Attachment N1

GARNET ENERGY CENTER

Case No. 20-F-0043

1001.23 Exhibit 23

Water Resources and Aquatic Ecology

UPDATED: January 7, 2022

Contents

Tables

Figures

Appendices

Exhibit 23: Water Resources and Aquatic Ecology

This Exhibit will track the requirements of Final Stipulation 23, dated March 5, 2021, and therefore, the requirements of 16 New York Codes, Rules and Regulations (NYCRR) § 1001.23.

As noted throughout this Exhibit, potential impacts to water resources and aquatic ecology as a result of the Project have been minimized to the maximum extent practicable. Groundwater recharge will continue to occur as it does under current conditions and, in many instances, stormwater infiltration will increase as portions of the Project Area regularly disturbed by agricultural practices will consist of a stabilized vegetated ground cover during operation of the solar energy center (refer to Section 23(a)(3) below). Additionally, protective measures will be in place during construction in order to avoid potential impacts to groundwater wells within and adjacent to the Project Area (Section 23(a)(3)). Project Components have been sited to avoid temporary or permanent impacts to waterbodies to the maximum extent practicable. As noted in Section 23(b)(4), construction of the Project is anticipated to result in only approximately ~~15,462~~8,040 linear feet of temporary disturbance and ~~275~~ 284 linear feet of permanent disturbance to waterbodies identified during on-site wetland and stream delineations. Existing stormwater drainage patterns will be maintained to the maximum extent practicable. The Project has been designed in accordance with, and the Applicant will seek coverage under, the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001). Finally, a preliminary Stormwater Pollution Prevention Plan (SWPPP) outlining best management practices (BMPs) to be utilized during construction has been prepared (see Section 23(c)) to minimize potential impacts to water resources.

23(a) Groundwater

(1) Hydrologic Character

The Project Area is located within or adjacent to mapped aquifers. According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), the average representative depth to the water table within the Project Area is 2.58 feet (0.68 meters) and the depth to restrictive layers range from 0 to 78 inches. This data was obtained from the USDA NRCS Web Soil Survey tool, which lists depth to restrictive layers and water table by soil map unit for a given area of interest. Findings of the geotechnical investigations on-site indicate groundwater at depths ranging from 2 to 23 feet below ground surface (BGS) in the borings while

drilling, and stabilized groundwater within temporary wells at depths ranging between the soil surface and 5 feet. However, groundwater conditions may vary by season and weather conditions. Seven Standard Penetration Test (SPT) borings within solar array areas and three SPT borings within the substation areas encountered weathered bedrock at depths between 8 to 43 feet BGS throughout the Project Area. The Project Area does overlay a band of carbonate karst rock that spans the entire State of New York. However, evidence of karst features was not observed during any onsite investigations.

The Preliminary Geotechnical Engineering Report for the Project Area is provided as Appendix 21-1. More information regarding the underlying geology can be found throughout Exhibit 21. For the purposes of the Application, the bedrock depths are depicted visually in Figure 21-3 in Exhibit 21. Figure 21-3 depicts the depth to high groundwater across the Project Area based on USDA NRCS data. Exposed bedrock was not observed within the Project Area during field surveys.

At the depths estimated by the USDA NRCS soil report, and as encountered by geotechnical survey, most construction is not expected to intercept or affect groundwater on-site. Solar panel posts will be embedded on average between 5 to 10 feet BGS, however, excavation is not required for their installation. Based on the results from the geotechnical investigation, estimated groundwater table is 8 feet below ground surface. Nonetheless, temporary dewatering may be required during construction if perched water, groundwater, or seepage is encountered for construction activities requiring excavation. Further discussion of groundwater avoidance, minimization or minimization methods has been including in Section 23(b)(5) of this Exhibit.

Conditions encountered during subsurface investigations are generalized as depicted below in Table 23-1.

Table 23-1. Generalized Geotechnical Review Results

Description	Approximate Depth to Bottom of Stratum (feet)	Material Description	Relative Density/ Consistency
Stratum 1	0 to 1	Surficial layer consisting of topsoil; possible reworked soil	Possible reworked soil
Stratum 2	0.5 to 49.5	Native soil, consisting of silt, sand, clay and gravel mixtures with occasional rock/cobble fragments	Loose to Very Dense or Medium Stiff to Hard

Table 23-1. Generalized Geotechnical Review Results

Description	Approximate Depth to Bottom of Stratum (feet)	Material Description	Relative Density/ Consistency
Stratum 3	8 to 48.4 (maximum depth explored)	Weathered Shale Bedrock	Weathered Shale
Source: Preliminary Geotechnical Engineering Report, Terracon Consultants-NY, Inc., 2021			

(2) Map of Groundwater Aquifers and Groundwater Recharge Areas

The United States Geological Survey (USGS) has completed hydrogeologic mapping projects in cooperation with New York State and local agencies. The distribution and hydrogeologic characteristics of the unconsolidated aquifers are presented at the 1:250,000 scale in a series of five maps that were published in 1988 in cooperation with the NYSDEC. More detailed hydrogeologic maps are available for selected aquifers at 1:24,000 scale. Since 1980, 33 of these aquifer maps have been published in cooperation with the NYSDEC and New York State Department of Health (NYSDOH) and various local agencies. The aquifer maps generally include a series of 1:24,000 maps showing aquifer boundaries, surficial geology, location of wells and test holes, and the water table or potentiometric surface (USGS, n.d.). These 1:24,000 scale maps are not available for the Project Area.

The Project Area does not overlay any NYSDEC-listed primary aquifers. The closest primary aquifer is the Baldwinsville Aquifer approximately 4.3 miles east of the Project Area's eastern limit in eastern Cayuga County, New York (NYSDEC, n.d.). Primary aquifers are defined by the USGS and the NYSDEC as *"highly productive aquifers presently utilized as sources of water supply by major municipal water supply systems"* (NYSDEC, 1990).

The Project Area overlays one NYSDEC-listed principal aquifer as depicted in Figure 23-1. A portion of a principal aquifer (approximately 436 acres in size) is located through the northwest portion of the Project Area. This principal aquifer is an unconfined NYSDEC Principal Aquifer. As opposed to primary aquifers, principal aquifers, as per the NYSDEC, are aquifers known to be highly productive or whose geology suggests abundant potential water supply, but which are not intensively used as sources of water supply by major municipal systems at the present time. No impacts are anticipated to this aquifer as a result of the Project as discussed in Section 23(a)(3) below.

According to the *Principal Aquifers of the United States* (USGS, 2003), the Project Area does overlay a USGS-listed principal aquifer. This aquifer is identified as New York and New England carbonate-rock aquifers (USGS, 2003). No impacts are anticipated to this aquifer. The USGS defines a principal aquifer as "a regional extensive aquifer or aquifer system that has the potential to be used as a source of potable water" (USGS, 2003). Groundwater aquifers and groundwater wells are mapped in Figure 23-1, along with groundwater flow direction, groundwater quality, and wellhead and aquifer protection zones within a 500-foot radius of the proposed Project Area (and within a 2,000-foot radius of blasting locations and pier and post installation locations, as applicable). The data on groundwater aquifers and recharge areas was obtained through the NYSDEC Division of Water Resources, Bureau of Water Management. Specific information pertaining to local mapped groundwater aquifers and groundwater wells is described in detail below.

The nearest USGS groundwater monitoring site (USGS 430243076180401) Local number, Od-1825 is located in Camillus, NY, 22 miles east of the Project Area. According to data collected at this USGS groundwater site, the average annual depth to the New York and New England carbonate-rock aquifers sand and gravel aquifer's (glaciated region) water level is approximately 12.08 feet below land surface, with seasonal variation of 7.56 feet to 14.31 feet below land surface.

To identify existing groundwater wells within the Project Area, a Freedom of Information Law (FOIL) (Public Officers Law, Article 6 Sections 84-90) request was sent to the NYSDOH on December 17, 2020, to identify the locations of existing water wells and data on wells within 500 feet of the Project Area. This request was for any information pertaining to groundwater wells (including location, construction logs, depths, and descriptions of encountered bedrock) within the Project Study Area. A response from NYSDOH was received on January 4, 2021 which indicated one public water facility was within 0.5 miles of the Project Area. The public water facility, Conquest Municipal Center (Public Water Supply ID: NY0530061), is mapped on Figure 23-1. An additional public water supply facility, Village of Cato (Facility Reporter ID: WWR0000241), was identified approximately 1.5 miles northeast of the Project Area, via NYSDEC DECinfo Locator mapper, which was publicly available information. This public water supply facility is also shown on Figure 23-1. The record obtained from the NYSDOH is included in Appendix 23-1. Copies of the FOIL requests and responses received to date are included in Appendix 23-1. A FOIL request was sent to the Cayuga County Public Health Department on December 17, 2020 to request access to all publicly available groundwater well information. An email response on April 30, 2021

indicated that the FOIL request was denied and the Cayuga County Public Health Department was not comfortable providing that data (see Appendix 23-1). A request was sent to the Cayuga County Soil and Water Conservation District (SWCD) on December 17, 2020 to determine if they have record information on groundwater wells. No response has been received by the Applicant.

The NYSDEC's Water Well Program Information Search Wizard and publicly available NYSDEC Water Wells KMZ was consulted to obtain well information. The results of the search concluded that there are two groundwater wells within 550 feet of the Project Area. Wells CY1014 and CY986 are both located within the Project Area (see Figure 23-1), but neither are located within the limit of disturbance (LOD). Well CY1014 is located approximately 645 feet south of the LOD, and Well CY986 is located approximately 89 feet southwest of the LOD. The well depth is 112 feet and 48 feet, respectively. Additionally, the depth to groundwater for well CY1014 is zero feet, with a recorded yield of 0 gallons per minute (gpm). The depth to groundwater for well CY986 is 12 feet, with a recorded yield of 12 gpm. Locations of the two wells obtained from the search are mapped on Figure 23-1.

Private water wells of participating landowners within the Project LOD will be verified through field observations (no public wells are located within the LOD). Figure 23-1 illustrates known well locations and indicates which are approximate or confirmed. The results of the private well survey are discussed further below in Section (a)(4).

(3) Impacts on Groundwater Quality and Quantity

No permanent impacts to aquifers (primary, principal, or sole source) or groundwater are anticipated as a result of this Project. There is potential for minor and temporary adverse impacts to the local water which will be avoided, minimized, or mitigated through BMPs including measures proposed in the SWPPP provided as Appendix 23-3. Sole source aquifers are defined by the United States Environmental Protection Agency (USEPA) as aquifers that supply at least 50 percent of the drinking water for their service areas. There are no reasonable alternative drinking sources should these aquifers become contaminated. The nearest sole source aquifer is approximately 30 miles southeast of the nearest point within the Project Area, in the southern portion of Onondaga County, in the southwest portion of Madison County and northern portion of Cortland County. The USEPA "Sole Source" aquifer is identified as Cortland Home Preble Aquifer Sole Source Aquifer, Federal Register ID 53 FR 22045 (1988), as depicted on Figure 23-1.

Temporary impacts to groundwater could potentially occur through the introduction of pollutants from inadvertent discharges of petroleum or other chemicals used during the construction, operation, or maintenance phases of the Project. These discharges could result from mechanical failures in construction, operation, and maintenance equipment, and through spills during the refueling of equipment. Impacts to groundwater, however, are not anticipated due to the implementation of required avoidance, minimization, and mitigation measures, which will be strictly adhered to. These measures will be outlined in the Project's Preliminary Spill Prevention, Containment, and Control (SPC) Plan that will be filed prior to construction/operation of the Project as typically required by a certificate condition. A further discussion of groundwater impact avoidance and minimization measures, including a description of dewatering areas and methods, is provided in Section 23(b)(5) below.

The Project will add only a small area of impervious surface, ~~23.2~~19.64 acres (<1.0 percent of the Project Area), to the landscape through the placement of equipment pads, access roads, the collection substation, and the point of interconnection (POI) switchyard. These impervious areas will be distributed throughout the Project Area and will have at most a negligible effect on groundwater recharge for the local region. The construction of these impervious surfaces is typical of construction projects throughout New York State with methods approved by the NYSDEC. Beneath the solar arrays and within the overall majority of the Project Area will be pervious land cover (grass) that will allow for continued infiltration of stormwater runoff as occurs under existing site conditions. In areas of the site currently utilized for agricultural purposes, the proposed vegetated ground cover beneath the arrays will allow for greater infiltration than areas regularly disturbed by agricultural practices.

Minimal water use is expected during construction. The Applicant will work in consultation with the selected Engineering, Procurement, and Construction (EPC) Contractor to identify sources and locations for water necessary for construction activities. Concrete mixing trucks will have designated washout areas. While concrete batch plants are not expected to be required, they will be located in specified laydown areas or the substation yard, if needed. A further discussion of water use during construction is provided in Section 23(b)(1).

Within the Project Area, depths to the seasonal high-water table are approximated to range from the surface in isolated areas, to more than 4 feet BGS (Appendix 21-1). It is presumed that groundwater may be encountered in poorly drained soils, areas with a characteristic shallow water table, areas that contain seasonally perched groundwater, or areas where semi-impervious or

impervious layers of substrata do not permit groundwater to permeate deeply within the soil profile (i.e., aquitards and aquicludes). Furthermore, the ponding of surface waters and the pooling of water due to significant precipitation events could occur in open excavation areas or depressions during the construction phases of the Project.

Project construction and operation is not anticipated to cause any impacts to drinking water. Measures contained in the SWPPP and SPC Plan will be taken to avoid, minimize, and mitigate for any possible impacts to surface water and groundwater. Additionally, the Project will not have adverse impacts on public or private water wells. If a resident feels that their well water has been adversely affected by Project construction or operation, they may file a formal complaint to the Applicant through the Complaint Resolution Plan (Appendix 12-3).

Plans for notification and complaint resolution during construction of the Project for owners/operators of public and private wells within a one-mile radius of the Project Area are detailed in Exhibit 12 of this Application. The full Complaint Resolution Plan is available in Appendix 12-3.

Although no impacts to drinking water are anticipated as a result of Project construction or operation, the Applicant, consistent with Siting Board precedent, is not proposing post-driving (for the array's racking system) within 100 feet of any existing active water supply. Additionally, the Applicant will engage a third party to conduct pre- and post-construction water potability testing on lands for which the Applicant has been granted access. Testing will occur within specified distances from disturbances as follows:

- collection lines or access roads within 100 feet of an existing, active water supply well on a non-participating parcel;
- pier or post installation point within 200 feet of an existing, active water supply well on a non-participating parcel;
- and at the location of any horizontal directional drilling (HDD) operation within 500 feet of an existing, active water supply well on a non-participating parcel.

If the results of pre-construction testing indicate that federal and state standards for potable water are met, but post-construction testing fail to meet those standards, the Applicant will work in consultation with the affected landowner to construct a new well or otherwise reach a solution for the concern. Any newly constructed well shall be at least 100 feet from collections lines and access roads, and at least 200 feet from all other facility components.

Blasting operations are not anticipated to be required for Project construction. Regardless, the Applicant has developed a Preliminary Blasting Plan that outlines measures for avoidance of water supply wells (Appendix 21-3). In the unlikely event that blasting is required, no blasting will occur within 500 feet of a known existing active water supply or water supply intake on non-participating parcels. Pre- and post-blasting water quality testing will be undertaken by the Applicant for any active potable water wells within 1,000 feet of blasting operations on non-participating parcels.

(4) Private Well Survey Results

To help collect information on private wells adjacent to the Project Area, 382 well survey questionnaires were mailed to landowners of tax parcels within 500 feet of the Project Area. The Applicant also sent well surveys to landowners of tax parcels within 2,000 feet of the Project Area to conservatively account for potential blasting and array post installation locations. Included in the survey were questions about the size, yield, depth, and quality of water obtained from well(s) on the property, location in relation to any buildings on the property, whether any type of water treatment system had ever been installed at the property, and whether issues had ever occurred with wells identified on the property. The letter also contained a phone number to reach a TRC consultant (the Applicant's environmental consultant) if the recipient had any questions, along with a stamped self-addressed envelope to facilitate returns to TRC on behalf of the Applicant. As of May 25, 2021, TRC received responses to the survey questionnaire from 78 individuals, 15 of whom provided responses for multiple tax parcels. Sixty-eight respondents indicated the presence of at least one well on their property. A total of 115 wells were accounted for by these 68 respondents, of which 96 wells are considered active and nineteen wells are currently not in use. Nine survey responses indicated that there were no wells on the property. One survey response was sent back blank, with no information on the number of wells, and one survey respondent indicated the presence of wells on their property as "unknown". There are eight water well locations, with 11 wells identified, within the Project Area located on tax parcels 50.00-1-39, 51.00-1-17, 51.00-1-18.1, 51.00-1-19.21, 56.00-1-14.111, 56.00-1-19, 62.00-1-64.1, and 63.00-1-6.1. Seven of the eight tax parcels will be utilized for Project Components. However, these wells are expected to be near residential homes that will be avoided during construction. Therefore, there are no anticipated impacts to these groundwater wells. See Figure 23-1 for approximate private well locations as determined by survey responses.

Based on the results and level of detail provided within each response, the depths of private wells ranged from approximately 5 feet to 150 feet below grade with an average of 39.0 feet. Groundwater discharge from wells reported in this survey ranged from 2 gpm to 80 gpm with average of 16.3 gpm, with the majority being unknown. The completed survey responses are attached in Appendix 23-2. However, they have been redacted from this submittal to protect landowner confidentiality. If any additional well survey responses are received after May 30, 2021, they will be provided in a later filing.

23(b) Surface Water

(1) Surface Water Map

The locations of surface waters within the Project Area are mapped in Figure 23-2. This map was generated from publicly available data from the NYSDEC, Environmental Systems Research Institute (Esri), USGS, National Wetlands Inventory (NWI), and waterbody data collected during on-site waterbody and wetland delineations.

(I) Figures 22-3, 22-4, and 23-2 depict the locations of New York State (NYS) Mapped Streams, and regulated freshwater wetlands and adjacent areas, as well as NWI wetlands mapped by the US Fish and Wildlife Service (USFWS), which may or may not be regulated by the United States Army Corps of Engineers (USACE). Wetlands delineated in the field by TRC are depicted on Figure 22-4. Figures 22-3 and 22-4 also depict the location of any anticipated crossings of these resources. On-site survey data for surface waters will be provided to NYSDEC and New York State Department of Public Service (DPS) as shapefiles and in tabular format.

(II) Crossings of all resources listed above will be conducted via open cut and/or trenchless HDD installation for all underground lines. Details of the proposed crossings for underground lines are provided in the Preliminary Design Drawings included as Appendix 11-1.

(III) Final details relating to Project construction, including locations of potential sources of water for construction use, an estimate of maximum daily withdrawal rates, and any needed collection and transportation system for that water are not certain at this time because an EPC Contractor has not yet been selected for the Project. Options under consideration include trucking in water, use of an existing landowner's well within the Project Area, and/or installing a well. Regardless of the source selected, water use

during construction is expected to be minimal. Though not anticipated to be required, if necessary for Project construction, concrete batch plants will be located within either the indicated laydown areas or the substation yard. Concrete trucks shall use designated concrete washout facilities, which will be placed outside of active agricultural lands. Additionally, detail regarding BMPs for invasive species control, including the use of invasive species wash stations, can be found within the Invasive Species Management and Control Plan (ISMCP) included as Appendix 22-6. A discussion regarding fire control and emergency management is located within the Emergency Response Plan (ERP) included as Appendix 18-2.

(IV) Any potential impacts to downslope and downstream drinking water resources, public and private wells, surface water intakes, active agricultural lands, existing dwellings, and other infrastructure from stormwater runoff via construction on slopes greater than 25 percent will be addressed in the Preliminary SWPPP (Appendix 23-3).

(2) Surface Water Characteristics

The Study Area is located partially within both the NYSDEC-defined Seneca-Oneida-Oswego River and Lake Ontario and Minor Tributaries major drainage basins. The Seneca River major drainage basin drains an area of 2,213,746 acres and elevation ranges from 358 to 2,286 feet above sea level, making this the largest watershed in New York State. Cayuga County comprises 18 percent of the Seneca River sub-basin, a total of 398,980 acres. The average annual precipitation is between 34 to 40 inches. Wetlands and open water constitute 13.3 percent of the sub-basin. Within this major drainage basin, the Project is located in the Seneca River Sub-basin (hydrologic unit code [HUC] 04140201) (USDA NRCS, 2010).

The rest of the Project Area is located within the Lake Ontario and Minor Tributaries major drainage basin of New York. This major drainage basin drains an area of 449,088 acres and ranges in elevation from 243 to 1,102 feet above sea level (USDA NRCS, 2010). Cayuga County comprises 15 percent of the Irondequoit-Ninemile sub-basin, a total of 70,043 acres. Average annual precipitation is between 36 to 40 inches. Wetlands and open water constitute 11.2 percent of the sub-basin (USDA NRCS, 2010). Within this major drainage basin, the Project is located in the Irondequoit-Ninemile sub-basin (HUC 04140101).

The Project Area is located within the USGS-defined Seneca (HUC 04140201) and Irondequoit-Ninemile (HUC 04140101) sub-basins. At the watershed level, the Project Area is located within

the Ontario-Sterling Creek (HUC 0414010102), Lower Seneca River (HUC 0414020116), and Middle Seneca River (HUC 0414020114) watersheds. At the sub-watershed level, the Project Area is located within the Headwaters Sterling Creek (HUC 041401010202), Stark Pond-Seneca River (HUC 041402011607), and Howland Island-Seneca River (HUC 041402011409) sub-watersheds.

The water quality exhibited by streams draining the many sub-watersheds varies significantly. The Lower and Middle portions of the Seneca River are listed as impaired by the USDA NRCS (2010b). Sterling Creek, however, is listed as stressed (USDA NRCS 2010a). The waterbody uses most impaired by water quality impacts from unidentified pollutants are waterbody aesthetics and aquatic life. Duck Lake is located 1.46 miles west of the Project Area and is listed as a 303(d) waterbody by NYSDEC (NYSDEC 2018). As this waterbody is located a significant distance outside the LOD, it is not anticipated to be impacted by the Project.

The NYSDEC has implemented regulations addressing State-listed protected waterbodies in reference to Title 5 of Article 15 within the New York State Environmental Conservation Law (ECL) (Protection of Waters). Any action that disturbs the bed or banks of these protected waterbodies requires the issuance of a permit, except that permit is supplanted by Article 10 of the Public Service Law (PSL) and the approval is instead issued by the Siting Board as part of the Certificate.

The NYSDEC has classified waterbodies statewide with the following letters or grades, AA, AA(T), A, A(T), B, B(T), C, C(T), and D. Class AA or A waterbodies are reserved for the waterbodies with the highest water quality. AA or A classes indicate that the best use of the waterbody can be as a source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing. Class B waters are suggested to only be used for primary and secondary contact recreation and fishing. The best usage of Class C waters is fishing and non-contact related activities. Class D waters represent the poorest water quality standard and activities within this water class are advised to not occur. Waters with classifications A, B, and C may also have a standard of (T), indicating that it may support a trout population, or (TS), indicating that it may support trout spawning events. Certain waters of the State are listed as protected due to their classification level.

Waterbodies with a classification of AA, A, B, or C with a standard of (T) or (TS) are collectively referred to as "protected waterbodies," and are subject to the provisions of the Protection of Waters regulations. Special requirements apply to sustain (T) and (TS) waters, as they are

thought to support sensitive fisheries resources. There are four NYSDEC-classified waterbodies located in the Project Area. However, none of the waterbodies are considered protected waterbodies. Table 23-2 below lists the NYSDEC-classified mapped waterbodies within the Project Area and their State classifications. Figure 23-2 portrays their locations relative to the Project Area. In addition to those NYSDEC-mapped waterbodies listed below, numerous small unnamed and unmapped (by NYSDEC) waterbodies and tributaries are present within the Project Area. Waterbodies within 100 feet of any Project Components have been mapped through a desktop analysis and are identified on Figure 23-2.

Table 23-2. NYSDEC-Mapped Streams within the Study Area

NYSDEC Stream Name	New York State Major Drainage Basin	USGS HUC 8 Sub-basin and Name	NYSDEC Classification and Standard
847-490 Sterling Creek, Upper, and Tribs	Lake Ontario	04140101 (Irondequoit-Ninemile)	C
847-500 Sterling Creek, Upper, and Tribs	Lake Ontario	04140101 (Irondequoit-Ninemile)	C
898-106 Minor Tribs to Lower Seneca River	Oswego River/Finger Lakes	04140201 (Seneca)	C
898-31 Minor Tribs to Lower Seneca River	Oswego River/Finger Lakes	04140201 (Seneca)	C

Wetland and waterbody delineations occurred in the summer and fall of 2020. A full description of the wetland and waterbody delineation methodology and the results of the surveys can be reviewed in the Wetland and Stream Delineation Report included as Appendix 22-4. A total of ~~25~~ 27 waterbody features were identified during the delineation efforts. These stream features incorporate portions of the NYSDEC-mapped streams and unmapped streams identified by field staff. Most streams were documented as having intermittent flow. However, five streams were documented having ephemeral flow, and three have perennial flow. Four surface waterbodies were characterized as ponds.

An inquiry was sent to the NYSDEC Division of Fish, Wildlife & Marine Resources on December 17, 2020, requesting site specific data on the fish species that reside in the waterbodies that cross or are proximate to the Study Area to help determine the potential impacts to local aquatic resources due to the Project. Waterbodies that are encompassed in the Study Area and

incorporated into the information request include minor tributaries to Lower Seneca River and Sterling Creek, Upper and tributaries. No response has been received by the Applicant.

All fish species listed within the NYSDEC Statewide Fisheries Database that are related to the waterbodies were also included in the master wildlife inventory list attached in Appendix 22-1. A complete list of freshwater fish species that were observed or presumed to occur within the Project Area can also be found in the master wildlife inventory list attached in Appendix 22-1.

Based on the NYSDEC's list of Prohibited and Regulated Invasive Species of New York, two prohibited species, European frogbit (*Hydrocharis morsus-ranae*) and hydrilla (*Hydrilla verticillata*), from the NYSDEC list were observed during wetland and waterbody delineations (NYSDEC, 2014b). However, due to the location of the Project Area in the watershed, most of the Project Area does not consist of waterbodies large enough to support these aquatic invasive species.

(3) Downstream Drinking Water Supply Intakes

There is one permitted drinking water intake within one mile of the Project. The nearest site to the Project Area is the Conquest Municipal Center, in the Town of Conquest, Cayuga County. This drilled well intake is located adjacent to Conquest Recreation Field on Fuller Road ~~at a latitude and longitude of xxxxxxxxx, xxxxxxxxxx~~. The principal county served for this drilled well is Cayuga County. The total population served from this drilled well is 25. The Conquest Municipal Center is classified as NC – Non-community transient water system. There are no publicly available Annual Water Quality Reports or Water Withdrawal Reporting Forms for this site. As the Project Area is located approximately 0.5 miles northeast, it is not expected to have any adverse impacts on the water quality of this intake site. Therefore, no impacts on the downstream drinking water supply for the Town of Conquest.

(4) Surface Water Impacts

Project Components have been sited to avoid temporary or permanent impacts to wetlands and waterbodies to the maximum extent practicable. Construction of the Project is anticipated to result in approximately ~~15,462~~8,040 linear feet of temporary disturbance and ~~275~~ 284 linear feet of permanent disturbance to NYSDEC Class C and unclassified waterbodies identified during on-site wetland and stream delineation. There are ~~eight~~ seven stream crossings required for construction of the Project, which are discussed further in Section (b)(7). Refer to Exhibit 22 for a detailed discussion of wetlands and measures employed to avoid, minimize, or mitigate potential

impacts to surface waters. Certain construction activities have potential to result in direct and/or indirect impacts to surface waters. These activities include the installation of access roads, installation of collection lines, and the development of temporary staging areas and workspaces around the solar arrays, battery energy storage systems (BESS), collection substation, and POI switchyard. Impacts related to the construction of access road crossing will be minimized to the maximum extent practicable by using existing crossings and crossing at narrow waterbody locations where feasible. In addition, implementation of the BMPs in the SPC Plan and SWPPP will avoid or minimize impacts to the maximum extent practicable.

The Applicant evaluated potential temporary and permanent impacts to surface waters resulting from the construction and operation of the Project based on the Project design as shown in the Preliminary Design Drawings (Appendix 11-1). Construction of the Project is anticipated to result in approximately ~~15,462~~8,040 linear feet of temporary disturbance and ~~275~~ 284 linear feet of permanent disturbance to NYSDEC Class C and unclassified waterbodies identified during on-site wetland and stream delineation. None of these waterbodies are state protected.

Impacts to wetlands and streams have been minimized and avoided through the siting of Project Components after surveys were completed to avoid wetlands and waterbodies to the maximum extent practicable and siting stream crossings in locations of existing access ways, or along narrow sections of stream channels to reduce impact numbers. Table 23-3 lists a summary of the potential impacts to streams due to Project Component placement and/or construction.

As indicated on the Preliminary Design Drawings in Appendix 11-1, there will be a total of ~~nine~~ seven waterbody crossings, none which are NYSDEC-protected waterbodies, and therefore not regulated under Article 15 of the ECL. Out of the ~~nine~~ seven waterbody crossings, one crossing, S-NSD-7, will be done via HDD for installation of a collection line. The crossings will be constructed in accordance with USACE regulations and conditions. The Project will comply with the following proposed BMPs to prevent and reduce stream impacts: temporary equipment bridge, dam and pump stream crossing, dewatering basin, sediment filter bag, stream bank matting, and trench plugs. Final BMPs will be submitted to the Secretary or as part of a Compliance Filing.

Table 23-3. Impacts to Streams

Field ID	Flow Regime[1]	Linear Feet within Project Area and LOD	Potential Jurisdiction	NYSDEC Classification	Temporary Impact (Linear Feet)	Permanent Impact (Linear Feet)	Project Component	Method of Crossing
S-BTF-1	RUP	~~4,722~~4,720	USACE	Class C	~~2,641~~32	59	Access Road, Collector, Culvert/Riprap, Fence, Tree Clearing Type II	Culvert DC-05
~~S-BTF-2~~	~~RIN~~	~~183~~	~~USACE~~	~~-~~	~~183~~	~~-~~	~~Tree Clearing Type II~~	~~-~~
S-BTF-3	RIN	361	USACE	-	~~361~~29	-	Tree Clearing Type II	-
S-BTF-4	REPH	366	~~Non-jurisdictional~~USACE	-	~~133~~55	-	Tree Clearing Type II, LOD	-
S-BTF-5	RIN	712	USACE	-	53	-	LOD	-
S-BTF-7A	REPH	~~1,930~~1,220	Non-jurisdictional	-	~~1,895~~1,220	~~35~~28	~~Access Road, Collector, Culvert/Riprap, Grading,~~ Tree Clearing Type II, LOD	~~-Culvert DC-06~~
S-BTF-7B	RIN	710	USACE	-	681	-	Access Road, Collector, Culvert/Riprap, Grading,	Culvert DC-06

Table 23-3. Impacts to Streams

Field ID	Flow Regime[1]	Linear Feet within Project Area and LOD	Potential Jurisdiction	NYSDEC Classification	Temporary Impact (Linear Feet)	Permanent Impact (Linear Feet)	Project Component	Method of Crossing
~~S-BTF-8~~	~~RUP~~	~~883~~	~~USACE~~	~~Class C~~	~~733~~	~~-~~	~~Fence, Tree Clearing Type II~~	~~-~~
S-BTF-9	RIN	746	USACE	-	746	-	Tree Clearing Type II	-
S-BTF-10	RUP	2,374	USACE	Class C	~~1,797~~1,518	54	Access Road, Collector, Culvert/Riprap, Fence, Tree Clearing Type II, LOD	Culvert DC-08
S-JJB-1	RIN	289	USACE	-	90	-	Fence, Tree Clearing Type II	-
~~S-JJB-2~~	~~RIN~~	~~1,158~~	~~USACE~~	~~-~~	~~925~~	~~20~~	~~Access Road, Culvert/Riprap, Fence, Tree Clearing Type II~~	~~Culvert DC-03~~
S-JJB-3	RUP	2,094	USACE	Class C	~~1,880~~663	~~36-~~	Access Road, Culvert/Riprap, Fence, Tree Clearing Type II, LOD	Culvert DC-01
S-NSD-2A	REPH	~~311~~117	Non-jurisdictional	-	~~266~~117	-	~~Fence,~~ Tree Clearing Type II	-
S-NSD-2B	RIN	153	USACE	-	95	-	Tree Clearing Type II	-

Table 23-3. Impacts to Streams

Field ID	Flow Regime[1]	Linear Feet within Project Area and LOD	Potential Jurisdiction	NYSDEC Classification	Temporary Impact (Linear Feet)	Permanent Impact (Linear Feet)	Project Component	Method of Crossing
S-NSD-3	RIN	2,366	USACE	Class C	~~1,082~~953	20	Access Road, Culvert/Riprap, Fence, Grading, Tree Clearing Type II, LOD	Culvert DC-02
S-NSD-4	RIN	1,091	USACE	-	~~192~~203	-	Fence, LOD	-
~~S-NSD-5~~	~~RIN~~	~~2,697~~	~~USACE~~	~~Class C~~	~~858~~	~~-~~	~~Fence, LOD~~	~~-~~
S-NSD-7	RIN	3,131	USACE	Class C	~~1,621~~1,580	~~52~~93	Access Road, Culvert/Riprap, Grading	HDD and Culvert DC-04
S-NSD-10	RIN	244	USACE	-	-	30	Tree Clearing Type I	-
PS-7	RUP	5	USACE	Class C	5	-	LOD	-

1. Flow Regime: REPH – Ephemeral, RIN – Intermittent, RUP – Perennial, UNK - Unknown

Four open water wetlands/ponds including W-JJB-3, W-JJB-4, W-NSD-1, and W-NSD-7~~, and W-NSD-10~~ were observed onsite. Of these four open water wetlands/ponds, only one has impacts (W-NSD-7). The location of W-NSD-7 can be observed on sheet 143 of Figure 22-3. This is a 0.29-acre palustrine unconsolidated bottom (PUB) wetland. Temporary impacts to this wetland will total ~~11,241~~12,750 sq. feet (0.~~26~~ 29 acres), and permanent impacts to this wetland will total ~~4~~2.00 sq. feet (0.00 acres). These impacts will occur as result of the Project array area, fence, ~~grading,~~ and LOD. Exhibit 22 includes a further discussion of wetland and adjacent area impacts and the associated minimization/avoidance measures. No dredging is anticipated for the construction of this Project.

Surface waters surrounded by steep uplands are subject to erosion potential during any construction-related activity that may take place near these slopes. The Project has been designed to avoid steep slopes to the maximum extent practicable to pursue safe and economical design and construction procedures. Construction of the Project could result in minor siltation and sedimentation in waterbodies that are adjacent to steep uplands. The Applicant will take measures to avoid and minimize siltation events pursuant to the Final SWPPP. A preliminary SWPPP is included in Appendix 23-3 of this Application.

As noted earlier in this Exhibit, there are no surface drinking water intake sites in the Project Area or downstream of the Project Area within the Study Area. Based on the information obtained, the Project will not result in impacts to water-supply intakes. All practicable measures will be taken by the Applicant to avoid, minimize, and mitigate any impacts to surface waters through the measures adopted in the SWPPP and SPC Plan.

In keeping with guidance outlined by the DPS and NYSDEC, the Applicant will develop a SPC Plan that will also be used to avoid or minimize the potential for the release of hazardous chemicals or petroleum into local natural resources. The SPC Plan will assist in the avoidance, minimization, and mitigation of surface water impacts to protect local drinking water supplies.

(5) Ground Water Avoidance and Minimization Methods

Site planning was done to avoid impacts to groundwater to the maximum extent practicable as explained in Section 23(a)(3). Pre-construction planning for the Project will be completed with the understanding that groundwater could be encountered due to the variable seasonal high water table throughout the Project Area. Conventional sump and pump methods are anticipated to be adequate to control any accumulation of groundwater in shallow trenches or ponded surface water

in low-laying areas utilized during construction. The sediment laden water removed during these dewatering activities will be filtered and discharged in upland locations avoiding waterbodies and wetlands to the extent practicable.

Dewatering will likely occur if shallow groundwater is encountered during the construction phase of the Project. If dewatering is required, temporary pits or designed sediment traps will be utilized and placed in well-drained and upland areas. These sediment traps will not be placed within or directly adjacent to waterbodies and outside of wetland areas to the maximum extent practicable. Sediment traps will collect excess sediment in turbid waters and filter out cleaner water, discharging it into a pre-determined stable discharge area. Dewatering techniques will follow the standard actions of pumping accumulated water to a device (e.g., sediment filter bag, silt fence barrier, sediment trap) that will decrease the discharge velocity of water outflow and trap any suspended sediment prior to out-letting to well-drained undisturbed areas. Additionally, construction of the Project will adhere to the SPC Plan and SWPPP guidelines which prevent the contamination of and/or erosion due to surface water runoff or groundwater discharge, thereby avoiding significant adverse impacts to any water resources.

In areas where construction activity occurs below the water table, there is always some potential to impact localized groundwater flow regimes if precautions are not taken. At the Project Area, since minimal subsurface work is proposed, it is assumed groundwater could flow around the disturbance area and assume normal flow regimes further downslope. If groundwater infiltrates work areas that occur below the water table, removal of the groundwater by pumping could slightly decrease the level of local water tables within the vicinity of the construction activity. Any impact, however, will be minimal, localized, and temporary. Measures to restore the groundwater will be implemented. All water subject to the pumping operations will be pumped to the surface and discharged in an approved technique for decreasing its outlet velocity. Slowly discharged water through sediment bags or grass detention basins as appropriate, will be allowed to permeate back into the ground and re-settle below the water table downslope. Where possible, the location selected for re-infiltration into the water table will occur on permeable soils, which will help increase the rate of infiltration and reduce net loss of water volumes to evaporation. As stated above, construction of the Project will adhere to the SPC Plan and SWPPP guidelines that prevent the contamination of and/or erosion due to surface water runoff or groundwater discharge, thereby avoiding significant adverse impacts to associated water resources.

Groundwater migration events could result from the installation of buried interconnection lines which may facilitate groundwater travel along the loosened soils surrounding the buried collection lines. It is believed water could collect in the trench and migrate along the trench route to areas downslope. However, it is presumed there will be no net loss of groundwater because volumes will be naturally allowed to infiltrate back into the water table at lower elevations. Trench plugs may be used where deemed appropriate in any areas potentially affecting wetland resources.

The Project is not expected to have adverse impacts on public or private water wells. Any impacts to groundwater due to the Project will be minimal, localized, and temporary. In the unlikely event a local resident believes that their well water has been adversely impacted by the Project construction or operation, they may file a formal complaint, which will be responded to by the Applicant through the Complaint Resolution Plan mentioned previously (Appendix 12-3).

(6) Surface Water Avoidance and Minimization Methods

The use of existing and narrow crossings of surface waters will help minimize direct impacts to surface waters. To the maximum extent practicable, Project Components have been sited to avoid or minimize both temporary and permanent impacts to surface waters. Project Components will avoid surface waters to the maximum extent practicable. Temporary construction facilities (staging areas, etc.) will avoid surface water and impacts to surface water to the maximum extent practicable as shown in the Preliminary Design Drawings (Appendix 11-1). Furthermore, the number and overall impacts of access roads crossing surface waters will be minimized by using existing access road crossings when possible.

When the crossing of a surface water resource is deemed necessary for the Project, BMPs will be put into place following the guidelines and requirements put forth by the NYSDEC, DPS, and USACE. Proper briefing and signage will be used with construction crews to dictate areas where equipment access is prohibited. Crossing will occur only along properly permitted access roads or using temporary matting to traverse delineated waterbodies. These buffer restrictions will include no equipment refueling or washing in the buffer area, no storage of petroleum or chemical materials, no disposal of concrete or wash water, no amassing of construction debris or accumulation of slash materials in the area, no use of herbicides within the area, and no actions that may result in the degradation of waterbody banks or steep slopes above water resources.

During construction, the use of silt fences, hay bales, siltation catch basins, check dams, and other standardized sedimentation control measures will be installed and maintained throughout

the Project and until impact areas become stabilized as determined by the Environmental Monitor (EM). To facilitate soil stabilization, exposed soils will be seeded and mulched in a timely manner to reduce the risk of sedimentation events arising from storm events. Control measures will be dictated in the Project SWPPP. Their locations and design will be shown on appropriate construction drawings.

As part of Article 10 requirements, an EM will be in place throughout the work period and during the restoration period to inspect and assess sedimentation risk and mitigate any unforeseen issues specific to the nature of the Project Area. Dewatering will likely occur if shallow groundwater is encountered during the construction phase of the Project. Refer to Section 23(b)(5) for additional detail on dewatering methods.

Some thermal changes to waterbodies may occur as a result of clearing adjacent vegetation. However, proposed clearing in these areas has been minimized to the maximum extent practicable while retaining the capability of placing enough modules to achieve the contracted 200-MW generating capacity. A total of ~~12.6~~13.5 acres of Type II tree clearing (e.g. clearing of vegetation without soil disturbance), is proposed along ~~thirteen~~ eleven stream segments within the Project Area. ~~Nine~~ Eight of these streams are ephemeral or intermittent and are either unclassified or at best have a DEC classification of C, which represents non-trout waters typically supporting a warm water fishery. Streams on site ultimately drain to class C streams off site. In each case, clearing in the vicinity of streams on site shall incorporate a 25-foot buffer wherein clearing is restricted to Type II, which consists of removing woody plant species that have the potential to violate minimum clearance distance. No ground disturbance (e.g. excavation, stump grading, rutting, root removal) is allowed.

Changes to in-stream structure and morphology of streams are not expected or will be minimal due to the use of culverts and temporary crossings. The effect of turbidity on nearby aquatic habitat will be reduced by following the SWPPP and other guidelines imposed by regulatory agencies. Consultation with the New York Natural Heritage Program (NYNHP) indicated no records of state-listed threatened or endangered species; however, it did indicate a rare New York State endangered plant (Northern Adder's Tongue [*Ophioglossum pusillum]*) documented in the vicinity of the Project Area at one time, but has not been documented there since 1979 or earlier, and/or there is uncertainty regarding its continued presence. There are no anticipated impacts to or take of State-listed threatened and endangered (T&E) species, species of special concern, or species of greatest conservation need in aquatic habitat in the Project Area, as these species,

based upon investigation of publicly available information, are not indicated to occur in the Project Area. Refer to Section 22(f)(10) for further discussion on take of T&E species and Section 22(f)(9) for further discussion on impacts to State- and Federally listed species.

(7) Stream Crossings

The Preliminary Design Drawings (see Appendix 11-1) detail the temporary and permanent stream crossing methods and procedures. Culvert and bridge specifications, sizing, and flow calculations will be provided in the Final SWPPP. Culvert capacity will be shown in the Final SWPPP with BMP considerations for the placements of culverts. Refer to Section 23(c)(4) below for additional information on the Final SWPPP. The Final SWPPP will detail BMPs to be used year-round for the stream crossings. Proposed erosion and sediment control measures to be used to prevent and reduce impacts to streams during stream crossing activities include temporary equipment bridges, damming and pumping stream crossings, dewatering basins, sediment filter bags, stream bank matting, and trench plugs.

~~Eight~~ Six open cut stream crossings are proposed for the installation of culverts for collection lines under streams S-JJB-3, S-NSD-3, ~~S-JJB-2,~~ S-NSD-7, S-BTF-1, S-BTF-7B (stream crossed in two locations), and S-BTF-10, the locations of which can be found on Sheet ~~C.302,~~ C.304, ~~C.311,~~ C.313, C.316, C.320, C.320, and C.328 of the Preliminary Design Drawings available in Appendix 11-1. As previously stated, the Final SWPPP will detail BMPs and erosion and sediment control measures to be utilized to reduce impacts to streams as a result of this crossing method.

It is expected that the trenchless excavation technique of HDD will be used during construction to install collection lines under stream S-NSD-7 and wetland W-JJB-3. These locations can be found on the Preliminary Design Drawings available in Appendix 11-1. An Inadvertent Return Plan has been prepared to outline the procedures and responsibilities for the prevention, containment, and cleanup of an inadvertent release associated with the HDD process. The Inadvertent Return Plan is included in Appendix 21-2 of this Application.

The feasibility of using trenchless crossings will be assessed for all proposed stream crossings. BMPs will be used year-round for all stream crossings. Where impacts are deemed unavoidable, the mitigation measures discussed in Sections 23(b)(5) and 23(b)(6) above shall be used to reduce impacts to the maximum extent practicable.

(8) Potential Impacts of Blasting on Streams and Fish

As previously stated, blasting is not anticipated within the Project Area. Therefore, no impacts are anticipated to occur to streams and fish as a result. A Blasting Plan has been prepared in the event that blasting is determined to be required. The Blasting Plan is provided in Appendix 21-3.

23(c) Stormwater

(1) Stormwater Pollution Prevention Plan (SWPPP)

The NYSDEC requires coverage under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001 or most recent) for any "construction activities involving soil disturbances of one or more acres; including disturbances of less than one acre that are part of a larger common plan of development or sale that will ultimately disturb one or more acres of land; excluding routine maintenance activity that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility." This authorization is within the purview of the NYSDEC but is coordinated with the Article 10 process. The Applicant will seek coverage under the NYSDEC SPDES General Permit for the construction phase of the Project. A waiver to disturb five acres or more of soil at any one time will be requested.

Prior to construction, the Applicant will be required to prepare a Final SWPPP, which will describe in specific terms the erosion and sediment control practices that will be implemented during construction activities, and the stormwater management practices that will be used to reduce the pollutants in stormwater discharges after Project construction has been completed. This SWPPP will be prepared as part of the requirements for coverage under GP-0-20-001. It is anticipated that a Notice of Intent (NOI) will be prepared and submitted to the NYSDEC, who will review and authorize a SPDES General Permit and provide the NYSDEC Letter of Acknowledgement certifying that the Project is in compliance with the technical requirements of GP-0-20-001. Once the Project receives this required documentation, the Letter of Acknowledgement will be inserted within the SWPPP and kept on-site, as required by GP-0-20-001. The NOI will be included in the Final SWPPP.

A Preliminary SWPPP has been designed in accordance with the applicable SPDES General Permit (GP-0-20-001), the most current version of the New York State Standards and Specification for Erosion and Sediment Controls (SSESC), and the New York State Stormwater Management Design Manual (SWMDM), and is provided as Appendix 23-3.

The Preliminary SWPPP includes a detailed description of preconstruction requirements. As part of these requirements, an EM is required to be on-site daily to inspect the Project's erosion and sediment control practices when soil disturbing activities are being performed. The Preliminary SWPPP provides information on stormwater management practices, including erosion and sediment control (vegetative and structural measures, temporary and permanent measures), construction phasing and disturbance limits, waste management and spill prevention, and site inspection and maintenance.

Pre- and post-development hydrology, in addition to evaluation of runoff on both agricultural and drainage patterns, will be analyzed as part of stormwater design in accordance with final Project layout, and will be included in the Final SWPPP (see Section 23c(8) for further discussion). The hydrogeology of the Project Area will be taken into consideration when preparing the Final SWPPP. The Final SWPPP will include a description of proposed measures of prevention of ecological impacts to these areas to the maximum extent practicable, as well as pre- and post-development hydrologic modeling and water quality calculations. Proposed BMPs and BMP procedures are documented in the Preliminary SWPPP. BMPs will be used year-round for access roads and trenching locations along and across steep slopes.

All of the components of the Final SWPPP, which are enumerated within Part III.B of GP-0-20-001, will be included within the Final SWPPP so it can be used as a stand-alone document that will be kept at the construction site as described in the Construction General Permit Part II.D.2.

(2) Application for Individual SPDES Permit

The Project is eligible for coverage under the SPDES General Permit. Therefore, an individual SPDES Permit for the collection and management of stormwater discharges from the Project will not be submitted.

(3) Post Construction Erosion and Sediment Practices

The Preliminary SWPPP was developed in accordance with the most current version of the New York State SSESC and SWMDM. The SWPPP identifies the post-construction erosion and sediment practices that will be used to manage stormwater runoff from the developed Project Area, and includes runoff reduction/green infrastructure practices, water quality treatment practices, and practices that control the volume and rate of runoff. Proposed vegetation species that maybe be used are provided in the SWPPP, and the use of native species and pollinators will be prioritized when practical. Details are presented within the Preliminary SWPPP (see

Appendix 23-3). As previously stated, pre- and post-development hydrology, in addition to evaluation of runoff and drainage patterns, will be analyzed as part of stormwater design in accordance with final Project layout, and will be included in the Final SWPPP.

(4) Maryland Stormwater Design Guidance

The Preliminary SWPPP provides basic guidance on the NYSDEC Solar Panel Construction Stormwater Permitting/SWPPP Guidance Memo dated April 5, 2018, as well as the Maryland Department of the Environment (MDE) "Stormwater Design Guidance – Solar Panel Installation." The NYSDEC memo, shown as Appendix 23-4, provides guidance regarding stormwater design and SWPPP development for solar Projects within New York State.

The Project is anticipated to be a Scenario 1 solar project, in which a vegetated open space is developed. The Project satisfies Items 1 through 4 of Scenario 1 in the NYSDEC memo through the use of elevated racking systems for the solar arrays and allowing for water to shed off the panels onto the vegetated ground below. The Project proposes the construction of impervious areas (Scenario 1, Item 5) including access roads, equipment pads, and the substation yard, which will require the inclusion of post-construction stormwater management controls in accordance with the NYSDEC requirements. The Project is not anticipated to alter the hydrology from the pre- to post-development condition (Scenario 1, Item 6). However, stormwater analysis and the sizing of stormwater management practices will not be completed until the Final SWPPP that will be provided as part of the Board post-certification.

For development of the Final SWPPP, the Preliminary SWPPP will be amended to include post-construction stormwater management practices such as level spreaders, energy dissipaters, and infiltration basins. The Final SWPPP will detail the proposed post-construction stormwater practices that will be utilized to treat and control runoff from the Project per the requirements of the General Permit. The post-construction stormwater control practices, sized in accordance with Chapter 4 of the SWMDM as applicable, will provide water quality volume treatment and runoff reduction, and will control the volume and rate of the stormwater runoff from the Project.

(5) Post-Construction Stormwater Practices

If the evaluation included in the Final SWPPP regarding non-rooftop disconnection alternatives determines that the Project includes Scenario 2 as described above, the Final SWPPP will address post-construction stormwater practices designed in accordance with the sizing criteria in Chapter 4 of the SWMDM, dated January 2015.

The Project is not located within a regulated, traditional land use control of a Municipal Separate Storm Sewer System (MS4) area. Therefore, the Project is not subject to the requirements or regulations of MS4s.

(6) Request for a Waiver

The Applicant intends to request written authorization from the NYSDEC to allow the disturbance of greater than 5 acres at one time. Accordingly, construction phase SWPPP inspections will be required at least twice per every 7 calendar days.

(7) Final SWPPP

The Final SWPPP will include an erosion and sediment control plan as required per GP-0-20-001 to limit the possibility of off-site impacts, and to minimize, to the maximum extent practicable, soil erosion and sedimentation within water resources throughout the Project Area. The Final SWPPP will be submitted to the Secretary once filed with NYSDEC.

(8) Post-Construction Runoff

Increases in stormwater runoff are anticipated to be minimal, as Project construction will result in limited addition of impervious surfaces. Due to the conversion of landcover from row crops to meadow grasses, runoff will be slowed as it flows through the Site, allowing for more infiltration to occur during Project operation. Therefore, no significant changes to the rate or volume of stormwater runoff are anticipated due to Project operations. However, precautionary and appropriate post-construction BMPs will be installed and maintained according to the Project-specific SWPPP. The Applicant is proposing the use of infiltration basins downslope and grade-break swales throughout the Project Area to control and treat runoff, in combination with other commonly used New York State SWMDM approved practices.

Existing drainage patterns will be maintained to the maximum extent practicable. Minimal grading and impervious surfaces are proposed as part of the Project. Therefore, negative impacts to water wells and surrounding agricultural land uses are not anticipated. Erosion and sediment controls will remain in place during site restoration until disturbed areas have been stabilized with vegetation.

23(d) Chemical and Petroleum Bulk Storage

(1) Spill Prevention and Control Measures

No on-site storage or disposal of large volumes of substances regulated under the chemical and petroleum bulk storage programs of New York State is proposed. The generator step-up (GSU) transformer proposed within the collection substation will contain mineral oil (such as the American Society for Testing and Materials (ASTM) D3487 Type II Inhibited Mineral Oil, or similar) for insulating purposes. Transformers are exempt from the petroleum bulk storage program because they are considered operational tank systems. Operational tank system means a tank system that is integral to, or connected to, equipment or machinery for which the petroleum in the system is used solely for operational purposes. Petroleum in an operational tank system is not consumed in any context (such as being combusted as fuel or used as a raw material in a manufacturing process). However, if construction, operational, or maintenance activities at the Facility require petroleum or other hazardous chemicals to be stored on-site, their use will comply with applicable State laws, regulations and guidelines. As of now, there is no anticipated use of petroleum or other hazardous substances.

The Project will adhere to a SPC Plan to minimize the potential impact to aquatic resources from minor leaks or mechanical failures of construction equipment/vehicles. The SPC Plan will be submitted to the Secretary prior to construction/operation of the Project.

This Plan dictates that all contractors will be required to keep materials on hand to control and contain a petroleum spill. Any spills will be reported in accordance with State and/or Federal regulations. Contractors will be responsible for ensuring responsible action on the part of construction personnel.

The purpose of this SPC Plan is to:

- Provide guidance and information to the personnel that would be called upon to respond to sudden oil releases from oil-filled equipment and oil storage containers;
- Describe measures in place that would prevent released oil from reaching nearby navigable waters;
- Describe the inspection procedures; and,
- Discuss the discharge response actions and notifications to ensure employees are prepared to carry out their responsibilities during an oil spill incident.

This Plan has the full approval of Project management with authority to commit the necessary resources to fully implement the Plan, and expeditiously respond to releases of oil. Spill prevention and control measures that are in place will discuss appropriate alternatives and mitigation measures for petroleum and chemical storage.

(2) Storage of Regulated Substances

The on-site storage or disposal of large volumes of substances regulated under the chemical and petroleum bulk storage programs of New York State is not proposed.

(3) Storage or Disposal of Hazardous Substances Compliance with Local Law Regulations

As previously stated in Sections 23(d)(1)(2), the on-site storage or disposal of large volumes of substances regulated under the chemical and petroleum bulk storage programs of any local laws is not proposed.

23(e) Aquatic Species and Invasive Species

(1) Biological Aquatic Resource Impacts

Exhibit 22 directly addresses impacts to wetlands and waterbodies, as applicable, within the Project Area. Secondary reference can also be made through review of Tables 23-2 and 23-3, respectively in this Exhibit. Additionally, Section 22(f)(10) discusses impacts to state and federally listed species within the Project Area. There are no anticipated impacts to or take of State-listed threatened and endangered species, species of special concern, or species of greatest conservation need in aquatic habitat in the Project Area.

It is assumed that any potential impacts to surface waters within the Project Area could, in turn, possibly impact ecologies, organisms, and ecosystems dependent upon these aquatic resources through the introduction of invasive species. Only a small portion of these biological complexes, however, could be impacted by the construction and operation of the Project due to its siting design.

TRC, on behalf of the Applicant, consulted local, statewide, and federal desktop databases and environmental agencies to determine common species documented to occur in the region of the Project Area. Of the invasive species listed within the NYSDEC list of Prohibited and Regulated Invasive Plants (NYSDEC, 2014b) list, European frogbit and hydrilla were documented during on-site survey work conducted by environmental field staff. Therefore, adverse impacts to aquatic

biology as a result of the spread of invasive species as a direct result of the Project construction are not anticipated.

In addition, the Project Area contains limited suitable habitat for the prevalence of aquatic invasive species and general aquatic communities and ecologies. This is due to most of the Project residing within higher elevations where documented waterbodies and wetlands act as headwaters, and to the limited depth and size of waterbodies within the Project Area. For these reasons, the biological diversity of aquatic life on-site is relatively low.

(2) Protective Measures for Biological Aquatic Resources

Measures to avoid or minimize impacts to surface waters during construction are addressed in Section 23(b)(6) above. In summation, the protection of biological aquatic resources will be a direct result of protecting the surface waters in which these biological resources are dependent upon. Water quality will be protected by avoiding impacts to wetlands and waterbodies to the maximum extent practicable. The utilization of HDD to avoid some stream features will also reduce impact to documented surface waters. Surface water impacts are only proposed to occur as a direct result of construction of the Project. No impacts to surface waters are likely to occur during the operational phase of the Project. It should be noted that loss of habitat has been largely avoided through careful siting and design of the Project. The majority of the Project Area encompasses small headwater streams that primarily connect to ditched agricultural field streams and wetlands. As such, there are no impacts to larger streams and rivers that contain a clear majority of aquatic habitat that exists in the region. Where permanent roads cross a stream, the culverts will be embedded 20 percent to allow for aquatic species to travel through impacted areas unrestricted as required by USACE regulatory requirements.

23(f) Cooling Water

This Project will not utilize cooling water during any phase of construction or operation and, therefore, cooling water withdrawals will not be addressed in the Application.

References

New York State Department of Environmental Conservation (NYSDEC). 1990. *Division of Water Technical & Operational Guidance Series 2.1.3. Primary and Principal Aquifer Determinations*. https://www.dec.ny.gov/docs/water_pdf/togs213.pdf. Accessed January 2021.

NYSDEC. n.d. Aquifers in New York State. https://www.dec.ny.gov/lands/36119.html#Primary Accessed January 2021.

NYSDEC. n.d. *DECinfo Locator Mapper.* https://gisservices.dec.ny.gov/gis/dil/. Accessed February 2021.

NYSDEC. 2014a. Water Well Information – Search Wizard. https://www.dec.ny.gov/cfmx/extapps/WaterWell/index.cfm?view=searchByCounty. Accessed January 2021.

NYSDEC. 2014b. *New York State Prohibited and Regulated Invasive Plants*. https://www.dec.ny.gov/docs/lands_forests_pdf/isprohibitedplants2.pdf. Accessed February 2021.

NYSDEC. 2018. *The Draft New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy.* https://www.dec.ny.gov/docs/water_pdf/303dlistdraft18.pdf. Accessed January 2021.

United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). 2010a. *Irondequoit-Ninemile Watershed*. https://www.nrcs.usda.gov/wps/PA_NRCSConsumption/download?cid=stelprdb1246874&ext=pdf. Accessed January 2021.

United States Geological Survey (USGS). 2003. *Principal Aquifers of the United States*. https://water.usgs.gov/ogw/aquifer/map.html. Accessed January 2021.

USDA NRCS. 2010b. *Seneca Watershed*. https://www.nrcs.usda.gov/wps/PA_NRCSConsumption/download?cid=stelprdb1246876&ext=pdf. Accessed January 2021.

USGS. n.d. *Unconsolidated Aquifers of Upstate New York*. https://ny.water.usgs.gov/projects/bgag/aquifer.maps/maps.html. Accessed January 2021.