

# RESRFP23-1 Smart Solar Siting Scorecard Informational Webinar

December 18, 2023

## Agenda:

- **Overview of agricultural mitigation and evaluation criteria for NYSERDA's Tier 1 program**
- **Overview of the Scorecard**
  - Introduction and Scorecard purpose
  - Agricultural lands
  - Forested lands
  - Community benefits and collaboration
- **Resources and considerations to support development of co-utilization strategies**
- **Question and answer**

# Webinar logistics

- **Attendees are muted unless allowed to speak by organizers. Attendee videos remain off.**
- **Feel free to pose questions in the Q&A box at any time. As time allows, we may address questions as the presentation proceeds, or address them during the Q&A portion at the end of the webinar**
- **Attendees' names are not visible to each other by default. However, your name will be shown with a question you submit or if you speak.**

# Overview of agricultural mitigation and evaluation criteria for NYSERDA's Tier 1 program

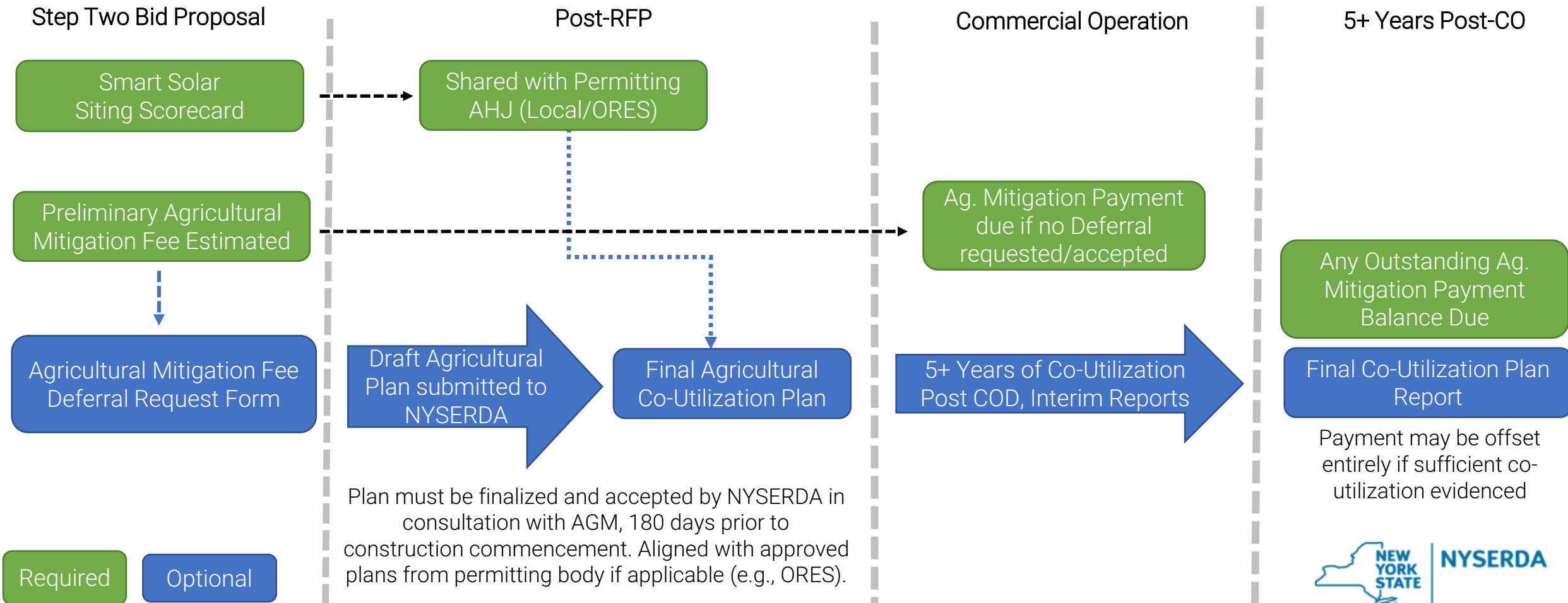
- **Renewable Energy Standard (RES): Evolution of Agricultural Evaluation Criteria (Tier 1)**
- **Smart Solar Siting Scorecard & Agricultural Mitigation Flow Chart**
- **Agricultural Co-Utilization Plan (ACUP)**

# Renewable Energy Standard (RES): Evolution of Agricultural Evaluation Criteria (Tier 1)

- > **2016** – NYSERDA awarded its first Large-Scale Solar project under the last procurement in the Renewable Portfolio standard
- > **2017** – Renewable Energy Standard procurements started under the Clean Energy Standard, resulting in 22 solar, 1 hydroelectric and 3 wind awards. This was the first year that evaluated bids in part based on their project viability, including their permitting status, preferencing projects with more developed site plans
- > **2018** – NYSERDA introduced **Site Character** evaluation criteria which favorably evaluated projects that avoided United States Department of Agriculture (USDA) Prime Soils and Prime Soils if drained
- > **2019** – NYSERDA introduced and required awarded projects claiming Site Character points or projects sited in Agricultural Districts to **adhere to [AGM's 'Guidelines for Solar Projects - Construction Mitigation for Agricultural Lands'](#)**
- > **2020** – NYSERDA signaled to renewable developers to **avoid Mineral Soil Groups 1-4** by requiring an **agricultural mitigation payment** for projects sited on 30 acres or more of MSGs 1-4
- > **2021** – **Smart Solar Siting Scorecard** (“Scorecard”) introduced
- > **2022** – **Updated Scorecard** and to be used in evaluation; **Agricultural Mitigation Payment Deferral** mechanism implemented to encourage agricultural co-utilization
- > **2023** – **Updated Scorecard** – simplified strategy lists mechanism and improved strategies.

# Smart Solar Siting Scorecard & Agricultural Mitigation Flow Chart

## Smart Solar Siting Scorecard & Agricultural Mitigation Payment Process



# Agricultural Mitigation Payment Resources

- [NYSERDA 2023 Soils Data for use in the Large-Scale Renewables and NY-Sun Programs](#)
  - MSG 1-4 shapefiles are also downloadable by REDC region are available on the [Tier-1 Solicitation Page](#)
- [Attachment G. Agricultural Mitigation Estimate Calculator Link](#)
- [Attachment H. Agricultural Mitigation Payment Deferral Request Form Link](#)

# Agricultural Mitigation Payment

## NYSERDA Agricultural Mitigation Payment Estimate Calculator

Bid Facility Name			
Total Parcel(s) Area (Acres)			
Facility Area (# of Acres) on Mineral Soil Group (MSG):		<a href="#">NYS T&amp;F 2023 MSG 1:4 Value per Acre</a>	
MSG 1		\$1,218	\$0
MSG 2		\$1,084	\$0
MSG 3		\$962	\$0
MSG 4		\$828	\$0
MSG 5:10/ Other		n/a	n/a
Sum	0.0		\$0
Facility Area Occupation Ratio (Facility Area/ Total Parcel Area)	#DIV/0!		
Estimated Agricultural Mitigation Payment (\$)		\$0	

### Instructions

1. Populate yellow highlighted cells in Column C with appropriate project information. Refer to Key Definitions at bottom of sheet for additional guidance.
2. Populate Cell C3 with the Bid Facility name.
3. Populate Cell C4 with the total area of controlled parcels and, if applicable, parcels intended to be controlled for use to construct the Bid Facility site.
4. Populate Cells C7:C11 based on the expected amount of overlap of Facility Area on MSG 1-4 and other soil types/land cover types.
5. Column E will automatically calculate.
6. Cell C15 will display the estimated Agricultural Mitigation Payment based on the estimated inputs for the Facility Area overlap with MSG 1-4

**Proposers should note** that an Agricultural Mitigation Payment will only be required if the Facility Area overlap with MSG 1-4 is equal to or greater than 30 acres.

### Key Definitions

Page 1

# Key Ag Mitigation Payment Deferral Terms

**Agricultural Co-Utilization Plan:** A plan developed by Seller and submitted to NYSERDA in accordance with the requirements of Section 6.11 of the Agreement and RESRFP23-1 that proposes a viable co-utilization of the Bid Facility site with the agricultural production of “crops, livestock, or livestock products,” as that phrase is defined by New York State Agriculture and Markets Law (AML) § 301(2) for the duration of the Contract Delivery Term.

**Eligible Co-Agricultural Expenses:** Expenses that (i) are included in an Agricultural Co-Utilization Plan that has been accepted by NYSERDA in writing, (ii) the Seller can demonstrate would not have been incurred but for the implementation of the Agricultural Co-Utilization Plan, and (iii) are incurred prior to the fifth anniversary of the Bid Facility entering Commercial Operation.

**Additional related terms and contractual components can be found in [Attachment A. RESRFP23-1 Standard Form Agreement and Exhibits](#)**



# Agricultural Co-Utilization Plan (ACUP)

## The core components of an ACUP would be:

- **Narrative Section:** description of the current type of agricultural operation and farm history of the facility area that is being proposed to incorporate agricultural co-utilization, and a description of the planned agricultural production to that will be integrated within the solar facility during the operational phase.
- **Farm Logistics Section:** description the pertinent design features (e.g., row spacing, typical equipment clearance heights, minimum turning radius tolerance, etc.) of the solar facility and any agricultural infrastructure which will be specified to accommodate the agricultural equipment and activities necessary for a viable farm operation.
- **Planting, Cultivation, and Harvest Plans; Site Plan with overlay of proposed agriculture co-use components (e.g., planting and or grazing areas, farm equipment access points, racking detail depicting the side elevation profile of the solar panels in relation to the proposed agriculture crop); Soils Report; Farm Equipment list with relevant specifications and purpose for both existing and to be acquired equipment; Documentation between Farm operator and Solar company (if available/applicable) establishing the farmers access to and right to farm within the facility area; Implementation Schedule; Safety and Emergency Protocols; Site Photos**

# Examples of Agricultural Co-Utilization Activities

**"Crops, livestock and livestock products" shall include but not be limited to the following:**

- a. Field crops, including corn, wheat, oats, rye, barley, hay, potatoes and dry beans.**
- b. Fruits, including apples, peaches, grapes, cherries and berries.**
- c. Vegetables, including tomatoes, snap beans, cabbage, carrots, beets and onions.**
- d. Horticultural specialties, including nursery stock, ornamental shrubs, ornamental trees and flowers.**
- e. Livestock and livestock products, including cattle, sheep, hogs, goats, horses, poultry, ratites, such as ostriches, emus, rheas and kiwis, farmed deer, farmed buffalo, fur bearing animals, wool bearing animals, such as alpacas and llamas, milk, eggs and furs.**
- f. Maple sap.**
- g. Christmas trees derived from a managed Christmas tree operation whether dug for transplanting or cut from the stump.**
- h. Aquaculture products, including fish, fish products, water plants and shellfish.**
- i. Woody biomass, which means short rotation woody crops raised for bioenergy, and shall not include farm woodland.**
- j. Apiary products, including honey, beeswax, royal jelly, bee pollen, propolis, package bees, nucs and queens. For the purposes of this paragraph, "nucs" shall mean small honey bee colonies created from larger colonies including the nuc box, which is a smaller version of a beehive, designed to hold up to five frames from an existing colony**

# Smart Solar Siting Scorecard - Overview

- **Introduction and Scorecard purpose**
- **Agricultural lands**
- **Forested lands**
- **Community benefits and collaboration**

# Scorecard Purpose

**RESRFP23-1:** Proposers of Solar facilities will be required to complete and submit the Appendix 2 RESRFP23-1 Smart Solar Siting Scorecard, which will allow NYSERDA to score Bid Proposals based on the Bid Facilities expected impacts to active agricultural land and Mineral Soil Groups 1 through 4 (MSG 1-4), forested land, and additional measures. NYSERDA is not intending to use the Scorecard as a screening tool to preclude Proposers from receiving a NYSERDA award based on agricultural impacts, nor contractually require avoidance and/or mitigation measures submitted via the Scorecard, however NYSERDA may make the Scorecards for awarded projects publicly available such that the applicable permitting body may reference the Scorecard as part of the permitting process for the Bid Facility.

## **Associated RESRFP23-1 Request for Proposals Documents**

### [Appendix 2. RESRFP23-1 Smart Solar Siting Scorecard](#)

[Appendix 2. Exhibit 1. Smart Solar Siting Scorecard Workbook](#)

[Appendix 2. Exhibit 2. Scorecard Acronyms and Definitions](#)

[Appendix 2. Exhibit 3. Scorecard Resources](#)

### [Attachment A. RESRFP23-1 Standard Form Agreement and Exhibits](#)

[Exhibit E. NYS Dept. of Agriculture and Markets Guidelines for Solar Energy Projects - Construction Mitigation for Agricultural Lands](#)

# Smart Solar Siting Scorecard Evolution



**Incremental evolution of RFP requirements such as project viability, site character considerations and Permitting Plan Requirements and guidelines, and due diligence conducted to date**



## **2021 Version**

- **Excluded from Evaluation Criteria**
- **Broad avoidance categories of certain Environmental and Agricultural areas**
- **All strategies were optional**



## **2022 Version**

- **Included in Evaluation Criteria**
- **Focused avoidance of certain Forest and Agricultural lands**
- **Strategies are now a mix of mandatory and optional**
- **Expanded Categories and Strategies**



- **Streamlined the Strategy Lists; adjusted points**
- **Introduced Table 2 to prorate co-use points based on acres of co-use**
- **Created list of resources to support strategy implementation**
- **Strengthened Forest Protection section**

# Scorecard Breakdown of Points by Category

Scorecard Section	Number of Points Available		Total
	Avoidance	Minimization	
<b>Agricultural Protection</b>	50	45	<b>95</b>
<b>Forested Lands Protection</b>	35	10	<b>35*</b>
<b>Community Benefits &amp; Collaboration</b>	25		<b>25</b>
<b>Extra Credit: Innovation</b>	5		<b>5</b>
<b>TOTAL POINTS AVAILABLE</b>			<b>160</b>

\*Maximum of 35 points available

# Scorecard Breakdown of Points by Category

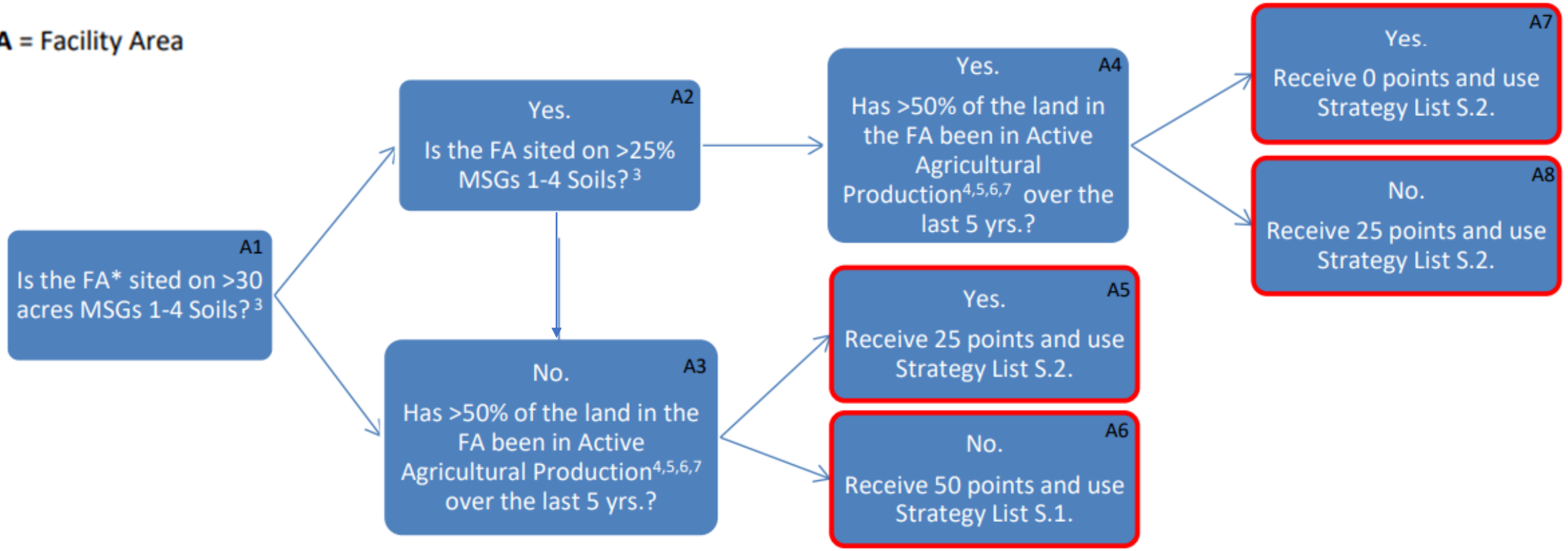
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<b>Community Benefits &amp; Collaboration</b>		25	<b>25</b>
<b>Extra Credit: Innovation</b>		5	<b>5</b>
<b>TOTAL POINTS AVAILABLE</b>			<b>160</b>

\*Maximum of 35 points available

# Part 1 – Agriculture Avoidance Flow Chart

Avoid locating the solar project Facility Area on agricultural land to prevent impacts to resources or activities of concern.

\*FA = Facility Area



<sup>3</sup> **MSGs 1-4 Soils** = Mineral Soil Groups 1-4 as identified in the 2023 New York State Agricultural Land Classification issued by NYSAGM for the applicable county. A pdf can be downloaded with this link: <https://agriculture.ny.gov/system/files/documents/2023/01/masterlistofagriculturalsoils.pdf>. NYSEDA Interactive Map of Mineral Soil Groups 1 through 4 is available as an interactive map and as tabular data for download at <https://data.ny.gov/Energy-Environment/NYSEDA-2023-Soils-Data-for-use-in-the-Large-Scale/dayw-t2bj> and [www.nyserda.ny.gov/ces/rfp](http://www.nyserda.ny.gov/ces/rfp).

<sup>4</sup> **Active Agricultural Production** = Total number of acres of Cultivated Crops, Hay Land, and Pasture in the FA at any time in last five years.

<sup>5</sup> **USGS National Land Cover Database (NLCD)** [https://www.usgs.gov/centers/eros/science/national-land-cover-database?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/centers/eros/science/national-land-cover-database?qt-science_center_objects=0#qt-science_center_objects) and can be viewed through the MRLC Viewer at <https://www.mrlc.gov/viewer/>.

<sup>6</sup> **Cultivated Crops** = The land used for raising crops assessed using, at minimum, the two most recent available updates to the National Land Cover Database (NLCD) datasets (Data Source 2019 & 2021 NLCD, Relevant Data Layer: 2019 & 2021 Map: cultivated crops), supplemented by additional information and/or resources.

<sup>7</sup> **Pasture/Hay Land** = The land where animals fed on the grass and the land where grass was grown to be made into hay assessed using, at minimum, the two most recent available updates to the National Land Cover Database (NLCD) datasets (Data Source 2019 & 2021 NLCD, Relevant Data Layer: 2019 & 2021 Map: pasture/hay), supplemented by additional information and/or resources.



# Strategy List Selection

## RESRFP23-1 Exhibit 1 to Appendix 2. RESRFP23-1 Smart Solar Siting Scorecard Workbook

Please fill in all yellow shaded cells

Bid Facility Name	Test Facility		
Facility Area (acres)	100.0		
On MSG 1 (acres)	15.0		
On MSG 2 (acres)	15.0		
On MSG 3 (acres)	20.0		
On MSG 4 (acres)	10.0		
Cultivated Crops (acres)	15.0		
Pasture/Hayland (acres)	20.0		
Forested Land (acres)	17.0		

Populating Bid Facility information at the top of the worksheet will automatically calculate the Avoidance Points and the Strategy List to use

Scorecard Subsection	Points		
	Avoidance	Minimization	Total
Agricultural Protection	25	0	25
Forested Lands Protection	0	0	0
Community Benefits & Collaboration	0		0
Extra Credit: Innovation	0		
<b>TOTAL POINTS</b>	<b>25</b>		

AGRICULTURAL PROTECTION		
Part 1: Avoidance		
Total Facility Area acres on MSGs 1-4 Soils	60.0	Receive 25 points and use Strategy List S.2.
Facility Area sited on MSGs 1-4 Soils	60.0%	
Land in the Facility Area been in Active Agricultural Production over the last 5 years?	35.0%	

## Part 2 – Agriculture Strategy List Options

Design solar project to *minimize* impacts to natural and agricultural resources during all phases of the project.

### Strategy List Options Based Upon Outcome of Avoidance Flow Chart in Part 1

S.1 – No Threshold Exceedances

S.2 – Exceeds MSGs 1-4 Threshold, Exceeds Active Agricultural Production Threshold, or Exceeds MSGs 1-4 Threshold AND Active Agricultural Production Threshold

Note: M = Mandatory; 0 points awarded for strategy  
1,2, 3 or 4 = Number of points awarded for strategy

## MANDATORY MINIMIZATION STRATEGIES

### Land Use and Operations

#### Soil Conservation

ID#	S.1	S.2	Strategy	Project Phase <sup>8</sup>
1	M	M	Develop an Agricultural Plan, consistent with the New York State Department of Agriculture and Markets Guidelines for Solar Energy Projects - Construction Mitigation for Agricultural Lands <sup>9</sup> to the maximum extent practicable, to avoid, minimize, and mitigate agricultural impacts to active agricultural lands within NYS Agricultural Land Classified MSGs 1-4.	PreC

## OPTIONAL MINIMIZATION STRATEGIES

### Land Use and Operations

#### Soil Conservation

<i>ID#</i>	<i>S.1</i>	<i>S.2</i>	<i>Strategy</i>	<i>Project Phase</i>
18	1	2	Within the security fence, conduct compaction tests <sup>9, 10</sup> and soil sampling for pH, percent organic material, cation exchange capacity, Carbon (C), Nitrogen (N), Phosphorus/Phosphate (P), and Potassium/Potash (K) <sup>11, 12, 133</sup> every five (5) years while operational to measure changes in soil quality over the duration of the project. Develop an approach to ensure that every five years the results are made available to the public (e.g., by posting the results on the Project's Website or via a Newsletter).	PostC
19	1	1	Install and maintain culverts and/or waterbars to maintain or improve site specific natural drainage patterns.	Const
20	1	1	Improve on-site hydrology through the construction of green infrastructure like bioswales, where appropriate for existing site topography or changes to site topography.	Const
	<b>3</b>	<b>4</b>	<b>Subtotal</b>	

# Strategy Implementation

Land Use and Operations: Soil Conservation (Optional)				
ID#	S.1	S.2	Strategy	Project Phase
18		↑	Within the security fence, conduct compaction tests and soil sampling for pH, percent organic material, cation exchange capacity, Carbon (C), Nitrogen (N), Phosphorus/Phosphate (P), and Potassium/Potash (K) every five (5) years while operational to measure changes in soil quality over the duration of the project. Develop an approach to ensure that every five years the results are made available to the public (e.g., by posting the results on the Project's Website or via a Newsletter).	PostC
19			Install and maintain culverts and/or waterbars to maintain or improve site specific natural drainage patterns.	Const
20			Improve on-site hydrology through the construction of green infrastructure like bioswales, where appropriate for existing site topography or changes to site topography.	Const
	0	0	<b>Subtotal</b>	
Land Use and Operations: Project Landscaping and Infrastructure (Optional)				
ID#	S.1	S.2	Strategy	Project Phase
21			Within the security fence, locate and design roads to minimize the overall disturbance of the land and to limit soil compaction.	Const
22			Within the security fence, where feasible (considering, for example, bedrock), bury all underground electric conduits on lands in Active Agricultural Production or MSGs 1-4 to a minimum depth of 48 inches; at this depth, with landowner approval, the conduits can be left in place during decommissioning, avoiding the need to disturb the soil.	Const
23			Include site-adjacent and/or local farmers (including renting farmers as applicable) in the design process during the development and construction phase of the solar project through commercial operation in order to minimize impact to existing farm operations.	PreC
	0	0	<b>Subtotal</b>	
Land Use and Operations: Monitoring, Maintenance and Operations (Optional)				
ID#	S.1	S.2	Strategy	Project Phase
24			For projects with 1-acre to 50-acres of Active Agricultural Production within the Facility Area, appoint environmental monitor(s) with understanding of agricultural practices to oversee the construction, restoration, and follow- up monitoring of agricultural and environmental	Const, PostC

Yellow shaded cells indicate where the Strategy List approach should be selected

**Table 2: Prorating Points for Multiple Co-Utilization Types**

Co-Utilization Type	Acres of FA with Co-Utilization Type <sup>I</sup>	FA Acres	Calculated Percentage Amount		Strategy Points Earned <sup>II</sup>		Total Points Earned
Pollinators & Ecosystem Services	_____ Acres	_____ Acres	_____ %	x	_____	=	_____
Livestock and Livestock Products	_____ Acres	_____ Acres	_____ %	x	_____	=	_____
Crop(s) Production	_____ Acres	_____ Acres	_____ %		_____		Points will be assigned by NYSERDA <sup>III</sup>

**Note: NYSERDA will add any points earned for Crop(s) Production to the TOTAL.**

- I Acres of Facility Area (FA) with Co-Utilization should align with the Bid Facility site plan submitted in accordance with the RESRFP23-1 Site Control minimum threshold requirement, Section 4.3.7.
- II Include points earned from Subtotal for each Co-utilization Subsection above.
- III NYSERDA will evaluate the current land use categories (e.g., NLCD categories Cultivated Crops and Pasture/Hay Land, MSGs 1-4) in the FA and the Crop Production plan and scale for each Bid and then assign points. Projects that commit to more extensive crop production Co-Utilization relative to the current acres of crop production will receive greater points for the crop production Co-Utilization strategy. Points will also be relative to percentage of other Bid Submissions % of Crop Production being proposed.

# Co-Utilization Acreage

Prorating Points for Multiple Co-Utilization Types					
Co-Utilization Type	Acres of Facility Area with Co-Utilization Type*	Facility Area Acres	Calculated Percentage Amount	Strategy Points Earned**	Total Points Earned
Pollinators & Ecosystem Services		100	0%	0	0
Livestock and Livestock Products		100	0%	0	0
Crop(s) Production		100	0%	0	0

\*Acres of Facility Area (FA) with Co-Utilization should align with the Site Control Layout  
 \*\*Include points earned from Subtotal for each Co-utilization Subsection above.  
 \*\*\*NYSERDA will evaluate the current land use categories (e.g., NLCD categories Cultivated Crops and Pasture/Hay Land, MSGs 1-4) in the FA and the Crop Production plan and scale for each Bid and then assign points. Projects that

Enter acres of each type of co-utilization in the yellow-shaded cells

**Table 3: Points for Maximizing Co-Utilization** <sup>IV</sup>

Total Acres of FA with one or more Co-Utilization Activity	FA Acres	Calculated Percentage Amount	Threshold		Total Points Earned <sup>V</sup>
_____ Acres	_____ Acres	_____ %	If TOTAL % > 80%, 7 Points Earned	=	_____

- IV Only complete this section if the project includes *Livestock and Livestock Products* and/or *Crop(s) Production*. *Pollinators and Ecosystem Services* Co-Utilization cannot be the only type of Co-Utilization initiative but can be included in the percentage total. If an acre includes more than one type of Co-Utilization, it should only be included once in calculating the total acres. If Co-Utilization is incorporated in project design and operational plans, then commence and maintain the respective *Pollinator and Ecosystem Services, Livestock and Livestock Products, and/or Crop(s) Production* initiatives for a minimum of 5 years. Such Co-Utilization initiatives must commence within 3 years of commercial operation of the Bid Facility. Annual Co-Utilization initiative summaries must be prepared and made available to interested Potential Community Intervenors for the life of the initiative. If the Co-Utilization initiative is no longer operational after the 5-year period, then the final activity summary must document the basis for the termination of the Co-Utilization initiative (see ID# 17 above).
- V NYSERDA will evaluate the scale and mix of Co-Utilization initiatives and reserves the right to decrease points earned if a project does not demonstrate a genuine effort to meet the goal of maximizing Co-Utilization on the site.

# Maximizing Co-Utilization

## Points for Maximizing Co-Utilization

Total Acres of FA with one or more Co-Utilization Activity****	FA Acres	Calculated Percentage Amount	Threshold	Total Points Earned*****
	100	0%	If Calculated % Amount > 80%, 7 points earned	0

\*\*\*\*Only complete this section if the project includes Livestock and Livestock Products and/or Crop(s) Production. Pollinators and Ecosystem Services Co-Utilization cannot be the only type of Co-Utilization initiative but can be included in the percentage total. If an acre includes more than one type of Co-Utilization, it should only be included once in calculating the total acres. If Co-Utilization is incorporated in project design and operational plans, then commence and maintain the respective Pollinator and Ecosystem Services, Livestock and Livestock Products, and/or Crop(s) Production initiatives for a minimum of 5 years. Such Co-Utilization initiatives must commence within 3 years of commercial operation of the Bid Facility. Annual Co-Utilization initiative summaries must be prepared and made available to interested Potential Community Intervenors for the life of the initiative. If the Co-Utilization initiative is no longer operational after the 5-year period, then the final activity summary must document the basis for the termination of the Co-Utilization initiative (see ID#17 above).

\*\*\*\*\*NYSERDA will evaluate the scale and mix of Co-Utilization initiatives and reserves the right to decrease points earned if a project does not demonstrate a genuine effort to meet the goal of maximizing Co-Utilization on the site.

Enter total acres with co-utilization in the yellow-shaded cell



# Scorecard Breakdown of Points by Category

Scorecard Section	Number of Points Available		Total
	Avoidance	Minimization	
Agricultural Protection	50	45	95
Forested Lands Protection	35	10	35*
Community Benefits & Collaboration		25	25
Extra Credit: Innovation		5	5
<b>TOTAL POINTS AVAILABLE</b>			<b>160</b>

\*Maximum of 35 points available

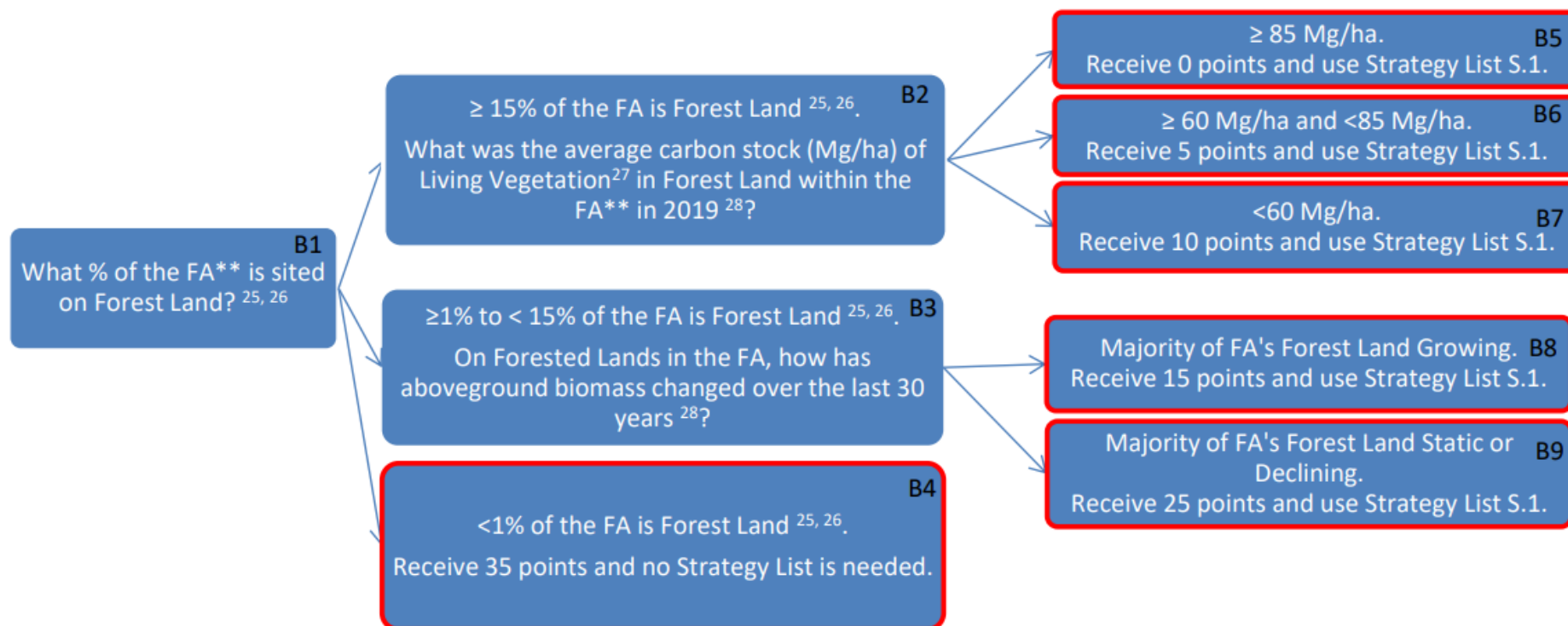
## Forested Lands Protection

### \*Part 1 – Forested Lands Avoidance Flow Chart

Avoid locating the solar project Facility Area on forested land to prevent impacts to resources or activities of concern.

\*The avoidance evaluation for boxes B2-B9 will be conducted by NYSERDA based on the sources indicated in the Forested Lands Avoidance Flow Chart.

\*\*FA = Facility Area



<sup>25</sup> **Forest Land** = Areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover assessed using, at minimum, the two most recent available updates to the National Land Cover Database (NLCD) datasets (Data Source 2019 & 2021 NLCD, Relevant Data Layer: 2019 & 2021 Map Deciduous Forest, Evergreen Forest, and Mixed Forest). If the 2021 Data Source shows a decrease in Forest Land and the clearing occurred under the site control of the developer, then the 2019 Data Source should be used to calculate box B1.

<sup>26</sup> USGS National Land Cover Database (NLCD): [https://www.usgs.gov/centers/eros/science/national-land-cover-database?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/centers/eros/science/national-land-cover-database?qt-science_center_objects=0#qt-science_center_objects) and can be viewed through the MRLC Viewer at <https://www.mrlc.gov/viewer/>.

<sup>27</sup> **Living Vegetation** = Estimated sum of carbon stored in aboveground & belowground biomass of woody vegetation, in milligrams per hectare.

<sup>28</sup> New York Forest Carbon Assessment Summary Report: <https://www.esf.edu/cafri-ny/documents/cafri-report-2023.pdf>.

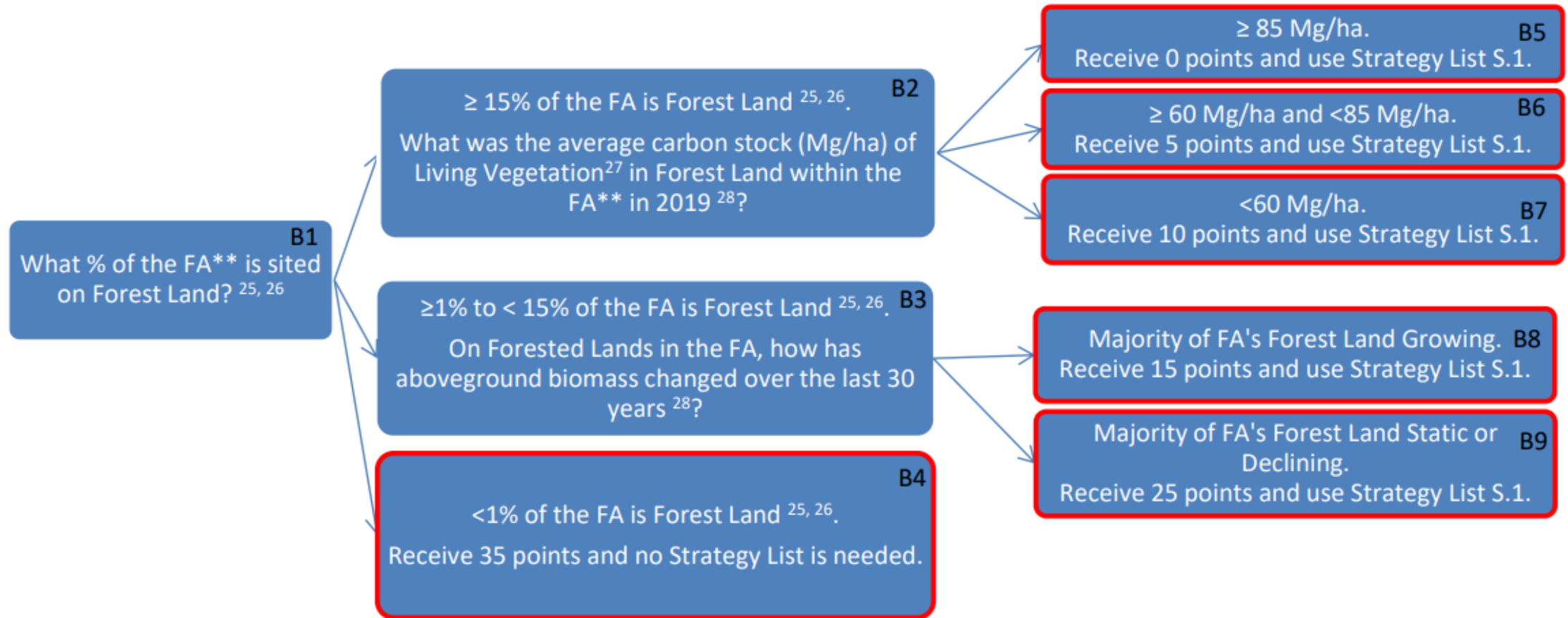
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28 New York Forest Carbon Assessment Summary Report: <https://www.esf.edu/cafri-ny/documents/cafri-report-2023.pdf>.

B1. What % of the FA is sited on forested land?

88.3%  $\geq 15\%$

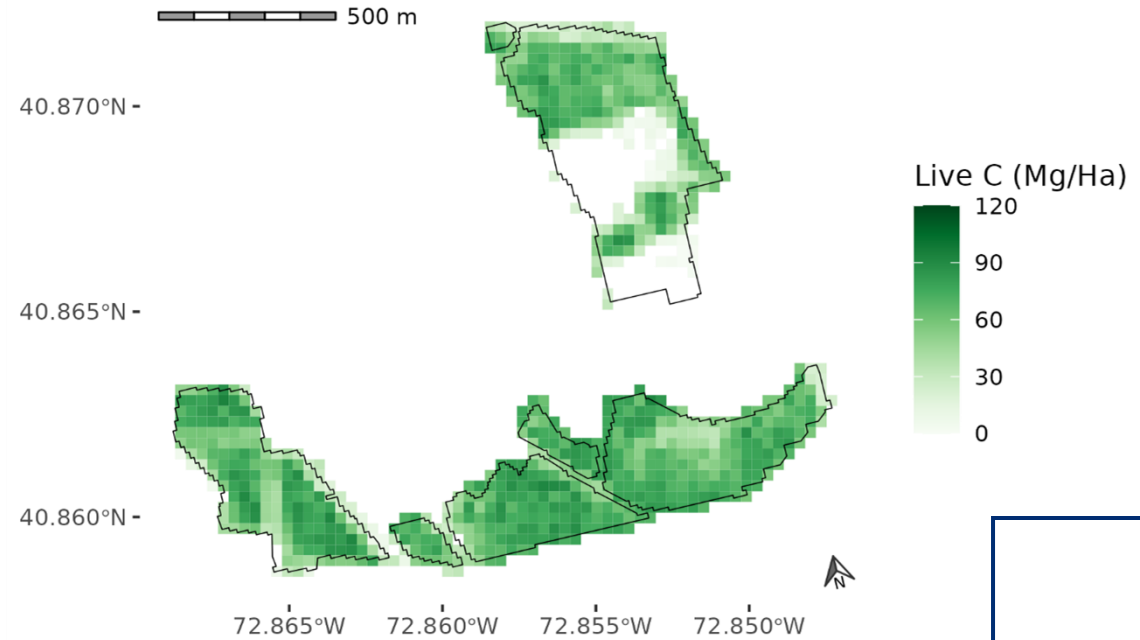
B2. What was the average carbon stock of living vegetation on Forest Land within the FA in 2019?

61.5 Mg/ha

Long Island Solar Farm, LLC: Polygon Forest Coverage Map 2010  
Total Site Forest Cover 2010: 88.28%



Long Island Solar Farm, LLC: 2010 Live C Map  
Sitewide Mean Live C (Mg/Ha): 61.54



5 pts

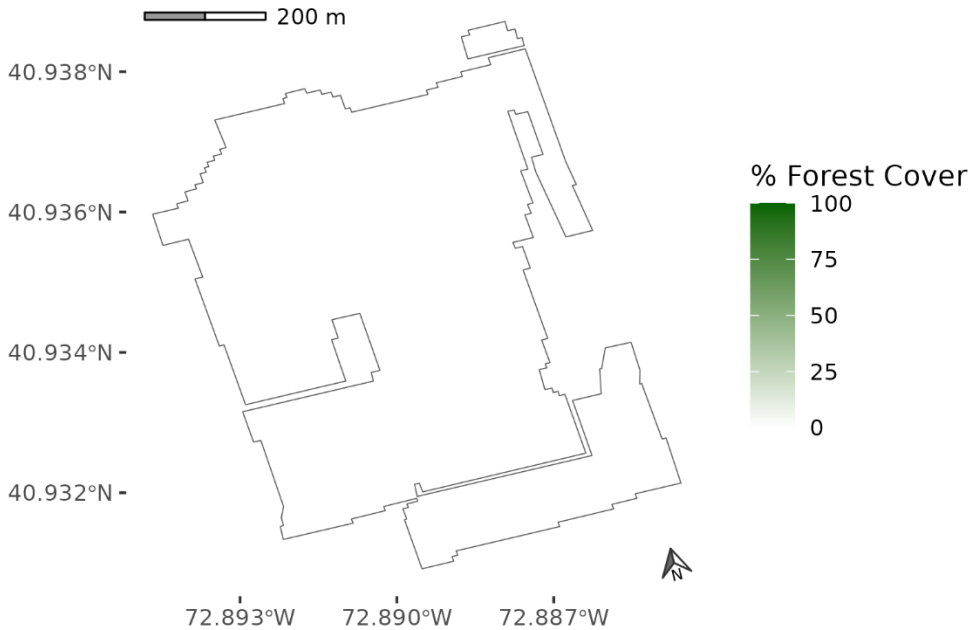
Project	Year	Forest Coverage (%)	Growing Forest (%)	Live C (Mg/ha)	Biomass Growth Rate (Mg/ha/year)	Points
Long Island Solar Farm, LLC	2010	88.3	74.2	61.5	1.6	5
Shoreham Solar Commons	2016	0	0	0	0	35

B1. What % of the FA is sited on forested land?

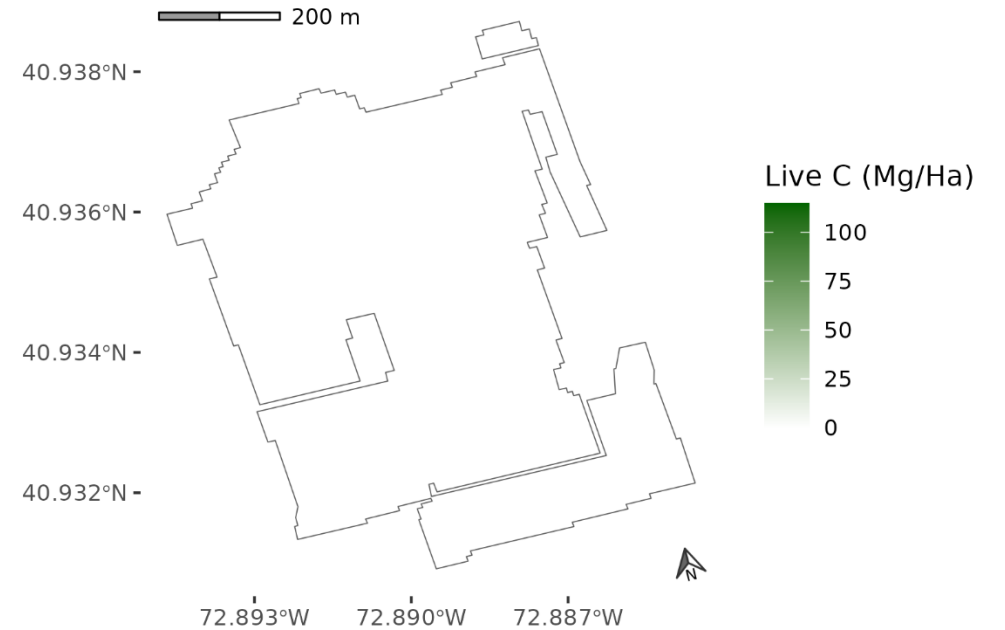
0% → <1%

B4. <1% is Forested Land. Receive 35 points and no Strategy List needed.

Shoreham Solar Commons: Polygon Forest Coverage Map 2016  
Total Site Forest Cover 2016: 0%



Shoreham Solar Commons: 2016 Live C Map  
Sitewide Mean Live C (Mg/Ha): 0



35 pts

Project	Year	Forest Coverage (%)	Growing Forest (%)	Live C (Mg/ha)	Biomass Growth Rate (Mg/ha/year)	Points
Long Island Solar Farm, LLC	2010	88.3	74.2	61.5	1.6	5
Shoreham Solar Commons	2016	0	0	0	0	35

# Scorecard Breakdown of Points by Category

Scorecard Section	Number of Points Available		Total
	Avoidance	Minimization	
<b>Agricultural Protection</b>	50	45	<b>95</b>
<b>Forested Lands Protection</b>	35	10	<b>35*</b>
<b>Community Benefits &amp; Collaboration</b>		25	<b>25</b>
<b>Extra Credit: Innovation</b>		5	<b>5</b>
<b>TOTAL POINTS AVAILABLE</b>			<b>160</b>

\*Maximum of 35 points available

# Scorecard Breakdown of Points by Category

Scorecard Section	Number of Points Available		Total
	Avoidance	Minimization	
Agricultural Protection	50	45	95
Forested Lands Protection	35	10	35*
Community Benefits & Collaboration	25		25
Extra Credit: Innovation	5		5
<b>TOTAL POINTS AVAILABLE</b>			<b>160</b>

\*Maximum of 35 points available



## **Extra Credit: Innovation**

Response Optional – Up to five points will be assigned if proposed innovative practices or designs are approved as meeting the spirit of the Innovation category by NYSERDA. In order to qualify, the practice or design must be truly innovative and cannot be part of an existing minimization strategy. The practice or design must also be of a scale, evidenced by the level of administration or cost required to implement the practice or design, worthy of innovation points.

<i>ID#</i>	<i>EC</i>	<i>Strategy</i>
59	0-5	Describe innovative practices or designs proposed for the project that further minimize impacts or provide complimentary co-benefits in cell E150 of the Innovation Section of the Workbook.

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## RESRFP23-1 Exhibit 2 to Appendix 2. Acronyms and Definitions

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*Please Note:* Agriculture-specific terms are defined by Agriculture and Markets Law unless otherwise noted.

<b>Term / Phrase</b>	<b>Definition</b>
<b>Active Agricultural Production</b>	Total number of acres of Cultivated Crops, Hay Land, and Pasture in the FA at any time in last five years.
<b>Agricultural Plan</b>	Agricultural Plan should be consistent with the <a href="#">New York State Department of Agriculture and Markets Guidelines for Solar Energy Projects – Construction Mitigation for Agricultural Lands</a> to the maximum extent practicable, and should describe a plan to avoid, minimize, and mitigate agricultural impacts to active agricultural lands ( <i>i.e.</i> , land in active agriculture production defined as active three of the last five years) within NYS Agricultural Land Classified Mineral Soil Groups 1 through 4. (19 CRR-NY 900-2.16(c), Exhibit 15: Agricultural resources).
<b>Agrivoltaics</b>	A simultaneous use of land for solar photovoltaic power generation and agricultural production “crops, livestock and livestock products,” as that phrase is defined by New York State Agriculture and Markets Law (AML) § 301(2).
<b>Bid Facility</b>	An electric generating station that has been submitted by the Proposer for consideration in response to this RFP
<b>Bid Proposal</b>	An offer to sell a Bid Quantity of RECs from a Bid Facility at a proposed Price Structure and Contract Tenor.

## RESRFP23-1 Exhibit 3 to Appendix 2. Smart Solar Siting Scorecard Resources



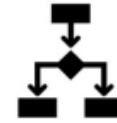
Webpages  
or Blog Posts



Journal Articles  
or Studies



Best Management Practices  
or Guidance Documents



Decision-Making Tools,  
Software, or Forms



Case Studies or  
Project Examples

ID#	Resource Type	Resource	Resource Description/Overview
<b>28</b>		<a href="#">The 5 Cs of Agrivoltaic Success Factors in the United States: Lessons From the InSPIRE Research Study</a>	Agrivoltaic project success determinants and topic considerations. Provides information on site assessments and vegetation management plans. See tables 2, 3, 4, 5, 6
		<a href="#">McCall, et al; Vegetation Management Cost and Maintenance Implications of Different Ground Covers at Utility-Scale Solar Sites (March 28, 2023)</a>	Review of O&M cost for vegetation management plan.  <u>See sections:</u> 2.4. Literature Review—Vegetative O&M Costs; 4.1. Cost Differences in O&M by Ground Cover; 4.2. Individual Activity Costs by Ground Cover
		<a href="#">Xerces Society, Pollinator Habitat Installation Planning Form; Pollinator Habitat Management Log (n.d.)</a>	Forms for planning and tracking pollinator-friendly solar installation and management. Vegetation management plan may consider incorporating the following forms: Pollinator Habitat Installation Planning Form; Pollinator Habitat Management Log.  <u>See sections:</u> Site assessment: pages 1-5 Vegetation management plan: pages 5-6 Seed mix: Appendix 1

# Scorecard and proposal resources

## **Associated RESRFP23-1 Request for Proposals Documents**

### **Appendix 2. RESRFP23-1 Smart Solar Siting Scorecard**

Appendix 2. Exhibit 1. Smart Solar Siting Scorecard Workbook

Appendix 2. Exhibit 2. Scorecard Acronyms and Definitions

Appendix 2. Exhibit 3. Scorecard Resources

### **Attachment A. RESRFP23-1 Standard Form Agreement and Exhibits**

Exhibit E. NYS Dept. of Agriculture and Markets Guidelines for Solar Energy Projects - Construction Mitigation for Agricultural Lands

## **NYS Agricultural Technical Working Group Resources:**

**<https://www.nyatwg.com/resources>**

# Resources and considerations to support development of co-utilization strategies

- **Agrivoltaic Solutions**
- **Solar Ag Services**
- **United Agrivoltaics LLC**



# AGRIVOLTAIC SOLUTIONS



Nick Armentrout  
NYSERDA Smart Solar Siting Scorecard webinar  
December 18, 2023

# Managed sheep grazing and mowing services, and dual-use planning for solar facilities



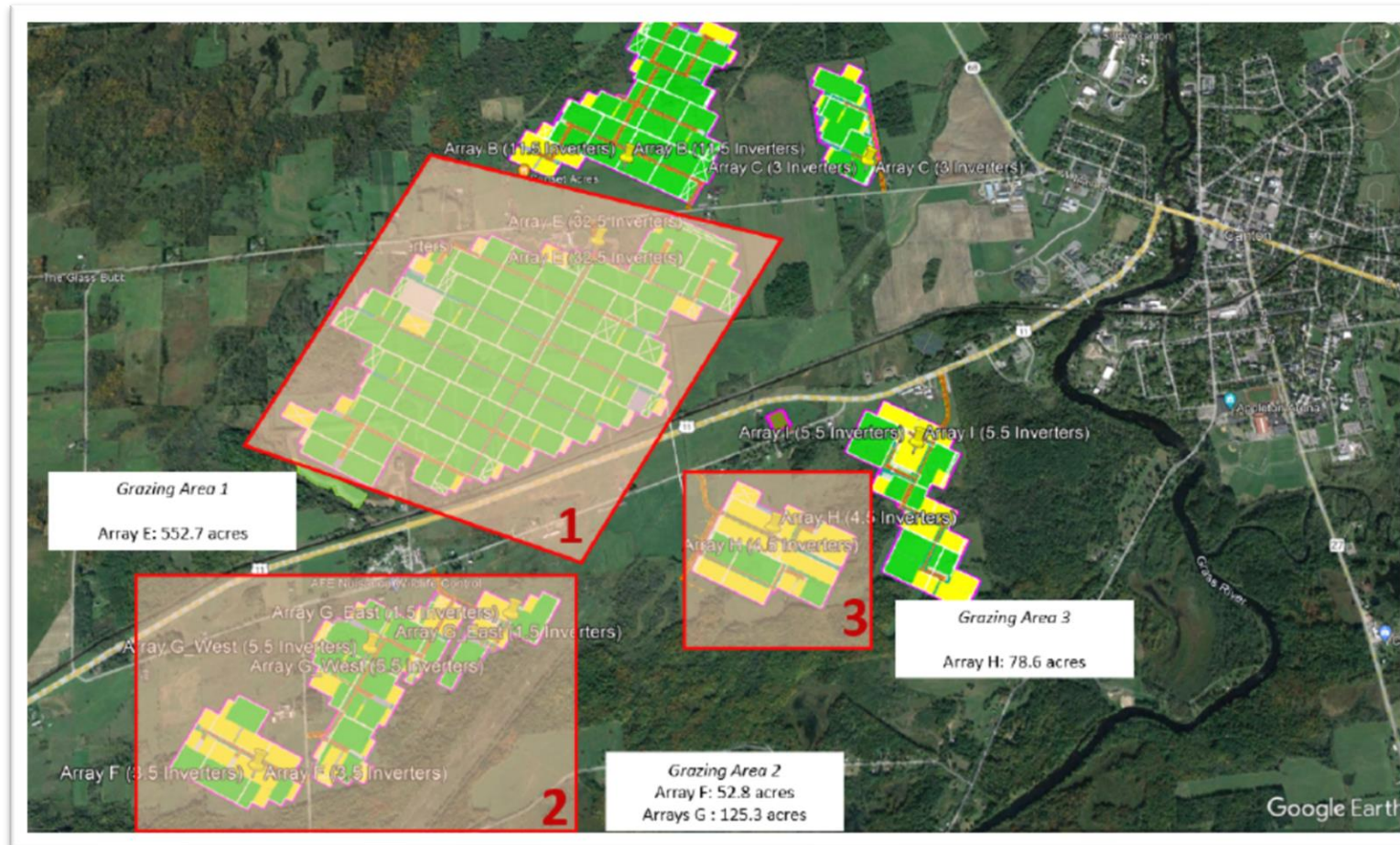
# Our 2023 management portfolio:



Approximately 550 acres  
DG/community scale  
Maine, New York, and Vermont



# Consulting: facility layout and design, and planning for grazing and agricultural activities



*Since 2018*

- New York: approx. 3 GW, > 17,000 (fenced) acres
- NY and US: approx. 6 GW, > 38,000 (fenced) acres



Thank you  
[www.agrivoltaicsolutions.com](http://www.agrivoltaicsolutions.com)









# SolAg

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774-766-0329





**UNITED**  
AGRIVOLTAICS



 **SHEEP GRAZING  
PLEASE KEEP  
GATE CLOSED**  
1-833-FARMSUN

FARM CONTACT:

SITE LOCATION:



- Caleb Scott
- CEO: United Agrivoltaics North America
- VP: American Solar Grazing
- [Info.farmsun@gmail.com](mailto:Info.farmsun@gmail.com)
- 1-833-FARMSUN
- [Caleb@unitedagrivoltaics.com](mailto:Caleb@unitedagrivoltaics.com)
- [www.unitedagrivoltaics.com](http://www.unitedagrivoltaics.com)

# Questions?