maps are included in Appendix 4. During that inventory, additional populations of arrow-leaved aster were documented in the Project area, including some that occur within the proposed disturbance area.

The current report is intended to document the transplantation and monitoring of nimblewill muhly (Section II) and the transplantation of arrow-leaved aster (Section III). This report also includes four appendices: Appendix 1 presents muhly transplant data; Appendix 2 consists of the nimblewill muhly photolog; Appendix 3 consists of the arrow-leaved aster photo log; and Appendix 4 consists of the plant species list and plant inventory maps.

II. Nimblewill Muhly Transplantation and Monitoring

Populations

Four populations of nimblewill muhly were documented on the Project site and are shown In Figure 1. Site A consists of an old logging road with hundreds of plants scattered in loose mats along the road. Site B is also an old logging road which widens near the northern end. This area contains dense mats of nimblewill muhly likely containing many hundreds of plants. Both of these populations occur in mixed sun and shade conditions growing in slightly compacted soil. The plants appear to be vigorous and in good health with many showing signs of reproduction. Site C consists of 29 stems in two separate clumps (genets) in the shade beneath a canopy of buckthorn and northern hardwoods. Site D consists of a woods-edge in partial sun and contains two clumps with 30 stems. Plants from Sites C and D appeared to be less vigorous and showing only minor signs of reproduction.

Transplanting

Transplanting of nimblewill muhly occurred on September 23-24 and October 7, 2015 into 5 plots in the Conservation Area as shown In Figure 1. These plots are numbered 4-8 (plots 1-3 are located in the Chelsea Hill Solar Conservation Area). All of the plants from Site C were transplanted. As outlined in the MOU with ANR, the nimblewill muhly plants at Site D were not transplanted, but were flagged off with caution tape. The nimblewill muhly plants at Site A were partially in the Conservation Area. Therefore only plants found in the northern third of that area were transplanted. As mentioned above, Site B contained many hundreds of plants. Since it was not feasible to transplant all of these plants, only a portion (approximately 10%) of this population was transplanted.

The five transplant plots were established within the Conservation Area. Each plot measures 1mX1m and is oriented on a north-south axis. Plot corners were marked with either wooden grade-stakes or with survey whiskers driven into the ground. Flagging was also hung in woody vegetation above each plot. The transplant plots were prepared by removing all of the existing sod and turning the soil to create a bed for planting. Since the nimblewill muhly plants on site occurred in shaded and partial shaded conditions, plots were established in a range of shaded to full sun conditions.

Transplanting occurred by digging up the nimblewill muhly plants and obtaining as much soil and root mass as possible. These “sod mats” were transported to the transplant plots in a wheelbarrow or buckets. The sod mats were planted into the transplant plots and watered at the time of transplanting. Watering occurred once/week for a period of two weeks. After that time, rain events precluded the need for further watering.

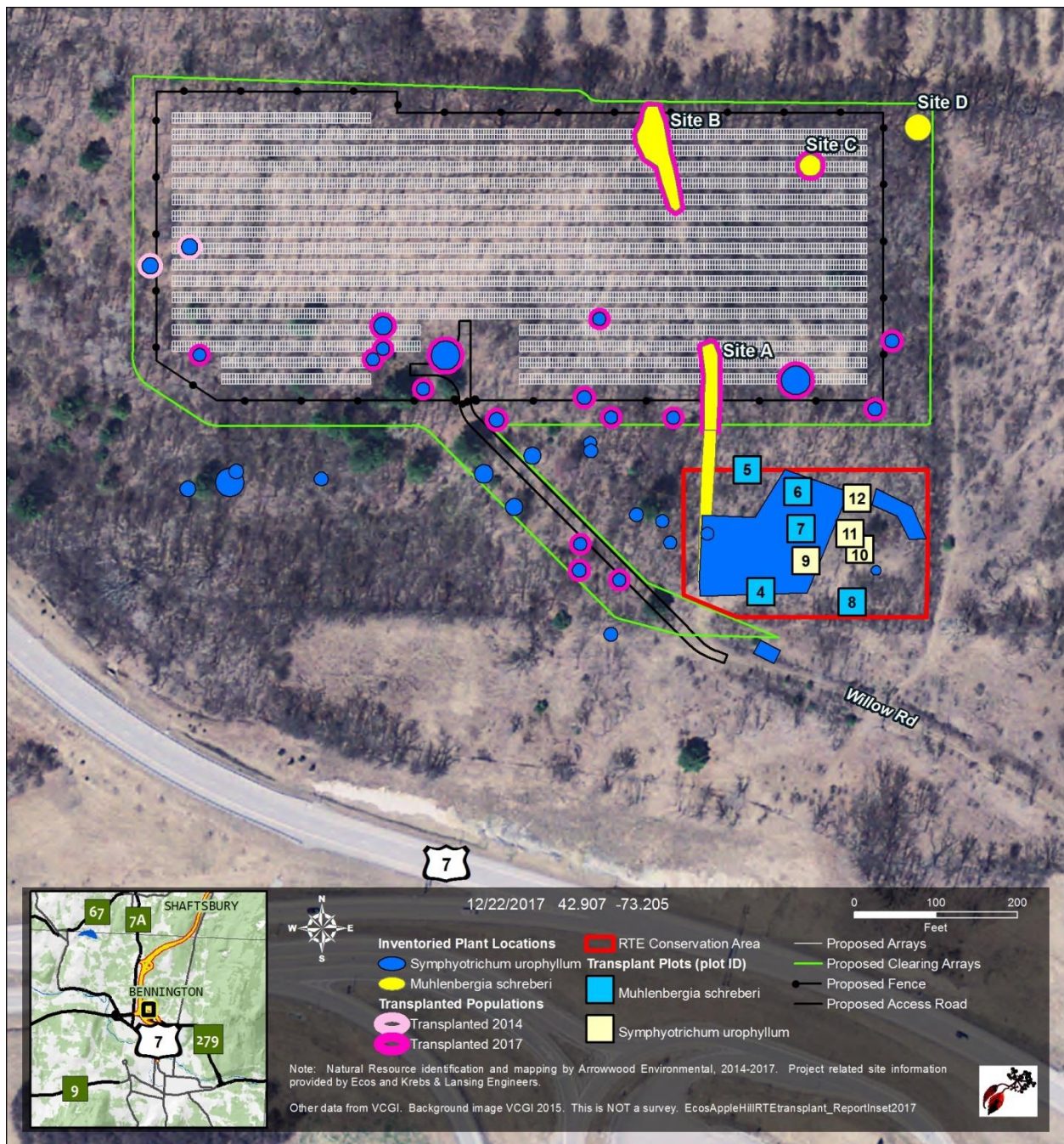


Figure 1. Map of rare plant populations and transplant plots

Monitoring

Monitoring of the nimblewill muhly transplant plots has occurred once per year since transplantation. Monitoring consists of documenting the percent cover of muhly plants as well as all other species that become established in the plots. Notes on the health, vigor and evidence of reproduction of the muhly plants are also taken. During the 2017 monitoring event, the plots were weeded to decrease

competition from other species. All monitoring data is included in Appendix 1. Appendix 2 consists of a photo log of the transplant plots.

Table 1 summarizes the nimblewill muhly transplant data. Since stem counts of this species are difficult, the main metric used for determining success of the transplants is percent cover. Additional information on plant health is also noted.

Table 1. Summary of Transplant Data for Nimblewill Muhly

Plot#	2015 % Cover	2016 % Cover	2017 % Cover	Notes
4	75%	50%	80%	Plot in sun. Plants appear healthy and exhibit vigorous growth, most flowering/fruited in 2017.
5	85%	65%	70%	Plot in sun. Plants appear healthy and exhibit vigorous growth, most flowering/fruited in 2017.
6	90%	50%	25%	Plot in partial shade, plants appear moderately healthy.
7	70%	30%	15%	Plot in shade; overall plant health not very vigorous; Appx 2/3 of plants reproducing in 2017.
8	80%	65%	8-10%	Deer trail established through plot, plants likely trampled; bare soils present.

As can be seen from this table, success of the transplant plots has been mixed. After a decline in 2016, the plants in Plots 4 and 5 have recovered well and appear to be vigorous and reproducing. The decline in 2015 is likely due to transplant shock; it may also be attributable to the fact that both of these plots are located in nearly full sun conditions, while the plant originated from partial shaded conditions. Plots 6 and 7, both in partial shaded conditions, have exhibited a significant decrease in percent cover, though the plants that remain are still showing signs of reproduction. As noted in the Table, a deer trail was established through Plot 8 in 2017 which is likely responsible for the significant decrease in nimblewill muhly cover in that plot.

Transplant plots will continue to be monitored for a period of three years post-construction to comply with the MOU.

III. Arrow-leaved Aster Transplantation

As noted above, the initial rare plant inventory of the site was conducted in 2014. An updated rare plant inventory was conducted in the fall of 2017 to comply with ANR guidelines on the length of time that inventories are valid. A compiled species list is included in Appendix 4. During the updated inventory in

2017, numerous additional locations of arrow-leaved aster were documented as shown in Figure 1. Due to permitting and potential construction timing constraints, Apple Hill Solar, LLC determined that transplanting species in late winter/early spring before construction would not be feasible and should commence in the late fall of 2017. During the rare plant inventory, locations of arrow-leaved aster were recorded with GPS and a wire-stake flag was placed at the location of each aster individual. The number of individuals at each location is indicated in Figure 1.

Only individuals that were likely to be directly impacted by the proposed Project were targeted for transplantation. Figure 1 shows which locations were transplanted on November 28, 2017. (Information on the plants transplanted in 2014 were presented in the Chelsea Solar Project report from 11/28/2017). At each location, the arrow-leaved aster plant was dug up with accompanying soil and transported to the transplant plots in buckets. Four new transplant plots (Numbers 9-12) were established using the same method outlined in Section II above. Aster plants were planted into the newly turned soil and watered at the time of transplanting. Plants included both basal rosettes and individuals that had flowered in 2017.

Table 2 shows the number of basal rosettes and flowering plants transplanted into each plot. A photo of each plot immediately after transplantation is shown in Appendix 3.

Table 2. 2017 Arrow-leaved Aster Transplant Summary Data

Plot	# of Rosettes	# of Flowering Individuals	Total Plants
9	24	8	32
10	36	9	45
11	25	7	32
12	14	7	21
13	9	0	9

The transplant plots will be monitored once per year for a period of three years post-construction to comply with the MOU with ANR.

Appendix 1:

Nimblewill Muhly Transplant Plot Data

2015		2016		2017	
Name: Michael Lew-Smith	Date	Plot ID	Date	Plot ID	
Transplanted Species: <i>Muhlenbergia schreberii</i>	10/7/15	4	9/13/16	4	
	Photo #	Total % Cover	Photo #	Total % Cover	
	394	80%	975	85%	
Plant Species	% Cover Code	% Cover	% Cover Code	% Cover	
<i>Muhlenbergia schreberii</i>	5	51-75%	4	26-50%	P
<i>Taraxicum officinale</i>	0	<1%	1	1-5%	L
<i>Euthamia graminifolia</i>	0	<1%			O
<i>Symphotrichum lateriflorum</i>	0	<1%	3	11-25%	T
<i>Trifolium repens</i>	0	<1%	0	<1%	
<i>Ajuga repens</i>	0	<1%			W
<i>Fragaria sp.</i>	0	<1%	1	1-5%	E
<i>Solidago gigantea</i>			2	6-10%	E
<i>Solidago rugosa</i>			1	1-5%	D
<i>Thymus pulegioides</i>			1	1-5%	E
<i>Galium aparine</i>			1	1-5%	D
<i>Rosa sp.</i>			1	1-5%	
<i>Spiraea alba</i>			2	6-10%	
<i>Parthenocissus quinquefolia</i>			1	1-5%	
<i>Verbascum thapsis</i>					
<i>Clinopodium vulgare</i>					
<i>Oxalis acetosella</i>					1
<i>Prunella vulagris</i>					
<i>Daucus carota</i>					0
<i>Agrostis capillaris</i>					2
<i>Anthoxanthum odoratum</i>					1
Comments on Transplanted Species	75% cover of Muhl schr		50% cover of Muhl schr		80% cover of Muhl schr
	Plants are senescing. Some die-back.		Plants have recovered from transplant shock fairly well. Exhibiting vigorous growth. Nearly all are flowering		Plants look healthy and show vigorous growth. Most flowering.
Environmental Comments	Transplanted on 9/23/15. Plot in full sun, plants taken from partial sun/shade.		Plot well vegetated, small amount of bare soil.		Very dense weedy cover pre-weeding. Some species intertwined with Muhlshr and not pulled

2015			2016		2017		
Name: Michael Lew-Smith	Date	Plot ID	Date	Plot ID		Date	Plot ID
Transplanted Species: <i>Muhlenbergia schreberii</i>	10/7/15	5	9/13/16	5		9/7/17	5
	Photo #	Total % Cover	Photo #	Total % Cover		Photo #	Total % Cover
	397	90%	979	90%		1535-6	80%
Plant Species	% Cover Code	% Cover	% Cover Code	% Cover	% Cover Code	% Cover	
<i>Muhlenbergia schreberii</i>	6	76-100%	5	51-75%	P	5	51-75%
<i>Taraxicum officinale</i>	0	<1%			L		
<i>Galium mollugo</i>	0	<1%	0	<1%	O		
<i>Symphotrichum lateriflorum</i>	0	<1%	1	1-5%	T		
<i>Juncus tenuis</i>	1	1-5%	2	6-10%	W	2	6-10%
<i>Prunella vulgaris</i>	0	<1%					
<i>Solidago gigantea</i>			2	6-10%	E		
<i>Clinopodium vulgare</i>			1	1-5%	E		
<i>Pastinaca sativa</i>			1	1-5%	D		
<i>Cornus racemosa</i>			0	<1%	E		
<i>Thymus pulegioides</i>			1	1-5%	D		
<i>Brassica sp.</i>			0	<1%			
<i>Oxalis stricta</i>			0	<1%			
<i>Hypericum cf perforatum</i>			1	1-5%			
<i>Agrostis capillaris</i>			2	6-10%		2	6-10%
<i>Anthoxanthum odoratum</i>			2	6-10%			
<i>Fectuca sp.</i>			2	6-10%			
<i>Carex cf rosea</i>			2	6-10%		2	6-10%
Comments on Transplanted Species	85% cover of Muhl schr		65% cover Muhl schr			70% cover of Muhlschr	
	Some plants senescing, some die-back compared to untransplanted plants.		Comprises most of cover in plot. Plants look healthy and vigorous. Most are flowering		Vigorous growth, most plants flowering		
Environmental Comments	Transplanted on 9/24/15. Plot shallow to bedrock.		Single Pastinaca plant pulled from plot. Plot in sun. Woody shrubs in vicinity, but not shading plot.		Some graminoids intermixed with Muhlschr, difficult to pull.		

2015			2016		2017		
Name: Michael Lew-Smith	Date	Plot ID	Date	Plot ID		Date	Plot ID
Transplanted Species: <i>Muhlenbergia schreberii</i>	10/7/15	6	9/13/16	6		9/7/17	6
	Photo #	Total % Cover	Photo #	Total % Cover		Photo #	Total % Cover
	395	90%	977	70%		1531-2	26%
Plant Species	% Cover Code	% Cover	% Cover Code	% Cover		% Cover Code	% Cover
<i>Muhlenbergia schreberii</i>	6	76-100%	5	51-75%	P	3	11-25%
<i>Symphytrochium laterflorum</i>			1	1-5%	L		
<i>Solidago rugosa</i>			2	6-10%	O		
<i>Taraxicum officinale</i>			2	6-10%	T		
<i>Fragaria sp.</i>			0	<1%			
<i>Ajuga reptans</i>			1	1-5%	W		
<i>Clinopodium vulgare</i>			0	<1%	E		
<i>Brassica sp.</i>			1	1-5%	E		
<i>Juncus tenuis</i>			2	6-10%	D		
<i>Poa compressa</i>			0	<1%	E		
<i>Galium aparine</i>			1	1-5%	D		
<i>Agrostis capillaris</i>						1	1-5%
<i>Carex sp.</i>						0	<1%
Comments on Transplanted Species	90% cover of Muhl schr		50% cover of Mulh schr			25% cover Muhl schr	
	Dense planting. Plants look healthy		Plants look healthy, most are flowering			Plants look moderately healthy	
Environmental Comments	Transplanted on 9/24/15 and 10/7/15. Plot in partial shade/sun.		Duff layer of Crataegus leaves, shaded plot.			Total weedy species 25% before weeding; bare soil present post-weeding	

2015			2016		2017		
Name: Michael Lew-Smith	Date	Plot ID	Date	Plot ID		Date	Plot ID
Transplanted Species: <i>Muhlenbergia schreberii</i>	10/7/15	7	9/13/16	7		9/7/17	7
	Photo #	Total % Cover	Photo #	Total % Cover		Photo #	Total % Cover
	396	70%	978	40%		1533-4	20%
<i>Plant Species</i>	% Cover Code	% Cover	% Cover Code	% Cover		% Cover Code	% Cover
<i>Muhlenbergia schreberii</i>	5	51-75%	3	11-25%	P	3	11-25%
<i>Carex cf gracillima</i>	1	1-5%	2	6-10%	L		
<i>Prunella vulgaris</i>	0	<1%	NA		O		
<i>Symphyotrichum lateriflorum</i>	0	<1%	1	1-5%	T		
<i>Anthoxanthum odoratum</i>			2	6-10%			
<i>Clinopodium vulgare</i>			1	1-5%	W		
<i>Fragaria sp.</i>			0	<1%	E		
<i>Juncus tenuis</i>			1	1-5%	E	1	1-5%
<i>Ranunculus sp.</i>			1	1-5%	D		
<i>cf Dactlys glomerata</i>					E	1	1-5%
					D		
Comments on Transplanted Species	70% cover of Muhl schr		30% cover Muhl schr			15% cover Muhl schr	
			Plants healthy but not very vigorous. Most are flowering.			Moderate growth/health of plants. Appx 2/3 flowering	
Environmental Comments	Transplanted on 10/7/15. Plot in partial shade.		60% bare soil, 10% duff layer of leaves. Overall veg growth is not very vigorous in this area. Shaded beneath elm, dogwood and oak.			Appx 35% bare soil. Appx 65% cover pre-weeding	

2015			2016		2017		
Name: Michael Lew-Smith	Date	Plot ID	Date	Plot ID		Date	Plot ID
Transplanted Species: <i>Muhlenbergia schreberii</i>	10/7/15	8	9/13/16	8		9/7/17	8
	Photo #	Total % Cover	Photo #	Total % Cover		Photo #	Total % Cover
	393	80%	976	85%		1529-30	20%
<i>Plant Species</i>	% Cover Code	% Cover	% Cover Code	% Cover	% Cover Code	% Cover	
<i>Muhlenbergia schreberii</i>	6	76-100%	5	51-75%	P	2	6-10%
<i>Juncus tenuis</i>	1	1-5%	3	11-25%	L	2	6-10%
<i>Pastinaca sativa</i>			2	6-10%	O		
<i>Euthamia graminifolia</i>			1	1-5%	T		
<i>Symphyotrichum lateriflorum</i>			1	1-5%			
<i>Taraxicum officinale</i>			0	<1%	W		
<i>Trifolium pratense</i>			0	<1%	E		
<i>Solidago patula</i>			0	<1%	E	1	1-5%
<i>Clinopodium vulgare</i>			0	<1%	D		
<i>Anthoxanthum odoratum</i>			1	1-5%	E		
					D		
Comoments on Transplanted Species	80% cover Muhl schr		65% cover of Muhl schr			8-10% cover of Muhl schr	
	8 large clumps of sod transplanted.		Plants are healthy, nearly all flowering. Cover in plot mostly Muhl schr and Juncus.			Sparse cover of Muhl schr; no plants flowering; impacted by deer trail	
Environmental Comments	Transplanted on 10/7/15. Plot in shade.		Single plant of Pastinaca pulled from plot. Several patches of bare ground but mostly well vegetated. 3 rosettes of Solpat have colonized plot.			Deer trail through plot, some subsequent erosion has occurred; bare soils appx 30%	

Appendix 2:

Nimblewill Muhly
Transplant Plot Photo Log



T4 Nimblewill Muhly Transplant Plot 10/7/15 Looking North



T4 Nimblewill Muhly Transplant Plot 9/13/16 Looking North



T4 Nimblewill Muhly Transplant Plot 9/7/17 Looking North



T5 Nimblewill Muhly Transplant Plot 10/7/15 Looking North



T5 Nimblewill Muhly Transplant Plot 9/13/16 Looking North



T5 Nimblewill Muhly Transplant Plot 9/7/17 Looking North

PHOTO MISSING

T6 Nimblewill Muhly Transplant Plot 10/7/15 Looking North



T6 Nimblewill Muhly Transplant Plot 9/13/16 Looking North



T6 Nimblewill Muhly Transplant Plot 9/7/17 Looking North



T7 Nimblewill Muhly Transplant Plot 10/7/15 Looking North



T7 Nimblewill Muhly Transplant Plot 9/13/16 Looking North



T7 Nimblewill Muhly Transplant Plot 9/7/17 Looking North



T8 Nimblewill Muhly Transplant Plot 10/7/15 Looking North



T8 Nimblewill Muhly Transplant Plot 9/13/16 Looking North



T8 Nimblewill Muhly Transplant Plot 9/7/17 Looking North

Appendix 3:

Arrow-leaved Aster
Transplant Plot Photo Log



T9 Arrow-leaved Aster Transplant Plot 11/28/17 Looking North



T10 Arrow-leaved Aster Transplant Plot 11/28/17 Looking North



T11 Arrow-leaved Aster Transplant Plot 11/28/17 Looking North



T12 Arrow-leaved Aster Transplant Plot 11/28/17 Looking North



T13 Arrow-leaved Aster Transplant Plot 11/28/17 Looking North

Appendix 4:

**Species List
and
Inventory Maps**



Rare, Threatened and Endangered Plant Inventory

Report Date: 12/21/2017

Project Name Chelsea Solar

Botanist Michael Lew-Smith

Survey Date 10/11/2017

Description Species list includes both Chelsea Solar and adjacent Apple Hill Solar Projects. Inventory in August 2014 by Matt Peters was updated in October 2017 by Michael Lew-Smith. The following list includes species documented in both inventories.

Plant List

Plant Name	Common Name	S-Rank	T/E	Plant Family
<i>Daucus carota</i>	Queen Anne's lace			Apiaceae
<i>Pastinaca sativa</i>	parsnip			Apiaceae
<i>Zizia aurea</i>	golden Alexanders			Apiaceae
<i>Apocynum cannabinum</i>	Indian hemp			Apocynaceae
<i>Apocynum sp.</i>				Apocynaceae
<i>Asplenium platyneuron</i>	ebony spleenwort			Aspleniaceae
<i>Ageratina altissima</i>	white snakeroot			Asteraceae
<i>Anaphalis margaritacea</i>	pearly everlasting			Asteraceae
<i>Arctium minus</i>	lesser burdock			Asteraceae
<i>Cirsium arvense</i>	Canada thistle			Asteraceae
<i>Doellingeria umbellata</i>	tall white aster			Asteraceae
<i>Erechtites hieraciifolius</i>	pilewort			Asteraceae
<i>Eurybia divaricata</i>	white wood aster			Asteraceae
<i>Eurybia macrophylla</i>	large-leaved aster			Asteraceae
<i>Packera obovata</i>	running ragwort			Asteraceae
<i>Rudbeckia hirta</i>	black-eyed Susan			Asteraceae
<i>Solidago altissima</i>	tall goldenrod			Asteraceae
<i>Solidago bicolor</i>	silver rod			Asteraceae
<i>Solidago gigantea</i>	large goldenrod			Asteraceae
<i>Solidago juncea</i>	early goldenrod			Asteraceae
<i>Solidago patula</i>	swamp goldenrod	S3		Asteraceae
<i>Solidago puberula</i>	downy goldenrod			Asteraceae
<i>Solidago rugosa</i>	rough-leaved goldenrod			Asteraceae
<i>Symphyotrichum cordifolium</i>	heart-leaved aster			Asteraceae
<i>Symphyotrichum lanceolatum</i>	lance-leaved aster			Asteraceae
<i>Symphyotrichum novae-angliae</i>	New England aster			Asteraceae
<i>Symphyotrichum pilosum</i>	white aster			Asteraceae
! <i>Symphyotrichum urophyllum</i>	arrow-leaved aster	S1		Asteraceae
<i>Athyrium filix-femina</i>	lady fern			Athyriaceae
<i>Berberis thunbergii</i>	Japanese barberry			Berberidaceae



Rare, Threatened and Endangered Plant Inventory

Report Date: 12/21/2017

Plant Name	Common Name	S-Rank	T/E	Plant Family
<i>Berberis vulgaris</i>	common barberry			Berberidaceae
<i>Betula papyrifera</i>	paper birch			Betulaceae
<i>Carpinus caroliniana</i>	hornbeam			Betulaceae
<i>Ostrya virginiana</i>	hop-hornbeam			Betulaceae
<i>Hackelia virginiana</i>	Virginia stickseed			Boraginaceae
<i>Alliaria petiolata</i>	garlic mustard			Brassicaceae
<i>Lobelia inflata</i>	Indian tobacco			Campanulaceae
<i>Lonicera morrowii</i>	Morrow's honeysuckle			Caprifoliaceae
<i>Valeriana officinalis</i>	garden heliotrope			Caprifoliaceae
<i>Dianthus armeria</i>	deptford pink			Caryophyllaceae
<i>Celastrus orbiculatus</i>	Oriental bittersweet			Celastraceae
<i>Cornus alternifolia</i>	alternate-leaved dogwood			Cornaceae
<i>Cornus racemosa</i>	gray dogwood			Cornaceae
<i>Juniperus communis</i>	common juniper			Cupressaceae
<i>Carex flava</i>	yellow sedge			Cyperaceae
<i>Carex gracillima</i>	slender sedge			Cyperaceae
<i>Carex granularis</i>	meadow sedge			Cyperaceae
<i>Carex laxiculmis</i>	spreading sedge	S3		Cyperaceae
<i>Carex laxiflora</i>	loose-flowered sedge			Cyperaceae
<i>Carex lurida</i>	sallow sedge			Cyperaceae
<i>Carex cf pensylvanica</i>	Pennsylvania sedge			Cyperaceae
<i>Carex radiata</i>	stellate sedge			Cyperaceae
<i>Carex swanii</i>	swan's sedge			Cyperaceae
<i>Carex tribuloides</i>	blunt broom sedge			Cyperaceae
<i>Carex virescens</i>	greening-up sedge			Cyperaceae
<i>Carex vulpinoidea</i>	fox sedge			Cyperaceae
<i>Scirpus atrovirens</i>	dark bulrush			Cyperaceae
<i>Scirpus pendulus</i>	reddish bulrush			Cyperaceae
<i>Dennstaedtia punctilobula</i>	hay-scented fern			Dennstaedtiaceae
<i>Dryopteris intermedia</i>	intermediate woodfern			Dryopteridaceae
<i>Dryopteris marginalis</i>	marginal woodfern			Dryopteridaceae
<i>Polystichum acrostichoides</i>	Christmas fern			Dryopteridaceae
<i>Polystichum braunii</i>	Braun's holly fern			Dryopteridaceae
<i>Equisetum arvense</i>	field horsetail			Equisetaceae
<i>Lyonia ligustrina</i>	maleberry			Ericaceae
<i>Lotus corniculatus</i>	bird's-foot trefoil			Fabaceae
<i>Robinia pseudo-acacia</i>	common locust			Fabaceae

Rare, Threatened and Endangered Plant Inventory

Report Date: 12/21/2017

Plant Name	Common Name	S-Rank	T/E	Plant Family
<i>Trifolium pratense</i>	red clover			Fabaceae
<i>Trifolium repens</i>	white clover			Fabaceae
<i>Fagus grandifolia</i>	American beech			Fagaceae
<i>Quercus macrocarpa</i>	bur oak			Fagaceae
<i>Quercus rubra</i>	red oak			Fagaceae
<i>Hypericum sp.</i>				Hypericaceae
<i>Carya cordiformis</i>	bitternut hickory			Juglandaceae
<i>Juglans cinerea</i>	butternut			Juglandaceae
<i>Juncus dudleyi</i>	Dudley's rush			Juncaceae
<i>Juncus tenuis</i>	path rush			Juncaceae
<i>Clinopodium vulgare</i>	wild basil			Lamiaceae
<i>Monarda fistulosa</i>	wild bergamot			Lamiaceae
<i>Origanum vulgare</i>	wild marjoram			Lamiaceae
<i>Dendrolycopodium obscurum</i>	flat-branched tree clubmoss			Lycopodiaceae
<i>Lythrum salicaria</i>	purple loosestrife			Lythraceae
<i>Tilia americana</i>	basswood			Malvaceae
<i>Fraxinus americana</i>	white ash			Oleaceae
<i>Ligustrum obtusifolium</i>	Japanese privet			Oleaceae
<i>Circaea canadensis</i>	tall enchanter's nightshade			Onagraceae
<i>Onoclea sensibilis</i>	sensitive fern			Onocleaceae
<i>Epipactis helleborine</i>	helleborine			Orchidaceae
<i>Larix decidua</i>	European larch			Pinaceae
<i>Pinus strobus</i>	white pine			Pinaceae
<i>Pinus sylvestris</i>	Scotch pine			Pinaceae
<i>Plantago lanceolata</i>	buckhorn plantain			Plantaginaceae
<i>Plantago major</i>	plantain			Plantaginaceae
<i>Platanus occidentalis</i>	sycamore			Platanaceae
<i>Agrostis gigantea</i>	red-top			Poaceae
<i>Andropogon gerardii</i>	big bluestem			Poaceae
<i>Bromus inermis</i>	Hungarian brome			Poaceae
<i>Dactylis glomerata</i>	orchard grass			Poaceae
<i>Dichanthelium acuminatum</i>	woolly panic grass			Poaceae
<i>Digitaria ischaemum</i>	smooth crabgrass			Poaceae
<i>Elymus repens</i>	witch grass			Poaceae
<i>Glyceria striata</i>	fowl manna grass			Poaceae
<i>Muhlenbergia glomerata</i>	bog muhly			Poaceae
<i>Muhlenbergia mexicana</i>	wirestem muhly			Poaceae



Rare, Threatened and Endangered Plant Inventory

Report Date: 12/21/2017

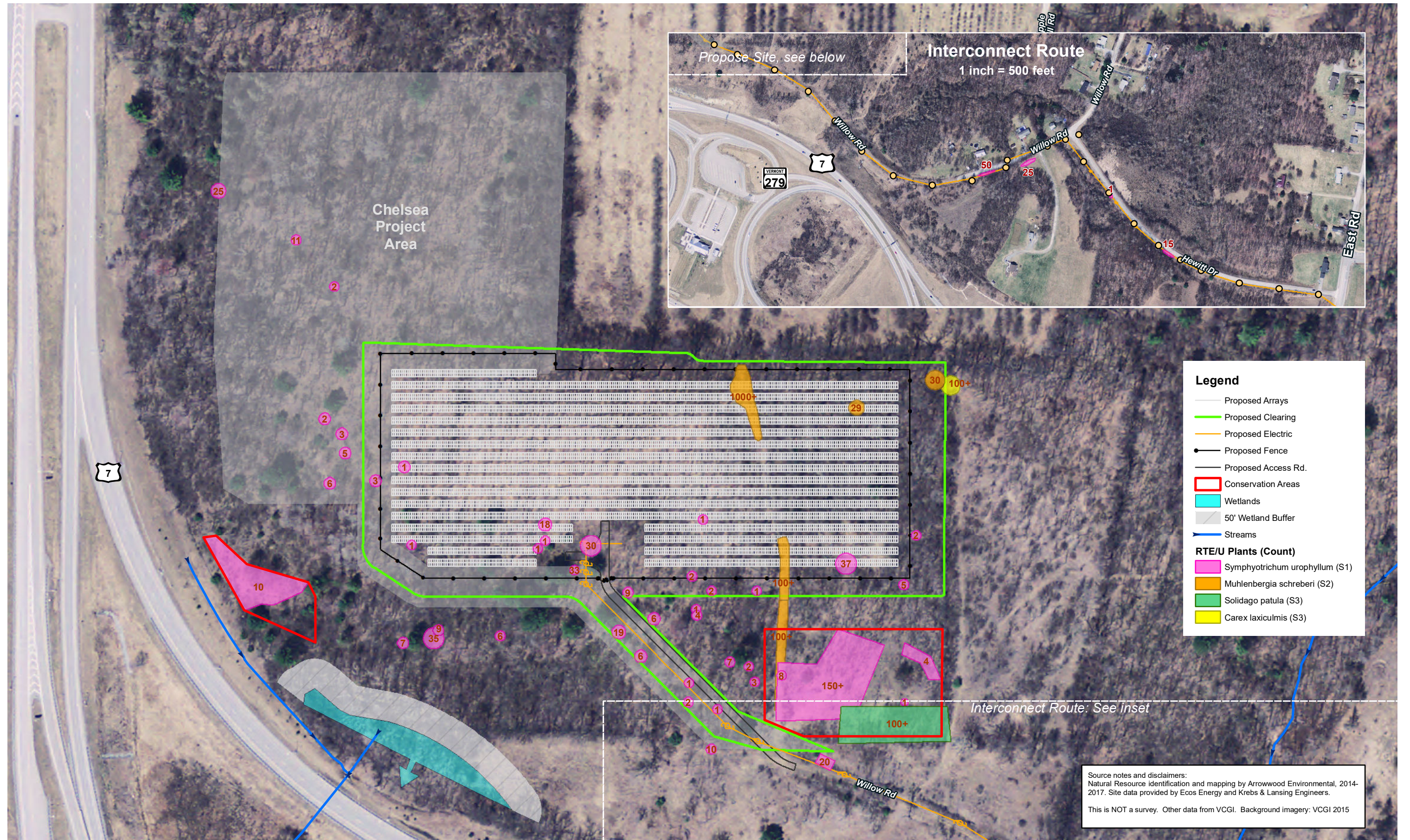
Plant Name	Common Name	S-Rank	T/E	Plant Family
! <i>Muhlenbergia schreberi</i>	nimble will	S2		Poaceae
<i>Phleum pratense</i>	Herd's grass			Poaceae
<i>Poa compressa</i>	Canada bluegrass			Poaceae
<i>Poa pratensis</i>	Kentucky bluegrass			Poaceae
<i>Schedonorus arundinaceus</i>	tall fescue			Poaceae
<i>Schizachyrium scoparium</i>	little bluestem			Poaceae
<i>Anemone virginiana</i>	thimbleweed			Ranunculaceae
<i>Clematis virginiana</i>	virgin's-bower			Ranunculaceae
<i>Frangula alnus</i>	glossy buckthorn			Rhamnaceae
<i>Rhamnus cathartica</i>	buckthorn			Rhamnaceae
<i>Agrimonia striata</i>	roadside agrimony			Rosaceae
<i>Crataegus punctata</i>	white haw			Rosaceae
<i>Crataegus sp.</i>				Rosaceae
<i>Dasiphora fruticosa</i>	shrubby cinquefoil			Rosaceae
<i>Malus pumila</i>	wild apple			Rosaceae
<i>Rosa multiflora</i>	multiflora rose			Rosaceae
<i>Rubus pubescens</i>	dwarf raspberry			Rosaceae
<i>Spiraea alba</i>	meadowsweet			Rosaceae
<i>Spiraea tomentosa</i>	steeplebush			Rosaceae
<i>Galium verum</i>	yellow bedstraw			Rubiaceae
<i>Zanthoxylum americanum</i>	prickly ash			Rutaceae
<i>Populus tremuloides</i>	quaking aspen			Salicaceae
<i>Salix bebbiana</i>	Bebb's willow			Salicaceae
<i>Salix discolor</i>	pussy willow			Salicaceae
<i>Acer platanoides</i>	Norway maple			Sapindaceae
<i>Acer rubrum</i>	red maple			Sapindaceae
<i>Acer saccharum</i>	sugar maple			Sapindaceae
<i>Verbascum thapsus</i>	common mullein			Scrophulariaceae
<i>Thelypteris palustris</i>	marsh fern			Thelypteridaceae
<i>Ulmus americana</i>	American elm			Ulmaceae
<i>Ulmus rubra</i>	slippery elm			Ulmaceae
<i>Pilea pumila</i>	clearweed			Urticaceae
<i>Viburnum dentatum</i>	arrow-wood			Viburnaceae
<i>Viburnum lentago</i>	nannyberry			Viburnaceae
<i>Viburnum opulus</i>	guelder-rose			Viburnaceae
<i>Viola sp.</i>				Violaceae
<i>Parthenocissus quinquefolia</i>	woodbine			Vitaceae



Rare, Threatened and Endangered Plant Inventory

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Plant Name	Common Name	S-Rank	T/E	Plant Family
<i>Vitis riparia</i>	riverbank grape			Vitaceae



Rare, Threatened, Endangered & Uncommon Plant Inventory Results. Pre-Mitigation Populations

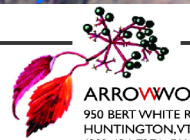
Thursday, January 11, 2018 File: Chelsea_AppleHill_RTEInventoryUpdate_PreMitigation

Prepared By: A Worthley, Arrowwood Environmental

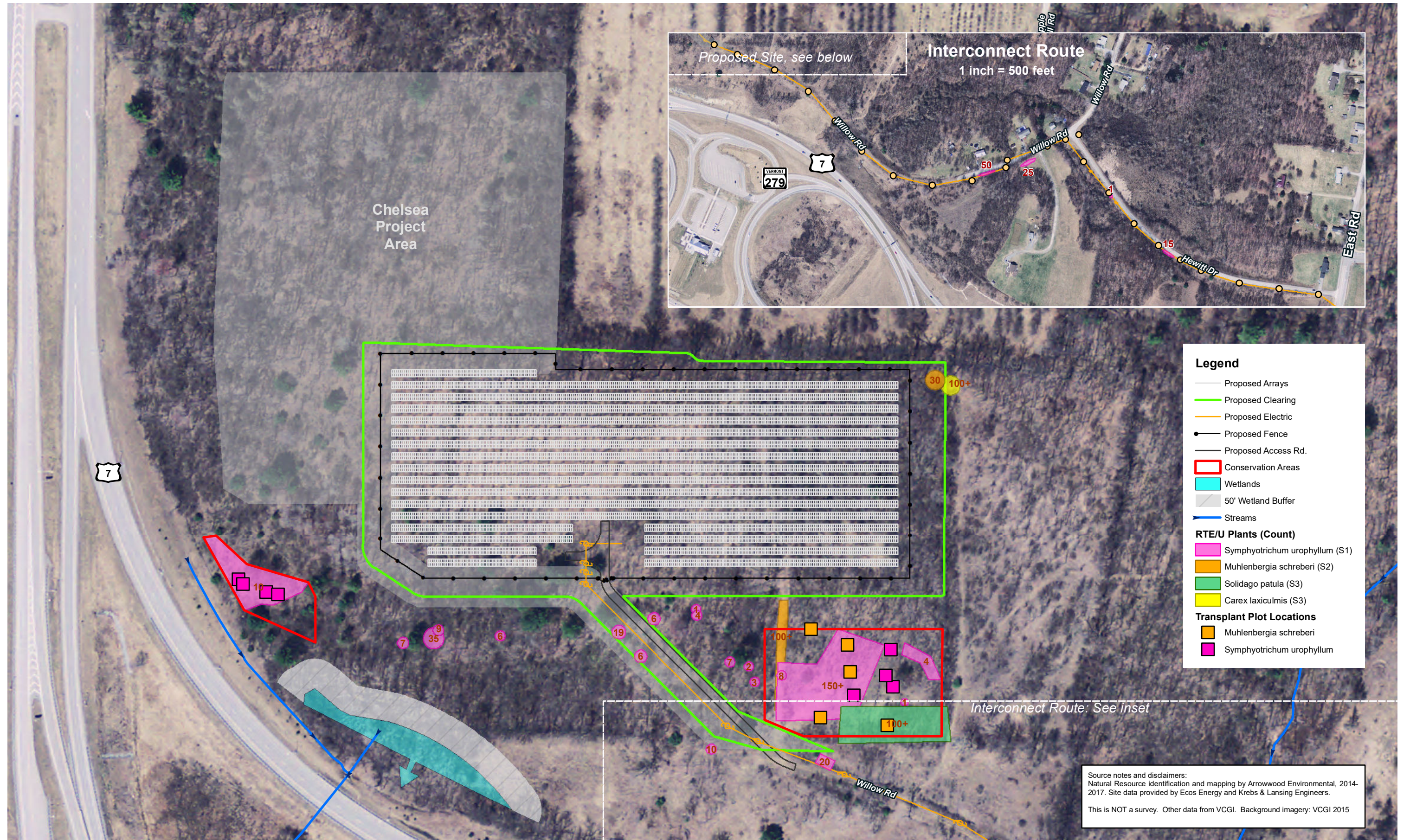
Coordinate System: NAD 83, Vt State Plane

1 inch = 150 feet

0 25 50 100 150 200 250 Feet



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Rare, Threatened, Endangered & Uncommon Plant Inventory Results. Post-Mitigation Populations

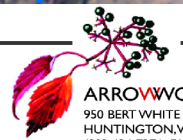
Thursday, January 11, 2018 File: Chelsea_AppleHill_RTEInventoryUpdate_PostMitigation

Prepared By: A Worthley, Arrowwood Environmental

Coordinate System: NAD 83, Vt State Plane

1 inch = 150 feet

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