Bluestone Wind Project

Case No. 16-F-0559

1001.23 Exhibit 23

Water Resources and Aquatic Ecology

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EXHIBIT 23 WATER RESOURCES AND AQUATIC ECOLOGY

This Exhibit includes a review of the groundwater, surface water, and aquatic ecology impacts of the Facility consisting of the identification and mapping of existing conditions, an impact analysis, and proposed impact avoidance, minimization and mitigation measures.

(a) Groundwater

(1) Hydrologic Information

According to a review of the USDA Web Soil Survey, the average depth to groundwater ranges from the ground surface to greater than 78 inches 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 the depth to bedrock ranges from approximately 16 inches to greater than 78 inches. As part of a larger geotechnical investigation, the Applicant's consultant, Terracon Consultants-NY, Inc. (Terracon), conducted preliminary soil borings to determine groundwater levels at a subset of turbine locations. The results of this study confirmed the ranges of depth to bedrock in the area (see Appendix JJ, Report of Expected Geotechnical Conditions). The study did not identify any karst features within the Facility. Maps showing depth to bedrock and depth to water table throughout the Facility Site, based on the Soil Survey of Broome County, New York, are provided in Figure 21-3 (USDA, 1971).

Construction dewatering may be required for surface water control and for excavations that encounter perched groundwater conditions, groundwater or seepage. The final method for dewatering the Facility Site during construction will be determined by the balance of plant (BOP) prior to commencing construction. Although precise locations requiring dewatering have not yet been identified, the review of site conditions conducted to date indicates that dewatering may be necessary at some turbine locations. Based on the relatively low permeability of the soils anticipated, the open sump pumping method—which is a common and economical method of dewatering—may be used at the Facility Site. All proposed methods of dewatering will address concerns and requirements related to runoff and sediment transport as well as any other applicable requirements of the New York State Department of Environmental Conservation's (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity, GP-0-15-002. Additional information pertaining to dewatering is presented in Section 23(a)(3)(ii) below. In addition, consistent with GP-0-15-002, a preliminary Stormwater Pollution Prevention Plan (SWPPP) has been prepared to address construction-related best management practices (BMPs), including those relating to site dewatering. The SWPPP is included in Appendix KK and described below in Section 23(c).

(2) Groundwater Aquifers and Recharge Areas

The Facility Site does not contain any primary aquifers, a designation applied by U.S. Geological Survey (USGS) and NYSDEC to aquifers that are highly productive and utilized by major municipal water supply systems (NYSDEC, 2011).

The Facility Site overlays part of an unconsolidated aquifer mapped by NYSDEC Division of Water, Bureau of Water Resources Management. This high yield, unconfined aquifer runs north-south underneath the Oquaga Creek valley and is capable of yielding 10-100 gallons per minute (NYSDEC, 2008).

The U.S. Environmental Protection Agency (USEPA) maintains authority over sole source aquifers (SSAs), which are those aquifers that supply at least 50% of the drinking water in a given area. The Clinton Street-Ballpark Valley SSA underlies the Susquehanna River Valley, including the far western portion of the Facility Site. According to 2016 USEPA GIS data, approximately 219 acres of the Facility Site lie above the Clinton Street-Ballpark Valley SSA. USEPA review is required when a proposed Facility lies within a SSA and also receives federal funding. However, the Bluestone Wind Project will not receive federal funding and is therefore not subject to the USEPA's SSA review process under the Safe Drinking Water Act (SDWA). Adverse impacts to this aquifer are not anticipated because the Facility will not result in a new point of stormwater discharge or significant new impervious cover.

To identify existing water wells within one mile of the Facility Site, a Freedom of Information Law (FOIL) request letter was sent to the NYSDEC, the New York State Department of Health (NYSDOH), and Broome County Health Department on June 13, 2018. These letters requested any information pertaining to groundwater wells (including location, construction logs, depths, and descriptions of encountered bedrock) within one mile of the preliminary Facility Area. The NYSDOH declined to provide the locations of public water wells, however, the Department informed the Applicant that 4 public water wells were located near Facility components, and one additional well was located within one mile of the Facility. The Broome County Health Department provided the locations and description of 17 public wells within the preliminary Facility Area on August 24, 2018 (see Appendix XX). Of these, 5 are located within one mile of Facility components, which is in accordance with the information provided by NYSDOH. Depth of these wells range from 95 to 250 feet and have groundwater yields ranging from 10 to 12 gallons per minute (gpm). Four of these wells are used for residences and facilities at the Sky Lake Conference Center, and one well is used for private residences by the Deer Lake Water Association. No information on water wells was received from the NYSDEC. Table 23-1 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 23-1.

Private wells were identified by sending a well survey to all residences/businesses located within a 2,000-foot radius of the proposed Facility Area. The Applicant's consultant, Environmental Design & Research, Landscape Architecture, Engineering, & Environmental Services, D.P.C. (EDR), sent out letters in April 2018 including a brief summary of the Project and the Article 10 process, contact information for the Applicant, a description of where the well owner can get more information about the Project, and a questionnaire to the owners of the 189 unique tax parcels located within a 2,000-foot radius of the proposed Facility Area. The questionnaire included questions such as: whether the parcel had well(s); the size and yield of the well; the well's depth to groundwater; sampling and testing history of the well; and location in relation to buildings on the parcel. Included with the questionnaire was an EDR-addressed envelope to facilitate return of the surveys.

EDR received 37 responses to the surveys identifying a total of 23 private wells within 2,000 feet of the Facility Site (Figure 23-1). Based on the private well survey responses, the depths of the private wells range from 3 feet to 350 feet below grade with an average depth of approximately 165 feet below grade (the depths of five wells were unknown or not available). All private wells reported were installed in bedrock, and are primarily used for residences. Groundwater yields reported in this survey range from 5 gpm to 40 gpm with averages yields of approximately 14 gpm. Table 23-1 includes private water well locations, well design, and production information, to the extent such data was provided in response to private well surveys. The survey responses are included in Appendix XX, which will be filed confidentially.

Table 23-1. Summary of Available Public and Private Well Locations and Characteristics [REDACTED]

(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 in the Facility Area. The majority of the proposed turbines will be located on hilltops, generally above and outside of the aquifer footprints located in the valleys (Figure 23-1). Excavations for foundations, roadways, and underground collection lines are expected to be relatively shallow and are not anticipated to intercept groundwater within the surrounding aquifers. However, there is potential for short-term, minor adverse impacts to groundwater during construction, as described below.

Residence and community groundwater wells are generally assumed to be set deeper than the proposed wind turbine foundations and associated underground electrical transmission lines within fractured bedrock or granular till soil. Additionally, turbines are set back from residential structures more than 1,500 feet, and there are no private or public water wells located within 200 feet of proposed turbine locations. Two public wells associated with the Sky Lake Conference Center are located within 100 feet of a proposed collection line, however, the line will be installed on the opposite side of an existing road from where the wells are located, and the shallow excavation required for line installation is not anticipated to affect groundwater quality.

Based on the data reviewed and the planned setback distances, it is unlikely construction of the proposed turbines will have an impact on shallow aquifer or residential water well groundwater quality or quantity. To ensure construction and operation of the Facility does not adversely affect nearby groundwater wells, structural, water quality, and water quantity inspections of any water wells within 500 feet of proposed blasting will be conducted prior to and after blasting activities. Additional pre- and post-blast surveys will be offered to all property owners within a 2,000-foot radius of the blast site. Any adverse impacts identified based on this testing will be mitigated in accordance with Section (b)(5) below.

The Facility will add only small areas of impervious surface, which will be dispersed throughout the Facility Site, and will have a negligible effect on groundwater recharge. However, 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 localized disruption of groundwater flows down-gradient of proposed turbine foundations;
- Minor modification to surface runoff or stream-flow, thereby affecting groundwater recharge characteristics;
- Minor degradation of groundwater quality from accidental spills and installation of concrete foundations;
- Impacts to groundwater recharge areas (wetlands); and

- Groundwater migration along collection line trenches.

A 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 from fuel and hydraulic systems, as well as more substantial spills that could occur during refueling or due to mechanical failures and other accidents. However, these impacts are not anticipated to be of concern because the Applicant has developed avoidance, minimization, and mitigation measures that are outlined in the Facility's Preliminary Spill Prevention, Control and Countermeasures (SPCC) Plan. See Section (b)(5) and (d) for a discussion of the SPCC Plan and other mitigation measures.

Construction activities have the potential to impact localized groundwater flow paths in areas where excavation occurs below the water table. In these instances, water is anticipated to flow around the disturbance and resume its original flow direction downgradient of the disturbance. Groundwater that infiltrates into the excavation may require removal by pumping, which could have a minimal, short-term effect on the elevation of the water table. However, this water will be pumped to the surface, discharged to the ground surface through a velocity dissipating device, and allowed to infiltrate back into the water table with negligible loss of volume due to evaporation. In addition, excavation is not anticipated to occur below the water table for the Facility. Therefore, any effect will be very localized and temporary.

The greatest potential for impacts to groundwater from the Facility is the installation of turbine foundations. Depth to bedrock within the Facility Site ranges from 1 inch to more than 78 inches below the ground surface. The bedrock is anticipated to be encountered at a depth of less than 8 feet under most of turbine locations. Mechanical excavation (e.g., pneumatic hammer, large ripper) may be possible for some of the rock encountered, particularly the upper few feet, but in many cases, blasting will generate less noise and take less time. Blasting will likely be necessary where bedrock is encountered at a shallow depth for construction of proposed wind turbine foundations. All required blasting will comply with applicable laws and regulations and will be conducted in accordance with a site-specific Blasting Plan; a Preliminary Blasting Plan is included with the Application as Appendix HH. See Exhibit 21(i) through (k) for additional information on blasting and associated mitigation measures. Impacts associated with conventional excavation methods will be managed by utilizing BMPs contained in the Facility's SWPPP.

Installation of the concrete foundations could cause a temporary, localized increase in the pH of groundwater during the curing process. This effect will not extend beyond the immediate area of the foundation and will not adversely affect groundwater quality. In the event a perched groundwater condition is encountered at a turbine site, temporary construction dewatering methods will be employed, as described in Section (a)(3)(i) below. Turbine

foundations are typically designed to resist hydrostatic forces, when required, eliminating the need to install permanent drainage systems.

As previously noted, preliminary soil borings have been conducted to determine groundwater levels at a subset of turbine locations (see Report of Expected Geotechnical Conditions attached as Appendix JJ). The preliminary subsurface investigations by Terracon included subsurface soil and bedrock sampling and limited geotechnical laboratory testing at 19 boring locations located in proximity to the proposed turbine sites, substation, operation and maintenance (O&M) building, point of interconnection, and collection lines. The borings were completed between June 2 and June 30, 2018 and were drilled to depths ranging from 6 to 25 feet. These locations were selected to be representative of the overall Facility Site. The preliminary geotechnical investigation included borings to test for subsurface soil, bedrock, and groundwater properties. Groundwater was not encountered in any of the 19 borings. This result suggests that groundwater is not anticipated to be encountered at turbine locations. Should shallow/perched groundwater be encountered, any construction impacts will be addressed through relatively common engineering measures and construction techniques, including dewatering, which will avoid and minimize the potential for groundwater to cause erosion and sedimentation.

In addition to impacts to groundwater due to turbine foundation installation, minor impacts could result from the installation of buried interconnect 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 interconnect lines, water could collect in the trench and migrate through the trench to areas of lower elevation where it will naturally infiltrate back into the water table with negligible loss of volume.

(i) Impacts to the Clinton Street-Ballpark Valley SSA

Under Section 1424(e) of the SDWA, an aquifer may be designated by the USEPA as a SSA if it is determined that the aquifer is the sole or principal source of drinking water for an area, and if contaminated, would create a significant hazard to public health. SSA designations are made in response to a petition from the locality, after a public hearing. For the Clinton Street-Ballpark Valley SSA, the petition was filed February 26, 1981 and the SSA was formally designated on January 14, 1985 (50 FR 2025).

According to a 1977 NYSDEC Bulletin (Bulletin 73), the Clinton Street-Ballpark Valley SSA underlies 3 square miles of urban land in the Susquehanna River Valley and chiefly consists of permeable sand and gravel. Bulletin 73 describes the SSA as being bound on the north by the impermeable bedrock wall of the Susquehanna Valley, on the south by low hills of impermeable till and bedrock, on the east by the Chenango River, and on the southwest by the Susquehanna River. On the northwest, no natural boundary was

recognized, so an arbitrary boundary was drawn north from the northernmost river bend at Johnson City (Randall, 1977). However, according to current (2016) USEPA mapping, the eastern boundary of the Clinton Street-Ballpark Valley Sole Source Aquifer roughly follows the edge of the Upper Susquehanna Drainage Basin, and approximately 219 acres of the Facility Site lie above the SSA. The principal sources of recharge are: (a) induced recharge from the Susquehanna and Chenango Rivers; (b) precipitation on the aquifer and on thin sand and gravel bordering it; and (c) infiltration from small streams crossing the aquifer (Randall, 1977).

Projects within designated SSAs which receive federal financial assistance are subject to USEPA review. The goal of the review process is to ensure that each project or activity within the SSA is designed and constructed in a manner that will prevent the introduction of contaminants in quantities that may create a significant hazard to public health. The USEPA defines "significant hazard to public health" as a level of contaminant which causes or may cause the aquifer to: (a) exceed any maximum contaminant level set forth in any promulgated National Optimal Drinking Water Standard, any state standard more stringent than the federal standard, or any public health advisory level for currently unregulated contaminants; (b) otherwise adversely affect the health of persons; or (c) require a public water system to install additional treatment to prevent such adverse effect. As indicated above, the proposed Facility is not receiving federal financial assistance, and is therefore not subject to USEPA review under the SDWA.

The USGS conducted a study of groundwater quality in the Susquehanna River Basin in 2009. Water samples were collected from 16 production wells and 14 private residential wells from August through December 2009. The results indicate that groundwater is generally of acceptable quality throughout the Susquehanna River Basin, although concentrations of some constituents exceeded at least one drinking-water standard at 28 of the 30 wells. The Susquehanna River Basin encompasses a larger area than the Clinton Street-Ballpark Valley SSA, so not all the data is directly applicable to the Project. However, six of the 30 sample wells were located above the SSA. In those six wells, constituents exceeding drinking water standards include sodium, manganese, iron, radon-222, residue on evaporation, total coliform, pesticides, and volatile organic compounds. Where comparable data was available from previous sampling efforts at the six sample points within the Clinton Street-Ballpark Valley SSA, concentrations of contaminants had increased since 2004 (Reddy & Risen, 2012). As indicated above, the Facility Site only overlaps the far eastern edge of the SSA, and none of the sample wells in the USGS study were located within the Facility Site.

Construction, operation, and or maintenance of the Facility is not expected to result in the introduction of contaminants to the SSA or to groundwater because the Applicant has developed multiple plans that outline measures to avoid, minimize, and mitigate impacts to groundwater resources. As discussed in Section (b)(5), a SPCC plan has been developed and will be implemented at the Facility to prevent releases of oil and chemicals into the environment and minimize the potential environmental impact in the unlikely event that a spill occurs (see Appendix YY). In addition, a Draft Inadvertent Return Plan (Appendix II) has been prepared that outlines measures to monitor and minimize the potential for frac-outs associated with horizontal directional drilling (HDD), a response plan should a frac-out occur, and direction for disposal of HDD drilling fluids. With respect to stormwater management, the Applicant has prepared a preliminary SWPPP (Appendix KK) and will seek coverage under, and will comply with, NYSDEC's stormwater general permit discussed below in Section (c). As described above, all required blasting will comply with applicable laws and regulations and will be conducted in accordance with a site-specific Blasting Plan. The Preliminary Blasting Plan (Appendix HH) and 1001.21(i) through (k) provide information on blasting and associated mitigation measures. Finally, the Facility will add only small areas of impervious surface, which will be dispersed throughout the Facility Site and will have a negligible effect on groundwater recharge.

(ii) Dewatering Areas

During construction, groundwater may be encountered in shallow excavations in areas of poorly drained soils and/or shallow bedrock. Additionally, ponding of surface water and/or precipitation may occur in open excavations and in low-lying areas. It is anticipated that groundwater and/or surface water that accumulates in shallow excavations of the upland areas can generally be controlled using conventional sump and pump methods. During these construction-related dewatering activities, 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. However, because final engineering will not be completed until the Facility has been certified and a turbine model has been selected, exact areas of dewatering cannot be known at the time of this Application.

The determination of long-term dewatering (if necessary) will be addressed during final geotechnical investigations to be conducted at each turbine location following Certification. See Section (b)(5) below for additional information on dewatering methods.

(4) Sources of Water During Construction

Sources of water that may be utilized for construction uses (e.g., for concrete mixing, fire control, and invasive species wash stations) include water trucks and small ponds on participating properties within the Facility Site. Details associated with the design and layout of facilities for withdrawal and transport of source water will be provided post-Certification once the Applicant engages a BOP contractor.

(b) Surface Waters

(1) Surface Waters Map

A map showing locations of all surface waters, including intermittent and ephemeral streams (to the extent such streams and wetlands are identified in publicly available data), within and adjacent to the Facility Site, is provided in Figure 23-2. Data sources used to generate this map include publicly available data from Broome County, NYSDEC, the Environmental Systems Research Institute (ESRI), the USGS, and National Wetlands Inventory (NWI) along with stream data collected during on-site wetland and stream delineations. Stream mapping outside these areas was based on NYSDEC mapping and stream classifications and other mapping sources as applicable. Wetland and stream delineations identified all surface waters (ponds; ephemeral, intermittent, and perennial streams; and wetlands) within a 500-foot wide radius of proposed construction work areas. A table summarizing these data is included below at Table 23-2. Shapefiles identifying the data will be submitted to NYSDEC and DPS staff under separate cover.

(2) Description of Surface Waters

The Facility Site is located in a high elevation area relative to local relief at the boundaries between two major watersheds. Approximately 94% of the Facility Site, including all of the eastern portion, lies within the Upper Delaware drainage basin (USGS Hydrologic Unit 02040101) while the western edge of the Facility Site (approximately 6%) drains into the Upper Susquehanna drainage basin (USGS Hydrologic Unit 02050101). Both the Delaware and the Upper Susquehanna River basins combine to drain Broome, Tioga, Chenango, Madison, Cortland, Delaware, and Otsego counties. These two watersheds, and their rivers and streams supply clean drinking water in the Mid-Atlantic region.

Both the Upper Delaware and the Upper Susquehanna drainage basins are highly susceptible to flooding. Between 1954 and 2013, there were 10 presidential disaster declarations for flood events in Broome County, and 12 in adjacent Delaware County (NYS DHSES, 2014). A flood in January of 1996 rendered the Village of Windsor's Department of Public Works inoperable (NOAA, 2016). There were two drowning deaths in the Village of Deposit during severe flooding in April 2005, as well as damage to water mains. In June 2006, another flood caused

extensive damage to Deposit's public and private structures, utilities, and infrastructure; the cost to restore function to the wastewater treatment plant alone was nearly $1 million (Tetra Tech, 2013a). That same widespread record flooding event in June 2006 put the Village of Windsor's potable water wells in jeopardy (NOAA, 2016), compromising the municipal water service for 7 days (Tetra Tech, 2013b). Another devastating flood occurred in the region in 2011, causing extensive damage to infrastructure, including municipal water service, wastewater treatment plant, and schools in the Villages of Windsor and Deposit (Tetra Tech, 2013a, 2013b; NOAA, 2016).

Under Article 15 of the Environmental Conservation Law (Protection of Waters), NYSDEC has regulatory jurisdiction over any activity that disturbs the bed or banks of protected streams. Any stream, or particular 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). 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 Class D waters represent the lowest classification standard. Streams designated (t) indicate that they support trout, and also include those more specifically designated (ts) which support trout spawning.

A list of all NYSDEC-mapped streams that cross a portion of the Facility is provided in Table 23-2. Protected streams crossed by Facility components are Class A, Class B(t), and Class C(t), and include Fly Creek, Marsh Creek and tributaries, Oquaga Creek Upper tributaries, and Big Hollow Brook. There are no mapped Class AA or D streams that cross the Facility limits of clearing, nor are there any streams that support trout spawning.

Table 23-2. NYSDEC Mapped Streams that Cross Facility Limits of Clearing

Stream Name[1]	NYSDEC Classification	NYSDEC Standard	Part Item Number	Water Index Number[2]
Fly Creek	B	B(T)	815-822	D-71-10-6
Marsh Creek	C	C(T)	815-828	D-71-10-7
Marsh Creek (tributaries)	C	C(T)	815-828	D-71-10-7
Oquaga Creek Upper	C	C	815-818	D-71-10
Oquaga Creek Upper (tributaries)	C	C(T)	815-830	D-71-10
Bone Creek	C	C	815-820	D-71-10-1
Big Hollow Brook (tributaries)	A	A	815-837	D-71-11-1

[1] Based on streams from the Water Quality Classifications – NYS GIS layer (downloaded from https://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1118) that intersected Facility buffered areas as defined in the Preliminary Scoping Statement (PSS).

[2] Based on streams from the Water Inventory/Priority Waterbodies List GIS layer (downloaded from `http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1117) that intersected Facility buffered areas as defined in the PSS.

Also note that the NYSDEC will conduct a site visit to review the boundaries of delineated wetlands and streams, and will subsequently issue a Freshwater Wetlands Determination, which will address the jurisdictional status of streams. Based on the information in the Freshwater Wetlands Determination, which is included with the Wetland Delineation Report (see Appendix VV), the Applicant identified a total of 11 crossings of NYSDEC-protected streams. See Section (b)(4) below for a detailed discussion of potential impacts to streams and Section (b)(5) for a discussion of avoidance and minimization measures.

On-site wetland/stream delineations were conducted in the spring of 2018, during which data were collected on streams that exist within a wetland/stream survey area (i.e., a 200-foot radius around areas of proposed disturbance). In other words, these efforts were specific to areas near where disturbance could occur during construction and operation, and therefore, do not cover the entirety of parcels defining the Facility Site. For a full description of stream and wetland delineation results and methods, see the Wetland Delineation Report included in Appendix VV. Included in the delineations are portions of the mapped streams listed above in Table 23-2, as well as unmapped streams, which are either intermittent, perennial, or ephemeral tributaries of the mapped streams. Most streams were located in forests and hedgerows, and generally had gentle to moderate gradients. The majority of streams appear to be intermittent channels that primarily flow during the wet season, with a rocky substrate and well-defined banks.

Publicly available data on fish communities in lakes and streams associated with the Facility Site is limited. The Upper Susquehanna and Upper Delaware watersheds support a number of fish species sought by anglers including brown and brook trout, small- and largemouth bass, yellow perch, and black crappie. Sky Lake and the few open water ponds within the Facility Site likely support a smaller diversity of aquatic species. Much of the Facility is high in the watershed, and the streams within the Facility Site are generally small and also support lower numbers of aquatic species. However, to conservatively represent all species that could possibly occur, fish species documented in the Upper Delaware River and Upper Susquehanna River watersheds are included in the Wildlife Species List (see Appendix LL). A total of 46 unique fish species were identified as potentially occurring at the Facility Site.

The NYSDEC maintains a list of the *Common Aquatic Invasive Species of New York*, which includes fish, clam, mussel, insect, plant, and algae species, known habitat distributions of these species and recommended boat-cleaning methods to prevent their spread (NYSDEC, 2018a). Of the 22 invasive species included on the list, 12 could occur in the vicinity of the Facility Site based on known distributions and habitat requirements, including curly-leaf pond weed (*Potamogeton crispus*), European frogbit (*Hydrocharis morsus-ranae*), Eurasian watermilfoil

(*Myriophyllum spicatum*), water chestnut (*Trapa natans*), hydrilla (*Hydrilla verticillata*), starry stonewort (*Nitellopsis obtusa*), rock snot (*Didymosphenia geminata*), Asian clam (*Corbicula fluminea*), zebra mussel (*Dreissena polymorpha*), quagga mussel (*Dreissena bugensis*), alewife (*Alosa pseudoharengus*), and round goby (*Neogobius melanstomus*) (NYSDEC, 2018b; Weldy & Werier, 2018; NYIS.INFO, 2018). None of the species on the list were observed during wetland delineations or other field investigations, including a terrestrial plant invasive species survey; however, a comprehensive aquatic species inventory was not conducted. Most of the aquatic habitat within the Facility Site is in the upper portion of the watershed, where water bodies are of insufficient volume to support most of these species.

(3) Drinking Water Supply Intakes

A FOIL request on the location of downstream surface drinking water supply intakes was submitted to NYSDOH, Broome County Health Department, and NYSDEC on June 13, 2018. The inquiry requested data on public surface drinking water intake sites within 1 mile of the proposed Facility or, if there are no such intake sites, the nearest intakes downstream of the Facility Site. Because the proposed Facility would be located within two watersheds, the Applicant requested data for both the Upper Susquehanna and Upper Delaware watersheds.

A response letter from the NYSDOH was received on July 9, 2018, which identified 30 water intake locations within one mile of the Facility Site servicing approximately 5,569 people. Twenty of these water intakes are utilized by campgrounds and retreats, including the Sky Lake Camp and Retreat Center and the Tuscarora Scout Reservation. The remaining water intakes supply water to residents, two restaurants, a golf club, and the Village of Windsor. Discreet locations of the intakes, although requested, were not provided by the agency.

A response letter from the Broome County Health Department was received on July 10, 2018 indicating that the only surface water public water supply in Broome County Health Department's jurisdiction is the City of Binghamton Filtration Plant. The intake for the plant is located on the Susquehanna River in the City of Binghamton at latitude 42.1050, longitude -75.89530, approximately 25 miles downstream of the Facility Site.

To date, no response or acknowledgement of receipt of the FOIL request has been received from the NYSDEC.

The Applicant will take all measures practicable to avoid, minimize, and mitigate impacts to surface waters, including surface drinking water supplies, due to construction and operation of the Facility as outlined in Section (b)(5) below.

(4) Impacts to Surface Waters

During the earlier stages of development of the project, the Applicant considered installing up to 53 turbines at the Facility Site. The decision to reduce the number of turbines installed to 33 has reduced potential impacts to surface waters. Moreover, the Applicant has sited wind turbine foundations, the O&M building and the collection substation, to avoid or minimize temporary and permanent impacts to surface waters. The Applicant also has attempted to avoid impacts to surface waters associated with the Facility by locating access roads and collection lines to minimize the number stream crossings. Where stream crossings cannot be avoided, the overall impacts will be minimized by utilizing existing crossings and narrow crossing locations to the extent practicable. Also, the Applicant will use HDD where feasible to further minimize crossing impacts. As described in Exhibit 22, the construction of the Facility will only have minimal impacts to surface waters and will have no impact on open water wetlands. In addition, impacts to streams due to construction of the Facility will be limited to 1,002 linear feet of temporary impacts and 1,351 linear feet of permanent impacts. The details of these impacts are described below.

During construction, direct or indirect impacts to surface waters will occur as a result of the installation of access roads, the installation of electrical interconnects, and the development and use of temporary construction workspaces around the batch plant and laydown yard. Direct impacts could include 1) an increase in water temperature and conversion of cover type due to clearing of vegetation, 2) siltation and sedimentation due to earthwork, such as excavating and grading activities, 3) disturbance of stream banks and/or substrates resulting from buried cable installation, and 4) the direct placement of fill in surface waters to accommodate road crossings. Indirect impacts to surface waters may result from sedimentation and erosion caused by construction activities (e.g., removal of vegetation and soil disturbance).

Clearing of trees and other woody vegetation around stream and riverbanks could increase the temperature of those waters. Water temperature governs most of the physical, chemical, and biological processes that occur in streams. Temperature determines the types of organisms that can live in streams and rivers. All aquatic organisms, including zooplankton, phytoplankton, fish, and insects have a range of temperatures they can live within. Above or below that range, the organisms can become stressed and the number of individuals of the species will decrease (USGS, 2016). Temperature in streams also influences the water chemistry, including dissolved oxygen levels and chemical reactions. Twenty-three stream segments occur within the limits of clearing for the Facility. Vegetation clearing along streambanks will be minimized to the extent practicable to minimizes changes in cover that could result in localized increases in stream temperature. Forest clearing along streams will be limited to short segments and will not occur along the length of the entire stream. Therefore, water temperature impacts are anticipated to be localized and minor.

Potential temporary and permanent impacts to streams and open waters that could result from Facility construction and operation have been calculated using disturbance assumptions presented in Exhibit 22(b). The Facility is anticipated to result in up to approximately 1,008 linear feet of temporary disturbance to perennial, ephemeral, and intermittent streams and up to approximately 1,994 linear feet of permanent disturbance to perennial, intermittent, and ephemeral streams. As stated above, impacts have already been minimized substantially due to changes in the Facility layout. Table 23-3 provides a summary of the potential impacts to streams, including type of impact and measures that will be taken to avoid and minimize impact at each stream crossing.

Table 23-3. Impacts to Streams

Stream Delineation ID[1]	NYSDEC Classification (if applicable)	Temporary Stream Impact (sq ft)	Temporary Stream Impact (Linear feet)	Permanent Stream Impact (sq ft)	Permanent Stream Impact (linear feet)	Type of Impact	Crossing/Avoidance Methodology
M	C	0	0	0	0	Collection Line	HDD
O	--	2,011	505	--	--	Collection Line	Trench
R Oquaga Creek Tributar	C(T)	618	91	465	62	Access Road	--
S	--	304	60	51	12	Access Road	--
T	--	17	3	367	55	Access Road/ Collection Line	--
X	--	667	83	354	43	Access Road/ Collection Line	--
AA Bone Creek	C	831	133	523	55	Access Road	--
GG Marsh Creek Tributary	C(T)	13	3	517	108	Access Road/ Collection Line	--
II	--	121	27	--	--	Collection Line	Trench
JJ Fly Creek	B(T)	829	224	--	--	Collection Line	Trench
PP	--	61	42	--	--	Collection Line	Trench
TT	--	559	55	--	--	Collection Line	Trench
DDD	--	228	45	5,077	856	Access Road	--
LLL Marsh Creek Tributary	C(T)	189	48	--	--	Collection Line	Trench
MMM	--	101	31	--	--	Collection Line	Trench
OOO Marsh Creek Tributary	C(T)	371	40	--	--	Collection Line	Trench
4C Oquaga Creek Tributary	C(T)	140	64	--	--	Collection Line	Trench

Stream Delineation ID[1]	NYSDEC Classification (if applicable)	Temporary Stream Impact (sq ft)	Temporary Stream Impact (Linear feet)	Permanent Stream Impact (sq ft)	Permanent Stream Impact (linear feet)	Type of Impact	Crossing/Avoidance Methodology
4D Oquaga Creek Tributary	C(T)	480	141	175	39	Access Road	--
4E Marsh Creek	C(T)	0	0	--	--	Collection Line	HDD
5B	--			482	188	POI Substation	--
5E Tarbell Brook	C(T)	111	18	--	--	Collection Line	Trench
6A	--	77	40	--	--	POI Substation	Trench
Total Impact	--	7,728	1,653	8,011	1,418	--	--

[1]Delineation ID assigned by EDR.

As indicated above in Table 23-3, it is anticipated that there will be a total of 9 stream crossings of NYSDEC-protected streams, which are regulated under Article 15 of the New York Environmental Conservation Law. Of these 9 crossings, 6 are associated with buried interconnection lines, while the remaining 3 are associated with access road construction. These crossings are of Fly Creek tributaries, Marsh Creek and tributaries, Upper Oquaga Creek and tributaries and Tarbell Brook. Stream crossings will be conducted in accordance with all applicable laws and regulations. BMPs and other guidelines for Article 15 stream crossings will be developed in consultation with the NYSDEC and NYSDPS. See Section (b)(5) below for further discussion of avoidance, minimization, and mitigation of impacts to surface waters.

There will be no permanent impacts to wetlands containing open waters resulting from Facility construction and operation. Surface water sources most vulnerable to sedimentation are those with steep uplands adjacent to work areas. The Facility has been designed to avoid steep slopes to the maximum extent practicable, but some construction in areas of steep slopes is unavoidable. Construction of the Facility could result in some siltation and sedimentation in streams adjacent to steep uplands. However, these impacts are anticipated to be minor because the Applicant will take measures to avoid and minimize siltation, as described in Section (b)(5) below, including developing and implementing a SWPPP, as described in Section (c)(1) below. In addition, the use of HDD will minimize impacts to stream reaches, and typical BMPs will be implemented (e.g., appropriate drilling setbacks from surface waters, use of erosion and sediment control measures, etc.). Final specifications associated with HDD installation will be prepared by the BOP contractor in accordance with all relevant environmental permitting conditions. Anticipated locations of HDD in relation to surface water resources are identified in Figure 23-2 and the Wetland and Stream Impact Drawings (Appendix WW).

Facility construction or operation is not anticipated to impact drinking water. The measures that the Applicant will take to avoid, minimize, and mitigate impacts to surface waters, described below in Section (b)(5), will ensure that drinking water sourced at surface intake sites is not degraded by Facility construction or operation. As previously noted, the Applicant has also drafted a Preliminary SPCC Plan to minimize the potential for unintended releases of petroleum and other hazardous chemicals during Facility construction and operation (Appendix YY). Proper implementation of the SPCC Plan will avoid, minimize, and mitigate the potential for contamination of both surface water and groundwater, thereby protecting drinking water supplies.

No dredging is proposed as part of this Facility. Therefore, this application does not identify precautions taken to avoid or minimize the need for dredging.

(5) Measures to Avoid or Mitigate Surface Water Impacts

Direct impacts to surface waters have been minimized by designing the Facility layout to avoid surface water impacts where practicable and implementing other measures such as utilizing existing or narrow crossing locations whenever possible. Upgrading existing crossings that are under-maintained/undersized will have a long-term beneficial effect on water quality, as it will help to keep farm equipment or other vehicles out of surface waters. Special crossing techniques, equipment restrictions, herbicide use restrictions, and erosion and sedimentation control measures will be utilized to reduce adverse impacts to water quality, surface water hydrology, and aquatic organisms. In addition, clearing of vegetation along stream banks will be kept to a minimum.

As previously indicated, of the 9 crossings of NYSDEC-protected streams, 6 are associated with buried interconnection lines, while the remaining 3 are associated with access roads. The buried interconnect crossing of Marsh Creek will be installed through HDD, which will avoid permanent impacts to this stream and the adjacent wetland. Access roads will impact 235 linear feet of Class C(T) streams, and 224 feet of a Class B stream. Impacts to these streams will be minimized by the use of trenchless technologies (i.e., horizontal directional drill) if feasible. See the Wetland and Stream Impact Drawings (Appendix WW) for a detailed depiction of each crossing for identification of HDD crossing locations.

The Applicant will provide final engineering plans to the NYSDEC and NYSDPS regarding each proposed crossing prior to the Siting Board's determination of whether to issue an Article 10 Certificate to the Facility. Stream crossing methods will take into consideration and meet all NYSDEC stream crossing guidelines. Any work prohibition dates associated with crossings of State-protected streams under ECL Article 15 will be established in consultation with

the NYSDEC. Where crossings of surface waters are required, BMPs will be utilized, as required by the NYSDEC. Specific minimization measures for protecting surface water resources will include the following:

- *No Equipment Access Areas:* Except where crossed by permitted access roads or through non-jurisdictional use of temporary matting, streams will be designated "No Equipment Access," thus prohibiting the use of motorized equipment in these areas.
- *Restricted Activities Area:* A buffer zone of 100 feet, referred to as "Restricted Activities Area," will be established where Facility construction traverses streams, wetlands and other bodies of water. Restrictions will include:
    - No deposition of slash within or adjacent to a waterbody;
    - No accumulation of construction debris within the area;
    - Herbicide restrictions within 100 feet of a stream or wetland (or as required per manufacturer's instructions);
    - No degradation of stream banks;
    - No equipment washing or refueling within the area;
    - No storage of any petroleum or chemical material; and
    - No disposal of excess concrete or concrete wash water.
- *Sediment and Siltation Control*: A soil erosion and sedimentation control plan will be developed and implemented as part of the SPDES General Permit for the Stormwater Discharges from Construction Activity. Silt fences, hay bales, and temporary siltation basins will be installed and maintained throughout Facility construction. Exposed soil will be seeded and/or mulched to ensure that erosion and siltation is kept to a minimum along wetland boundaries. Specific control measures will be identified in the Facility's 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. See Section (c) below for a detailed discussion of stormwater issues.

The Facility is not expected to have adverse impacts on public or private water wells. To ensure construction and operation of the Facility does not adversely affect nearby groundwater wells, the Applicant will conduct pre- and post-construction baseline testing of water wells located within 100 feet of all Facility components to determine any surficial impacts to groundwater drinking wells. With respect to Facility turbines, in particular, pre- and post-construction baseline testing of water wells located within approximately 1,000 feet of Facility turbines will be conducted to determine any surficial impacts to groundwater drinking wells. In addition, if a resident feels that their

well water has been adversely impacted by Facility construction or operation, they may file a formal complaint, which will be responded to by the Applicant through the Complaint Resolution Plan (see Appendix R).

If shallow groundwater is encountered during construction activities such as foundation excavation, dewatering will likely occur. If dewatering is required, a temporary pit (or sediment trap) will be constructed in upland areas (i.e., not within streams or wetlands) to trap and filter water prior to discharging it to a stable discharge area. Dewatering will involve pumping accumulated water to a device (e.g., sediment filter bag, silt fence barrier), decreasing discharge velocity, and trapping suspended sediment prior to out-letting the water to undisturbed ground. The stable outlet must be capable of filtering further sediment and withstanding the velocity of the discharge water to prevent erosion.

As described above in Section (b)(2), the Upper Delaware and the Upper Susquehanna drainage basins are both susceptible to frequent and severe flooding. Between 1954 and 2013, there were 10 presidential disaster declarations for flood events in Broome County, and 12 in adjacent Delaware County (NYS DHSES, 2014). However, only the most extreme flooding results in disaster declaration, and the area suffers even more flooding than those numbers suggest. For example, the Village of Windsor has exceeded flood stage ten times just since 1993 (NOAA, 2016). Major flood events in the region have caused drowning deaths and recurring, extensive damage to private property, utilities, and public infrastructure in the two villages closest to the Facility Site, Windsor and Deposit (Tetra Tech, 2013a, 2013b; NOAA, 2016). Flood events in August and September of 2004 caused over $52,000 and $180,000, respectively, of roadway damage in the Town of Sanford (Tetra Tech, 2013b).

A floodplain is flat land adjacent to a stream or river that experiences occasional or periodic flooding. Information on floodplains in the vicinity of the Facility Site was obtained from the Federal Emergency Management Agency (FEMA) and Broome County GIS and Mapping Services. Areas designated as 100-year floodplains are present within the Facility Site along the entire Upper Oquaga Creek, as well as a tiny portion of Fly Creek at the very edge of the Facility Site. To minimize risks associated with flooding, the Applicant has developed a flood mitigation strategy that focuses on two main components: (1) Facility siting/design and (2) mitigation/minimization measures to be deployed during Facility construction. Each of these components are discussed below.

The Facility layout has been designed to avoid floodplains to the extent practicable. There are no turbines, access roads, met towers, substations, laydown areas, or O&M facilities located within the designated 100-year floodplains. The only Facility component that will cross a floodplain is an approximately 1,350-foot long section of buried electrical collection line running between turbine T24 and T25. In addition, the access road layout has been developed with deliberate intent to avoid permanent water crossings wherever feasible. Where access roads must

cross streams (e.g., there is no other practicable way to access turbine sites), the crossings have been designed to accommodate high flows levels.

During construction, the Applicant will deploy various preventative measures to minimize impacts associated with potential flooding events. For example, if a significant storm event is predicted during installation of this section of collection line, construction equipment will be removed from the floodplain prior to the storm, if feasible. In addition, to minimize sedimentation risks during construction, erosion controls will be reinforced in advance of significant storm events, when feasible. For more information about the erosion and sediment control practices to be implemented during construction, see Section (c) below and the Preliminary SWPPP, attached hereto as Appendix KK. The Facility's final SWPPP will include comprehensive on-site stormwater management controls designed to handle 1, 2, 10, 25, 50 and 100-year storm events in accordance with SPDES permit requirements. Through the use of controls such as vegetation buffers and infiltration basins, the Facility will not adversely impact the quality or quantity of stormwater runoff from the Facility Site.

(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 2015 and effective on January 29, 2015 (as modified July 14, 2015 and November 23, 2016) (see http://www.dec.ny.gov/docs/water_pdf/gp015002.pdf). This authorization is subject to review by NYSDEC and is independent of the Article 10 process. A Preliminary SWPPP required by the General Permit is attached as Appendix KK. The Preliminary SWPPP includes a discussion of pre-construction requirements, which include ensuring that there is at least one person on site daily to inspect the site's erosion and sediment control practices when soil disturbing activities are being performed. The Preliminary SWPPP provides: an introduction and overview of the proposed project, and the purpose and need and appropriate contents of a complete SWPPP; a description of anticipated stormwater management practices, including temporary and permanent erosion and sediment control measures (vegetative and structural); anticipated construction activities, including preliminary construction phasing and disturbance limits; waste management and spill control measures; proposed site inspection and maintenance measures, including construction site inspections and recordkeeping; and conditions that will allow for the termination of permit coverage.

(2) Post-Construction Erosion and Sediment Control Practices

As described above, the Preliminary SWPPP and associated erosion and sedimentation control plan will address the anticipated stormwater management practices that will be used to reduce the rate and volume of stormwater runoff after Facility construction has been completed. The Article 10 Application will include a description of the green infrastructure practices (e.g., vegetative filters) for stormwater quality to be implemented at the Facility Site, as described in the Preliminary SWPPP. The Preliminary 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 permanent, post-construction erosion and sediment control measures (vegetative and structural), along with the anticipated stormwater management practices that will be used to reduce the rate and volume of stormwater runoff after construction has been completed.

Following Certification of the Facility, it is anticipated that hydrologic models (e.g., Hydraflow Hydrographs Extension for AutoCAD Civil 3D software) based upon measurable watershed characteristics will be utilized by professional engineers to calculate stormwater discharges. Stormwater runoff rates discharged from the Facility Site under existing conditions (pre-construction) will provide the basis for evaluation and comparison to proposed conditions (post-construction). Design points of interest will be established where stormwater runoff exits the Site (e.g., where proposed Facility access roads intersect with existing public roads/roadside ditches). These design points will provide fixed locations at which existing and proposed stormwater quantities can be compared. The areas draining to these design points will be delineated using land survey information and proposed grading plans, and a hydrologic analysis of each of the drainage areas will be conducted to model their discharges (typically for the 1, 2, 10, 25, 50 and 100-year storm events). Because final engineering will not be completed until the Facility has been certified, and because the Applicant will ultimately seek coverage under the SPDES General Permit independent of the Article 10 process, a final SWPPP cannot be included in the Article 10 Application. Following Certification of the Facility, the Applicant will conduct the detailed engineering necessary to prepare a final SWPPP, in accordance with the SPDES General Permit.

(d) Chemical and Petroleum Bulk Storage

(1) Spill Prevention and Control Measures

To prevent unintended releases of petroleum and other hazardous chemicals, a Preliminary SPCC Plan has been prepared that outlines preventative measures and response procedures in the unlikely event of a release. 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.

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. Chemicals potentially found on-site during construction and operation of the Facility will likely include antifreeze, paints/solvents, lubricants and other chemicals 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). Any spills of these material will be reported internally, and a decision will be made whether the incident must be reported to federal, state or local authorities.

(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 Storage Regulations

No local laws governing the storage of chemicals (i.e., hazardous substances) or petroleum have been identified.

(e) Aquatic Species and Invasive Species

(1) Impact to Biological Aquatic Resources

With respect to potential impacts to wetlands, see Exhibit 22. With respect to impacts to surface waters, see Table 23-3, above. Generally speaking, impacts to surface waters result in impacts to biological aquatic resources that require aquatic habitats. However, only a small fraction of the available aquatic habitat that exists within the Facility Site will be impacted by Facility construction or operation.

A list of threatened, endangered, and otherwise protected species that could occur within the Facility Site is provided in Exhibit 22(f)(6), which includes two species of mussels that are listed as threatened in New York State.

The green floater and brook floater mussel have historically been recorded in the vicinity of the Facility. However, as discussed in Exhibit 22(f)(6), no suitable habitat for these species will be disturbed by construction or operation of the Facility. Sedimentation and changes in water hydrology are the main threats to these species, and these impacts will be minimized through the development of a SWPPP for the Facility. Therefore, no impacts to threatened or endangered aquatic species are anticipated to result from Facility construction or operation.

None of the species included in the Common Aquatic Invasive Species of New York (NYSDEC, 2016) list were observed during on-site delineations or field investigations. However, a comprehensive inventory of aquatic invasive species was not conducted. Most of the aquatic habitat within the Facility Site is in the upper portion of the watershed and does not consist of water bodies large enough to support these species. Furthermore, most aquatic invasive species are introduced to lakes, then travel to streams and rivers. Aquatic invasive species are typically spread by ships, boats, barges, aquaculture, recreation, and connected waterways. These activities are infrequent in small headwater streams, thereby limiting the potential for the introduction of aquatic invasive species to surface waters on the Facility Site. 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. For additional information on aquatic invasive species see Section (b)(2) above and Exhibit 22. As no aquatic invasive species were identified within the Facility, maps and shapefiles of the locations of aquatic invasive species are not included in this Application.

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

Measures to avoid and mitigate impacts to surface waters during construction are addressed above in Section (b)(5). These measures protect aquatic species by protecting the water quality in the habitats where they occur. They also offer direct protection through ensuring avoidance of protected streams during the times of the year when fish are likely to be migrating and spawning.

Surface water impacts during Facility operation will be limited to those associated with permanent changes attributable to installation of Facility components. Impacts to surface waters are discussed in more detail in Section (b)(4). There will be some permanent loss of aquatic habitat resulting from placement of Facility components in surface waters. However, this loss of habitat has been largely avoided through careful siting and design. The majority of the Facility will be located high in the watershed, and Facility components have been sited away from larger streams and rivers that could potentially support threatened aquatic species.

With respect to invasive species, smaller waterbodies, like the headwater streams found throughout the Facility Site, as less likely to host aquatic invasive species than larger waterbodies. Since the common pathways for invasive species introduction (commercial shipping vessels, recreational watercraft, aquaria release, and bait) will not be utilized during construction or operation of the Facility, the risk of spreading invasive species is low. Due to the low risk of spreading invasive species, there are no significant impacts to aquatic resources anticipated from invasive species. 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 assure compliance with applicable water quality standards (6 NYCRR Part 703).

(f) Cooling Water

The proposed Facility does not involve the use of cooling water, and as such, the requirements of this section are not applicable to this Facility. Therefore, information related to cooling water systems, intake, and discharge is not included in this application.

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