# NORTH SENECA
# SOLAR PROJECT

**APPENDIX 15-B**
**Agricultural Plan**
**ORES Permit Application No. 23-00036**

# Agricultural Plan

## North Seneca Solar Project

## Towns of Waterloo and Junius, Seneca County, New York

## ORES Permit Application No. 23-00036

Prepared for:

NORTH SENECA SOLAR PROJECT

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# TABLE OF CONTENTS

## 1.0 INTRODUCTION

The following Agricultural Plan (the Plan) was developed by North Seneca Solar Project, LLC (the Applicant) in order to mitigate impacts on existing agricultural lands associated with the proposed North Seneca Solar Project, an up to 90-megawatt solar energy generating facility in the Towns of Junius and Waterloo, Seneca County, New York (the Facility or Facility Site). The Plan covers the following stages of the Facility's life: 1) Construction, 2) Post-Construction Restoration, 3) Monitoring and Remediation, and 4) Decommissioning, in accordance with New York State Department of Agriculture and Markets (NYSDAM) Guidelines for Solar Energy Projects – Construction Mitigation for Agricultural Lands (Revision 10/18/2019) (herein referred to as NYSDAM Guidelines).

The NYSDAM Guidelines apply to Facility areas that are subject to ground disturbance[1] within existing agricultural lands including:

- Lands where agricultural use will continue or resume following completion of construction (typically those lands outside of the developed Facility's security fence)
- Lands where the proposed solar development will be returned to agricultural use upon decommissioning (typically those lands inside of the developed Facility's security fence)
- Applicable area under review pursuant to Section 94-c of the New York State Executive Law.

Applicable areas under review pursuant to Section 94-c of the New York State Executive Law include active agricultural lands (i.e., lands in active agricultural production three of the last five years) within New York State Agricultural Land Classified Mineral Soil Groups (MSGs) 1 through 4. The proposed Facility will be reviewed under Section 94-c and as such, this Plan will apply only to active agricultural lands as defined by Section 94-c within MSGs 1 through 4. See Exhibit 15 of the 94-c application for identification of active agricultural land within the Facility Site.

This Plan will guide the Facility's construction, restoration, and decommissioning on agricultural lands. If it is determined that there is a conflict between the content of this Plan and the requirements of Facility construction and operation, the Applicant will notify the Office of Renewable Energy Siting (ORES) and the NYSDAM and seek a reasonable alternative. At the time of decommissioning, if it is determined that the site will return to agricultural production, the land will be restored to conditions suitable for such production.

## 2.0 ENVIRONMENTAL AND AGRICULTURAL MONITOR

The Applicant will hire or designate an Environmental Monitor (EM) that will oversee agricultural monitoring in accordance with Title 19 New York Codes, Rules and Regulations (19 NYCRR) §900-6.4(b) and 6.4(s) to assure compliance with this Plan during construction, restoration, and follow-up monitoring conducted on

[1] Consistent with the NYSDAM Guidelines, ground disturbance is defined as an activity that contributes to measurable soil compaction, alters the soil profile, or removes vegetative cover. Construction activities that utilize low ground pressure vehicles that do not result in a visible rut that alters soil compaction, is not considered a ground disturbance. Soil compaction will be tested using an appropriate soil penetrometer or other soil compaction measuring device, and test results within the affected area will be compared with those of the adjacent unaffected portion of the agricultural area.

agricultural land on the Facility Site.[2] The EM will have a confident understanding of normal agriculture practices and be able to identify how construction of the Facility may affect the Facility Site and the applicable agricultural practices. The EM will also have experience with, or understanding of, the use of a soil penetrometer for compaction testing and record keeping. The EM may serve dual inspection roles associated with other Facility permits and construction duties if the agricultural workload allows. The EM will provide pertinent, site-specific agricultural information as outlined in this Plan for Facility construction (and eventually decommissioning) through field review and direct contact with farm operators and the NYSDAM. The EM will maintain regular contact with appropriate onsite Facility construction supervision and inspectors and farm operators (as necessary) throughout the construction phase. The EM will be on site whenever construction or restoration activities involving ground disturbance are occurring on agricultural land and will notify the NYSDAM of such activities. The Applicant may also retain the EM for follow-up monitoring (and remediation if needed) in restored agricultural areas, as described in Section 4.2. The purpose of the agency coordination is to assure that the mitigation measures proposed in this Plan are implemented to the maximum extent practicable. The Applicant intends to coordinate with the NYSDAM Division of Land and Water Resources to schedule inspections in a manner that avoids delays to construction. During inspections, NYSDAM personnel will be required to follow all Facility safety and security protocols and will be escorted by a Facility representative along with the EM.

# 3.0 CONSTRUCTION

## 3.1 Agricultural Best Management Practices During Construction

Before any topsoil is stripped from the Facility Site, representative soil samples will be collected from the agricultural areas to be disturbed. The soil sampling will be conducted in accordance with Cornell University's soil testing guidelines, and samples will be submitted to a laboratory for testing pH, percent organic material, cation exchange capacity, Phosphorus/Phosphate, and Potassium/Potash. The results will establish a benchmark to be measured against during post-construction restoration and at decommissioning.

Stripped topsoil will be stockpiled from work areas and separated from other excavated material (e.g., rock, sub- soil, etc.) until completion of Facility construction and final restoration. All topsoil will be stockpiled as close as is reasonably practical to the area from which it was removed to be used for restoration. Any topsoil removed from permanently converted agricultural areas (e.g., permanent roads, etc.) will be spread in adjacent agricultural areas within the Limits of Construction Activity[3] in a manner consistent with the Facility grading and drainage plan. Permanent topsoil stockpile areas will be clearly designated on construction drawings and flagged in the field. The EM will be consulted regarding necessary changes or additions to

[2] The Applicant understands that the NYSDAM requires the opportunity to review and will approve the proposed EM based on qualifications or capacities.

[3] This limit encompasses the anticipated outer bounds of where construction and related impacts may occur for the Facility. This boundary includes defined work corridors along Facility components, security fencing, and proposed planting modules and incorporates areas where construction vehicles and/or personnel may need extra room to construct the Facility.

the designated stockpile areas based on field conditions. Sufficient area will be allotted to allow adequate access to the designated stockpile areas (as designated on the site plan or by the EM).

- Topsoil stockpiles on agricultural areas left in place prior to October 31 will be stabilized in accordance with the Facility's Stormwater Pollution Prevention Plan (SWPPP) (Appendix 13-C), using Aroostook Winter Rye or equivalent at an application rate of three bushels (168 lbs.) per acre and mulched with straw mulch at rate of two to three bales per 1,000 square feet.
- Topsoil stockpiles left in place between October 31 and May 31 will be stabilized in accordance with the Facility SWPPP and mulched with straw at a rate of two to three bales per 1,000 square feet to prevent soil loss.

The surface of access roads located outside of the Facility's security fence and constructed through agricultural fields will be level with the adjacent field surface. If a level road design is not feasible, all access roads will be constructed to allow a farm crossing and to restore or maintain original surface drainage patterns.

Culverts or waterbars may be installed to maintain or improve site specific natural drainage patterns as applicable consistent with the proposed erosion and sediment control measures and the SWPPP (Appendix 13-C). See Exhibit 13 for additional detail regarding proposed impacts to water resources and aquatic ecology.

Vehicles or equipment will not be allowed outside the planned Limits of Construction Activity without the EM seeking prior approval from the landowner (or agricultural producer), and the Applicant pursuing permit amendments, as necessary. All vehicle and equipment traffic, parking, and material storage will be limited to the access roads, designated work areas, and laydown and staging areas. Low ground pressure equipment[4] may be used outside these areas in limited instances if approved by the EM. Where repeated temporary access is necessary across portions of agricultural areas outside of the security fence, such access will require the process of stripping and stockpiling all topsoil along the access road or the use of timber matting to avoid soil disturbance. Proposed permanent access will be established as soon as possible to limit temporary disturbance and avoid impact to undisturbed soils.

All collection lines will be buried in agricultural fields wherever practicable. When open-cut trenching is proposed, topsoil will be stripped from the entire work area, and segregated from other materials. When closing the trench, the stockpiled topsoil will be regraded on top of the backfilled native material. Narrow open trenches less than 25 feet long involving a single directly buried conductor or conduit (as required) to connect short rows of solar modules within the array will be exempt from topsoil segregation requirements.

Horizontal directional drilling (HDD) or equivalent installation techniques that do not disrupt the soil profile will be used wherever practicable, as indicated on the Exhibit 5 Design Drawings. If HDD is utilized, any HDD drilling fluid inadvertently discharged will be removed from agricultural areas in accordance with the

[4] Low ground pressure vehicles do not result in a visible rut that alters soil compaction.

Inadvertent Return Flow Plan (to be submitted as a pre-construction compliance filing pursuant to 19 NYCRR §900-10.2(f)(5)).

Electric collection, communication, and transmission lines installed above ground can create long-term interference with equipment operation on agricultural lands. Therefore, interconnect conductors outside of the security fence will be buried in agricultural fields wherever practicable. In limited instances where overhead utility lines are required (including at the point of interconnection), these lines will be located outside field boundaries or along permanent access roads, wherever possible. While not anticipated, if overhead utilities must cross farmland, agricultural impacts will be minimized by using taller structures that provide longer spanning distances and the poles will be located at the edges of agricultural fields to the greatest extent practicable.

All buried utilities located within the Facility's security fence will have a minimum depth of 18 inches of cover if buried in a conduit and a minimum depth of 24 inches of cover if directly buried (i.e., not routed in conduit).[5]

All buried utilities located outside of the Facility's security fence will adhere to the following requirements:

- In cropland, hay fields, and improved pasture, buried electric conductors will have 48 inches minimum depth of cover. In areas where the depth of soil over bedrock is less than 48 inches, the electric conductors will be buried below the surface of the bedrock if conditions are friable or rippable, or as near as possible to the surface of the bedrock.
- In unimproved grazing areas or on land permanently devoted to pasture, buried electric conductors will have 36 inches minimum depth of cover.
- Where electrical conductors are buried directly below the Facility's access road or immediately adjacent to the access road (at road edge), the minimum depth of cover will be 24 inches. Conductors will be close enough to the road edge that they will not be subject to disturbance during site restoration or future agricultural cultivation.

When buried utilities alter the natural stratification of soil horizons and natural soil drainage patterns, the effects will be rectified through installation of subsurface intercept drain lines. The Seneca County Soil and Water Conservation District will be consulted to determine the type of intercept drain lines necessary to prevent surface seeps and seasonally prolonged saturation of the area within or adjacent to the conductor installation zone. Existing subsurface drain tiles impacted by construction or operation of the Facility will be repaired consistent with the Drainage Remediation Plan (Appendix 15-C). All agricultural drain lines will be installed or repaired according to Natural Resources Conservation Service conservation practice standards, and specifications will meet or exceed the American Association of State Highway and Transportation Officials M-252 specifications.

Excess concrete will not be buried or left on the surface in active agricultural areas, and concrete trucks will be cleaned outside of active agricultural areas. Onsite disposal of any excess subsoil or rock will not be allowed in active agricultural lands. Designated spoil disposal locations will be specified in the associated

[5] Burial of electrical conductors located within the Facility may be superseded by more stringent updated electrical code or applicable governing code.

construction plans. If landowner agreements, or the Facility's land use approvals do not allow for onsite disposal, materials will be removed from the Facility Site and disposed of at an appropriate disposal location consistent with local, state, and/or federal regulations including by obtaining any necessary permits.

In pasture areas, it may be necessary to construct temporary fencing (in addition to the Facility's permanent security fences) around work areas to prevent livestock access to active construction areas and areas undergoing restoration. For areas returning to pasture, temporary fencing will remain in place to exclude livestock until pasture areas are appropriately restored and revegetated. All temporary fencing will be included within the Limits of Construction Activity and will be shown on the construction drawings. The Applicant will be responsible for maintaining the temporary fencing until the EM determines that the vegetation in the restored area is established and able to accommodate grazing. At such time, the Applicant will be responsible for removal and disposal of the temporary fences.

## 3.2 Monitoring and Reporting during Construction

The EM will be on site whenever construction involving ground disturbance is occurring on agricultural land and will notify NYSDAM of the Facility's activity. The EM will oversee compliance with the Section 94-c agricultural conditions and requirements including those outlined in this Agricultural Plan and the Drainage Remediation Plan (Appendix 15-C). The EM will perform regular inspections of construction work sites and, in consultation with ORES and Department of Public Service, issue regular reporting and compliance audits in accordance with 19 NYCRR §900-6.4(b)(1) and §900-6.4(d).

# 4.0 POST-CONSTRUCTION RESTORATION

## 4.1 Agricultural Best Management Practices during Post-Construction Restoration

Post-construction restoration requirements will be applied to agricultural areas that experienced ground disturbance due to construction activities and will be returned to active agricultural use (typically lands outside of the developed Facility's security fence).

All construction debris in active agricultural areas including pieces of wire, bolts, and other unused metal objects will be removed and properly disposed of as soon as practicable to prevent mixing with topsoil or ingestion by grazing livestock.

Excess stripped topsoil will not be utilized for fill within the Facility Site. Any extra topsoil removed from permanently impacted areas (e.g., roads, equipment pads, etc.) will be evenly spread in adjacent agricultural areas within the Facility Site consistent with the grading plan.

All access roads outside of the security fencing will be regraded to allow for farm equipment crossing. In addition, original surface drainage patterns will be restored.

All surface or subsurface drainage structures damaged during construction will be repaired as close to preconstruction conditions as possible unless the structures are to be removed as part of the Facility design.

Any surface or subsurface drainage problems resulting from construction of the Facility will be corrected with the appropriate mitigation in accordance with the Drainage Remediation Plan (Appendix 15-C) or as determined by the EM through consultations with the Seneca County Soil and Water Conservation District, and the landowner.

Agricultural soil restoration practices will only be conducted when topsoil/subsoil conditions are favorable (e.g., workable, relatively dry). Restoration will not be conducted while soils are in a wet or plastic state of consistency. Stockpiled topsoil will not be regraded, and subsoil will not be decompacted until plasticity, as determined by the Atterberg field test, is adequately reduced. No permanent Facility restoration activities will occur in agricultural areas between October and May unless approved by the NYSDAM.

In all disturbed areas that will be returned to agricultural use, including timber matted areas, the EM will determine appropriate restoration activities. These activities may include decompaction, rock removal, and revegetation. Soil compaction will be tested in the affected areas and adjacent undisturbed areas using a soil penetrometer or other soil compaction measuring device as soon as soils achieve moisture equilibrium with adjacent unaffected areas. Compaction tests will be made at regular intervals of distance throughout the affected areas, including each soil type identified within the affected areas. Soil compaction will be measured by comparing probing depths of both affected and unaffected areas. Where representative soil density of the affected area's collective depth measurements exceed 250 pounds per square inch, or are more than 20% greater than the adjacent undisturbed area's mean soil density, decompaction will be required to a depth of 18 inches with a tractor mounted deep ripper or heavy-duty chisel plow. Following decompaction, all rocks four inches and larger in size that are unearthed will be removed from the soil surface.

To revegetate disturbed agricultural land, the area will be seeded with the seed mix specified by the landowner (or agricultural producer) or as otherwise recommended in the NYSDAM's *New York State Farmland: Seeding, Fertilizing and Lime Recommendations for Gas Pipeline Right-of-Way Restoration in Farmlands* (revised 6-5-2015). Soil amendments will be applied as necessary so that restored agricultural areas' soil properties, at minimum, reasonably reflect the pre-construction soil test results or as otherwise agreed to by the involved parties to ensure continued productive agricultural use. All parties will be cognizant that areas restored after October 1 may not obtain sufficient growth to prevent erosion over the winter months. If areas are to be restored after October 1, necessary provisions will be made to restore or re-seed any eroded or poorly germinated areas in the springtime to establish proper growth.

## 4.2 Monitoring During the Post-Construction Restoration and Remediation

Following restoration activities and once the restored area achieves the establishment of the desired crop, the Applicant will conduct monitoring which will last for a minimum of 365 days following the date of commercial operation or two full growing seasons, whichever is longer.

Onsite monitoring will be conducted seasonally at least three times (spring, summer, and fall) during each monitored growing season to identify any remaining impacts directly associated with the construction of the Facility on agricultural lands proposed to remain or resume agriculture production. The Applicant will

retain the EM to oversee follow-up monitoring and remediation in agricultural areas, as necessary during Facility operation. Monitoring will be limited to the restored agricultural areas. Non-Facility related impacts affecting the restored area will be discussed with NYSDAM staff and considered for omission from future monitoring and remediation. The EM will record the following observations from onsite inspections:

- Topsoil thickness and trench settling – EM observations may require small hand dug holes to observe the percentage of settled topsoil in areas where the topsoil was stripped, or trenching was performed without stripping topsoil. Observations documenting inadequate depth of topsoil will require remediation by re-appropriating additional topsoil. The following materials will be used for remediation: known areas of native excess topsoil (according to records of Facility-specific excess topsoil disposal spread within the original Limit of Construction Activity) or imported topsoil free of invasive species that is consistent with the quality of topsoil on the affected site.
- Soil compaction – Restored agricultural soils within the Facility Site that fail to revegetate or display stunted crop growth may be compacted. Soils in such areas will be tested using a soil penetrometer or other soil compaction measuring device. Compaction tests will be made at regular intervals of distance throughout the restored areas, including each soil type identified on the affected agricultural areas. Where representative soil density of the affected area exceeds the representative soil density of the unaffected areas, additional decompaction may be required. Consultation with NYSDAM and the landowner or agricultural producer will be conducted prior to scheduling additional decompaction. If warranted, decompaction to a depth of 18 inches will occur with a tractor-mounted deep ripper or heavy-duty chisel plow. Displaced topsoil will be restored to original depth and original contours will be re-established, where possible. Decompaction will be conducted during periods of relatively low soil moisture to ensure the desired mitigation and to prevent additional soil compaction. Stones and rocks greater than four inches that are brought to the surface as a result of deep ripping will be removed.
- Drainage – The EM will visually inspect the restored agricultural areas for pervasive wet conditions or stunted crop growth from seasonal saturation that was not previously experienced at the site and does not result from the agricultural producer's irrigation or excessive rainfall. Identified areas will be compared to the nearest undisturbed adjacent areas on substantially equivalent terrain and under a similar crop management plan. Drainage observations will be evaluated to determine if Facility construction or restoration activities affected surface or sub-surface drainage. Drainage issues resulting from Facility construction that are affecting or likely to reduce crop productivity of the adjacent areas will be remediated through a positive surface drainage, sub-surface drainage repair, or equivalent measures.
- Agriculture Fencing and Gates – The EM will inspect all agricultural fencing and gates (installed, altered, or repaired) within the Facility's Limits of Construction Activity for function and longevity. The Applicant is responsible for maintaining the integrity of associated fencing and gates throughout the operational life of the Facility.

At the end of each growing season, the Applicant (or its contractor) will consolidate the monitoring observations into a report and provide the report to the NYSDAM upon request. Each report will include

date-stamped photographs illustrating crop growth in comparison with unaffected portions of the agricultural areas.

The areas will be evaluated by comparing productivity to that of the nearest adjacent undisturbed agricultural land of similar crop type within the same field. If a decline in crop productivity is apparent, the Applicant in consultation with the landowner, agricultural producer, or other appropriate parties, will determine whether the decline is due to Facility-related activities. In the event Facility activities are determined to be the primary detrimental factor, the EM will notify the NYSDAM to potentially schedule a NYSDAM staff field visit. If Facility restoration is determined to be insufficient, the Applicant will develop a plan for appropriate rehabilitation measures to be implemented. NYSDAM staff will review and approve the plan prior to implementation. Additional monitoring may be required depending on the type and extent of restoration activities needed.

The Applicant is not responsible for site conditions or potential damages attributable to land use management conducted by the agricultural producer or others.

# 5.0 DECOMMISSIONING

## 5.1 Construction Requirements for Decommissioning

If restoration to agricultural use is proposed when the Facility is permanently decommissioned, all above ground structures (including panels, racking, signage, equipment pads, and security fencing) and underground utilities less than 48 inches deep in agricultural areas will be removed in accordance with Exhibit 23 (Site Restoration and Decommissioning) and the Decommissioning and Site Restoration Plan (Appendix 23-A). A Final Site Restoration and Decommissioning Plan will be submitted prior to the start of construction in accordance with 19 NYCRR § 900-10.2(b). All piers, footers, or other supports will be removed to a minimum depth of 48 inches below the soil surface. Project components above a depth of 36 inches will also be removed in non-agricultural areas.

Access roads in areas planned for agricultural production post-decommissioning will be removed, unless otherwise specified by the landowner. If the access road is to be removed, topsoil will be returned from recorded excess native topsoil stockpiles or disposal areas created during Facility construction, if present, or topsoil free of invasive species that is consistent with the quality of topsoil on the affected site will be imported. All areas intended for agricultural production will be restored in accordance with the requirements of this Plan, recommendations of the current landowner or leasing agricultural producer, and as required by the Seneca County Soil and Water Conservation District and the NYSDAM.

Environmental monitoring and restoration requirements in accordance with the prior sections of this Plan, will be followed for the decommissioning restoration. The NYSDAM will be given notice before the Applicant undertakes decommissioning.

## 5.2 Monitoring During the Post-Decommissioning Restoration and Remediation

Following decommissioning, agricultural areas will be restored in accordance with the requirements outlined in Section 4.1. Following restoration, the Applicant will conduct monitoring, reporting and remediation in accordance with the requirements outlined in Section 4.2. The monitoring period shall last for two full growing seasons (i.e., spring, summer, fall) once the restored area achieves the establishment of the desired crop.