



## **FLAT CREEK SOLAR**

**Permit Application No. 23-00054**

**§ 1100-2.15 Exhibit 14**  
**Wetlands**

**Contents**

Acronym List ..... ii

Glossary Terms..... iii

Exhibit 14: Wetlands ..... 1

    14(a) Map Depicting Wetland Boundaries ..... 1

    14(b) Wetland Delineation Survey Report ..... 12

    14(c) Qualitative and Descriptive Wetland Function Assessment..... 15

    14(d) Off-site Wetlands Hydrological and Ecological Influence Analysis..... 18

    14(e) Avoidance of Impacts on NYS Wetlands and Adjacent Areas ..... 18

    14(f) Minimization of Impacts on NYS Wetlands and Adjacent Areas ..... 19

        (1) Wetland Function Considerations in Design and Siting ..... 24

        (2) Wetland Function in Adjacent Areas..... 24

    14(g) Wetland Restoration and Mitigation Plan..... 25

References ..... 28

**Tables**

Table 14-1. Impacts to State Jurisdictional Wetlands ..... 2

Table 14-2. Impacts to State Jurisdictional 100-Foot Adjacent Areas..... 5

Table 14-3. Wetland Mitigation Requirements..... 25

**Figures**

- Figure 14-1. Federal & State Jurisdictional Wetlands & Adjacent Areas
- Figure 14-2. TRC Delineated Wetlands & Streams
- Figure 14-3. Proposed Impacts to State-Jurisdictional Wetlands & Adjacent Areas Within the Facility Site

**Appendices**

- Appendix 14-1 Wetland and Stream Delineation Report
- Appendix 14-2 ORES Wetland Jurisdictional Determination
- Appendix 14-3 Wetland Functions and Values Assessment
- Appendix 14-4 Wetland Mitigation Plan

## Acronym List

|          |   |
|----------|---|
| BMP      | best management practice                                    |
| E&SC     | erosion and sedimentation control                           |
| ERM      | Environmental Resource Mapper                               |
| FGDC     | Federal Geographic Data Committee                           |
| FWW      | freshwater wetlands   |
| GPS      | Global positioning system                                   |
| HDD      | Horizontal directional drilling                             |
| JD       | Jurisdictional determination                                |
| LOD      | Limits of disturbance                                       |
| MW       | megawatt  |
| NRCS     | Natural Resources Conservation Service                      |
| NWI      | National Wetland Inventory                                  |
| NYCRR    | New York Codes, Rules, and Regulations                      |
| NYPA ROW | New York Power Authority right of way                       |
| NYSDEC   | New York State Department of Environmental Conservation     |
| ORES     | Office of Renewable Energy Siting and Electric Transmission |
| PEM      | Palustrine emergent   |
| PFO      | Palustrine forested   |
| POI      | point of interconnection                                    |
| PSS      | Palustrine forested   |
| PUB      | Palustrine unconsolidated bottom                            |
| PV       | Photovoltaic  |
| ROW      | right of way  |
| SWPPP    | Stormwater Pollution Prevention Plan                        |
| TWT      | The Wetland Trust   |
| USACE    | United State Army Corps of Engineers                        |
| USCs     | Uniform Standards and Conditions                            |
| USDA     | United States Department of Agriculture                     |
| USFWS    | United States Fish and Wildlife Service                     |
| WRMP     | Wetland Restoration and Mitigation Plan                     |

## **Glossary Terms**

|                                   |   |
|-----------------------------------|---|
| <b>Applicant</b>                  | Flat Creek Solar NY LLC, a subsidiary of Cordelio Power LP, the entity seeking a siting permit for the Facility from the Office of Renewable Energy Siting and Electric Transmission (ORES) under Article VIII of the New York State Public Service Law.  |
| <b>Facility</b>                   | Flat Creek Solar, a 300 MW solar generating facility located in the Towns of Root and Canajoharie, NY. The proposed Facility components to be constructed for the generation, collection, and distribution of energy for Flat Creek Solar include solar panel modules, electrical collection system, collection substation, point of interconnection (POI) switchyard, access roads, laydown/staging areas, and other ancillary facilities. |
| <b>Facility Site</b>              | The participating parcels encompassing Facility components, which totals approximately 3,794 acres in the Towns of Canajoharie and Root, Montgomery County, New York (Figure 2-1).  |
| <b>Study Area</b>                 | The Study Area for the Facility includes a radius of five miles around the Facility Site boundary, unless otherwise noted for a specific resource study or Exhibit. The 5-mile Study Area encompasses approximately 108,667 acres, inclusive of the approximately 3,794-acre Facility Site.   |
| <b>Limit of Disturbance (LOD)</b> | The area to which temporary construction impacts will occur, totaling approximately 1,637 acres.  |

## **Exhibit 14: Wetlands**

This Exhibit provides information required in accordance with the requirements of §1100-2.15 of the Article VIII Regulations.

### **14(a) Map Depicting Wetland Boundaries**

On behalf of the Applicant, field surveys were conducted by TRC within the Facility Site to identify wetland and stream features within each parcel to be disturbed by construction activities associated with Facility installation. The Facility Site includes 3,794 acres of privately owned land across 45 parcels, generally consisting of cultivated crops, pastureland, wetlands, and mixed forests. Surveys for wetlands and streams were conducted in 2020, 2021, 2022, 2023, and 2024. Field surveys were performed in accordance with the *United States Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual* (Environmental Laboratory 1987) and the *2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)* (USACE 2012), the *New York State Freshwater Wetlands Delineation Manual* (Browne et al. 1995), and wetland delineation requirements detailed in Chapter XVIII, Title 16 of New York Codes, Rules and Regulations (NYCRR) Part 1100 §1100-1.3 provided by the Office of Renewable Energy Siting (ORES).

The results of the field surveys are presented in detail within the Wetland and Stream Delineation Report included as Appendix 14-1. Site visits to review the delineated boundaries of wetlands and streams onsite were conducted with ORES and TRC on May 31, 2023, and August 31, 2023, and ORES issued a wetland and waterbody jurisdictional determination (JD) on September 27, 2023, and a revised JD was received on July 1, 2024. Both JDs are included in Appendix 14-2. The JD includes specific determinations for State-jurisdictional features located within the Facility Site. ORES did not request boundary changes to wetland and stream features resulting from these site visits. Table 14-1 below summarizes proposed impacts to State-jurisdictional wetlands, while Table 14-2 below summarizes adjacent area impacts associated with State-jurisdictional wetlands within the Facility Site. Information regarding the need for and timing of a federal JD is further discussed in Exhibit 25 (Other Permits and Approvals).

Table 14-1. Impacts to State Jurisdictional Wetlands

| Field ID | Wetland Class <sup>1</sup> | State Wetland Class <sup>2</sup> | Facility Component/ Impact | Article VIII Feature/Activity   | State Mitigation Requirements <sup>3</sup> | Impacts <sup>4</sup> |       | Mitigation |       | Page Number from Civil Drawing |
|----------|----------------------------|----------------------------------|----------------------------|---|--|----------------------|-------|------------|-------|--------------------------------|
|          |                            |                                  |                            |   |  | Sq ft                | Acres | Sq ft      | Acres |                                |
| W-RDS-05 | PEM                        | Unmapped > 12.4 ac               | Access road                | Access Road   | A(M3)                                      | 22.6                 | <0.00 | 22.6       | <0.00 | C-102-55                       |
|          | PEM                        |                                  | Grading                    | Other activities integral to the project involving grading                          | A(M3)                                      | 340.35               | 0.01  | 340.35     | 0.01  |                                |
|          | PEM                        |                                  | Culvert                    | Other activities and structures integral to the project involving placement of fill | A(M3)                                      | 18.9                 | <0.00 | 18.9       | <0.00 |                                |
|          | PFO                        |                                  | Grading                    | Other activities integral to the project involving grading                          | A(M3)                                      | 313.7                | 0.01  | 313.7      | 0.01  |                                |
|          | PFO                        |                                  | Culvert                    | Other activities and structures integral to the project involving placement of fill | A(M3)                                      | 17.1                 | <0.00 | 17.1       | <0.00 |                                |
| W-DJB-11 | PSS                        | Unmapped > 12.4 ac               | Collection ROW             | Power Interconnection (including clearing for interconnections)                     | A(M3)                                      | 12,822.65            | 0.29  | 12,822.65  | 0.29  | C-102-09                       |
| W-EES-06 | PEM                        | Unmapped > 12.4 ac               | Collection ROW             | Power Interconnection (including clearing for interconnections)                     | A(M3)                                      | 26,557.23            | 0.61  | 26,557.23  | 0.61  | C-102-20, C-102-21, C-102-26   |
|          | PEM                        |                                  | Tree Clearing              | Selective cutting of trees and shrubs   | A  | 15.36                | <0.00 | -          | -     |                                |

Table 14-1. Impacts to State Jurisdictional Wetlands

| Field ID | Wetland Class <sup>1</sup> | State Wetland Class <sup>2</sup> | Facility Component/ Impact | Article VIII Feature/Activity   | State Mitigation Requirements <sup>3</sup> | Impacts <sup>4</sup> |       | Mitigation |       | Page Number from Civil Drawing |
|----------|----------------------------|----------------------------------|----------------------------|---|--|----------------------|-------|------------|-------|--------------------------------|
|          |                            |                                  |                            |   |  | Sq ft                | Acres | Sq ft      | Acres |                                |
|          | PEM                        |                                  | Access Road                | Access Road   | A(M3)                                      | 172.77               | <0.00 | 172.77     | <0.00 |                                |
|          | PEM                        |                                  | Grading                    | Other activities integral to the project involving grading                          | A(M3)                                      | 298.3                | 0.01  | 298.3      | 0.01  |                                |
|          | PEM                        |                                  | Culvert                    | Other activities and structures integral to the project involving placement of fill | A(M3)                                      | 103.3                | <0.00 | 103.3      | <0.00 |                                |
|          | PSS                        |                                  | Collection ROW             | Power Interconnection (including clearing for interconnections)                     | A(M3)                                      | 32,055.20            | 0.74  | 32,055.20  | 0.74  |                                |
| W-EES-26 | PFO                        | Unmapped > 12.4 ac               | Tree Clearing              | Clearing of Forest  | A(M3)                                      | 20.6                 | <0.00 | 20.6       | <0.00 | C-101-47                       |
| W-MLM-10 | PEM                        | Mapped (CA-1, Class III)         | Collection ROW             | Power Interconnection (including clearing for interconnections)                     | A(M3)                                      | 4,523.2              | 0.10  | 4,523.2    | 0.10  | C-102-34, C-102-42, C-102-51   |
|          | PFO                        |                                  | Collection ROW             | Power Interconnection (including clearing for interconnections)                     | A(M3)                                      | 186,580.44           | 4.28  | 186,580.44 | 4.28  |                                |
|          | PFO                        |                                  | HDD Bore Pit               | Other activities and structures integral to the project involving placement of fill | A(M3)                                      | 294.0                | 0.01  | 294.0      | 0.01  | C-102-42, C-102-51             |

Table 14-1. Impacts to State Jurisdictional Wetlands

| Field ID                   | Wetland Class <sup>1</sup> | State Wetland Class <sup>2</sup> | Facility Component/ Impact | Article VIII Feature/Activity   | State Mitigation Requirements <sup>3</sup> | Impacts <sup>4</sup> |             | Mitigation       |             | Page Number from Civil Drawing                  |
|----------------------------|----------------------------|----------------------------------|----------------------------|---|--|----------------------|-------------|------------------|-------------|---|
|                            |                            |                                  |                            |   |  | Sq ft                | Acres       | Sq ft            | Acres       |   |
| W-NSD-05                   | PEM                        | Unmapped > 12.4 ac               | Access Road                | Access Road   | A(M3)                                      | 14.1                 | <0.00       | 14.1             | <0.00       | C-102-40,<br>C-102-41,<br>C-102-49,<br>C-102-50 |
|                            | PEM                        |                                  | Fence Line                 | Security Fence  | A  | 133.6                | <0.00       | -                | -           |   |
|                            | PEM                        |                                  | Culvert                    | Other activities and structures integral to the project involving placement of fill | A(M3)                                      | 46.9                 | <0.00       | 46.9             | <0.00       |   |
|                            | PEM                        |                                  | Grading                    | Other activities integral to the project involving grading                          | A(M3)                                      | 419.0                | 0.01        | 419.0            | 0.01        |   |
| <b>Totals<sup>5</sup>:</b> |                            |                                  |                            |   |  | <b>264,973.2</b>     | <b>6.08</b> | <b>264,824.3</b> | <b>6.08</b> | -   |

<sup>1</sup> PEM: Palustrine Emergent; PSS: Palustrine Scrub-Shrub; PFO: Palustrine Forested; PUB: Palustrine Unconsolidated Bottom  
<sup>2</sup> Wetlands are classified from Class I (which provide the most benefits) to Class IV (which provide fewer benefits)  
<sup>3</sup> A(E): Allowed, enhancements and/or mitigation required (e.g., planting of adjacent area, mitigating hydrological changes); A: Allowed; no mitigation or enhancement required; A(M3): Allowed, mitigation required (1:1 mitigation ratio by area of impact -creation, restoration, and enhancement)  
<sup>4</sup> This table only shows State jurisdictional wetlands being impacted to their adjacent areas.  
<sup>5</sup> Individual impact acres may not add to the total impact acreages due to rounding.



Table 14-2. Impacts to State Jurisdictional 100-Foot Adjacent Areas

| Field ID | Wetland Class <sup>1</sup> | State Wetland Class <sup>2</sup> | Facility Component/Impact   | ORES Impact Type  | State Mitigation Requirements <sup>3</sup> | Impacts <sup>4</sup> |       | Mitigation |       | Page Number from Civil Drawing                   |
|----------|----------------------------|----------------------------------|-----------------------------|---|--|----------------------|-------|------------|-------|--|
|          |                            |                                  |                             |   |  | Sq ft                | Acres | Sq ft      | Acres |  |
| W-ABL-06 | PEM/PFO                    | Unmapped > 12.4 ac               | Tree clearing (no grubbing) | Clearing of Forest  | A  | 33,448.1             | 0.77  | -          | -     | C-102-03,<br>C-102-05,                           |
|          |                            |                                  | Tree clearing (grubbing)    | Clearing of Forest  | A  | 1,925.2              | 0.04  |            |       |  |
|          |                            |                                  | Photovoltaic (PV) Array     | Solar Panel   | A  | 1,632.8              | 0.04  |            |       |  |
|          |                            |                                  | Laydown                     | Other activities integral to the project involving grading                          | A  | 391.8                | 0.01  |            |       |  |
|          |                            |                                  | Fence                       | Security Fence  | A  | 767.2                | 0.02  |            |       |  |
| W-DJB-11 | PSS                        | Unmapped > 12.4 ac               | Collection ROW              | Power Interconnection (including clearing for interconnections)                     | A  | 40,784.4             | 0.94  | -          | -     | C-102-09   |
|          |                            |                                  | Tree clearing (no grubbing) | Clearing of Forest  | A  | 409.9                | 0.01  | -          | -     | C-102-09   |
|          |                            |                                  | HDD bore pit                | Other activities and structures integral to the project involving placement of fill | A  | 196.0                | 0.005 |            |       |  |
|          |                            |                                  | Laydown                     | Other activities integral to the project involving grading                          | A  | 30,857.2             | 0.71  |            |       |  |
| W-EES-06 | PEM/PSS                    | Unmapped > 12.4 ac               | Collection ROW              | Power Interconnection (including clearing for interconnections)                     | A  | 98,460.56            | 2.26  | -          | -     | C-102-13,<br>C-102-14,<br>C-102-20,<br>C-102-21, |

Table 14-2. Impacts to State Jurisdictional 100-Foot Adjacent Areas

| Field ID | Wetland Class <sup>1</sup> | State Wetland Class <sup>2</sup> | Facility Component/Impact   | ORES Impact Type  | State Mitigation Requirements <sup>3</sup> | Impacts <sup>4</sup> |       | Mitigation |       | Page Number from Civil Drawing |
|----------|----------------------------|----------------------------------|-----------------------------|---|--|----------------------|-------|------------|-------|--------------------------------|
|          |                            |                                  |                             |   |  | Sq ft                | Acres | Sq ft      | Acres |                                |
|          |                            |                                  | Tree clearing (no grubbing) | Clearing of Forest  | A  | 23,598.1             | 0.54  |            |       | C-102-26                       |
|          |                            |                                  | Tree clearing (grubbing)    | Clearing of Forest  | A  | 4,202.7              | 0.10  |            |       |                                |
|          |                            |                                  | Access Road                 | Access Road   | A  | 5,436.6              | 0.12  |            |       |                                |
|          |                            |                                  | Grading                     | Other activities integral to the project involving grading                          | A  | 2,471.6              | 0.01  |            |       |                                |
|          |                            |                                  | MV feeder (collection??)    | Power Interconnection (including clearing for interconnections)                     | A  | 65.5                 | 0.002 |            |       |                                |
|          |                            |                                  | PV Array                    | Solar Panel   | A  | 4,481.4              | 0.10  |            |       |                                |
|          |                            |                                  | Laydown                     | Other activities integral to the project involving grading                          | A  | 69,603.8             | 1.60  |            |       |                                |
|          |                            |                                  | HDD Bore Pit                | Other activities and structures integral to the project involving placement of fill | A  | 396.0                | 0.01  |            |       |                                |
| W-EES-12 | PEM/PSS                    | Unmapped > 12.4 ac               | Fence                       | Security Fence  | A  | 2,538.5              | 0.06  | -          | -     | C-102-12                       |
|          |                            |                                  | Tree Clearing (no grubbing) | Clearing of Forest  | A  | 669.4                | 0.02  |            |       |                                |
|          |                            |                                  | PV Array                    | Solar Panel   | A  | 27.3                 | 0.001 |            |       |                                |
| W-EES-13 | PEM                        | Unmapped > 12.4 ac               | Collection ROW              | Power Interconnection   | A  | 8,633.89             | 0.20  | -          | -     | C-102-12                       |

Table 14-2. Impacts to State Jurisdictional 100-Foot Adjacent Areas

| Field ID | Wetland Class <sup>1</sup> | State Wetland Class <sup>2</sup> | Facility Component/Impact   | ORES Impact Type  | State Mitigation Requirements <sup>3</sup> | Impacts <sup>4</sup> |       | Mitigation |       | Page Number from Civil Drawing |
|----------|----------------------------|----------------------------------|-----------------------------|---|--|----------------------|-------|------------|-------|--------------------------------|
|          |                            |                                  |                             |   |  | Sq ft                | Acres | Sq ft      | Acres |                                |
|          |                            |                                  |                             | (including clearing for interconnections)   |  |                      |       |            |       |                                |
|          |                            |                                  | Tree clearing (grubbing)    | Clearing of Forest  | A  | 526.6                | 0.01  |            |       |                                |
|          |                            |                                  | Tree clearing (no grubbing) | Clearing of Forest  | A  | 489.9                | 0.01  |            |       |                                |
|          |                            |                                  | Laydown Area                | Other activities integral to the project involving grading                          | A  | 3,278                | 0.08  |            |       |                                |
|          |                            |                                  | HDD bore pit                | Other activities and structures integral to the project involving placement of fill | A  | 146.9                | 0.003 |            |       |                                |
|          |                            |                                  | Fence                       | Security Fence  | A  | 91.8                 | 0.002 |            |       |                                |
| W-EES-26 | PEM/PFO                    | Unmapped > 12.4 ac               | Access Road                 | Access Road   | A  | 6,113.9              | 0.14  | -          | -     | C-102-46,<br>C-102-47          |
|          |                            |                                  | Tree clearing (grubbing)    | Clearing of Forest  | A  | 1,731.7              | 0.04  |            |       |                                |
|          |                            |                                  | Tree clearing (no grubbing) | Clearing of Forest  | A  | 33,391.4             | 0.77  |            |       |                                |
|          |                            |                                  | Grading                     | Other activities integral to the project involving grading                          | A  | 3,285.3              | 0.08  |            |       |                                |
|          |                            |                                  | PV Array                    | Solar Panel   | A  | 26.8                 | <0.00 |            |       |                                |
|          |                            |                                  | Collection ROW              | Power Interconnection (including clearing for interconnections)                     | A  | 1,759.2              | 0.04  |            |       |                                |
|          |                            |                                  | Fence                       | Security Fence  | A  | 1,036.5              | 0.02  |            |       |                                |

Table 14-2. Impacts to State Jurisdictional 100-Foot Adjacent Areas

| Field ID | Wetland Class <sup>1</sup> | State Wetland Class <sup>2</sup> | Facility Component/Impact   | ORES Impact Type  | State Mitigation Requirements <sup>3</sup> | Impacts <sup>4</sup> |       | Mitigation |       | Page Number from Civil Drawing |
|----------|----------------------------|----------------------------------|-----------------------------|---|--|----------------------|-------|------------|-------|--------------------------------|
|          |                            |                                  |                             |   |  | Sq ft                | Acres | Sq ft      | Acres |                                |
| W-IBP-01 | PFO                        | Unmapped > 12.4 ac               | Tree clearing (grubbing)    | Clearing of Forest  | A  | 649.0                | 0.01  | -          | -     | C-102-25,<br>C-102-31          |
|          |                            |                                  | Tree clearing (no grubbing) | Clearing of Forest  | A  | 34,067.2             | 0.78  |            |       |                                |
|          |                            |                                  | PV Array                    | Solar Panel   | A  | 63.65                | 0.001 |            |       |                                |
|          |                            |                                  | Laydown Area                | Other activities integral to the project involving grading                          | A  | 227.4                | 0.005 |            |       |                                |
|          |                            |                                  | Fence                       | Security Fence  | A  | 459.1                | 0.01  |            |       |                                |
| W-JMP-11 | PFO                        | Unmapped > 12.4 ac               | Tree Clearing (no grubbing) | Clearing of Forest  | A  | 16,541.1             | 0.38  | -          | -     | C-102-30                       |
| W-JMP-12 | PEM/PSS                    | Unmapped > 12.4 ac               | PV Array                    | Solar Panel   | A  | 449.0                | 0.01  | -          | -     | C-102-30                       |
|          |                            |                                  | Fence                       | Security Fence  | A  | 2.35                 | <0.00 |            |       |                                |
| W-JMP-13 | PFO                        | Unmapped > 12.4 ac               | Collection ROW              | Power Interconnection (including clearing for interconnections)                     | A  | 2,852.5              | 0.07  | -          | -     | C-102-30                       |
|          |                            |                                  | Tree Clearing (no grubbing) | Clearing of Forest  | A  | 6,783.5              | 0.16  |            |       |                                |
|          |                            |                                  | HDD Bore Pit                | Other activities and structures integral to the project involving placement of fill | A  | 147.0                | 0.003 |            |       |                                |
| W-JMP-19 | PFO                        | Unmapped > 12.4 ac               | Tree Clearing (grubbing)    | Clearing of Forest  | A  | 5,036.5              | 0.12  | -          | -     | C-102-53,<br>C-102-54          |
|          |                            |                                  | PV Array                    | Solar Panel   | A  | 456.1                | 0.01  |            |       |                                |

Table 14-2. Impacts to State Jurisdictional 100-Foot Adjacent Areas

| Field ID | Wetland Class <sup>1</sup> | State Wetland Class <sup>2</sup> | Facility Component/Impact   | ORES Impact Type  | State Mitigation Requirements <sup>3</sup> | Impacts <sup>4</sup> |       | Mitigation |       | Page Number from Civil Drawing         |
|----------|----------------------------|----------------------------------|-----------------------------|---|--|----------------------|-------|------------|-------|--|
|          |                            |                                  |                             |   |  | Sq ft                | Acres | Sq ft      | Acres |  |
|          |                            |                                  | Collection ROW              | Power Interconnection (including clearing for interconnections)                     | A  | 7,902.5              | 0.18  |            |       |  |
|          |                            |                                  | Fence                       | Security Fence  | A  | 270.4                | 0.01  |            |       |  |
| W-MLM-10 | PEM/PFO                    | Mapped (CA-1, Class III)         | Collection ROW              | Power Interconnection (including clearing for interconnections)                     | A  | 32,687.5             | 0.75  | -          | -     | C-102-34, C-102-42, C-102-51           |
| W-NSD-05 | PEM/PSS/PUB                | Unmapped > 12.4 ac               | Access Road                 | Access Road   | A  | 18,003.6             | 0.41  |            |       | C-102-40, C-102-41, C-102-49, C-102-50 |
|          |                            |                                  | Tree clearing (grubbing)    | Clearing of Forest  | A  | 160.9                | 0.004 |            |       |  |
|          |                            |                                  | Tree Clearing (no grubbing) | Clearing of Forest  | A  | 13,574.1             | 0.31  |            |       |  |
|          |                            |                                  | Grading                     | Other activities integral to the project involving grading                          | A  | 4,871.7              | 0.11  |            |       |  |
|          |                            |                                  | Inverter and Pad            | Other activities and structures integral to the project involving placement of fill | A  | 480.0                | 0.01  |            |       |  |
|          |                            |                                  | PV Array                    | Solar Panel   | A  | 2,347.2              | 0.05  |            |       |  |
|          |                            |                                  | Culvert                     | Other activities and structures integral to the project involving placement of fill | A  | 274.5                | 0.01  |            |       |  |
|          |                            |                                  | HDD Bore Pit                | Other activities and structures integral to   | A  | 49.0                 | 0.001 |            |       |  |

Table 14-2. Impacts to State Jurisdictional 100-Foot Adjacent Areas

| Field ID | Wetland Class <sup>1</sup> | State Wetland Class <sup>2</sup> | Facility Component/Impact   | ORES Impact Type  | State Mitigation Requirements <sup>3</sup> | Impacts <sup>4</sup> |       | Mitigation |       | Page Number from Civil Drawing                  |
|----------|----------------------------|----------------------------------|-----------------------------|---|--|----------------------|-------|------------|-------|---|
|          |                            |                                  |                             |   |  | Sq ft                | Acres | Sq ft      | Acres |   |
|          |                            |                                  |                             | the project involving placement of fill   |  |                      |       |            |       |   |
|          |                            |                                  | Collection ROW              | Power Interconnection (including clearing for interconnections)                     | A  | 1,459.8              | 0.03  |            |       |   |
|          |                            |                                  | Fence                       | Security Fence  | A  | 4,265.3              | 0.10  |            |       |   |
| W-NSD-10 | PEM/PSS                    | Unmapped > 12.4 ac               | Tree clearing (no grubbing) | Clearing of Forest  | A  | 818.4                | 0.02  |            |       | C-102-40  |
|          |                            |                                  | PV Array                    | Solar Panel   | A  | 20.7                 | <0.00 |            |       |   |
|          |                            |                                  | Fence                       | Security Fence  | A  | 340.7                | 0.01  |            |       |   |
| W-RDS-05 | PEM/PFO                    | Unmapped > 12.4 ac               | Access Road                 | Access Road   | A  | 29,289.7             | 0.67  |            |       | C-102-54,<br>C-102-55,<br>C-102-59,<br>C-102-60 |
|          |                            |                                  | Tree Clearing (no grubbing) | Clearing of Forest  | A  | 33,707.6             | 0.77  |            |       |   |
|          |                            |                                  | Tree Clearing (grubbing)    | Clearing of Forest  | A  | 472.4                | 0.01  |            |       |   |
|          |                            |                                  | Grading                     | Other activities integral to the project involving grading                          | A  | 16,409.9             | 0.38  |            |       |   |
|          |                            |                                  | PV Array                    | Solar Panel   | A  | 6.89                 | <0.00 |            |       |   |
|          |                            |                                  | Culvert                     | Other activities and structures integral to the project involving placement of fill | A  | 770.2                | 0.02  |            |       |   |
|          |                            |                                  | HDD Bore Pit                | Other activities and structures integral to   | A  | 49.0                 | 0.001 |            |       |   |

Table 14-2. Impacts to State Jurisdictional 100-Foot Adjacent Areas

| Field ID   | Wetland Class <sup>1</sup> | State Wetland Class <sup>2</sup> | Facility Component/Impact   | ORES Impact Type  | State Mitigation Requirements <sup>3</sup> | Impacts <sup>4</sup> |              | Mitigation |            | Page Number from Civil Drawing |
|--|----------------------------|----------------------------------|-----------------------------|---|--|----------------------|--------------|------------|------------|--------------------------------|
|  |                            |                                  |                             |   |  | Sq ft                | Acres        | Sq ft      | Acres      |                                |
|  |                            |                                  |                             | the project involving placement of fill                         |  |                      |              |            |            |                                |
|  |                            |                                  | Collection ROW              | Power Interconnection (including clearing for interconnections) | A  | 10,394.2             | 0.24         |            |            |                                |
|  |                            |                                  | Fence                       | Security Fence  | A  | 1,127.58             | 0.03         |            |            |                                |
| W-RDS-09   | PFO                        | Unmapped > 12.4 ac               | Fence                       | Security Fence  | A  | 44.2                 | 0.001        | -          | -          | C-102-54                       |
|  |                            |                                  | Tree Clearing (grubbing)    | Clearing of Forest  | A  | 811.9                | 0.02         |            |            |                                |
|  |                            |                                  | Tree Clearing (no grubbing) | Clearing of Forest  | A  | 23,994.2             | 0.55         |            |            |                                |
| W-RDS-10   | PEM/PFO                    | Unmapped > 12.4 ac               | Fence                       | Security Fence  | A  | 139.1                | 0.003        | -          | -          | C-102-54                       |
|  |                            |                                  | Tree Clearing (no grubbing) | Clearing of Forest  | A  | 13,651.3             | 0.31         |            |            |                                |
| <b>Totals<sup>5</sup>:</b>   |                            |                                  |                             |   |  | <b>664,090.0</b>     | <b>15.25</b> | <b>0.0</b> | <b>0.0</b> | <b>-</b>                       |
| <sup>1</sup> PEM: Palustrine Emergent; PSS: Palustrine Scrub-Shrub; PFO: Palustrine Forested; PUB: Palustrine Unconsolidated Bottom<br><sup>2</sup> Wetlands are classified from Class I (which provide the most benefits) to Class IV (which provide fewer benefits)<br><sup>3</sup> A: Allowed; no mitigation or enhancement required;<br><sup>4</sup> This table only shows State jurisdictional wetlands being impacted to their adjacent areas.<br><sup>5</sup> Individual impact acres may not add to the total impact acreages due to rounding. |                            |                                  |                             |   |  |                      |              |            |            |                                |

As required under Article VIII, TRC used publicly available information to perform a desktop review of land within 100 feet of the limits of disturbance (LOD) that is not part of the Facility Site. These sources include the New York State Department of Environmental Conservation (NYSDEC) Environmental Resource Mapper (ERM) and the United States Fish & Wildlife Service (USFWS) National Wetlands Inventory (NWI) Mapper to determine the presence of mapped wetlands and streams. The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) web soil survey was reviewed to determine the presence of hydric soils which is often indicative of wetland presence. Historic and current aerial imagery was reviewed to determine the potential offsite extent of wetlands and streams mapped during field delineations. The possible presence of unmapped wetlands was determined using saturation signatures and geomorphic features observed on current and historic aerial imagery. Section 14(d) below provides more details and information on the desktop analysis methodology and results.

#### **14(b) Wetland Delineation Survey Report**

The results from the wetland and waterbody delineations within the Facility Site are documented in the Wetland and Stream Delineation Report (Appendix 14-1). The Applicant submitted the Wetland and Stream Delineation Report to ORES on July 28, 2023, to review and to facilitate the ORES site visits as noted above. No wetland or stream boundary modifications were requested resulting from the ORES site visits. Additional surveys were conducted in November 2023 and February 2024 to delineate approximately 56 acres of land that were added to the Facility Site. The Wetland and Stream Delineation Report was updated to include the additional delineated areas in November 2023 and February 2024 and was resubmitted to ORES on May 21, 2024. A revised Jurisdiction Determination was received on July 1, 2024.

Additionally, the Wetland and Stream Delineation Report submitted to ORES on May 21, 2024, includes updates due to the amended 2023 definition of “waters of the United States” following the Supreme Court decision in *Sackett v. Environmental Protection Agency* (598 U.S. 651 (2023)).

Delineated wetland resources were assigned covertype(s) based on the Cowardin classification system (Federal Geographic Data Committee [FGDC], 2013; Figure 14-2). If a delineated wetland contained multiple covertypes creating a wetland complex, covertypes were assigned based on field observed breaks in the vegetation communities. Wetland covertypes are categorized as palustrine emergent (PEM), palustrine scrub-shrub (PSS), palustrine forested (PFO), and



palustrine unconsolidated bottom (PUB). Wetland boundaries were marked in the field using sequentially numbered pink flagging. Boundary flag locations were recorded using a Geode™ global positioning system (GPS) unit with reported sub-meter accuracy. Sample locations were recorded for each wetland covertype within a delineated feature using the USACE Northcentral and Northeast Region Wetland Determination forms. This method was utilized to establish a more complete depiction of wetlands associated with the Facility Site. Streams were marked in-field using blue survey flagging along the bank edges for streams that were six feet wide or more. For streams less than six feet wide, a centerline was marked. Flag locations were recorded using a Geode™ GPS unit with reported sub-meter accuracy and a stream determination data form was recorded for each feature. Delineated streams are further detailed in Exhibit 13 (Water Resources and Aquatic Ecology) of this Application.

As detailed in the appended Wetland and Stream Delineation Report, TRC delineated 144 wetlands during field surveys within the Facility Site. Total wetland coverage within the Facility Site is 457.42 acres (14% of the Facility Site). As detailed in the JD provided by ORES, 26 of the wetlands surveyed are State-jurisdictional. The Wetland and Stream Delineation Report is summarized below and can be found as Appendix 14-1.

A total of 110 (195.65 acres) PEM wetlands were identified within the Facility Site. PEM wetlands are dominated by an herbaceous layer of typically hydrophytic (water-tolerant) plant species. PEM wetlands usually contain deep, nutrient-rich soils that remain saturated or inundated throughout the year.

A total of 34 (103.53 acres) PSS wetlands were identified within the Facility Site. PSS wetlands are dominated by woody shrub vegetation that stands less than 20 feet tall. Species within the PSS wetland covertype could include a mix of true shrubs, young trees and shrubs, or trees that are small or stunted due to environmental stressors.

A total of 36 (140.99 acres) PFO wetlands were identified within the Facility Site. PFO wetlands are dominated by typically hydrophytic tree species 20 feet tall or taller. The understory in PFO wetlands is often dominated with an assortment of shrub and herbaceous species. Understory vegetation presence can vary between wetlands, as large trees may inhibit growth of vegetation in the understory.

A total of 20 (17.86 acres) PUB wetlands were identified within the Facility Site. PUB wetlands are characterized by surface water and have less than 30 percent vegetative cover and at least

25 percent cover of particles less than stones. As these are bodies of standing water, evidence of wetland hydrology was decisively present with standing water.

Further characterization of the wetlands and streams can be found in Appendix 14-1, the Wetland and Stream Delineation Report.

Mapping by the NYSDEC depicts three NYSDEC-mapped wetlands within the Facility Site. These wetlands (CA-1, CA-5, and CA-6) exist partially within Facility Site parcels and overlap with TRC delineated wetlands W-JMP-08, W-MLM-04, W-DJB-02, and W-MLM-10. Therefore, and as shown in the ORES JD, these delineated wetlands are State-jurisdictional as extensions of NYSDEC-mapped wetlands. Additionally, per the ORES JD issued on September 27, 2023, 26 delineated wetlands are State-jurisdictional as either extensions of existing NYSDEC-mapped wetlands or as part of offsite wetlands greater than 12.4 acres in size. The 26 State-jurisdictional wetlands within the Facility Site are listed below.

- W-ABL-06 (unmapped >12.4 acres)
- W-DJB-02 (CA-5)
- W-DJB-11 (unmapped >12.4 acres)
- W-EES-06 (unmapped >12.4 acres)
- W-EES-08 (unmapped >12.4 acres)
- W-EES-09 (unmapped >12.4 acres)
- W-EES-12 (unmapped >12.4 acres)
- W-EES-13 (unmapped >12.4 acres)
- W-EES-26 (unmapped >12.4 acres)
- W-IBP-01 (unmapped >12.4 acres)
- W-JMP-08 (CA-6)
- W-JMP-11 (unmapped >12.4 acres)
- W-JMP-12 (unmapped >12.4 acres)
- W-JMP-13 (unmapped >12.4 acres)
- W-JMP-19 (unmapped >12.4 acres)
- W-MLM-03 (CA-5)
- W-MLM-04 (CA-5)
- W-MLM-05 (CA-5)
- W-MLM-06 (CA-5)
- W-MLM-07 (CA-5)
- W-MLM-10 (CA-5)
- W-NSD-05 (unmapped >12.4 acres)
- W-NSD-10 (unmapped >12.4 acres)
- W-RDS-05 (unmapped >12.4 acres)

- W-RDS-09 (unmapped >12.4 acres)
- W-RDS-10 (unmapped >12.4 acres)

Each of the delineated wetlands are shown on aerial mapping on Figure 14-1.

#### **14(c) Qualitative and Descriptive Wetland Function Assessment**

The USACE developed a supplement to the *Highway Methodology Workbook* entitled *Functions and Values: A Descriptive Approach* (USACE Supplement) (USACE 1999) to collect and describe the functions and values of wetlands in a measurable and unbiased perspective. Previous efforts to interpret wetland functions and values were legally difficult to document and defend, resulting in the creation of the USACE Supplement. A Wetlands Functions and Values Assessment was performed for wetlands delineated within the Facility Site using elements of the Highway Methodology to conduct a qualitative assessment, taking into consideration seasonal variations, of the physical characteristics of the wetlands and identify the functions and values they exhibit.

Wetland functions and values are the favorable services that a wetland provides to its surrounding environment and towards the benefit of human society (USACE 1999). They operate because of physical, chemical, and biological characteristics, and are the basis for many complex relationships maintained between wetlands and the local ecological and human environments. Assessing the specific functions and values of a wetland is needed to determine the overall impacts an alteration may have on a wetland. The assessments aid in establishing appropriate mitigation measures that may be required should an impact to a wetland occur. A wetland functions and values assessment was performed for delineated wetlands within the Facility Site and a comprehensive description of the functions and values of each wetland is presented below.

#### ***Wetland Functions***

Wetland functions are the ecosystem properties that result from the biologic, chemical, hydrologic, and physical processes that take place within a wetland which aid in promoting a homeostatic natural environment in the absence of human interference. The eight wetland functions in the USACE Supplement include:

1. Groundwater Recharge/Discharge – This function defines the potential for a wetland to act as a source of groundwater recharge and/or discharge. Recharge describes the potential for the wetland to contribute water to an underlying aquifer. Discharge relates to the potential for the wetland to act as a source of groundwater transfer to the surface (i.e., springs and hillside seeps).

2. Flood-flow Alteration – This function applies to the effectiveness of the wetland in reducing flood damage by containing an enhanced ability to store floodwaters for an extended period following heavy precipitation events.
3. Fish and Shellfish Habitat – This function defines a wetland’s ability to contain or influence suitable habitats for fish and shellfish species.
4. Sediment/Toxicant/Pathogen Retention – This function describes the ability of a wetland to hinder the degradation of water qualities downstream. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens based on its geomorphic position, connectivity, soil thickness, and other physical characteristics.
5. Nutrient Removal/Retention/Transformation – This function relates to the wetlands containing the ability to prevent excess nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.
6. Production Export – This function relates to a wetland’s ability to produce food or usable products for organisms, including humans, within the trophic levels associated with the watershed.
7. Sediment/Shoreline Stabilization – This function defines a wetland’s ability to effectively stabilize streambanks and shorelines against future erosion events.
8. Wildlife Habitat – This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Resident and migrating species were considered along with the potential for any State or federally listed species occurring within the wetland.

As is common, wetlands within the Facility Site displayed multiple functions based on their specific characteristics observed during onsite delineations. The primary functions of wetlands surveyed in the Facility Site include:

- Flood-flow Alteration;
- Sediment/Toxicant/Pathogen Retention;
- Groundwater Recharge/Discharge;
- Nutrient Removal/Retention/Transformation;
- Production Export; and
- Wildlife Habitat.

## **Wetland Values**

Wetland values are the perceived societal benefits stemming from the ecosystem functions and/or other characteristics of a wetland. The value of a wetland function, or a combination of functions, is based on the interpretative judgement of the significance attributed to the wetlands through various functions it provides. Five values are defined by the USACE Supplement and include:

1. Recreation – This value indicates whether the wetland is effective in providing or assisting in the establishment of recreational opportunities such as boating, fishing, hunting, and other leisurely pursuits. Recreation in this capacity includes both consumptive and non-consumptive activities. Consumptive activities consume or diminish the plants, animals, or other resources that are naturally located in the wetland, whereas non-consumptive activities do not.
2. Education/Scientific – This value considers the effectiveness of the wetland as a site for public education or as a location for scientific research.
3. Uniqueness/Heritage – This value applies to wetlands that contain a singular or rare quality. Special qualities may include such things as the wetland's history and the presence of archaeological sites, historical events which may have taken place at the wetland, or unique plants, animals, or geologic features located within, or supported by, the wetland feature.
4. Visual Quality/Aesthetics – This value relates to the visual and aesthetic qualities of the wetland.
5. Threatened or Endangered Species Habitat – This value related to the effectiveness of the wetland or associated waterbodies to specifically support threatened or endangered species.

Wetlands values within the Facility Site provide limited societal benefits due to the wetlands occurring on private property and being largely inaccessible to the public. The primary values displayed by wetlands within the Facility Site include:

- Recreation; and
- Visual Quality/Aesthetics.

When designing the Facility, the Applicant used information from the Functions and Values Report to situate components in areas where they would have no impact or minimal impacts on wetlands

with higher functions and values. Wetlands with higher functions and values provide significant benefits to the overall environment than wetlands with lower functions and values. Wetlands with higher functions and values require greater levels of compensatory mitigation for permanent impacts. Therefore, the Applicant has designed the Facility to minimize impacts to the maximum extent practicable to wetlands with higher functions and values.

For more detail on the functions and values of the wetlands within the Facility Site, please see the Wetland Functions and Values Assessment provided as Appendix 14-3.

#### **14(d) Off-site Wetlands Hydrological and Ecological Influence Analysis**

Wetland and stream delineations were conducted within the 3,794-acre Facility Site. For areas within 100 feet of the LOD where access was not authorized, wetlands were approximated using aerial imagery, review of wetland feature mapping services maintained by the USFWS (NWI and the NYSDEC, reference to onsite observations, current and historic aerial imagery, and an analysis of publicly available topographic contour maps of the Facility Site. These approximations of off-site wetlands within 100 feet of the LOD were used to determine hydrological connections to wetlands and waterbodies within the Facility Site, including possible off-site State-jurisdictional wetlands.

Wetland features that extend beyond the Facility Site typically have similar functions and values to wetlands mapped within the Facility Site during delineation field surveys. Offsite wetlands are not expected to be ecologically different to those within the Facility Site, and likely contain similar vegetative communities as those detailed in Appendix 14-1 (*Wetland and Stream Delineation Report*). Wetlands mapped within the Facility Site may potentially have hydrological connections to off-site wetlands through a series of streams and ditches. As detailed in the jurisdictional determination provided by ORES on July 1, 2024 (Appendix 14-2), 26 delineated wetlands are deemed State-jurisdictional. Eight of the wetlands identified within the Facility Site (W-DJB-02, W-JMP-08, W-MLM-03, W-MLM-04, W-MLM-05, W-MLM-06, W-MLM-07, and W-MLM-10) relate to mapped NYSDEC freshwater wetlands (FWW) CA-5 and CA-6. Section 14(e) below discusses proposed impacts to State-jurisdictional wetlands that will occur from Facility construction and operation.

#### **14(e) Avoidance of Impacts on NYS Wetlands and Adjacent Areas**

Wetlands within the Facility Site are widespread and exhibit a broad range of types including large wetland complexes, swales, forested and shrubby wetlands, ditches, depressions, and ponds.

The Facility design process used information from the wetland and stream delineation to place components where they would avoid impacts to State-jurisdictional wetlands, waterbodies, and their adjacent areas wherever possible. Through careful component siting and multiple design iterations, the Applicant has avoided impacts to State-jurisdictional wetland resources to the maximum extent practicable. Of the 26 State-jurisdictional wetlands, totaling 289.7 acres, the Applicant has avoided impacts to 20 wetlands entirely and 97.9% of the total acreage of State-jurisdictional delineated wetlands in the Facility Site. In addition to avoidance of 97.9% of the State jurisdictional wetlands within the Facility Site, the Applicant avoided impacts to 43 delineated wetlands outside of the currently proposed LOD including potential impacts to presumed State-jurisdictional wetlands located in areas that were originally considered for panel arrays.

State jurisdictional adjacent area impacts were avoided to maximum extent possible while considering both engineering and environmental constraints however due to the wide-ranging extent of wetlands within the Facility Site, and other constraints such as topography, sensitive resource areas, and land access, complete avoidance of the 100-foot regulated adjacent area was not feasible for 17 of the State-jurisdictional wetlands. There is a total of 348.9 acres of 100-foot regulated adjacent areas in the Facility Site. Of the 348.9 acres, the Facility design avoided 333.7 acres (95.6%). Where adjacent areas overlap for two nearby wetlands, the area is only counted once.

The Applicant has also elected to utilize horizontal directional drilling (HDD) techniques for collection lines to avoid permanent impacts to State-jurisdictional wetlands and adjacent areas. The HDD method is a trenchless technique that allows cable installation through a direct bore path under the ground. This method avoids the ground disturbance that results from traditional trench digging methods, therefore, avoiding collection line impacts to State-jurisdictional wetlands. By utilizing HDD, impacts to five wetlands were avoided and impacts to an additional five wetlands were reduced. If an inadvertent release were to occur during construction, the Applicant will have an Inadvertent Return Plan that will be approved through the compliance process.

#### **14(f) Minimization of Impacts on NYS Wetlands and Adjacent Areas**

Through the design process and multiple drafts and revisions of the Facility, the Applicant has avoided impacts to wetlands to the maximum extent practicable. However, complete avoidance

of State-jurisdictional wetlands was not feasible in all cases as explained above (Figure 14-3). The Applicant has minimized unavoidable impacts to State-jurisdictional wetlands to 6.08 acres. The Applicant also carefully designed the Facility to minimize impacts to State-jurisdictional wetland 100-foot adjacent areas to the maximum extent practicable. However, a subset of Facility components will result in unavoidable impacts to State-jurisdictional wetland adjacent areas. Construction of the Facility is expected to result in a cumulative total of 15.25 acres of impacts to State-jurisdictional wetland adjacent areas, primarily from collection line installation, tree clearing for collection lines and interconnection, and temporary laydown areas. These impacts are allowed under the Article VIII regulations and further detailed in Table 14-2 above and Section 14(g) below. Wetland adjacent areas that will be impacted correspond to unmapped State-jurisdictional wetlands and one Class III NYSDEC wetland. Per Section 1100-2.15(g) of the Article VIII regulations, impacts from Facility construction activities and component siting to the adjacent areas of unmapped wetlands >12.4 acres and Class III wetlands are allowed.

As previously stated, several iterations of the Facility layout were made throughout the design process to avoid impacts to State-jurisdictional wetlands and their regulated adjacent areas to the extent practicable. Extensive reviews of the Facility design and subsequent modifications were completed with specific priority given to the avoidance of wetland impacts. Design and Construction minimization methods include:

- panels were sited to maximize the use of non-forested upland areas while minimizing overlap with wetlands.
- Linear facilities were designed to cross wetlands at their narrowest sections and utilize existing disturbed areas to the extent possible
- Facilities that require foundations, including the substation and all inverters were located outside of wetland and adjacent areas.
- Access road and collection line crossings have been collocated to the extent feasible.
- Vegetation clearing and grading was minimized where wetlands occur within the Facility Site
- Clearing of trees and shrubs will occur where necessary.
- Low pressure-tracked vehicles and/or installation during frozen ground conditions.



- No installation of permanent/temporary roads for machinery within wetlands (temporary matting is exceptional).
- Rigorous development efforts since 2019 in order to have access to more acres than needed for the Facility that allowed for early stage avoidance of wetland resources.
- Landowner education and outreach allowed the Applicant to redesign and renegotiate one of the leased areas to avoid a significant wetland impact.

As stated above, the Applicant elected to utilize HDD for some collection line installation to avoid wetland impacts. The HDD method also reduced the trenching and workspace required for collection line installation through State-jurisdictional wetlands.

State-jurisdictional wetlands or their regulated 100-foot adjacent areas are anticipated to be impacted by Facility construction are W-RDS-05, W-ABL-06, W-DJB-11, W-EES-06, W-EES-13, W-IBP-01, W-JMP-13, W-JMP-19, W-MLM-10, and W-NSD-05. All these wetlands, except for W-MLM-10, correspond to unmapped wetlands >12.4 acres in size. Wetland W-MLM-10 corresponds to NYSDEC-mapped wetland CA-1, a Class III FWW. Impacts to 3 of these 6 unmapped wetlands are de minimus (<.02 acre) (Table 14-1). Impacts to Wetlands W-EES-06, W-MLM-10, and W-DJB-11 are unavoidable as explained below:

***Wetland W-EES-06***

As shown in Tables 14-1 and 14-2, 1.36 acres of total impact are proposed in W-EES-06 and 4.80 acres of total impact are proposed in the State-regulated adjacent area. Impacts to the wetland are due to collection line installation and the associated workspace, access road, grading, culvert installation, and tree clearing. Impacts to the regulated adjacent area are due to collection line, an HDD bore pit, laydown area, access road, grading, Photovoltaic (PV) array, fencing, and tree clearing (with and without grubbing).

This wetland is a large complex totaling over 50 acres across multiple parcels south of Carlisle Road and east of Lincoln Road. This area includes three fields of panels and a long collection route that connects the east side of the Facility to the center where the collection substation is located. The wetland impacts to this wetland are largely due to the installation of the collection line and the associated workspace (1.35 acres). The Applicant was able to avoid greater impacts to wetland W-EES-06 by working closely with the landowner. The first iteration of the design included the collection line along the southern edge of the parcel through the entire wetland,

however in the final design the Applicant was able to shift the collection line north to use the upland field more effectively and minimize the overlap with the wetland reducing impacts.

The impacts to the wetland adjacent area occur are also largely related to the collection line installation (2.26 acres), a laydown area (1.6 acres), and tree clearing (0.64 acres). Tree clearing is required in two areas for panels installation and shading. The Applicant did not site panels in multiple fields in this area of the Facility Site to avoid large portions of delineated wetland and sited panels in the upland areas. Impacts to this wetland complex are a result of connecting these panel areas to one another or to an access point.

### ***Wetland W-MLM-10***

As shown in Tables 14-1 and 14-2, 4.39 acres of total impact are proposed in W-MLM-10 and 0.75 acres of total impact are proposed in the State-regulated adjacent area. Impacts to the wetland are due to collection line installation and the associated workspace, and a HDD bore pit. Impacts to the regulated adjacent area are due to collection line installation and associated workspace.

This wetland is located between Rappa Road and Flat Creek Road, south of the existing New York Power Authority right of way (NYPA ROW). Complete avoidance of the wetland was not feasible as it is located along the collection line corridor that is necessary to connect the northeast portion of the Facility to the collection substation. This collection line segment is approximately 8,435 feet (1.6 miles). Due to landowner easement restrictions and location of the panels, siting the collection line to run adjacent to the NYPA ROW was the only feasible option. To minimize potential impacts to wetland W-MLM-10, the Applicant opted to not use HDD. Due to the length of the potential bore to fully avoid this wetland, approximately 5,600 feet, additional impacts could have occurred. At longer lengths, collection line boring has a larger risk of potential inadvertent releases (frac-outs). To avoid this, the Applicant's longest bore in the Facility Site is 760 feet, reducing the likelihood for any inadvertent releases. If the Applicant chose to HDD through this wetland, several bore pits would need to be placed throughout the wetland creating more workspace need and more equipment that would need to traverse this area, furthering potential impacts to the wetland.

### ***Wetland W-DJB-11***

As shown in Tables 14-1 and 14-2, 0.29 acres of total impact are proposed in W-DJB-11 and 1.67 acres of total impact are proposed in the State-regulated adjacent area. Impacts to the wetland are due to collection line installation and the associated workspace. Impacts to the regulated adjacent area are due to collection line, an HDD bore pit, laydown area, and tree clearing (without grubbing).

This wetland is located in the northwest portion of the Facility Site. In order to access more northern parcels, the collection line has been routed through this wetland in order to connect this area to the collection substation. The impacts to this wetland are largely a result of collection line installation and associated workspace as well as tree clearing required to install the collection line. There will not be any grading or access roads in this wetland.

In other instances, panels were sited to maximize the use of non-forested upland areas while minimizing overlap with wetlands. Linear facilities that could not avoid wetlands were designed to cross at their narrowest sections to minimize impacts to the extent practicable. One example of this practice is with a wetland complex in the southwest portion of the Facility. This wetland complex also crosses a tributary to Flat Creek. The Applicant worked closely with the landowner and was able to utilize an existing upland farm crossing to cross wetland W-RDS-05 rather than create a new crossing through the existing wetland. This crossing was not entirely upland and the landowner was driving through the wetland and stream. The Applicant is proposing to install a culvert that would improve the water flow in this area, reduce the impact from crossing for construction and operation, and minimize the impact to this wetland and stream by crossing in only one location

Impacts to adjacent areas will result from tree clearing within collection line right of ways (ROW), access road installation, PV arrays, stormwater features, grading, inverters, HDD bore pits, and Facility fencing (Tables 14-1 and 14-2). Additional avoidance of wetlands and regulated adjacent areas beyond the design layout proposed in this Application would result in substantial additional tree clearing and grading (see Exhibit 11 [Terrestrial Ecology] for a discussion of the extent of tree clearing at the Facility Site) or would restrict the ability of the Facility to meet the stated objectives and generating goals.

The Applicant plans to implement best management practices (BMPs) during Facility construction and operation to minimize impacts to wetlands from erosion, pollution, spills, and sedimentation.

These BMPs are outlined and discussed in detail in the Stormwater Pollution Prevention Plan (SWPPP) (SWPPP; Exhibit 13, Appendix 13-3). A soil erosion and sedimentation control (E&SC) plan will be developed and implemented as part of the SPDES General Permit for the Facility. Temporary E&SC practices may include silt fences, filter socks, check dams, hay bales, and other options presented in the Preliminary SWPPP and the civil design drawings in Appendix 5-A. These features will be inspected on a regular basis to assure that they function properly throughout the period of construction and until completion of all construction restoration work.

### ***(1) Wetland Function Considerations in Design and Siting***

As shown in Table 14-1, Facility construction will result in 6.08 acres of impacts to State-jurisdictional wetlands and 15.25 acres of regulated 100-foot adjacent areas. The proposed impacts to adjacent areas are limited to unmapped (greater than 12.4 acres) and one Class III State-jurisdictional wetland. As discussed in the Wetlands Functions and Values Report (Appendix 14-2), the functions associated with the State-jurisdictional wetlands that the Facility will impact include groundwater recharge/discharge; flood flow alteration; sediment, toxicant retention; nutrient removal/retention/transformation; production export; sediment/shoreline stabilization; and wildlife habitat. The proposed impacts to State-jurisdictional wetlands are limited to the footprint of the component or feature and will not impact the entirety of the associate wetland.

The installation of BMPs identified above in the SWPPP (Exhibit 13, Appendix 13-3), will serve the stormwater functions of the wetlands during construction of the Facility (i.e., groundwater recharge/discharge, flood flow alteration, and sediment, toxicant retention).

### ***(2) Wetland Function in Adjacent Areas***

Regulated wetland adjacent areas provide a valuable protection buffer for wetlands and often share some of the same functions and values as the wetlands they surround. Facility design and component layout will improve the functions and values of the adjacent areas onsite, especially for those that are currently in disturbed areas or are subject to recurring disturbance resulting from agricultural activities. Facility construction will result in no net loss of functions and values of adjacent areas as all impacted adjacent areas will be planted with a native seed mix, which will stabilize the ground, minimize erosion, increase biodiversity, and restore the land post construction.

## 14(g) Wetland Restoration and Mitigation Plan

As detailed throughout this Exhibit, impacts to State-jurisdictional wetlands have been minimized to 6.08 acres and impacts to 100-foot adjacent areas have been minimized to 15.25 acres, the maximum extent feasible. Impacts are expected to occur in adjacent areas associated with unmapped wetlands greater than 12.4 acres in size and Class III wetlands. Impacts to adjacent areas related to Facility construction, as detailed in Table 14-2, are allowed in unmapped and Class III State-jurisdictional wetlands. In accordance with §1100-2.15(g) of the 94-c regulations, compensatory mitigation is not required for impacts to the regulated adjacent areas of these wetlands.

Tables 14-1 and 14-2 outline the permanent impacts to State-jurisdictional wetlands and required mitigation acreages for the impacts. Table 14-3 outlines the ORES wetland mitigation requirements for each impact activity in relation to wetland class. Based on Table 14-3, the mitigation ratio requirement for Facility impacts is 1:1, resulting in a total of 6.08 acres of in-kind mitigation. Some impacts, such as selective tree clearing, are allowed within all classes of wetlands and do not require mitigation.

**Table 14-3. Wetland Mitigation Requirements**

| Feature/Activity   | Class I |         | Class II |       | Class III & IV<br>Unmapped >12.4 Acres |    |
|--|---------|---------|----------|-------|--|----|
|  | FWW     | AA      | FWW      | AA    | FWW                                    | AA |
| <b>Major Activities</b>  |         |         |          |       |  |    |
| Solar Panels   | X       | A(AE)** | A(M2)    | A(E)* | A(M3)                                  | A  |
| Energy Storage   | X       | A(M3)** | X        | A(E)* | A(M3)                                  | A  |
| Access Roads   | A(M1)   | A(E)*   | A(M2)    | A(E)* | A(M3)                                  | A  |
| Power interconnections<br>(including clearing for<br>interconnections)                       | A(M1)   | A(E)*   | A(M2)    | A(E)* | A(M3)                                  | A  |
| Clearing of forest   | X       | A(M3)** | A(M2)    | A(E)* | A(M3)                                  | A  |
| Other activities and<br>structures integral to<br>the project involving<br>placement of fill | X       | A(M3)** | A(M2)    | A(E)* | A(M3)                                  | A  |

**Table 14-3. Wetland Mitigation Requirements**

|  | Class I |       | Class II |   | Class III & IV<br>Unmapped >12.4 Acres |   |
|--|---------|-------|----------|---|--|---|
| <b>Intermediate Activities</b>   |         |       |          |   |  |   |
| Security fence   | X       | A(E)* | A(M3)    | A | A                                      | A |
| Clearing and manipulation of undisturbed herbaceous vegetation   | X       | A(E)* | A(M3)    | A | A(M3)                                  | A |
| Other activities integral to the project involving grading   | X       | A(E)* | A(M3)    | A | A(M3)                                  | A |
| <b>Minor Activities</b>  |         |       |          |   |  |   |
| Grading and manipulation of disturbed areas (active hay/row crops, existing commercial/industrial development) | X       | A(E)* | A(M3)    | A | A(E)                                   | A |
| Selective cutting of trees and shrubs  | A       | A     | A        | A | A                                      | A |
| *No enhancements or mitigation required with 75 foot or more setback   |         |       |          |   |  |   |
| ** 75-foot setback from wetland boundary required in undisturbed adjacent area                                 |         |       |          |   |  |   |
| FWW = Freshwater wetland; AA = Adjacent Area   |         |       |          |   |  |   |

Per Section 1100-2.15(g) of the 94-c regulations, mitigation categories are defined as follows:

- a) X: Not an allowable feature or activity.
- b) A: Allowed; no mitigation or enhancement required.
- c) A(M1): Allowed, mitigation required (3:1 mitigation ratio by area of impact - creation only, broken down by covertime).
- d) A(M2): Allowed, mitigation required (2:1 mitigation ratio by area of impact - creation, restoration, and enhancement).

- e) A(M3): Allowed, mitigation required (1:1 mitigation ratio by area of impact – creation, restoration, and enhancement).
- f) A(E): Allowed, enhancements and/or mitigation required (e.g., planting of adjacent area, mitigating hydrological changes).

Mitigation can be achieved through creation, restoration, and/or enhancement of. ORES defines these methods as follows:

- a) Creation, in cases of activities requiring fill, means making a new wetland or expanding an existing wetland in lands that were not previously occupied by a wetland. Creation, in cases of activities not requiring fill, can include planting trees and/or shrubs in an existing wetland currently devoid of trees and shrubs.
- b) Restoration means reclaiming a degraded wetland or adjacent area to bring back one or more functions that have been partially or completely lost.
- c) Enhancement means altering an existing functional wetland or adjacent area to increase selected functions and benefits that offsets losses of these functions or benefits in another wetland or adjacent area or parts of the same wetland or adjacent area.

Pursuant to 16 NYCRR 1100-2.15(g)(1) wetland impact mitigation can also be achieved through the purchase of existing wetland mitigation bank credits through a commercial mitigation bank or in-lieu fee program within the same HUC 8 Watershed. The Wetland Trust (TWT) provides a wetland in-lieu fee program to purchase credits, and the Facility Site is located within the SA 6: Mohawk In-Lieu Fee Service Area (HUC 02020004). Resource types and credit availability will be verified with in-lieu company to ensure credit purchasing will cover necessary mitigation requirements.

A Draft Conceptual Wetland Restoration and Mitigation Plan (WRMP) is included as Appendix 14-4 that outlines the permanent impacts to State-jurisdictional wetlands and their adjacent areas, and the mitigation required for these impacts. Potential onsite parcels that may offer mitigation opportunities are included with the draft WRMP. A final WRMP will be developed that discusses the selected mitigation sites identified after consultation with landowners and ORES. If an in-lieu fee program option is pursued by the Applicant, the final WRMP will include a discussion of this program and the mitigation requirements.

## References

- 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.
- Browne, S., Crocoll, S., Goetke, D., Heaslip, N., Kerpez, T., Kogut, K., Sanford, S., and D. Spasa. 1995. New York State Freshwater Wetlands Delineation Manual. New York State Department of Environmental Conservation (NYSDEC), Division of Fish and Wildlife, Bureau of Habitat, Albany, NY.
- Environmental Laboratory. 1987. Corps of Engineers Wetland Delineation Manual. Technical Report Y-87-1. U.S. Army Corps of Engineers (USACE): Waterways Experiment Station; Vicksburg, MS.
- Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.
- United States Army Corps of Engineers (USACE). 1999. The Highway Methodology Workbook Supplement. Wetland Functions and Values A Descriptive Approach.
- USACE. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0). U.S. Army Engineer Research and Development Center, Vicksburg, MS, 162 pp.
- United States Department of Agriculture, Natural Resources Conservation Service. 2018. Field Indicators of Hydric Soils in the United States, Version 8.2. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.