NORTH SENECA
SOLAR PROJECT

North Seneca Solar Project

ORES Permit Application No. 23-00036

1100-2.16 Exhibit 15

Agricultural Resources

REVISION 1

Table of Contents

EXHIBIT 15 AGRICULTURAL RESOURCES 1
(a) Study Area Assessment 1
(1) NYS Certified Agricultural Districts 1
(2) Land Receiving Real Property Agricultural Value Assessment 2
(3) Compliance with Local Zoning 2
(4) Agricultural and Non-Agricultural Land Uses 3
(5) Existing Energy Infrastructure and Completed Renewable Energy Facilities 5
(6) Active Agricultural Businesses 6
(7) Potential Construction Impacts and the Methods Available to Facilitate Farming Activity During Construction 9
(8) Impacts to Agricultural Production Areas 10
(b) Maps 13
(1) Field-Verified Active Agriculture Land Use 13
(2) Agricultural Production Acreage Proposed to Remain in Agricultural Use 14
(3) Landowner-Imposed Development Restrictions 14
(4) Locations of Known or Suspected Drainage Systems 14
(5) USDA Soil Mapping 15
(6) NYS Agricultural Land Classification Mineral Soil Groups for Impacted Agricultural Areas 15
(c) Agricultural Plan 16
(d) Remediation Plan 16
(1) Demonstration of the Likelihood of Impacts to Surface/Subsurface Drainage 17
(2) Identification of Methods of Repair for Damaged Drainage Features 17
(e) Agricultural Co-utilization 18
REFERENCES 19

List of Tables

Table 15-1. Agricultural Districts within 5-Mile Study Area 2
Table 15-2. Agricultural Crops and Non-Agricultural Land Uses within the Facility Site and 5-Mile Study Area 3
Table 15-3. Study Area Agricultural Census Summary 2007-2017 6
Table 15-4. Study Area Value of Agricultural Sales by Farming Type 8
Table 15-5. Agricultural Production Areas and Mineral Soil Groups Relative to Various Geographic Extents 12

List of Figures

Figure 15-1 NYS Certified Agricultural Districts
Figure 15-2 National Agricultural Statistics Service Cropland Data – 2022
Figure 15-3 Active Agricultural Land Use
Figure 15-4 Impacts to Active Agricultural Land – Revision 1
Figure 15-5 Landowner-Imposed Development Restrictions – Revision 1
Figure 15-6 Agricultural Drainage Systems

List of Appendices

Appendix 15-A Landowner Survey Responses (CONFIDENTIAL/ REDACTED)
Appendix 15-B Agricultural Plan
Appendix 15-C Drainage Remediation Plan

EXHIBIT 15 AGRICULTURAL RESOURCES

(a) Study Area Assessment

(1) NYS Certified Agricultural Districts

The Agricultural Districts Law, (Article 25-AA, Section 305-A of the New York State Agriculture and Markets Law), is a county and state-wide effort intended to preserve, protect, and encourage the development and improvement of the state's most valuable agricultural assets. The Agricultural Districts Law encourages the continued use of farmland for agricultural production by:

- Providing a framework to limit local regulation on farm practices;
- Modifying public agencies' ability to acquire land through eminent domain;
- Modifying the right to advance public funds to construct facilities that encourage development;
- Requiring state agencies to modify regulations to encourage farming; and
- Providing Right to Farm provisions for protection from private nuisance suits.

The Agricultural Districts Law also allows reduced property tax bills for land in agricultural production by limiting the property tax assessment of such land to its prescribed agricultural assessment value. Depending on the design and construction plans, projects such as a solar energy facility can be consistent with and supportive of agricultural crop types if the site is allowed to return to prior agricultural use following decommissioning.

North Seneca Solar Project, LLC (the Applicant) proposes to construct and operate the North Seneca Solar Project (the Facility), an up to 90-megawatt commercial photovoltaic (PV) energy system located in the Towns of Waterloo and Junius, Seneca County, New York (Facility Site).

New York State Agriculture and Markets Law §303b allows land to be added to agricultural districts through an annual process; however, land can only be removed from districts as part of a mandatory eight-year review. Seneca County Agricultural District 6 covers the majority of the Facility Site as shown in Figure 15-1. The next eight-year review for Seneca County Agricultural District 6 has been initiated (Seneca County, 2023).

The study area for agricultural resources includes the areas within five miles of the Facility Site, hereafter referred to as the 5-mile Study Area. The 5-mile Study Area encompasses approximately 79,192 acres within Ontario, Seneca, and Wayne Counties.

Approximately 51,436 acres (65%) of the 5-mile Study Area is enrolled in four agricultural districts. Table 15-1 provides a summary of agricultural districts located within the 5-mile Study Area.

Table 15-1. Agricultural Districts within 5-Mile Study Area

Agricultural District	Acres within 5-mile Study Area	% of 5-mile Study Area	Acres within Facility Site	% of Facility Site
Ontario County Agricultural District 1	12,399	24%	--	--
Seneca County Agricultural District 6	28,022	55%	862	92%
Seneca County Agricultural District 8	9,975	19%	--	--
Wayne County Agricultural District 1	1,041	2%	--	--

Seneca County has approximately 151,817 acres of land enrolled in Agricultural Districts; agricultural district lands within the Facility Site account for 0.6% of all lands enrolled in an agricultural district across the County. Agricultural district lands within the 5-mile Study Area in Seneca County comprise approximately 25% of the total lands enrolled in an agricultural district within Seneca County. Figure 15-1 depicts parcels enrolled in a New York State Certified Agricultural District within the Facility Site and 5-mile Study Area.

(2) Land Receiving Real Property Agricultural Value Assessment

As mentioned above, agricultural lands may qualify for a tax break through the agricultural value assessments program. Land taxes are based on current land use and are determined by the Town Assessor, independent of agricultural district enrollment. Within the Facility Site, nine of the 12 participating parcels are enrolled in the agricultural value assessment program, totaling 595 acres (63%) of the Facility Site. Within the 5-mile Study Area approximately 36,128 acres across 684 parcels are enrolled in the agricultural value assessment program. Figure 15-1 depicts parcels receiving real property agricultural value assessment within the Facility Site and 5-mile Study Area.

(3) Compliance with Local Zoning

The Facility Site is located within the Towns of Junius and Waterloo, of which only the Town of Waterloo has an adopted Zoning Code and enacted local laws related to solar energy facilities.

According to the Town of Waterloo Local Law 1 of the Year 2019, the proposed Facility is classified as a Large-Scale Solar Energy System. Large-Scale Solar Energy Systems are an allowable use within the Industrial (I) and Agricultural (A) zoning districts and are subject to the specific regulations at Section 134.6 of the Town of Waterloo Zoning Code. Detailed site requirements are provided in the solar law, including, but not limited to, special use permits (requiring, site plans, an operation and maintenance plan, a decommissioning plan, and agricultural resources, among other details), special use permit standards for setbacks, array height, lot coverage and size restrictions, security requirements, and other requirements listed in the solar law. There are no specific requirements regarding agricultural resources for Large-Scale Solar Energy Systems details in the Town of Waterloo Local Law 1.

The proposed Facility is in the Agricultural (A) Zoning District within the Town of Waterloo. The Facility is a permitted use within this zoning district. As detailed in Exhibit 24, the Facility generally complies with relevant local laws and ordinances within the Town of Waterloo, except in those limited instances for which the Applicant is seeking a waiver.

Figure 3-6 depicts zoning districts within the Facility Site and 5-mile Study Area. More information regarding local laws and zoning regulations can be found in Exhibit 24.

(4) Agricultural and Non-Agricultural Land Uses

Figure 15-2 and Table 15-2 shows the distribution of agricultural crop types throughout the Facility Site and 5-mile Study Area according to the most recent U.S. Department of Agriculture (USDA) National Agricultural Statistics Service (NASS) Cropland Data Layer (USDA, 2022). The USDA's data were utilized to support the analyses in this section of the exhibit as the Applicant's site-specific field-verified active agricultural crop types data are specific to the Facility Site. However, it is important to note that the USDA's data is based on a supervised classification of aerial imagery and is not generally field verified.

According to the Cropland Data Layer, dominant agricultural uses within the 5-mile Study Area (by acreage) include corn, soybeans, grass/pasture, and alfalfa while most of the agricultural land within the Facility Site is devoted to production of corn. To a lesser extent, land in the Facility Site also produces soybeans, grass/pasture, other hay/non alfalfa, alfalfa, or are used as fallow/idle cropland. Agricultural production within the Facility Site represents only a fraction of the area within the 5-Mile Study Area. For example, while the land mapped in corn production is reported to comprise approximately 40% of the Facility Site, this acreage reflects only 2.6% of the corn production within the 5-Mile Study Area.

Table 15-2. Agricultural and Non-Agricultural Land Uses within the Facility Site and 5-Mile Study Area

Crops Type/ Existing Uses	5-Mile Study Area		Facility Site	
	Acres	%	Acres	%
Agricultural Land Uses [1]				
Corn	14,021.8	17.7	373.4	39.7
Soybeans	13,306.3	16.8	169.2	18.0
Grass/Pasture	7,097.5	9.0	28.5	3.0
Alfalfa	4,030.0	5.1	14.9	1.6
Other Hay/Non-Alfalfa	1,783.8	2.3	33.6	3.6
Winter Wheat	1,146.9	1.4	0.4	<0.1
Fallow/Idle Cropland	709.4	0.9	3.8	0.4
Dry Beans	96.3	0.1	1.8	0.2
Apples	81.2	0.1	--	--
Oats	79.8	0.1	--	--
Grapes	70.3	0.1	--	--
Clover/Wildflowers	42.5	0.1	--	--

Crops Type/ Existing Uses	5-Mile Study Area		Facility Site	
	Acres	%	Acres	%
Other Crops	40.3	0.1	--	--
Rye	29.1	<0.1	--	--
Millet	21.6	<0.1	--	--
Onions	17.8	<0.1	--	--
Sweet Corn	17.6	<0.1	0.2	<0.1
Triticale	9.3	<0.1	--	--
Sorghum	7.6	<0.1	--	--
Cabbage	7.6	<0.1	--	--
Potatoes	6.9	<0.1	--	--
Christmas Trees	6.7	<0.1	--	--
Pears	1.3	<0.1	--	--
Spring Wheat	1.1	<0.1	--	--
Barley	0.9	<0.1	--	--
Speltz	0.9	<0.1	--	--
Blueberries	0.9	<0.1	--	--
Sunflowers	0.7	<0.1	--	--
Cucumbers	0.7	<0.1	--	--
Buckwheat	0.4	<0.1	--	--
Squash	0.4	<0.1	--	--
Dbl Crop WinWht/Sorghum	0.4	<0.1	--	--
Dbl Crop WinWht/Soybeans	0.2	<0.1	--	--
Sod/Grass Seed	0.2	<0.1	--	--
Cherries	0.2	<0.1	--	--
Peaches	0.2	<0.1	--	--
Carrots	0.2	<0.1	--	--
Total	**42,639.0**	**53.8**	**625.8**	**66.6**
Non-Agricultural Uses[2]				
Deciduous Forest	12,806.1	16.2	225.7	24.0
Woody Wetlands	9,376.9	11.8	67.3	7.2
Developed, Open Space	4,689.9	5.9	10.0	1.1
Developed, Low Intensity	3,103.7	3.9	1.3	0.1
Open Water	2,483.8	3.1	--	--
Developed/Medium Intensity	1,577.2	2.0	0.3	<0.1

Crops Type/ Existing Uses	5-Mile Study Area		Facility Site	
	Acres	%	Acres	%
Mixed Forest	918.3	1.2	6.7	0.7
Developed, High Intensity	661.7	0.8	--	--
Barren Land	437.4	0.6	--	--
Emergent Herbaceous Wetlands	244.1	0.3	0.7	0.1
Shrub/Scrub	36.3	<0.1	0.2	<0.1
Evergreen Forest	189.2	0.2	2.2	0.2
Total	**36,524.8**	**46.0**	**314.3**	**33.4**

[1] Agricultural crop types based on the most recent USDA NASS Cropland Data Layer (USDA, 2022)

[2] Non-agricultural land uses are derived from the most recent NLCD (MRLC, 2021).

The non-agricultural land uses presented in Table 15-2 are derived from the 2019 National Land Cover Database (NLCD). The NLCD is a Landsat based, 30-meter resolution land cover database generated by United States Geological Survey in cooperation with the Multi-Resolution and Characteristics Consortium (USGS MRLC, 2021). According to the NLCD data, approximately 46% of the 5-mile Study Area and 33% of the Facility Site are composed of non-agricultural uses. The NLCD acreage of agricultural land use within the Facility Site and 5-mile Study Area is generally consistent with the agricultural uses depicted by the Cropland Data Layer but presents more general cover types than those defined by Cropland Data Layer (e.g., cultivated crops and hay/pasture).

Additionally, as described in Exhibit 11(a), plant communities within the Facility Site were identified and mapped based on a combination of desktop review of recent (2022) aerial imagery, publicly available datasets for land cover and soil (including the USDA NASS Cropland and NLCD datasets), data collected during on-site ecological field surveys conducted between May 2022 and April 2023, and responses received from an agricultural survey submitted to participating landowners. Therefore, the ecological community mapping depicted in Figure 11-1 is anticipated to contain a more accurate representation of the extent of active agricultural and non-agricultural land uses. Based on the ecological community mapping described in Table 11-1, the actual extent of active agricultural land use within the Facility Site totals approximately 600 acres, which will be reported throughout this exhibit.

(5) Existing Energy Infrastructure and Completed Renewable Energy Facilities

Figure 3-4 illustrates existing overhead electric transmission facilities within the 5-mile Study Area along with proposed Facility components. The Facility will connect to the existing Niagara Mohawk Tap to Hamilton Road 115 kV transmission line, which traverses the Facility Site from east to west. As discussed in Exhibit 3(d) and depicted in Figure 3-4, there are five existing community scale solar facilities wholly or partially within the 5-mile Study Area.

In addition to the proposed Project, there are several proposed solar energy projects within the 5-mile Study Area, one of which is currently under construction. Proposed solar energy projects are described in greater detail in Exhibit 3(i) and depicted in Figure 3-7.

(6) Active Agricultural Businesses

The total number of farms in Seneca County decreased by 12% between 2012 and 2017 (USDA, 2007; USDA, 2012a; USDA, 2017a) and the total land used for farms decreased by 9%. During this period the average farm size increased by 3%. Despite decreases in the number of farms between 2012 and 2017, agriculture remains a stable industry in Seneca County. The market success of agriculture throughout Seneca County can be measured by the 7% increase in the net cash farm income, however a decrease of 24% was observed in the market value of products sold between 2012 and 2017 (USDA, 2007; USDA, 2012a; USDA, 2017a).

While the Facility is located entirely in Seneca County, the 5-mile Study Area extends into Ontario and Wayne Counties. In Ontario County, the total number of farms decreased by 2% despite the total land in farms and the average farm size increasing by 4% and 6%, respectively, between 2012 and 2017 (USDA, 2007; USDA, 2012a; USDA, 2017a). The total market value of products sold and the net cash farm income both increased between 2007 and 2017 by 17% and 20%, respectively. In Wayne County, the total number of farms (-5%), total land area in farms (-11%), and the average farm size all decreased (-6%). However, the market value of products sold and the net cash farm income both increased by 8% and 5%, respectively, between 2012 and 2017 (USDA, 2007; USDA, 2012a; USDA, 2017a). Table 15-3 summarizes the changes in agricultural businesses since 2007.

Table 15-3. Study Area Agricultural Census Summary 2007-2017

Metric	2007	2012	2017	Percent Change (%), 2007-2017
Seneca County				
Number of Farms	513	584	516	+0.6
Land in Farms (acres)	127,972	130,206	118,545	-7.4
Average Farm Size (acres)	249	223	230	-7.6
Total Market Value of Products Sold ($)	**84,075,000**	**118,926,000**	**90,843,000**	**+8.4**
Ontario County				
Number of Farms	859	853	833	-3.0
Land in Farms (acres)	198,937	192,616	200,089	+0.6
Average Farm Size (acres)	232	226	240	+3.4
Total Market Value of Products Sold ($)	**153,847,000**	**180,326,000**	**205,160,000**	**+33.4**

Metric	2007	2012	2017	Percent Change (%), 2007-2017
Wayne County				
Number of Farms	938	873	829	-11.6
Land in Farms (acres)	168,471	179,109	159,093	-5.6
Average Farm Size (acres)	180	205	192	+6.7
Total Market Value of Products Sold ($)	**168,963,000**	**205,606,000**	**221,295,000**	**+31.0**

Source: USDA Census of Agriculture for Seneca, Ontario, and Wayne Counties, 2007, 2012, 2017

As noted in Table 15-4, the distribution of sales between livestock and crops shifted slightly in Seneca County between 2012 and 2017, with a decrease in the proportion of sold livestock, poultry, and related products (USDA, 2012a; USDA 2017a). The production of crops increased between 2012 and 2017 to become the dominant form of agriculture in Seneca County, generating the majority of the total value of agricultural sales (51.9%). The most valuable crop activity is grain, oilseed, dry bean, and dry pea production, representing the majority (63.4%) of the total value of all crop products sold in 2017. In terms of sales, grain, oilseed, dry bean, and dry pea are also the most valuable crops grown in Seneca County (USDA, 2017a).

The distribution of sales between livestock and crops shifted slightly in Ontario County between 2012 and 2017, with an increase in the proportion of sold livestock, poultry, and related products (USDA, 2012b; USDA 2017b). In Ontario County, livestock, poultry, and related products generate over two-thirds of the total value of agricultural sales, with the most important livestock activity being dairy farming, which represents the majority (85%) of the total value of all livestock activities in 2017. In terms of sales, dairy farming is also the most valuable agricultural product in Ontario County (USDA, 2017b).

The distribution of sales between livestock and crops shifted slightly in Wayne County between 2012 and 2017, both the proportion of sold livestock as well as the proportion of sold crops had an overall increase in value (USDA, 2012c; USDA 2017c). In Wayne County, crop products generate almost three quarters of the total value of agricultural sales, with the most important crop activity being fruits, tree nuts, and berries which represents nearly three quarters of the total value of all crop production activities in 2017 (71.3%). In terms of sales value, fruits, tree nuts, and berries are the most valuable crops grown in Wayne County (USDA, 2017c).

Table 15-4. Study Area Value of Agricultural Sales by Farming Type

Type	2012	Percent of total (%)	2017	Percent of Total (%)
Seneca County				
Livestock, Poultry, and Products	$66,420,000	55.8	$43,717,000	48.1
Crops	$52,506,000	44.2	$47,126,000	51.9
Total	**$118,926,000**	**100.0**	**$90,843,000**	**100.0**
Ontario County				
Livestock, Poultry, and Products	$103,091,000	57.2	$141,910,000	69.2
Crops	$77,235,000	42.8	$63,250,000	30.8
Total	**$180,326,000**	**100.0**	**$205,160,000**	**100.0**
Wayne County				
Livestock, Poultry, and Products	$56,207,000	27.3	$65,820,000	29.7
Crops	$149,398,000	72.7	$155,475,000	70.3
Total	**$205,605,000**	**100.0**	**$221,295,000**	**100.0**

Source: USDA Census of Agriculture for Seneca, Ontario, and Wayne Counties, 2007, 2012, 2017

To better understand potential impacts of the Facility on agricultural businesses and operations, a survey was distributed in April of 2023 to participating landowners (i.e., participating at the time of this mailing) hosting Facility components. The purpose of the survey was to determine how the Facility may impact agricultural operations for participating landowners. Surveys were completed for all 13 participating parcels associated with the Facility, either through surveys returned by mail or by phone call. Agriculture survey correspondence is provided in Appendix 15-A.

Based on the survey responses as well as an interpretation of available aerial imagery, the Facility Site contains land that was farmed in the last five years. Ten of the 13 parcels within the Facility Site contained agricultural land and were in active agricultural use between 2018 and 2022, with crops reported as the primary use. Livestock were raised on two of the 10 parcels. Limited timber harvesting activities were reported on two parcels. Based on the survey responses and proposed Facility layout, no change in agricultural operations is expected on at least three parcels after the Facility is developed. Agricultural operations are expected to continue within a reduced area once the Facility is developed on at least four parcels. Agricultural operations are expected to pause during Facility operations on the remaining three parcels. More specifically, one landowner is already planning to sell remaining livestock in the next few years with or without development of the Facility and plans to lease more land to a neighbor to continue production of row crops. Another landowner has plans to continue beef operations and open a hunting club with rental cabins.

This ability to continue agricultural production and other uses will be supported by the lease payments received from the Applicant. See section (a)(8) for additional information describing how the design of

the Facility facilitates the potential for farming activities to continue on certain active agricultural lands located outside the security fence of the Facility.

Although active agricultural land accounts for approximately 64% of land within the Facility Site, it represents just 1% of agricultural land within the 5-mile Study Area (see Section (a)(4) above). The construction of the Facility Site will not result in a significant loss of agricultural land to the region.

Since 2007, the number of farms has increased in Seneca County and although the number of farms within Ontario and Wayne Counties has declined since 2007, the amount of land owned by each farm and the value of products produced has continued to grow substantially. The temporary pause in agricultural production within the Facility Site will not have a significant adverse effect on the greater agricultural economy in the region. Lease payments provided to participating landowners will support their continued agricultural operations on other parcels.

(7) Potential Construction Impacts and the Methods Available to Facilitate Farming Activity During Construction

Construction of the Facility will result in some impacts to the agricultural communities and farming practices described previously. Permanent and temporary vegetation and soil disturbance are characterized by the following types of impacts:

- Permanent Impacts – includes the outer bounds of where lands will be converted to built structures and impervious surfaces that will not be decommissioned at the end of the Facility's useful life. In accordance with the preliminary Site Restoration and Decommissioning Plan (Appendix 23-A), this boundary will be limited to the POI substation, its access road, and overhead poles associated with the generation tie line, and totals only approximately 1.8 acres.

- Temporary Impacts during Operations – includes the area within the Facility's security fencing that will be disturbed during Facility construction and operations. This area includes built Facility components included within the Limits of Impervious Surfaces (LOIS) that will be decommissioned at the end of the Facility's useful life (e.g., collection substation, storage trailer, inverter pads, and access roads). These areas will be cleared of all vegetation, grubbed, and graded prior to installation. As detailed in Exhibit 11(b), approximately 11 acres of active agricultural land occur within the LOIS. In addition, areas surrounding the PV arrays and within the Facility's security fence will be maintained in an early successional vegetative community. Agricultural operations within this area will therefore be taken out of production for the life of the Facility; however, upon decommissioning and restoration of the Facility, agricultural uses would be able to begin again.

- Temporary Impacts during Construction – includes the areas outside of the Facility's security fencing but within the outer bounds of the Facility's anticipated disturbance footprint, or the Limits of Construction Activity (LOCA). Once construction is complete,

agricultural areas outside of the fence that are temporarily disturbed will be restored in accordance with the Agricultural Plan provided in Appendix 15-B and the New York State Department of Agriculture and Markets (NYSDAM) *Guidelines for Solar Energy Projects – Construction Mitigation for Agricultural Lands* (Revision 10/18/2019) and any farming practices can resume in these areas.

Collection lines that cross agricultural fields will be installed in accordance with the NYSDAM guidelines to ensure that impacts to active agricultural land will be minimized to the extent practicable. In addition, the Applicant will coordinate with landowners to minimize disruption to farming activities to the extent practicable throughout the duration of construction. Compensation will be provided for any unanticipated crop loss.

Once the Facility is operational, there will be no interference with ongoing farming operations outside of the Facility's security fence. Access roads built for the Facility (outside the fenced PV arrays) will be available to farmers for equipment access to active fields, should it be requested by a participating landowner.

(8) Impacts to Agricultural Production Areas

As discussed in section (a)(4) above and Exhibit 11(a), agricultural production areas[1] comprise approximately 600 acres (64%) of the 940-acre Facility Site. Construction of the Facility will result in temporary impacts of approximately 380 acres to agricultural lands (63% of agricultural land within the Facility Site), of which 71 acres (12%) will be restored following construction and remain in agricultural production throughout the life of the Facility. Approximately 309 acres (52%) will be restored to agricultural production upon Facility decommissioning and restoration. The majority (96%) of the Facility-related impacts occur in row croplands; only 1.8 acres (<1%) of active agricultural land, which occurs in row cropland, is anticipated to be permanently converted to the POI substation and its associated components.

The New York State Agricultural Land Classification System (NYSALCS) was researched and developed as a production rating system for every individual soil-type in the state, and has been used extensively since the early 1980's. It includes the USDA NRCS land capability class per soil and incorporates additional scientific soil and crop data for precision rating of each soil-type by county. The NYSALCS classifies each soil's inherent capability for agricultural production into one of 10 specifically ranked "*Mineral Soil Groups (MSG)*". The highest quality soil-types with the best sustained capability for agriculture comprise soil group 1. Conversely, those soils least suited for farming are classed in MSG 10. MSGs 1 through 4 represent the best soils for agricultural production.

Table 15-5 includes an assessment of the Facility's potential impact on MSG 1-4, as classified by the NYSALCS. Within the 940-acre Facility Site, 630 acres of soils (67%) are classified as MSGs 1-4; the remaining 33% of the soils are classified in MSG 5-10. As indicated in Table 15-5, no soils classified as

[1] Includes the active agricultural lands defined as actively utilized row croplands, field croplands, and pasturelands mapped by the Applicant and further defined in Exhibit 11 (Terrestrial Ecology) and Figure 11-1 (Impacts to Plant Communities).

MSG 1 exist within the Facility Site, and MSGs 2 and 3 represent the majority of MSGs present within the Facility Site. Approximately 367 acres of MSGs 2-4 within the Facility Site will be impacted during Facility construction. No impacts to MSG 1, or the best farmland in the state, are anticipated, as none are present within the Facility Site. Only 1.7 acres of permanent impact to MSG 1-4 will occur, which represents approximately 0.3% of all the MSGs 1-4 within the Facility Site. The 365 acres of MSGs within the Facility Site that will be temporarily impacted during Facility operation and/or construction represent approximately 58% of these soil groups in the Facility Site, less than 1% of these soil groups in the 5-mile Study Area and in Seneca County.

Table 15-5. Agricultural Production Areas and Mineral Soil Groups Relative to Various Geographic Extents

Agricultural Area	Facility Site					5-Mile Study Area (acres)	Town of Junius (acres)	Town of Waterloo (acres)	Seneca County (acres)	New York State (acres)
	Perm Impact[1] (acres)	Temp Impact During Construction[2] (acres)	Temp Impact During Operations[2] (acres)	No Impact (acres)	Total (acres)					
Agricultural Production Areas[3, 4]										
Active Row Cropland	1.8	62.4	304.1	184.4	552.6	35,921.7	9,929.9	3,289.8	97,034.9	2,484,386.5
Active Field Cropland[4]	0.0	8.7	5.4	32.7	46.8	6,490.9	1,208.4	1,551.7	26,982.4	3,942,818.0
Pastureland[4]	0.0	0.0	0.0	0.4	0.4					
Total	**1.8**	**71.1**	**309.4**	**217.1**	**599.8**	**42,412.6**	**11,138.3**	**4,841.6**	**124,017.3**	**6,427,204.5**
Mineral Soil Group										
Group 1	0.0	0.0	0.0	0.0	0.0	1,172.2	0.0	0.0	0.0	1,879,144.0
Group 2	1.5	21.6	84.4	76.1	183.5	15,245.9	4,308.7	424.1	30,383.8	1,815,434.6
Group 3	0.2	38.1	199.8	144.3	382.4	17,895.6	2,688.1	5,667.5	54,037.2	1,717,480.7
Group 4	0.0	4.8	16.5	42.6	63.8	7,667.1	888.2	2,564.2	6,877.9	306,176.2
Total	**1.7**	**64.4**	**300.7**	**262.9**	**629.7**	**41,980.9**	**7,885.0**	**8,655.8**	**91,298.9**	**5,718,235.5**
Groups 5-10	0.1	27.3	86.2	193.0	306.6	33,062.3	8,632.1	5,131.4	115,685.8	31,101,882.2
Agricultural Production Areas within Mineral Soil Groups 1-4										
Annual Row Crops	1.7	45.8	228.9	140.6	417.0	22,101.10	5,346.20	2,094.0	48,274.10	n/a
Field Crops[4]	0.0	1.3	0.2	2.8	4.3	3,696.90	496.40	1,145.40	15,115.60	n/a
Pastureland[4]	0.0	0.0	0.0	0.2	0.2					
Total	**1.7**	**47.1**	**229.1**	**143.7**	**421.6**	**25,798.00**	**5,842.60**	**3,239.40**	**63,389.70**	**n/a**

[1] As defined in Exhibit 15(a)(7).
[2] As defined in Exhibit 15(a)(7).
[3] Agricultural production areas (i.e., active agricultural lands) within the Facility Site have been extracted from the site-specific ecological communities layer that is described in Exhibit 11(a) and shown in Figure 11-1. Agricultural production areas for all other geographic areas have been extracted from the 2021 National Land Cover Database (NLCD).
[4] The 2021 NLCD data used in making agricultural area calculations outside the Facility Site do not differentiate between perennial field crops (i.e., hay) and pastureland. Therefore, these classes were grouped for areas outside the Facility Site.

(b) Maps

(1) Field-Verified Active Agriculture Land Use

Figure 15-3 depicts identified active agricultural land uses within the 5-mile Study Area, which includes land involved in the production of crops, livestock, and livestock products during at least three of the last five years. Approximately 44,716 acres (56%) of the 5-mile Study Area is identified as active agricultural land.

Data for this figure was generated based on review of the 2018-2022 USDA CropScape Cropland Data Layers. This dataset is produced using imagery collected during the growing season from the Landsat 8 OLI/TIRS sensor, the Disaster Monitoring Constellation (DMC) DEIMOS-1 and UK2, the ISRO ResourceSat-2 LISS-3, and the ESA SENTINEL-2 satellites sensors. To supplement this data, recent parcel property classification data from the New York State Office of Real Property Services and parcels enrolled in the agriculture value use assessment program were utilized to identify additional agricultural parcels. Real property agricultural value assessments have eligibility requirements and follow an application process that must be renewed each year, and the land must be "*used in the preceding two years for the production for sale of crops, livestock, or livestock products*" (NYSDTF, 2022).

As mentioned previously, the Applicant has consulted with the landowners of parcels that comprise the Facility Site through a landowner survey. The survey questionnaire requested landowners provide: 1) an indication of the active land uses that have taken place on their property in the last five years; 2) an indication of how landowners plan to use their property post-construction, including any mention of anticipated non-agricultural uses; 3) a description of how existing agricultural operations will be affected post-construction; and 4) confirmation of any drainage tile infrastructure on their property and a sketch of the location of any drainage tile infrastructure; and 5) additional thoughts about how the Project may affect the local agricultural economy. The responses to this survey indicated that dominant agricultural uses within the Facility Site between 2018 and 2022 include active cropland (see Appendix 15-A).

To the extent possible, the Applicant verified the location and extent of active agricultural land use within the Facility Site during on-site surveys, including avian surveys, wetland and stream delineations, and archaeological surveys. Data points and photos collected during on-site surveys informed the mapping of ecological community types within the Facility Site, including the delineation of active agricultural land. See Exhibit 11(a) and Figure 11-1 for additional detail on the identification and description of plant communities within the Facility Site. Based on this mapping, active agricultural land represents 64% (600 acres) of the Facility Site. The Applicant utilized information from the agricultural survey and spatial data in the siting of the Facility layout to avoid and minimize impacts to active agricultural land within the Facility Site to the maximum extent practicable. Active agricultural operations on adjacent parcels or portions of participating parcels not hosting Facility components will not be impeded and agricultural operations may continue. Impacts to active agricultural land and MSGs 1-4 are depicted in Figure 15-4.

The Applicant will implement the NYSDAM *Guidelines for Solar Energy Projects - Construction Mitigation for Agricultural Lands* (NYSDAM 2019) to mitigate impacts to active agricultural land within MSGs 1-4.

(2) Agricultural Production Acreage Proposed to Remain in Agricultural Use

All agricultural production areas (i.e., active agricultural land) within the Facility Site that are not hosting Facility components are expected to remain in active agricultural use, unless otherwise decided upon by the landowner. As indicated in Table 15-5 and depicted in Figure 15-4, approximately 48% of the active agricultural land (predominately row cropland) within the Facility Site would be able to remain in or return to agricultural production once the Facility is operational. All temporarily impacted active agricultural areas will be able to resume agricultural practices once the Facility is operational. Various measures to protect and restore agricultural lands and farming operations within the Facility Site will be undertaken during and after construction and will include full restoration of temporarily disturbed agricultural land in accordance with the Agricultural Plan (Appendix 15-B), which was developed based on NYSDAM Guidelines. At the end of the Facility lifespan, Facility components will be decommissioned, and the land restored, consistent with 16 NYCRR Section 1100-6.6(a) requirements, as described in Exhibit 23 and Appendix 23-A of this Application. Following completion of decommissioning and restoration, agricultural lands within the Facility Site are expected to return to pre-construction use, depending on the intentions of the landowners. With the additional income from lease payments and with additional land holdings, host landowners responding to the agricultural landowner survey have indicated that they will continue agricultural operations on other lands, and in some cases, expand operations through the purchase of additional land.

(3) Landowner-Imposed Development Restrictions

The final Facility Site boundary was largely influenced through consultations between the Applicant and participating landowners. The parcels that are currently proposed to host the Facility components represent multiple landowners who are willing and interested in participating in the Project, but only under specific circumstances that are compatible with landowner preferences. Several parcels or portions of parcels were ultimately excluded from the Facility Site where sensitive ecological, cultural, or utility setbacks result in design constraints (see Exhibit 2(a)(1) and Figure 2-3 for more information on other resources avoided during Facility design). In addition, some areas were avoided to allow landowners to continue agricultural operations undisturbed. Several participating landowners also signed easement agreements restricting solar development and allowing for only the installation of underground collection lines on four parcels (see Figure 15-5). Exhibit 4 provides more detail on the land agreements the Applicant has entered into with participating landowners. Outside of applicable setbacks required by 16 NYCRR Section 1100.2.6(d), no other landowner-imposed development restrictions have been identified.

(4) Locations of Known or Suspected Drainage Systems

Figure 15-6 includes the locations of known or suspected sub-surface drainage systems within the 5-mile Study Area. As part of the agricultural landowner survey, the Applicant consulted with the

landowners of parcels that comprise the Facility Site to obtain specific information on the location of drainage systems. Responding landowners indicated if the parcels included drain tiles, which fields contained drain tiles, and presented the information graphically in their response. To supplement data from the landowner surveys and to assess the potential for drainage systems within the larger 5-mile Study Area, a dataset from the National Center for Atmospheric Research was utilized. These data use multiple USDA and USGS datasets to show a 30-meter resolution layer of suspected drain tile areas (Valayamkunnath et. al., 2020). The Applicant also contacted the NYSDAM and the Seneca County Soil and Water Conservation District to request any information on subsurface drainage in and around the Facility Site. No responses were received from either agency at the time of the application.

Surface waters are discussed in Exhibit 13 (Water Resources and Aquatic Ecology) and Exhibit 14 (Wetlands) and are depicted in Figure 14-1. Surface water features that provide agricultural drainage are indicated on the stream data forms in Attachment B to Appendix 14-A. No unique agricultural drainage facilities were specifically identified at the Facility Site.

The Applicant has prepared a Drainage Remediation Plan to address unavoidable or inadvertent damages to surface or sub-surface drainage within the Facility Site during construction as discussed further in Section 15(d).

(5) USDA Soil Mapping

Soil types within the Facility Site were mapped using data from the USDA National Resource Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database (Soil Survey Staff, 2023). See Figure 10-3 for a map delineating soil types within the Facility Site. A description of the soil types within the Facility Site and their characteristics are provided in Exhibit 10 (Geology, Seismology and Soils).

(6) NYS Agricultural Land Classification Mineral Soil Groups for Impacted Agricultural Areas

As part of the 2021 RES Solicitation for Tier 1 RECs, New York State Energy Research & Development Authority (NYSERDA) provides mapping of MSGs 1-4 across the state. MSGs 1-4 are considered prime agricultural land by the NYSALCS. Utilizing this dataset, Figure 15-4 depicts the NYS Agricultural Land Classification MSGs 1-4 within the Facility Site.

Within the Facility Site, there are 422 acres of active agricultural land within MSGs 1-4 (Table 15-5). Approximately 144 acres are located outside of the Facility's LOCA and will therefore be able to continue in agricultural production undisturbed. Additionally, approximately 47 acres will be temporarily impacted during construction but will be restored to pre-construction conditions and able to remain in agricultural production upon completion of construction and restoration activities. Within the Facility's fence line, approximately 229 acres of agricultural land within MSGs 1-4 will be maintained in an early successional vegetative community and be taken out of agricultural production for the life of the Facility. Upon decommissioning and restoration of the Facility in accordance with Appendix 23-A, this area will be available to be farmed at the landowner's discretion. Only 1.7 acres of the agricultural lands

within MSGs 1-4 will be permanently lost to built components that will not be decommissioned at the end of the Facility's useful life (e.g., POI substation and associated access road and overhead generation tie line). Potential impacts to active agricultural land and mineral soils within the Facility Site represent a negligible impact to agricultural soils county- and state-wide. Exhibit 10 provides more information regarding potential impacts to soils in the Facility Site. See Figure 15-6 for a map depicting the NYS agricultural land classification system MSGs 1-10 within the Facility Site and Figure 15-4 depicting the Project-related impacts to agricultural land within MSGs 1-4. In addition, Section (a)(8) and Table 15-5 present the anticipated impacts to agricultural production areas, including MSGs.

(c) Agricultural Plan

As mentioned above, the Applicant prepared an Agricultural Plan (Appendix 15-B), consistent with the NYSDAM *Guidelines for Solar Energy Projects – Construction Mitigation for Agricultural Lands* (Revision 10/18/2019), to avoid, minimize, and mitigate impacts to active agricultural lands (i.e., land in active agricultural production defined as active three of the last five years) within MSGs 1-4 during the construction, restoration, post construction monitoring and remediation, and decommissioning phases of the Facility.

The proposed Facility has been sited to avoid impacts to a variety of sensitive resources, including significant agricultural resources, to the maximum extent practicable. As previously noted in Section (b)(3), landowner identified development restrictions were factored into the final Facility Site boundary and siting of the Facility components. The Applicant is thereby limited to developing the Facility on lands made available by participating landowners where construction of the Facility is feasible, while maintaining a design for a 90 MW capacity facility. As described in Section 15(a)(8), there are approximately 278 acres of active agricultural land classified as MSGs 1 through 4 that will be either permanently or temporarily impacted by the Project (Figure 15-4). The Agricultural Plan will be implemented in these areas to further avoid, minimize, and mitigate impacts to active agricultural land classified as MSGs 1 through 4.

Various measures to protect and restore agricultural lands and farming operations within the Facility Site will be undertaken during and after construction, including full restoration of temporarily disturbed agricultural land. The Applicant and/or a designated third-party Agricultural Monitor will consult with the NYSDAM during construction if deviation from the approved plan is necessary. In addition, the Applicant will continue to consult with landowners and the NYSDAM throughout the Article VIII process and during construction and operation of the Facility to ensure impacts to active agricultural land and farming operations are avoided, minimized, and/or mitigated to the extent practicable.

(d) Remediation Plan

The Applicant has prepared a Drainage Remediation Plan to address inadvertent damages to surface or sub-surface drainage features (Appendix 15-C). The potential impacts to drainage systems and process for identification and repair of the drainage features are summarized below, and further described in Appendix 15-C.

(1) Demonstration of the Likelihood of Impacts to Surface/Subsurface Drainage

Facility components have been sited to avoid temporary and permanent impacts to surface waters to the maximum extent practicable. Impacts to surface drainage features are discussed in Exhibit 13 (Water Resources and Aquatic Ecology) and Exhibit 14 (Wetlands), as well as the Drainage Remediation Plan (Appendix 15-C).

As mentioned previously, the Applicant has consulted with participating landowners of parcels that are sited to host Facility components. According to the survey results, three of the 12 participating parcels were identified as having drain tiles (Appendix 5-A). Additionally, a review of data from the National Center of Atmospheric Research [which portrays areas where agricultural drainage is most likely to occur based on several datasets (USDA 2017 Census of Agriculture, SSURGO data regarding soil type and slope from the USDA NRCS, 2016 NLCD land cover data, and slope data generated from the Shuttle Radar Topography Mission derived elevation mode)] indicates that while there are several parcels within the 5-mile Study Area that have the potential to host agricultural sub-surface drainage infrastructure, none are mapped within the Facility Site (Valayamkunnath et al., 2020). The Applicant is not aware of any drain tile systems that could be impacted by the Facility that extend outside the Facility Site onto non-participating parcels. Figure 15-6 depicts known and suspected surface and subsurface drainage features within the Facility Site and 5-mile Study Area.

Prior to construction, the location of all known drain tile lines will be flagged in the field to facilitate avoidance wherever practicable. While identification of existing drain tile systems can aid in minimizing impacts, impacts cannot feasibly be ruled out. The Applicant will follow the procedures outlined in the Drainage Remediation Plan (Appendix 15-C) should any drainage systems become damaged or need repair during construction or upon decommissioning of the Facility.

(2) Identification of Methods of Repair for Damaged Drainage Features

If broken drain tiles are visible during excavation and backfill activities, drain tile components that are damaged will be identified with flags or stakes until the extent of damage and need for repairs (if needed for drainage to support operation of the Facility) are evaluated. The location of damaged drain tile systems will also be recorded using Global Positioning System technology. If necessary, damage to drain tiles during certain aspects of Facility construction may not be apparent immediately following damage but may become more apparent over time. Unexpected surface water flow or ponding during dry conditions, formation of localized voids or sinkholes above drain tiles during low flow periods and upwelling of water during high flow periods are indicators of potential drain tile damage.

The Applicant will implement any required corrective measures throughout operation of the Facility, including the implementation of the Decommissioning and Site Restoration Plan (Exhibit 23 and Appendix 23-A) and in response to any issues identified through the complaint resolution process described in the Applicant's Complaint Management Plan which will be submitted as a pre-construction compliance filing consistent with 16 NYCRR Section 1100-10.2 (e)(7) requirements. All surface and subsurface drainage systems damaged during construction will be repaired as close to preconstruction

conditions as possible and in accordance with the NYSDAM Guidelines. See Exhibits 13 (Water Resources and Aquatic Ecology) and 14 (Wetlands) and Appendix 15-B (Surface and Sub-surface Drainage Remediation Plan) for additional details on restoration of surface and subsurface water drainage.

(e) Agricultural Co-utilization

As described in this Section 15(8), the area of active agricultural land within MSGs 1-4 that will be temporarily taken out of production during Facility operation is approximately 229 acres, which represents 54% of all active agricultural land within MSGs 1-4 in the Facility Site. Of this area, approximately 11 acres occurs within the LOIS and will be converted to built Facility components while the remaining areas within the Facility's security fencing (approximately 217 acres) would be maintained in an early successional community and may even benefit future agricultural production by allowing the soils to "rest" during the Facility's useful life. Areas outside of the security fencing that will be temporarily disturbed during construction or not impacted by Facility construction at all, together total 191 acres (45%) of active agricultural land within MSGs 1-4. These areas will remain in agricultural production at the discretion of the landowner.

The careful design and siting of the Facility will allow landowners continued use of their farmland for agricultural production in areas not utilized by Facility components. The Applicant worked closely with landowners to ensure that the siting of components on their agricultural land would be agreeable to the landowner and would not hinder any planned future agricultural uses. The Applicant has also facilitated the potential for ongoing agricultural production on adjacent parcels or portions of parcels not hosting Facility components by ensuring the Facility construction and operation does not impede access to agricultural fields by farming equipment (see Section (a)(7) for a discussion of the commitments to agricultural restoration of temporarily disturbed agricultural areas), and by limiting the fragmentation of agricultural fields. Therefore, the Facility design itself is intended to maximize the co-utilization of Facility components and agricultural land, supporting continued agricultural production in areas not impacted by the Facility, or on other parcels controlled by the landowner, and further supported by the payments received for leasing portions of the land for Facility development.

An Agricultural Co-utilization Plan (e.g., sheep grazing within fenced PV array areas, etc.) is not currently proposed for the North Seneca Solar Project and the requirements of Section 1100-2.16(e) are not applicable. The Applicant may elect to implement co-utilization measures in the future, at which point the Applicant will submit an Agricultural Co-utilization Plan to ORES during the pre-construction compliance filings phase.

REFERENCES

Cornell Institute for Resource Information Sciences. 2023. Agricultural Districts, New York State. Available at: https://cugir.library.cornell.edu/catalog/cugir-009010 (Accessed January 2024).

Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, DM. Hunt, and A.M. Olivero (editors). 2014. Ecological Communities of New York State. Second Edition: A Revised and Expanded Edition of Carol Reschke's Ecological Communities of New York State (1990). New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.

New York State Department of Taxation and Finance (NYSDTF). 2022. *Agricultural Assessment Program – Overview*. Available at: https://www.tax.ny.gov/research/property/assess/valuation/ag_overview.htm#:~:text=Introduction (Accessed September 2023).

Seneca County. 2023. *Agriculture in Seneca County*. Planning Board. Available at: https://www.co.seneca.ny.us/gov/admin/planning/agriculture-in-seneca-county/#agb (Accessed August 2023).

Soil Survey Staff, Natural Resources Conservation Service (NRCS), United States Department of Agriculture (USDA). 2023. *Soil Survey Geographic (SSURGO) Database*. Available at: https://sdmdataaccess.sc.egov.usda.gov (Accessed December 2023).

United States Department of Agriculture (USDA). 2019. 2017 Census of Agriculture: United States Summary and State Data, Volume 1. National Agricultural Statistics Service. AC-17-A-51. Issued April 2019.

USDA. 2022. CropScape – Cropland Data Layer. National Agricultural Statistics Service. Available at: https://nassgeodata.gmu.edu/CropScape/ (Accessed January 2024).

USDA. 2007. Census of Agriculture. County Summary Highlights: 2007. Available at: https://agcensus.library.cornell.edu/wp-content/uploads/2007-New_York-st36_2_001_001-2.pdf (Accessed September 2023).

USDA. 2012a. Census of Agriculture, Seneca County. County Summary Highlights: 2012. Available at: https://agcensus.library.cornell.edu/wp-content/uploads/2012-New_York-st36_2_001_001.pdf (Accessed September 2023).

USDA. 2012b. Census of Agriculture. County Profile: Ontario County New York. Available at: https://agcensus.library.cornell.edu/wp-content/uploads/2012-New_York-cp36003.pdf (Accessed September 2023).

USDA. 2012c. Census of Agriculture. County Profile: Wayne County New York. Available at: https://agcensus.library.cornell.edu/wp-content/uploads/2012-New_York-cp36101.pdf (Accessed September 2023).

USDA. 2017a. Census of Agriculture, Seneca County. County Summary Highlights: 2017. Available at: https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/New_York/cp36099.pdf (Accessed September 2023).

USDA. 2017b. Census of Agriculture. County Profile: Ontario County New York. Available at: https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/New_York/cp36069.pdf (Accessed September 2023).

USDA. 2017c. Census of Agriculture. County Profile: Wayne County New York. Available at: https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/New_York/cp36117.pdf (Accessed September 2023).

United States Geological Survey Multi-Resolution Land Characteristics Consortium. 2023. National Land Cover Database 2021. Available at: https://www.mrlc.gov/viewer/

Valayamkunnath, P., Barlage, M., Chen, F. et al. *Mapping of 30-meter resolution tile-drained croplands using a geospatial modeling approach*. Sci Data 7, 257 (2020). https://doi.org/10.1038/s41597-020-00596-x