



ConnectGen Chautauqua County LLC
South Ripley Solar Project
Matter No. 21-00750

900-2.14 Exhibit 13

Supplement

Water Resources and Aquatic Ecology

REDACTED

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EXHIBIT 13 WATER RESOURCES AND AQUATIC ECOLOGY

(a) Groundwater

(1) Hydrologic Information

According to a review of the U.S. Department of Agriculture (USDA) Web Soil Survey, groundwater depth ranges from the ground surface to greater than 6.5 feet below grade throughout the Facility Site, with high water tables most common in low-lying areas in and adjacent to wetlands. The Web Soil Survey also indicates bedrock may be as shallow as 2.5 feet below ground surface to greater than 6.5 feet below surface.

Additionally, in support of Exhibit 10, the Applicant retained Mott MacDonald (Mott) to prepare a Geotechnical Investigation Report (see Exhibit 10 and Appendix 10-A). The report included a summary of preliminary soil borings throughout the Facility Area¹, which identified the groundwater level at varying depths ranging between 3 feet and 17 feet below grade. Bedrock was also encountered at 18 of the 50 borings, with a range between 9 feet to 19 feet below ground surface. The results of this study are generally consistent with the depth ranges to bedrock and groundwater identified via the Web Soil Survey (see Appendix 10-A). Maps showing depth to bedrock and depth to water table throughout the Facility Site, based on the USDA Web Soil Survey (USDA, 2021), are provided in Figure 10-4.

(2) Public and Private Groundwater Wells

To identify existing water wells in the vicinity of the Facility Site, Freedom of Information Law (FOIL) request letters were sent to the New York State Department of Environmental Conservation (NYSDEC), Chautauqua County Department of Health (CCDOH), and to the New York State Department of Health (NYSDOH) on February 4, 2021. These letters requested information pertaining to groundwater wells (including location, construction logs, depths, and descriptions of encountered bedrock) and surface water intakes within one mile of the Facility Site (see Appendix 13-A).

The CCDOH response was received via email correspondence on February 24, 2021 and indicated there are no active public water supplies within the Facility Site. However, **BEGIN CONFIDENTIAL INFORMATION** <■

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END CONFIDENTIAL INFORMATION (see Appendix 13-B, Figure 13-1, and Table 13-1). In addition, CCDOH

¹ As indicated in the Geotechnical Investigation Report, results of the preliminary geotechnical investigations are documented within the broader Facility Area, which is defined in the South Ripley Solar Preliminary Scoping Statement as “the land area being considered to potentially host the South Ripley Solar Project”. In comparison to the Facility Area, the Facility Site is a smaller area comprised of parcels that are proposed to host Facility components.

noted in their email response that all dwellings within the Facility Site are likely served by private drinking water wells since there is no municipal drinking water supply in the area.

The NYSDOH response letter was received on March 8, 2021 and indicated that there are no records of active groundwater wells or surface water intake sites located within one mile of the Facility (see Appendix 13-B and Table 13-1). The CCDOH and the NYSDOH did not identify any wellhead or aquifer protection zones in the vicinity of the Facility. The Applicant has received no response to date from the NYSDEC; however, according to publicly available data of NYSDEC-mapped water wells (NYSDEC, 2021a), there are eight groundwater wells located within one-mile of the Facility, none of which are located in the Facility Site.

In addition, the Applicant sent private well surveys to all residences and businesses within 1,000 feet of the Facility Site (a total of 223 parcels). The water well survey was developed by Environmental Design & Research, Landscape Architecture, Engineering, & Environmental Services, D.P.C. (EDR), and included a brief summary of the Facility and the Section 94-c process, contact information for the Applicant, a description of how the well owner can obtain additional information, and a questionnaire that included questions such as: whether the parcel had well(s); the age, depth, size, and yield of the well; the well's depth to groundwater; observed water quality, sampling and testing history of the well; location of the well; and how the well was used on the property. Included with the questionnaire was a stamped and addressed return envelope to facilitate return of the surveys.

EDR received responses for 58 parcels which identified a total of 40 private wells within 1,000 feet of the Facility Site (see Figure 13-1). Based on the private well survey responses, the depths of the private wells range from 12 feet to 160 feet below grade with an average depth of approximately 70 feet below grade (the depths of five wells were unknown or not available). Private wells are installed in bedrock, sand-gravel, and shale, and are primarily used for residential purposes. Hard water was observed at a majority of the wells (25 wells) and water clarity was mostly observed to be clear. Groundwater yields of wells are largely unknown by respondents; however, the few yields reported ranged from 2.5 gallon per minute (gpm) to 175 gpm. The Applicant will consult with landowners to field verify all wells identified in the survey that are located on parcels leased or owned for the Facility. This effort will be completed prior to Facility construction. The survey responses are included in Appendix 13-B.

Copies of request letters and survey questionnaires are provided in Appendix 13-A. Agency responses and returned landowners surveys are provided under confidential cover in Appendix 13-B. Table 13-1 summarizes public and private water well locations, well design, and production information, to the extent such data was provided or is publicly available. The locations of private and public water sources are depicted on Figure 13-1.

There are five known private water supply wells within 100 feet of collection lines or access roads, or within 200 feet of PV arrays. Blasting activities are not anticipated for the construction of this Facility. Nineteen private wells are located within 500 feet of a planned bore pit location for trenchless installation of underground collection lines. Methods to protect groundwater during construction activities are described in Section (a)(3) below.

Sole source aquifers are designated by the United States Environmental Protection Agency (USEPA) as aquifers that are used as the sole or main sources of drinking water for a community and are regulated under the provisions of the Federal Safe Drinking Water Act (SDWA) in 1974 (NYSDEC, 2011). The SDWA also requires states to adopt drinking water quality standards to implement and enforce the national standards. The Upstate New York Groundwater Management Program has adopted special program policies and priority to provide protection in locations where groundwaters are both highly productive and highly vulnerable. As defined in the Division of Water Technical & Operational Guidance Series (TOGS) 2.1.3 (NYSDEC, 1990), protection categories include the following:

- Public Water Supply Wellhead Areas: the goal of the Wellhead Protection Program is to protect the ground water sources and wellhead areas that supply public drinking water systems from contamination. Per New York Codes, Rules and Regulations, Title 10, Volume A, Part 5 – Drinking Water Supplies, land use activities are generally limited generally within a minimum separation distance of 200 feet from a well serving a public water supply.
- Primary Water Supply Aquifer Areas: a designation applied by NYSDEC and USGS as aquifers that are presently being utilized as sources of water supply by major municipal water supply systems. NYSDEC considers all primary aquifers within New York State to qualify as sole source aquifers, however there is no direct relationship between the federal and state designations of sole source and primary aquifers.
- Principal Aquifer Areas: a designation applied by NYSDEC as aquifers that are known to be highly productive, or where geology suggests the potential for abundant water supply, but which are not currently used as water supply source by major municipal systems.
- Other areas as determined to be highly productive and vulnerable to contamination by NYSDEC.

The term “highly vulnerable” refers to aquifers which are highly susceptible to contamination from human activities at the land surface over the identified aquifer. Therefore, special protection policies are typically applied to the land area within the mapped boundaries of the aquifer (TOGS 2.1.3).

The Facility Site does not border or contain any part of a primary aquifer, sole source aquifer, or principal aquifer. The nearest primary aquifer is located over 17 miles east of the Facility Site and the nearest sole source aquifer is located over 40 miles northeast of the Facility Site. There are several unconfined aquifers of unknown or mid

to high yields located approximately one to three miles from the Facility Site. The NYSDEC considers unconfined aquifers with yields of 10 to 100 gallons per minute or greater than 100 gallons per minute as principal aquifers. Therefore, according to available data on aquifer yield, there are three principal aquifers located approximately 2 to 2.5 miles south and east of the Facility Site (see Figure 13-1).

Furthermore, as stated above and presented in Table 13-1 below, there are no wells that service a public water supply within the Facility Site. Therefore, based on the separating distance between the Facility Site and known primary, principal, and sole source aquifers, and wellhead protection areas, construction and operation of the Facility are not anticipated to result in impacts to public groundwater supply.

Table 13-1. Summary of Available Public and Private Well Locations and Characteristics¹

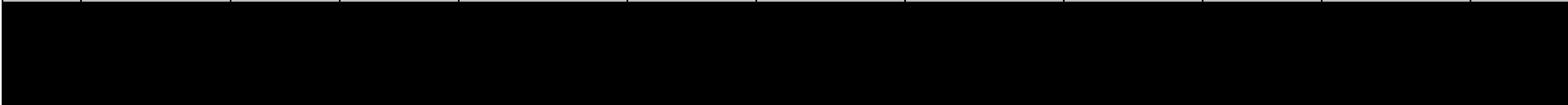
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Well ID ¹	Parcel	Depth (feet)	Diameter (inches)	Uses	Well Type	Well Construction Type	Date of Installation	Depth to Water (feet)	Yield (gpm ²)	Water Description /Quality	Data Source ³
[REDACTED]											

¹ As noted above, this table includes sensitive information and is being filed confidentially.

Well ID ¹	Parcel	Depth (feet)	Diameter (inches)	Uses	Well Type	Well Construction Type	Date of Installation	Depth to Water (feet)	Yield (gpm ²)	Water Description /Quality	Data Source ³
[REDACTED]											

Well ID ¹	Parcel	Depth (feet)	Diameter (inches)	Uses	Well Type	Well Construction Type	Date of Installation	Depth to Water (feet)	Yield (gpm ²)	Water Description /Quality	Data Source ³
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¹ Well IDs 1 through 42 were assigned by EDR based on the order in which responses from the private well survey were received. Well IDs CC-PWS and CC-1 were provided by Chautauqua County DOH in response to data requests.
² gpm= Gallons per Minute.
³ PWS = Private Water Well Survey. CCDOH= Chautauqua County Department of Health.

> END CONFIDENTIAL INFORMATION

(3) Groundwater Impacts

The Facility is not anticipated to result in any significant impacts to groundwater quality or quantity, drinking water supplies, aquifer protection zones, or groundwater aquifers within the Facility Site during normal or drought conditions. Excavations for the access roads, the collection substation, energy storage system and inverter foundations, if applicable, and any underground collection lines are expected to be relatively shallow (i.e., less than 10 feet deep). If shallow or perched groundwater is encountered during the construction of these foundations, common engineering practices, such as dewatering, will be employed.

Groundwater wells at the Facility Site average approximately 70 feet in depth based on data obtained from the private well survey (see Table 13-1 above). These depths are generally deeper within fractured bedrock or granular soil than the excavations and pile driving proposed for Facility construction. Based on the data reviewed and the planned setback distances required by Section 94-c, it is unlikely construction of the proposed Facility will have an impact on shallow aquifer or residential water well groundwater quality or quantity. As stated above, a total of five known private water supply wells are within 100 feet of collection lines or access roads, or within 200 feet of PV arrays and 18 private wells are located within 500-feet of planned bore pit locations for trenchless installations (e.g., Horizontal Directional Drilling [HDD] or jack-and-bore, etc.).

Trenchless installations may be implemented at crossings involving sensitive resources (e.g., wetlands, streams, pipelines, underground utilities). Boring/drilling equipment would be set up on either side of the crossing, outside of sensitive or restricted areas such that no surface disturbance is required between the bore pits. HDD and jack-and-bore methods utilize a mud slurry as lubricant during drilling, and therefore have the potential to result in a surface release of the drilling fluid, or “inadvertent return”. Inadvertent returns are generally rare, and the Applicant will develop an Inadvertent Return Plan as a pre-construction compliance filing to outline the protective measures to be taken when the collection line is installed via HDD or jack-and-bore methods to prevent any impact to groundwater wells. Additionally, the Applicant will adhere to the requirements of §900-6.4(n)(2) to conduct pre- and post-construction testing of the potability of water wells on non-participating properties within 500 feet of proposed HDD locations to monitor for potential HDD impacts.

The Facility will add only small areas of impervious surface, which will be dispersed throughout the Facility Site, treated in various stormwater management facilities, and will have a negligible effect on groundwater recharge. Anticipated impervious surfaces at the Facility include parking areas, access roads, inverters, collection substation, point of interconnection (POI), and the battery energy storage system.

Although the Applicant has designed the Facility to reduce the potential for impacts, and best management practices during construction will further avoid impacts, construction of the proposed Facility could result in certain localized impacts to groundwater, and the use of that water by adjacent landowners. These impacts could include:

- Minor degradation of groundwater quality from accidental spills;
- Minor localized disruption of groundwater flows;
- Groundwater migration along collection line trenches;
- Minor modification to surface runoff or stream flow, thereby affecting groundwater recharge characteristics; and
- Impacts to groundwater recharge areas (wetlands).

Potential impacts of construction of the Facility on drinking water supplies, groundwater quality and quantity (including public and private water supplies and private wells), wellheads, and aquifer protection zones are evaluated below, along with best management practices that will be utilized to minimize and mitigate such impacts.

One potential impact to groundwater is the introduction of pollutants from the accidental discharge of petroleum or other chemicals used during construction, operation, or maintenance. Such discharges could occur in the form of minor leaks, as well as more substantial spills that could occur during refueling and other accidents. However, the likelihood of these impacts is very low because the Applicant has developed avoidance, minimization, and mitigation measures that are outlined in the Facility's Preliminary Spill Prevention Control and Countermeasure (SPCC) Plan. See Exhibit 13(d)(1) below for a discussion of the SPCC Plan and other mitigation measures.

As indicated by the Geotechnical Report (Appendix 10-A), groundwater levels at the Facility Site may fluctuate due to seasonal variation, the amount of rainfall, soil permeability, and other factors. Therefore, groundwater levels during construction may be higher or lower than the levels indicated on the boring logs. Should shallow/perched groundwater be encountered, any construction impacts will be addressed through typical engineering measures and construction techniques, including dewatering, which will avoid and minimize the potential for groundwater to cause erosion and sedimentation. To protect groundwater quality, sediment laden water will be sufficiently filtered in upland locations and not discharged into wetlands or streams. Water velocity dissipation will be provided at all discharge points. Dewatering activities will not cause erosion in receiving channels or adversely impact water resources. The determination of any long-term dewatering (if necessary) will be addressed during final geotechnical investigations to be conducted following issuance of the Siting Permit.

Potential impacts to groundwater could also occur as a result from the installation of foundations for certain Facility components (e.g., collection substation, POI, and battery energy storage system [BESS]). Mechanical excavation (e.g., pneumatic hammer, larger ripper) may be required for Facility component installations, such as underground collection line installations, where the Geotechnical Report indicates shallow rock may be encountered see Appendix 10-A. In addition, installation of solar panel foundations will involve high-speed impact hammers that will drive steel piles to a minimum of depth ranging from 6.5 to 11 feet. Vibrations generated by high-speed hammers are typically low, transfer at short distance, and are not anticipated to result in interaction with nearby public or private water wells including changes in water quality or quantity. Blasting activities are not anticipated for the construction of this Facility due to the moderately weathered condition of the underlain bedrock. Please see Exhibit 10 for further description of construction techniques and associated impact. Based on the extensive geotechnical studies performed, Facility component siting, proposed construction techniques, and best practices construction and operation of the Facility is not anticipated to result in adverse impacts to groundwater resources.

In addition to limited potential impacts to groundwater due to foundation installation, minor impacts could also result from the installation of buried collection lines, which may facilitate groundwater migration along trench backfill in areas of shallow groundwater. Due to the decompaction of soils within the trench of the buried collection lines, water could collect in the trench and migrate through to areas of lower elevation where it will naturally infiltrate back into the water table with negligible loss of volume. Where needed, trench breakers may be installed to reduce groundwater migration along underground collection line trenches. Trench breakers would be constructed of sandbags or alternative materials. The placement of these mitigating practices would be determined in the field and/or as identified in construction plan documents.

Once constructed, the presence of certain Facility components (e.g., collection substation and POI, BESS, access roads, inverter pads and transformers) will result in a minimal increase of impervious surface area within the Facility Site. When natural vegetation is replaced with an impervious surface, water can no longer seep directly into the ground. Potential impacts include an increase in stormwater runoff and decrease in groundwater recharge. However, the limit of impervious surfaces¹ totals 33.7 acres, just 1% of the Facility Site. In addition, the Applicant will implement a Stormwater Pollution Prevention Plan in accordance with the Project's SPDES General Permit. See Exhibit 13(c)(1) below for a discussion of the SWPPP and other mitigation measures.

As indicated above, there are no active public water supply wells or intakes within the Facility Site. There are five private water wells that occur within 100 feet of collection lines or access roads or within 200 feet of panel areas,

¹ Limits of Impervious Surfaces represents all areas that will host built components of the Facility, including the collection substation and point of interconnection, battery energy storage system, inverters and transformers, access roads, and overhead collection line poles.

and 18 private water wells that occur within 500 feet of proposed bore pits for trenchless crossing installations. Construction and operation of the Facility is not anticipated to impact water supply wells outside of the Facility Site; however, the Applicant will conduct pre- and post-construction testing of the potability of active water wells on non-participating properties (pending permission by property owner) within the distances from construction disturbance as specified in §900-6.4(n)(2) to ensure wells are not impacted by construction activities. In the unlikely event that impacts do occur, a new well will be constructed for the landowner as required by this section of the regulations. Additionally, as stated in Section (a)(2) above, there are no wellhead or aquifer protection zones within the vicinity of the Facility. Therefore, based on the careful siting of project components and the implementation of various avoidance, minimization, and mitigation measures (e.g., SPCC Plan, SWPPP), the construction and operation of the Facility is not anticipated to result in significant impacts to drinking water supplies, groundwater quality or quantity in the Facility Site, public and private water wells, or wellhead and aquifer protection zones.

(b) Surface Waters

(1) Surface Waters Map

Maps showing locations of all federal, state, and/or locally regulated surface waters within the Facility Site and within 100 feet of areas to be disturbed by construction are depicted in Figure 14-1 and presented in more detail in the Wetland and Stream Delineation Report (Appendix 13-C). Wetland and stream delineations conducted by EDR at the Facility Site identified all surface waters (ponds; ephemeral, intermittent, and perennial streams; and wetlands) within the Wetland Study Area (i.e., within 100 feet of proposed Facility components). Shapefiles of these data were submitted to NYSDEC and ORES staff on November 10, 2020. Updated shapefiles, as well as a draft of the Wetland and Stream Delineation report were provided to NYSDEC and ORES staff on January 28, 2021. The identification of surface waters outside the Facility Site, but within 100-feet of the limits of disturbance, were mapped by EDR using a combination of publicly available data from Chautauqua County, NYSDEC, Environmental Systems Research Institute (ESRI), USGS, and the National Wetlands Inventory (NWI), as well the most recent orthoimagery collected by the New York State Digital Orthoimagery Program in 2020.

(2) Wetland and Stream Delineation Report

On-site wetland and stream delineations were conducted by EDR between late June through September 2020 during which data were collected on streams that were identified within the Wetland Study Area. The results of the on-site field delineations are documented in the Wetland and Stream Delineation Report (Appendix 13-C).

Streams were identified according to the Cowardin Classification System (1979), and stream boundaries were determined based on the presence of ordinary high water line characteristics, including a "*clear, natural line*

impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris" (CFR, 1986). Stream boundaries were defined in the field with sequentially numbered surveyor's flagging and mapped using a GPS unit with reported sub-meter accuracy. Stream flow regime (i.e., perennial, intermittent, or ephemeral) was determined through evaluation of hydrologic, geomorphic, and biological characteristics (NC DWQ, 2010). Data regarding stream gradient (gentle, moderate, or steep), stream bank and channel width, water depth, stream bed substrate, in-stream cover, and biological indicators were collected and recorded on stream inventory forms.

(3) Description of Surface Waters

The majority of the Facility Site, including the northern and eastern portions, are located in the Chautauqua-Conneaut watershed (USGS Hydrologic Unit 04120101), a sub-basin of the Lake Erie – Niagara River major drainage basin. A smaller portion of the Facility Site to the southwest is located in the French watershed (USGS Hydrological Unit 05010004), a sub-basin of the Allegheny River major drainage basin.

During on-site delineations, 104 streams were identified within the Wetland Study Area totaling 75,325 linear feet. These included perennial, intermittent, and ephemeral streams. Most streams delineated are tributaries to larger systems flowing through the lowlands eventually flowing into either Twentymile Creek or French Creek. No presence of aquatic invasive species was detected in any surface water within the Wetland Study Area, although terrestrial species associated with wetland areas were identified (e.g., purple loosestrife [*Lythrum salicaria*] common reed [*Phragmites australis*], etc). Streams present within the Facility Site and Wetland Study Area are presented in Table 13-2 below, and further described in the Wetland and Stream Delineation Report (Appendix 13-C).

Under the Protection of Waters Program (Article 15 of the Environmental Conservation Law [ECL]), NYSDEC has regulatory jurisdiction over any activity that disturbs the bed or banks of protected streams. Any stream, or portion of a stream, that has been assigned by the NYSDEC any of the following classifications or standards is considered a protected stream: AA, AA(t), A, A(t), B, B(t) or C(t) (6 NYCRR Part 701). Non-navigable Class C streams are not considered state-protected streams under Article 15. A classification of AA or A indicates that the best use of the stream is as a source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing. The best usages of Class B waters are primary and secondary contact recreation and fishing. The best usage of Class C waters is fishing and non-contact activities, and the best usage for Class D is fishing. Streams designated (T) indicate that they support trout, and those designated (TS) support trout spawning.

Table 13-2 below lists all NYSDEC-mapped streams that cross the Facility Site including NYS listed Water Quality Standards and Classification, flow, and relevant surface water characteristics. Streams delineated within the Facility Site include Class C, Class C(T), Class C(TS), and unmapped streams². The ORES and NYSDEC will assume jurisdiction over 14 delineated stream segments as identified in the ORES Final Surface Waters Jurisdictional Determination letter dated April 19, 2021 (see Appendix 13-D).

Table 13-2. Delineated Surface Waters

Delineation ID ¹	Linear Feet of Stream Within Study Area	Flow Characteristics/ Stream Type ²	Stream Name ³	NYSDEC Stream Class/ Standard ⁴	Waterbody Index Number (WIN) ⁵	Stream Order ⁶	Baseflow
FA Ditch 001	920.6	R6	Unnamed	Unmapped	–	1	Absent
FA Stream 001	182.9	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
FA Stream 002	494.7	R4	UNT to Twentymile Creek	Unmapped	–	1	Absent
FA Stream 003	383.9	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
FA Stream 004	361.9	R3	UNT to Twentymile Creek	Unmapped	–	1	Present
FA Stream 005	505.3	R3	UNT to Twentymile Creek	Unmapped	–	1	Present
FA Stream 007	480.4	R4	UNT to Twentymile Creek	Unmapped	–	1	Absent
FA Stream 008	4341.0	R3, R4	UNT to Twentymile Creek	Class C	E96-7-1	2	Present
FA Stream 009	115.3	R6	Unnamed	Unmapped	–	1	Absent
FA Stream 010	186.6	R6	UNT to Twentymile Creek	Unmapped	E96-7-1	1	Absent
FA Stream 011	229.7	R4	UNT to Twentymile Creek	Unmapped	E96-7-1	1	Absent
FA Stream 012	457.1	R4	UNT to Twentymile Creek	Class C	E96-7	1	Absent
ST-01	167.6	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-02	1706.8	R3, R4, R6	UNT to Twentymile Creek	Unmapped	–	2	Present
ST-03	91.0	R6	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-031	119.8	R6	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-04	5266.1	R2	Twentymile Creek	Class C(t)	E-96	2	Present
ST-068	123.7	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent

² Per 6 NYCRR§ 839.4, any unmapped, continuous flowing natural streams shall have the same classification and assigned standards as the waters to which it is a direct tributary. All other streams not shown on the NYSDEC maps shall be assigned to Class D.

Delineation ID ¹	Linear Feet of Stream Within Study Area	Flow Characteristics/ Stream Type ²	Stream Name ³	NYSDEC Stream Class/ Standard ⁴	Waterbody Index Number (WIN) ⁵	Stream Order ⁶	Baseflow
ST-07	95.1	R4	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-075	27.5	R4	UNT to Twentymile Creek	Class C	–	1	Present
ST-078	29.2	R4	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-08	3145.3	R2, R3, R4, R6	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-080	589.1	R6	UNT to Sixteenmile Creek (PA)	Unmapped	–	1	Absent
ST-09	102.4	R4	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-10	515.9	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-11	1410.3	R4	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-12	1473.5	R4, R6	UNT to Twentymile Creek	Unmapped	E-96-15a	1	Absent
ST-13	28.8	R4	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-14	145.9	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-15	54.8	R6	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-16	263.6	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-17	520.7	R6	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-18	406.9	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-19	312.8	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-20	3063.5	R3, R4	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-21	458.5	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-22	2638.6	R3	UNT to Twentymile Creek	Unmapped	–	2	Present
ST-23	912.3	R3, R4	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-24	88.7	R3	UNT to Twentymile Creek	Unmapped	E-96-18	1	Present
ST-25	213.5	R3	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-26	74.7	R4	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-27	257.1	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-28	329.8	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-29	33.5	R4	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-30	261.5	R4	UNT to Twentymile Creek	Unmapped	–	1	Present

Delineation ID ¹	Linear Feet of Stream Within Study Area	Flow Characteristics/ Stream Type ²	Stream Name ³	NYSDEC Stream Class/ Standard ⁴	Waterbody Index Number (WIN) ⁵	Stream Order ⁶	Baseflow
ST-31	314.8	R4, R6	UNT to Twentymile Creek	Unmapped	–	2	Absent
ST-32	121.5	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-33	764.2	R6	UNT to West Branch French Creek	Unmapped	–	1	Absent
ST-34	496.0	R6	UNT to West Branch French Creek	Unmapped	–	1	Absent
ST-35	97.1	R6	UNT to West Branch French Creek	Unmapped	–	1	Absent
ST-36	1747.3	R4, R6	UNT to West Branch French Creek	Unmapped	–	1	Present
ST-37	266.1	R4	UNT to West Branch French Creek	Unmapped	–	1	Present
ST-38	58.0	R6	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-39	4926.6	R3, R6	UNT to Twentymile Creek	Class C	E96-7-2	3	Present
ST-40	1824.7	R3, R4, R6	UNT to Twentymile Creek	Unmapped	–	2	Present
ST-41	426.7	R4	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-42	281.8	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-43	93.4	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-44	850.9	R4, R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-45	686.3	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-46	108.2	R6	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-47	167.6	R6	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-48	866.1	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-49	321.4	R4	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-50	4871.8	R3, R4, R6	UNT to Twentymile Creek	Unmapped	–	2	Present
ST-51	187.9	R4, R6	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-52	1109.0	R3	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-53	162.0	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-54	611.5	R4, R6	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-55	2086.4	R3, R4	UNT to Twentymile Creek	Unmapped	–	1	Present

Delineation ID ¹	Linear Feet of Stream Within Study Area	Flow Characteristics/ Stream Type ²	Stream Name ³	NYSDEC Stream Class/ Standard ⁴	Waterbody Index Number (WIN) ⁵	Stream Order ⁶	Baseflow
ST-56	71.3	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-57	349.5	R4, R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-58	432.0	R4	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-59	416.4	R4	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-60	96.4	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-61	604.7	R4, R6	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-62	68.6	R6	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-63	87.8	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-64	112.9	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-65	375.5	R4	UNT to Twentymile Creek	Unmapped	–	2	Present
ST-66	223.3	R6	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-67	389.5	R4	UNT to Twentymile Creek	Unmapped	–	1	Present
ST-68	908.0	R4, R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-69	1109.7	R3	UNT to Twentymile Creek	Unmapped	E96-7-2	3	Present
ST-70	1065.2	R4	UNT to Twentymile Creek	Unmapped	–	2	Present
ST-71	528.3	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-72	408.9	R4	UNT to Twentymile Creek	Unmapped	–	2	Absent
ST-73	523.2	R6	UNT to West Branch French Creek	Unmapped	–	1	Absent
ST-74	3204.0	R3	UNT to Twentymile Creek	Class C	E-96-15a	2	Present
ST-75	623.5	R4	UNT to West Branch French Creek	Unmapped	–	1	Present
ST-76	617.1	R4, R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-77	737.4	R3, R6	UNT to West Branch French Creek	Class C	Pa 84-5	1	Absent
ST-78	869.9	R3	Twentymile Creek	Class C(t)	E-96	2	Absent
ST-79	508.1	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-80	232.5	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-81	663.1	R3	UNT to Twentymile Creek	Unmapped	–	1	Present

Delineation ID ¹	Linear Feet of Stream Within Study Area	Flow Characteristics/ Stream Type ²	Stream Name ³	NYSDEC Stream Class/ Standard ⁴	Waterbody Index Number (WIN) ⁵	Stream Order ⁶	Baseflow
ST-82	80.7	R6	UNT to Twentymile Creek	Unmapped	–	1	Absent
ST-1001	397.0	R4	UNT to French Creek	Class C	Pa 84-5-1	1	Present
ST-1002	303.0	R4	UNT to French Creek	Class C	Pa 84-5-1	1	Present
TT Ditch 001	310.0	R6	Unnamed	Unmapped	–	1	Absent
TT Ditch 002	760.0	R6	Unnamed	Unmapped	–	1	Present
TT Ditch 003	176.0	R6	Unnamed	Unmapped	–	1	Present
TT Ditch 004	882.0	R6	Unnamed	Unmapped	–	1	Present
TT Stream 001	154.0	R4	Unnamed	Unmapped	–	1	Present

¹ ID assigned by delineation personnel in the field.
² R3 = Upper Perennial, R4 = Intermittent, R6 = Ephemeral.
³ Unnamed = Unnamed Tributary.
⁴ Based on publicly available NYSDEC stream mapping.
⁵ See 6NYCRR Parts 800-941.
⁶ Based on the Strahler method.

As described above, streams delineated within the Facility Site are limited to Class C(t), Class C, and unmapped streams by the NYSDEC. The NYSDEC establishes water quality standards criteria for specific substances, which are found in 6 NYCRR Part 703. In the absence of established water quality standards, numeric guidance values are derived and can be found in the guidance document for Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (NYSDEC, 1998)¹. Table 13-3 below provides the ambient water quality standards and guidance values applicable to streams within the Facility Site.

Table 13-3. New York State Ambient Standards and Guidance Values

Parameter	NYSDEC Classification	Standard
Taste-, color-, and odor-producing, toxic, and other deleterious substances	C	None in amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages.
Turbidity	C, D	No increase that will cause a substantial visible contrast to natural conditions.
Suspended, colloidal, and settleable solids	C, D	None from sewage, industrial wastes, or other wastes that will cause deposition or impair the waters for their best usages.
Oil and floating substances	C, D	No residue attributable to sewage, industrial wastes, or other wastes, nor visible oil film nor globules of grease.
Phosphorus and nitrogen	C, D	None in amounts that will result in growths of algae, weeds, and slimes that will impair the waters for their best usages.
Thermal discharges	C, D	Standard for this refers to 6 NYCRR Part 704.1 Water quality standards for thermal discharges. (a) All thermal discharges to the waters of the State shall assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water. (b) The criteria contained in this Part shall apply to all thermal discharges and shall be complied with, except as provided in this Part.
Flow	C, D	No alteration that will impair the waters for their best usages.
pH	C, C(t)	Shall not be less than 6.5 nor more than 8.5.
	D	Shall not be less than 6.0 nor more than 9.5.
Dissolved Oxygen	C, C(t)	For trout spawning waters (TS) the DO concentration shall not be less than 7.0 mg/L from other than natural conditions. For trout waters (T), the minimum daily average shall not be less than 6.0 mg/L, and at no time shall the concentration be less than 5.0 mg/L. For non-trout waters, the minimum daily average shall not be less than 5.0 mg/L, and at no time shall the DO concentration be less than 4.0 mg/L.
	D	Shall not be less than 3.0 mg/L at any time.
Dissolved solids	C	Shall be kept as low as practicable to maintain the best usage of waters but in no case shall it exceed 500 mg/L.

¹ Available at https://www.dec.ny.gov/docs/water_pdf/togs111.pdf.

Parameter	NYSDEC Classification	Standard
Total coliforms * (number per 100 mL)	C, D	The monthly median value and more than 20% of the samples, from a minimum of five examinations, shall not exceed 2,400 and 5,000, respectively.
Fecal coliforms * (number per 100 mL)	C, D	The monthly geometric mean, from a minimum of five examinations, shall not exceed 200.
Source: 6 NYCRR 703.2, NYCRR 703.3, 6 NYCRR 703.4, 6 NYCRR 704.1		

No aquatic invasive species were identified during on-site wetland and stream delineations, with the exception of terrestrial invasive species which are commonly found in wetland areas and included in the list of aquatic species provided by the NYSDEC and New York Invasive Species Information Clearinghouse (NYISIC). The most common terrestrial invasive species observed during wetland and stream delineations include purple loosestrife and common reed. Common reed and purple loosestrife typically do not grow within surface waters but are associated with the edges of waterbodies or with wetlands. Pursuant to Section 900-10.2(f)(4), and in compliance with 6 NYCRR Part 575, the Applicant will prepare and submit an Invasive Species Control and Management Plan (ISCMP) as a pre-construction compliance filing, including baseline mapping of all invasive species within 100 feet of the limits of construction activity and an identification of specific control, removal, monitoring, management, and disposal methods to be implemented for each identified invasive species.

(4) Drinking Water Supply Intakes

As previously noted, the Applicant sought information from NYSDOH, CCDOH, and NYSDEC pertaining to public water supplies (including public water supply intakes) which was supplied pursuant to a confidentiality agreement between the Applicant and each agency. NYSDOH indicated in their March 8, 2021 response that there are no records of groundwater wells or surface water intake sites located within one mile of the Facility. CCDOH identified one public water supply location within the Facility Site that has been inactive since 2018. CCDOH also stated in their email response dated February 24, 2021 that the nearest drinking water supply intake is located approximately 2-3 miles north on a tributary to Twentymile Creek. This surface water intake provides water to the Town of Ripley Municipal Water District. To date, no responses have been received from NYSDEC; however, review of publicly available data of NYSDEC mapped water withdrawals (NYSDEC, 2021b) identifies the Ripley Water District public water supply approximately 3 miles north of the Facility which is consistent with the CCDOH’s response. Given that the nearest active drinking water supply intake is 2 or more miles from the Facility on a tributary that does not flow through the Facility Site, and that the Applicant will implement various minimization measures (see Sections (b)5, (c), and (d)(1) below) to mitigate impacts to surface water within and near the Facility, no impacts to drinking water supply intakes are anticipated.

(5) Avoidance and Minimization of Impacts to NYS Protected Waters

During construction, temporary and permanent direct or indirect impacts to on-site surface waters may occur. Direct impacts are typically associated with the development of access roads and installation of collection lines and may include 1) the direct placement of fill in surface waters to accommodate road crossings for collection lines or access roads, 2) disturbance of stream banks and/or substrates resulting from buried cable installation, 3) changes to stream structure, morphology, and stability, and 4) siltation and sedimentation due to earthwork, such as excavating and grading activities. Indirect impacts to surface waters may result from sedimentation and erosion caused by construction activities (e.g., removal of vegetation and soil disturbance along streambanks) and an increase in water temperature and conversion of cover type due to clearing of vegetation.

The Applicant has sited Facility components to avoid or minimize both temporary and permanent impacts to surface waters to the maximum extent practicable. Large built components of the Facility, including PV racking systems, inverters, transformers, energy storage components, and the substation/POI, as well as temporary laydown yards, are all sited in upland areas at least 50 feet from NYS protected waterbodies, where possible. The Applicant has routed Facility components along previous disturbance corridors and designed access roads to work with the native topography and minimize the need for soil disturbance, which can also reduce the potential for sedimentation of surrounding surface waters. Where stream crossings cannot be avoided, the overall impacts have been minimized by utilizing existing crossings and narrow crossing locations if available. Where existing stream crossings need to be replaced, these crossings will be upgraded to meet NYSDEC standards. As practicable, stream crossings have also been designed to transect the stream at 90-degree angles, as practicable, to minimize loss of stream segment and riparian corridors. In some stream crossing locations, overhead crossings were avoided due to the need for additional tree clearing (e.g., at crossings of forested stream reaches), cost, and the potential for visual and agricultural impacts. The Applicant will utilize trenchless technologies (i.e., directional auger boring [DAB], horizontal direction drilling [HDD], etc.) where feasible to further minimize crossing impacts to surface waters.

Of the 14 delineated stream segments that were identified by ORES to be state-regulated waterbodies, the Applicant is proposing two crossings of a state-protected stream as identified in Table 13-4 below.

Table 13-4. Avoidance and Minimization of Impacts to NYS protected waters

Stream ID ¹	Stream Name	NYSDEC Class/Standard	Stream Type ²	Facilities Crossing ³	Crossing Method	Activity/Feature within 50 feet
ST-04	Twentymile Creek	Class C(t)	R2 – Lower Perennial	CL	Overhead Span – No Impact	Tree clearing
ST-78	Twentymile Creek	Class C(t)	R3 – Upper Perennial	CL	Underground Trenchless Installation – No Impact	None
¹ Based on field delineation ² Based on Cowardin Classification ³ CL = Collection Line						

Specifically, one overhead collection line crossing of a NYS protected waterbody (i.e., delineated stream ST-04 [Twentymile Creek]) will not result in the direct temporary or permanent impacts to the bed or banks of the stream. The poles associated with this overhead collection line span will be located more than 50 feet from the banks of this stream. However, minor tree clearing adjacent to the banks of this stream will be required to prepare the site for construction, maintain the electric line right of way and prevent vegetation from contacting the energized conductor. The other crossing will be a buried collection line to be constructed through HDD installation under a separate segment of Twentymile Creek (delineated stream ST-78). All boring pit locations and associated construction disturbance will be located a minimum of 50 feet from the banks of this stream. No direct temporary or permanent impacts to the bed or banks of the stream are anticipated. The Facility has been sited and designed to avoid impacts to all other state-regulated waterbodies.

(6) Measures to Minimize or Mitigate Impacts to New York State Protected Waters

As described in Section (b)(5) above, impacts to state-regulated surface waters have been avoided or minimized to the maximum extent practicable. Specifically, of the 14 delineated stream segments determined by ORES to be state-regulated waterbodies, project components will only cross state-protected stream(s) in two locations. Due to engineering design and construction methodologies (i.e., one overhead electrical collection crossing and one underground HDD electrical collection crossing), no temporary or permanent impacts to the bed or banks of any state-protected streams will occur. In addition, no temporary or permanent ground disturbance or vegetation clearing will occur within 50 feet of the banks of one of the state-protected stream (delineated stream ST-78) due to the HDD installation.

Approximately 0.5 acre of tree clearing will occur within 50 feet of state-protected streams to facilitate the installation of an overhead collection line crossing at ST-04 (as noted above), as well as minor clearing of trees (without grubbing or ground disturbance) within 50 feet of delineated streams ST-20 and ST-02.4 that would otherwise shade PV arrays, thus reducing their capacity. In addition, approximately 200 linear feet of fence line

and 0.02 acre of grading is proposed within 50 feet of State-regulated delineated streams. The Project was unable to completely avoid all activities within 50 feet of State-regulated streams while still meeting the goals and objectives of the Project due to engineering and design challenges (e.g., landowner-imposed development restrictions, extreme slope considerations, avoidance of other sensitive resources).

For all activities conducted within 50 feet of state-protected streams, the Applicant will utilize standard best management practices (BMPs) and comply with all relevant requirements of the Uniform Standards and Conditions as set forth in Section 900-6.4. Additionally, the following provides an explanation of all efforts the Applicant made to minimize impacts to state-protected streams:

- i. No solar panel racking or perimeter fence associated with the Facility will span a state-protected stream;
- ii. No excavation, grading, or placement of fill associated with the Facility will occur within a state-protected stream
- iii. The two proposed stream crossings have been located along straight sections of the stream channel and designed in a perpendicular alignment to the direction of flow;
- iv. As noted above, selective tree clearing is proposed within 50 feet of State-regulated streams within the Facility Site for one overhead collection line crossings and to reduce tree shading of PV arrays. With the exception of these locations, the Applicant will avoid tree clearing within 50 feet of state-protected waterbodies to the maximum extent practicable. Vegetation clearing within 50-feet of state protected waterbodies is limited to the minimum necessary to facilitate construction and operation of the Facility.
- v. All major facility components have been sited 50 feet or more from state protected waterbodies, with the exception of the two stream crossings and small length of fence line noted above. Streams will be protected from indirect impacts during construction by utilizing various erosion and sediment control measures in accordance with the approved SWPPP. Additionally, the Applicant will adhere to soil erosion and sedimentation control measures outlined in the Project SWPPP as part of the SPDES General Permit for the Facility. Silt fences, hay bales, and temporary siltation basins will be installed between water resource boundaries and construction areas (e.g., on the downstream side of all disturbed areas) and maintained throughout Facility construction. Exposed soil will be seeded and/or mulched to assure that erosion and siltation is kept to a minimum along wetland boundaries. Specific control measures are identified in the SWPPP, and the location of these features will be indicated on construction drawings and reviewed by the contractor and other appropriate parties prior to construction. 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 restoration work.
- vi. As noted above, minimal surface grading is proposed within 50 feet of a State-regulated stream (Delineated stream segment ST-02.4) for the installation of PV arrays. No panels will be located within

50 feet of state-regulated waterbodies and no other grading will occur within 50 feet of state-protected waterbodies.

- vii. The 0.5 acre of vegetation clearing that will occur within 50 feet of NYS protected waters will be restored in a manner conducive to safe long-term operation and maintenance of the Facility. Where electric collection lines cross wetlands and waterbodies, the Project will encourage the growth of site-specific native low growing scrub shrub species to maintain the ecological integrity of each cleared area and inhibit the growth of invasive species. Vegetation management will select for species with fine root biomass and canopies conducive to stream shading, such that stream quality is preserved, while maintaining the safe and reliable operation of the collection system. Restoration of vegetation within 50 feet of NYS protected waters will be further outlined in the Applicant’s Vegetation Management Plan in accordance with pre-construction compliance filings as outlined in 19 NYCRR 900-10.2.

Detailed information regarding the iterative design changes to avoid and minimize impacts to sensitive resources, including New York State protected waters are included in Appendix 11-E of the Application.

(7) Stream Restoration and Mitigation Plan for New York State Protected Waters

As described in Sections (b)(5) and (6) above and depicted in Appendix 13-F, only two crossings of state-protected streams are proposed, both of which are “Allowed (A)” in accordance with Table 1 as set forth in Section 900.2.14(b)(7). Therefore, the proposed activities are not subject to compensatory mitigation and a Stream Restoration and Mitigation Plan is not required.

(c) Stormwater

(1) Stormwater Pollution Prevention Plan

Prior to construction, the Applicant will submit a Notice of Intent seeking coverage under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity issued in January 2020 and effective on January 29, 2020 (see https://www.dec.ny.gov/docs/water_pdf/constgp020001.pdf) or its successor. This authorization is subject to review by NYSDEC and is independent of the Section 94-c process.

As required by the General Permit and on behalf of the Applicant, Mott MacDonald (Mott) developed a SWPPP to provide instruction on appropriate construction best management practices (BMPs) with respect to minimizing the discharge of pollutants and sediment in stormwater runoff and protect water quality during construction and operation of the Facility. The SWPPP is prepared in accordance with the applicable NYS Pollution Discharge Elimination System General Permit for Stormwater Discharges from Construction Activity and the NYS Standards

and Specifications for Erosion and Sediment Control in an effort to maintain existing drainage patterns and rates of stormwater runoff. The SWPPP contains detailed information including but not limited to the Applicant's methods of erosion and sedimentation control and waste management and spill control, and information regarding adherence expectations and associated inspections. In addition, the contents of the SWPPP discuss and describe the requirements of the General Permit and will be kept at the Facility Site and made available for review by the Engineer, contractors, and applicable regulatory agencies. A copy of the SWPPP is appended to this Application (Appendix 13-E).

(2) Post-Construction Erosion and Sediment Control Practices

As described above, the SWPPP and associated erosion and sedimentation control plan will address the anticipated stormwater management practices and green infrastructure practices (e.g., vegetative filters) that will be used to reduce the rate and volume of stormwater runoff after Facility construction has been completed. The SWPPP was prepared in accordance with New York State Standards and Specifications for Erosion and Sediment Control (NYS Standards), and the New York State Stormwater Management Design Manual, and includes information on proposed permanent, post-construction erosion and sediment control measures (vegetative and structural), along with the anticipated stormwater management practices that will be used to maintain the pre-construction rate and volume of stormwater runoff after construction has been completed.

(d) Chemical and Petroleum Bulk Storage

(1) Spill Prevention and Control Measures

To prevent unintended releases of petroleum and other hazardous chemicals, a preliminary Spill Prevention, Control and Countermeasure (SPCC) Plan has been prepared in accordance with the USEPA regulations that outlines preventative measures and response procedures in the unlikely event of a release (see Appendix 13-F). Specifically, the plan contains descriptions of on-site oil storage activities, procedures for handling oil, discharge or drainage controls, procedures in the event of a discharge discovery, a discharge response procedure, a list of spill response equipment to be maintained on-site, methods of disposal of contaminated materials in the event of a discharge, and spill reporting information.²

Construction and operation of the Facility will not require the use, storage or disposal of large quantities of chemicals or hazardous substances other than petroleum or other oils. Chemicals potentially found on-site during construction and operation of the Facility may include antifreeze, paints/solvents, lubricants and other chemicals

² Note, in addition to oil, very limited quantities of other chemicals may be stored on site, as discussed in the SPCC Plan.

commonly associated with the maintenance of engines and equipment. These materials will be stored consistent with label instructions in small containers (typically less than 5 gallons).

(2) Compliance with New York State Chemical and Petroleum Bulk Storage Regulations

It is not anticipated that large volumes of petroleum or hazardous substances will be stored in tanks subject to regulation under the State of New York’s chemical and petroleum bulk storage programs. If the Applicant elects to store petroleum or chemicals in tanks in quantities that exceed applicable regulatory thresholds, it will submit the necessary registration application(s) to NYSDEC and will comply with all applicable requirements set forth in the petroleum and chemical bulk storage regulations. See 6 NYCRR Part 613 (petroleum bulk storage) and 6 NYCRR Parts 596-599 (chemical bulk storage).

(3) Compliance with Local Chemical and Petroleum Bulk Storage Regulations

It is not anticipated that large volumes of petroleum or hazardous substances will be stored in tanks subject to regulation under County or Town chemical and petroleum bulk storage programs. If the Applicant elects to store petroleum or chemicals in tanks in quantities that exceed applicable regulatory thresholds, it will submit the necessary registration application(s) to Chautauqua County and the Town of Ripley and will comply with all applicable requirements set forth in the petroleum and chemical bulk storage regulations.

(e) Aquatic Species and Invasive Species

(1) Impact to Biological Aquatic Resources

Impacts to surface waters can also impact certain biological aquatic resources associated with those surface waters. These impacts are primarily related to sediment loading in surface waters during construction of the Facility, which can increase turbidity and impact water quality. The Applicant has prepared a SWPPP (Appendix 13-E) to prevent such impacts from occurring in surface waters within the Facility Site during construction and operation of the Facility. As indicated in Table 13-5 below, only a small fraction of the available aquatic habitat (wetlands and streams) that exists within the Facility Site will be impacted by Facility construction or operation. Impacts to wetlands and streams within the Facility Site are depicted in Appendix 14-C. See Section (b)(5) through (7) above for a discussion of anticipated impacts to state-protected streams. See Exhibit 14 for a discussion of wetlands within the Facility Site.

A Plant Species List and a Wildlife Species List are included in Appendix 11-A. The Plant Species List includes all plant species observed during on-site ecological field studies, including wetland delineations and habitat assessments. The Wildlife Species List identifies species that may occur within the ecological communities

present in the Facility Site at some time during the year. It is also based on site-specific field survey results, such as the breeding bird survey, as well as assessments of habitat availability and existing publicly available data, summarized in the Wildlife Site Characterization Report (Appendix 12-A). Appendix 11-A includes the pied-billed grebe, a New York State threatened aquatic avian species as it has been identified in the Audubon Christmas Bird Count (Jamestown and Dunkirk-Fredonia Counts) and reported by eBird users in the vicinity of the Facility. However, pied-billed grebe was not identified in the breeding bird or wintering raptor surveys conducted at the Facility Site between 2019 and 2021, and as described in the Wildlife Site Characterization Report (Appendix 12-A), no habitat suitable for this species (i.e., quiet, open marshes and large expanses of open water) can be found at the Facility Site, thus no impacts to this species are anticipated. The closest observation of pied-billed grebe to the Facility was an observation recorded via eBird at the Sheldon Trail hotspot approximately 3.5 miles east of the Facility Area. This rail-to-trail passes through woodlands and through wetlands which offer habitat suitable for beavers and migrating waterfowl.

Eight state-listed fish species have been identified by the Atlas of Inland Fishes of New York as occurring within the Erie-Niagara watershed (HUC-10 4120101) including: lake sturgeon, mooneye, silver chub, lake chubsucker, spoonhead sculpin, deepwater sculpin, northern sunfish, and eastern sand darter. This is a large watershed covering the northern portion of Chautauqua and Cattaraugus Counties, all of Erie County, and much of Niagara, Genesee and Wyoming Counties. As such, the Erie-Niagara watershed contains a much wider range of water bodies than those occurring within the Facility Site. Of the 129 stream features delineated within the Wetland Study Area, 107 stream segments are smaller intermittent or ephemeral creeks. Twentymile Creek and several of its tributaries are the only larger perennial streams in the Facility Site. Consequently, many of the fish species recorded in the Erie-Niagara watershed may not occur within the Facility Site due to limited available habitat. Based on the findings of the Wildlife Site Characterization Report and results of on-site field surveys, the proposed Facility Site has a relatively low potential to contain state-listed aquatic species.

Most aquatic invasive species are introduced to lakes, and then travel to streams and rivers. Aquatic invasive species are typically spread by ships, boats, barges, aquaculture, recreation, and connected waterways, activities that are infrequent in small headwater streams, like those that dominate the Facility Site.

As the common pathways for aquatic invasive species introduction are not applicable to the construction or operation of the Facility, the risk of spreading invasive species is low. No significant impacts to aquatic resources from invasive species are anticipated. Where permanent access roads cross streams, special crossing techniques will be used in accordance with regulatory requirements and NYSDEC guidance. These measures will collectively ensure compliance with applicable water quality standards (6 NYCRR Part 703). As a result, the construction and

operation of the Facility is not anticipated to cause the spread of aquatic invasive species or have adverse impacts to native aquatic species.

(2) Measures to Avoid or Mitigate Impacts to Aquatic Species

As detailed in Section (e)(1) above, impacts to aquatic species within the Facility Site are not anticipated. Adequate habitat for certain aquatic species is not present in the Facility Site, and common pathways for aquatic invasive species introduction are not present. In addition, avoidance measures implemented to minimize impacts to surface waters, as outlined above, will also serve to avoid or mitigate impacts to aquatic resources for any commonly occurring aquatic wildlife species in the area. Additionally, the Applicant will prepare an Invasive Species Control and Management Plan in accordance with Section 900-10.2(f)(4) of the 94-c regulations.

(f) Water Quality Certification

Under Section 404 of the Clean Water Act (CWA), the USACE has regulatory authority over any activity that involves the discharge of fill into Waters of the United States (WOTUS). As defined by the USACE, WOTUS include lakes, ponds, streams (intermittent and perennial), tidal waters, and wetlands. Wetlands are defined as *“those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions”* (USEPA, 2001). As summarized in Table 13-5 below, construction and operation of the Facility will result in approximately 180 linear feet of temporary stream disturbance, 499 linear feet of permanent stream impacts, 0.3 acre of temporary wetland disturbance, and one acre of permanent wetland impacts within federally jurisdictional WOTUS. Appendix 14-C depicts proposed wetland and stream impacts resulting from the construction and operation of the Facility. Please see Exhibit 14 for a detailed discussion of proposed impacts to State-regulated wetlands.

Table 13-5. Wetland and Stream Impacts

Wetland/ Stream	Delineation ID	Wetland/ Stream Type	Temporary Stream Impact (linear feet)	Permanent Stream Impact (linear feet)	Temporary Wetland Impact (square feet)	Permanent Wetland Impact (square feet)	Permanent Conversion (square feet)	Facilities Crossing Resource**	Appendix 14-C Sheet Number
Stream	ST-1002	R4-Intermittent	-	9	-	-	-	AR	43
Stream	ST-17	R6-Ephemeral	-	80	-	-	-	AR	1
Stream	ST-30	R4-Intermittent	-	23	-	-	-	AR, CL ROW	65
Stream	ST-30.1	R4-Intermittent	-	44	-	-	-	CL ROW	65
Stream	ST-39	R3-Upper Perennial	-	36	-	-	-	AR	33
Stream	ST-40.1	R4-Intermittent	-	12	-	-	-	N/A	30
Stream	ST-40.2	R6-Ephemeral	-	19	-	-	-	AR	30
Stream	ST-41	R4-Intermittent	-	14	-	-	-	AR	30
Stream	ST-41.1	R4-Intermittent	-	19	-	-	-	N/A	30
Stream	ST-50	R3-Upper Perennial	-	63	-	-	-	CL, AR, CL ROW	32
Stream	ST-69	R3-Upper Perennial	-	92	-	-	-	AR, CL ROW	42
Stream	ST-73	R6-Ephemeral	-	47	-	-	-	CL, AR, CL ROW	48
Stream	TT Ditch 002	R6-Ephemeral	20	41	-	-	-	F	16
Stream	TT Ditch 003	R6-Ephemeral	160	-	-	-	-	N/A	6
Wetland	Approximate 2	PEM	-	-	-	7755.8	-	CL, CL ROW, Pole	2
Wetland	FA Wetland 006	PEM	-	-	-	679.6	-	AR, CL ROW	8
Wetland	FA Wetland 010	PEM	-	-	11230.9	-	-	N/A	6
Wetland	FA Wetland 012	PFO	-	-	-	-	3829.5	CL, CL ROW, Pole	4, 8
Wetland	FA Wetland 015	PEM	-	-	-	995.9	-	AR, CL ROW	10
Wetland	FA Wetland 021	PEM	-	-	172.5	-	-	CL ROW	17, 16
Wetland	FA Wetland 025	PFO	-	-	-	-	2791.1	CL, CL ROW, Pole	20, 21
Wetland	FA Wetland 026	PEM	-	-	-	-	3.1	CL ROW	27
Wetland		PSS	-	-	-	-	567.7	CL, Pole, CL ROW	27

Wetland/ Stream	Delineation ID	Wetland/ Stream Type	Temporary Stream Impact (linear feet)	Permanent Stream Impact (linear feet)	Temporary Wetland Impact (square feet)	Permanent Wetland Impact (square feet)	Permanent Conversion (square feet)	Facilities Crossing Resource**	Appendix 14-C Sheet Number
Wetland	FA Wetland 029	PSS	-	-	-	16104.9	-	AR, N/A	24, 25
Wetland	Wetland 102	PEM	-	-	-	2102.1	-	AR, N/A	18
Wetland	Wetland 107	PFO	-	-	-	-	832.9	CL, CL ROW	13
Wetland	Wetland 108	PFO	-	-	-	-	424.4	CL, Pole, CL ROW	21
Wetland	Wetland 33	PFO	-	-	-	780.8	-	CL, Pole, CL ROW	2
Wetland	Wetland 35	PFO	-	-	-	-	669.8	CL, Pole, CL ROW	2, 3
Wetland	Wetland 38	PEM	-	-	359.6	-	-	CL, CL ROW	57
Wetland	Wetland 44	PEM	-	-	-	1090.4	-	AR	66
Wetland	Wetland 46	PEM	-	-	-	365.8	-	AR, N/A	43, 50
Wetland		PFO	-	-	-	3253.1	4534.9	CL, Pole, CL ROW	25, 26, 31, 37
Wetland		PSS	-	-	-	1050.8	-	AR, N/A	43, 50
Wetland	Wetland 52	PEM	-	-	-	1301	-	AR	30
Wetland		PSS	-	-	-	311.3	-	AR	30
Wetland	Wetland 81	PEM	-	-	-	36.7	-	AR	67
Wetland	Wetland 82	PEM	-	-	-	220.5	-	AR	67
Wetland	Wetland 83	PEM	-	-	-	1180	-	AR, CL ROW	69
Wetland	Wetland 84	PSS	-	-	-	2880.5	0.3	AR, CL ROW, N/A	40
Wetland	Wetland 98	PEM	-	-	-	5058	-	AR	23
Feet Total:			180	499	11,763	45,167	13,653.5		
Acres Total:			-	-	0.27	1.04	0.31		
** F = Fenceline; CL = Collection Line; CL ROW = Collection Line Right-of-Way; AR = Access Road; N/A = Not Applicable									

The Applicant anticipates obtaining coverage under a USACE Section 404 Permit prior to initiating any construction activities. In accordance with Section 401 of the Clean Water Act, the Applicant is required to obtain a Water Quality Certification from NYSDEC indicating that the proposed activity will comply with water quality standards, as set forth in 6 NYCRR Section 608.9, for any discharge into a navigable water of the United States (i.e., WOTUS).

(1) Request for Certification

The first step in requesting a Water Quality Certification compliance is to request a pre-filing meeting with ORES and NYSDEC. No less than 30 days later, the Applicant may submit the Section 401 WQC application and a copy of the Section 404 Permit application or pre-construction notification to ORES, NYSDEC Region 9, and the USACE Buffalo District Office. At this time, the Applicant has not yet submitted a federal permit application or pre-construction notification to the USACE. The request for Water Quality Certification will be filed and served and notice of it will be given pursuant to 19 NYCRR Section 900-1.6.

(2) Copies of Pertinent Federal Permit Applications

As stated above, the Applicant has not yet applied for federal permits or submitted any required pre-construction notifications to the USACE. Copies of pertinent federal permit applications will be distributed to ORES and NYSDEC following submission.

(3) Demonstration of Compliance with 6 NYCRR Section 608.9

The Applicant hereby states that construction and operation of the Facility will adhere to the requirements of 6 NYCRR Section 608.9.

(4) Contact Information for USACE District Engineer

USACE Buffalo District
1776 Niagara Street, Buffalo, NY 14207
Phone: (716)879-4330
Email: LRB.NewYork.RegActions@usace.army.mil

(5) Request for Certification Timetable

The Applicant initiated coordination with the USACE in May 2021 and plans to seek coverage under Section 404 of the CWA in Q3 of 2021. It is anticipated that the USACE will verify use of the Section 404 permits by Q1 2022.

The Applicant will send a follow up request to ORES and NYSDEC for a pre-filing meeting after the Section 94-c Application submittal.

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