

Table 1-1 (Sheet 1 of 7)
Summary of Potential Impacts and Proposed Mitigation

Aspect of Affected Environment	Potential Impact	Proposed Mitigation
Physiography, Geology, and Soils	Erosion and sedimentation during construction.	A Stormwater Pollution Prevention Plan (SWPPP) would be developed and implemented for the construction period.
	Construction traffic could also create airborne dust.	A Dust Control Plan would be developed and implemented.
	The proposed Project, once built, could potentially cause a minor alteration to existing drainage patterns.	A SWPPP would be developed and implemented for the operational period.
	Impacts to agricultural soils during construction and operation	SLW would follow NYS Department of Agriculture and Markets Guidelines for Siting and Constructing Wind Farms.
	Shallow bedrock and other geologic challenges (e.g., karst and problematic soils) could be encountered during construction.	Geotechnical studies would be conducted prior to final engineering design.
Water Resources	Release of hazardous substances associated with construction or operation.	A Spill Prevention, Containment, and Countermeasure Plan (SPCCP) would be developed and implemented.
	Soil erosion during construction could impact ground water.	A SWPPP would be developed and implemented for the construction period.
Streams, Rivers, and Lakes	Potential temporary impacts during construction could result from clearing and grading near stream banks.	Clearing near surface waters would be kept to a minimum to prevent significant disturbance to the habitats associated with surface waters; A SWPPP would be developed and implemented for the construction period.
	Overhead transmission line would cross surface waterbodies.	Crossings of the Chaumont River and other streams and tributaries would be accomplished by overhead spanning. It is likely that poles can be located greater than 50 feet from both sides of the Chaumont River and other streams and tributaries. It is possible to string cable between these utility poles in a manner that would not require construction equipment to drive through shallow surface waterbodies.
Wetlands	Desktop data indicates that there could be minor temporary impact associated with the construction of the overhead transmission line.	To minimize the impacts to wetlands, no Project infrastructure would be placed in wetlands, unless absolutely necessary. Qualified wetland biologists would field verify the absence of wetlands in the Project footprint, using delineation methods prescribed by the Army Corps of Engineers. Where impacts could occur, if practicable, Project components would be moved to avoid or minimize impacts to wetlands. SLW would obtain Army Corps of Engineers permit authorization for any unavoidable disturbances to wetlands and mitigate as required by any permit conditions.

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Aspect of Affected Environment	Potential Impact	Proposed Mitigation
Vegetation	Clearing for construction may temporarily impact abundant vegetation communities.	Clearing of vegetation would be minimized in areas that are ecologically sensitive, such as forested uplands, forested wetlands and the banks of creeks crossed by the overhead transmission line.
Non-bat Mammals	Minor temporary impacts to wildlife habitat associated with construction of the Project would be limited to clearing of forested habitat along the overhead transmission line right-of-way and within small portions of the laydown area for 16 turbines.	The Project was designed to avoid significant impact to wildlife. Project infrastructure is sited away from critical habitat and forested clearing would be minimized or avoided to the extent possible.
Bats	Bat collision with wind turbines is a potential impact.	Although impacts to bats are not anticipated to be greater than at other similar wind projects, SLW may develop a bat fatality monitoring program for post-construction implementation if pre-construction studies suggest a possibility of bat collisions.
Migrating Birds	During operation of the Project, there is the potential that migratory birds could collide with wind turbines.	SLW has selected the proposed Project layout to minimize impacts to migrating birds. Should location of particular Project facilities present a potential high risk for collision impacts, SLW will explore alternative configurations to minimize risk at these locations.
Breeding Birds	There may be a minor, temporary impact during construction due to the clearing and construction work in open nesting and foraging habitat. A much smaller footprint of such habitat, which is abundant in the Project area, may be displaced by Project infrastructure.	The proposed Project will encourage continued farming activities in the area by supplementing area farmers' income. This will also result in the maintenance of open grassland habitats since the regional climate favors traditional late season harvest which is beneficial for grassland birds.
	Approximately 82 acres of second growth deciduous forest would be cleared for Project components, which could result in temporary and permanent minor habitat loss for some forest-nesting avian species.	Mitigation is not necessary because conversion of forest habitat in the Project area will benefit birds that nest and forage in open habitats which are relatively more important in the region.
	There is a low potential risk that local breeding birds could collide with the wind turbines.	SLW is studying potential avian impact at the Project site. The Project site is anticipated to pose a low risk to breeding birds.
Threatened and Endangered Species	Individual bats or bat colonies for the Indiana bat and the small-footed myotis have been documented in Jefferson County, within approximately 15 to 40 miles of the proposed Project. No impacts are anticipated.	SLW is studying potential bat impact at the Project site. SLW has chosen to move forward with site development, in part because the Project site is anticipated to pose a low risk to threatened or endangered species. Although impacts to bats are not anticipated, SLW may develop a bat fatality monitoring program for implementation once construction is complete if pre-construction studies suggest possible impact.

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Summary of Potential Impacts and Proposed Mitigation

Aspect of Affected Environment	Potential Impact	Proposed Mitigation
	There is a slight risk of collision for migrating raptors.	SLW is studying potential avian impact at the Project site. The Project site is anticipated to pose a low risk to threatened or endangered species.
	There is a slight risk of collision for breeding birds.	To mitigate temporary impacts to breeding listed species, pre-construction surveys would be conducted in Project work areas to avoid impacts to nesting individuals. In areas where nesting individuals are encountered construction will be rescheduled to minimize disturbance to the extent possible. In addition clearing activities would occur prior to the breeding season where appropriate..
	Suitable habitat for Michigan lily and autumnal water-starwort species may temporarily be disturbed during construction activities.	SLW will develop a management plan to address the handling of these plants during construction if impacts are unavoidable.
Transportation	The potential need for the Project to improve transportation infrastructure to accommodate construction needs or repair damage to roads caused by construction traffic.	SLW would obtain all necessary permits from NYSDOT and local highway department(s) in order to make necessary road improvements and to operate oversized vehicles on the roads. Construction related wear and tear to County and local roads would be discussed with the entities that manage the transportation system and an appropriate strategy for road restoration would be developed.
	The need for the Project to temporarily relocate overhead lines and other facilities to accommodate oversize vehicles.	A Transportation and Traffic Plan would be created for the Project and would address this issue.
	Traffic delays and road closures due to transportation improvements or construction traffic.	SLW would assess work areas two weeks ahead of construction and would provide schools (during the school-year), police, fire, and emergency service agencies with advance notice of lane or road closures.

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Summary of Potential Impacts and Proposed Mitigation

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	Increased traffic generally over local roads during construction.	A Transportation and Traffic Plan would be created for the Project and would address this issue. The proposed Project transportation routes have been selected to minimize impacts to roads and surrounding communities. The number of roads used for material and equipment transportation has been limited to the minimum needed for construction. Aside from the oversized vehicles delivering turbine and tower components, construction vehicles would be similar in nature to vehicles currently traveling over the road network and therefore would likely not require special mitigation measures. Construction equipment and the personal vehicles of construction workers would not be parked along public roadways, but rather in designated parking areas, so as to preserve safety along local roadways (unless exceptions are requested and granted by the appropriate authorities). In consultation with appropriate local officials, a Project speed limit would be established.
	Project construction traffic may create fugitive dust.	A Dust Control Plan would be developed and implemented for the construction period.
Transportation - Cumulative	If the SLW Project and BP projects are built during the same construction season, it is possible that similar construction transportation routes may be chosen.	If construction is concurrent, coordination between the projects may be required, to make sure that responsibilities for road impacts and remediation are properly recognized and assigned. To the extent there is any overlap in project construction schedules, SLW would coordinate transportation activity with the other projects and would seek to modify its traffic management plan, if necessary, in an effort to mitigate cumulative effects on local transportation and coordinate road construction or improvements.
Land Use and Zoning	The Towns of Cape Vincent and Lyme have no specific requirements for development of wind projects in their jurisdictions, but have general zoning and land use regulations established for development.	The proposed Project is compliant with local zoning and land use regulations.
	Construction of the Project would result in the temporary disturbance of approximately 191 acres of agricultural land and permanent conversion of 98 acres of agricultural land to wind turbine structures, a substation and pervious access roads.	SLW would follow NYS Department of Agriculture and Markets Guidelines for Agricultural Mitigation for Wind Power Projects.

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Summary of Potential Impacts and Proposed Mitigation

Aspect of Affected Environment	Potential Impact	Proposed Mitigation
Utilities and Community Services	The Project would result in minor short- and long-term increases in energy usage associated with construction and operation of the Project.	Mitigation is not necessary as neither of these represents significant impacts on energy resources.
	Long-term energy use would increase slightly as a result of facility maintenance.	Mitigation is not necessary as this impact would be minor because the amount of required electricity and fuel is small, and local fuel suppliers and utilities have sufficient capacity available to serve the Project's needs, and the Project will augment the local electricity supply.
	There is a remote possibility that some overhead electrical distribution lines would have to be temporarily relocated to accommodate crane routes.	SLW would collaborate with the utility owners to reduce impacts to their facilities to the maximum extent practicable.
	During construction, large vehicles and temporary roads closures could block emergency vehicle access to area farms and homes.	SLW would assess work areas two weeks ahead of construction and would provide schools (during the school-year), police, fire, and emergency service agencies with advance notice of lane or road closures. SLW would issue press releases to local newspapers and radio stations regarding lane or road closures.
Cultural Resources	Construction and operation of the Project could affect archeological resources that are potentially eligible to the NRHP.	The proposed Project layout would be modified, if necessary, to avoid impact to historic properties to the greatest extent practicable. If NRHP-eligible sites are identified, and if the Project design cannot be adjusted so that the sites may be avoided, it may be necessary to develop an MOA which would outline steps to be taken to mitigate adverse Project effects. Project construction would begin only following successful implementation of all agreed-upon mitigation measures.
	Studies are being performed to determine whether the Project might be visible from historic structures listed in, eligible for, or recommended as potentially eligible for the National Register of Historic Places. Assessments would be made to determine if the Project may result in adverse effects to potentially significant structures located within the architecture APE. Visual effects that may result in a change to the setting and/or character of a historic property may be assessed as adverse.	If it is determined that the Project would result in adverse effects, SLW would consider whether minor redesign is feasible to avoid adverse effects. If avoidance of effects is not possible, SLW would work with the Towns of Cape Vincent and Lyme, SHPO, the US Army Corps of Engineers, and interested parties to develop an MOA that would stipulate appropriate activities that would be performed to mitigate effects.

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Visual Resources	The Project would be visible from a variety of locations within 5 miles of the proposed Project area.	<p>Although the visual mitigation options are limited given the nature of the Project and its siting criteria, the following mitigation measures are proposed for the Project:</p> <ul style="list-style-type: none"> ▪ Turbines would be painted white or light grey with non-specular material and not be used for commercial advertising. ▪ Turbines would not be allowed to rust. ▪ To the extent practicable, the electrical interconnect between turbines would be installed underground. Overhead electrical transmission from the turbines to the 115 kV transmission line, to the greatest extent practicable, would be sited away from where such infrastructure can be viewed from roads. The developer would also minimize clearing necessary for the installation of the electrical interconnect. ▪ The proposed turbines would maintain appropriate buffers from property lines nearby residences, roads and other nearby visually sensitive areas. ▪ Perimeter plantings around the substation may be planned to reduce visual impact. Appropriate plantings will be assessed after construction.
	Some residences located within 10 turbine diameters would experience some degree of shadow flicker in the Town of Cape Vincent.	<ul style="list-style-type: none"> ▪ The proposed turbines would maintain appropriate buffers to minimize visual impact and extended shadow flicker. ▪ Settlement agreements could be used to purchase landscape screening (trees, shrubs), or exclusionary treatments such as curtains or blinds.
	The United States Department of Transportation Federal Aviation Administration (FAA) requires aviation warning lights on the turbines, which could present a potential adverse visual impact from some viewing locations.	Aviation warning lighting would be limited to the minimum required by the FAA. The Project would purchase aviation warning lights that are shielded or otherwise directed so that they are the least visible from the ground. Due to the height of the proposed turbines, the FAA requires red flashing aviation obstruction lighting to be placed atop the nacelle on a to be determined number of turbines to assure safe flight navigation in the vicinity of the Project.

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Summary of Potential Impacts and Proposed Mitigation**

Aspect of Affected Environment	Potential Impact	Proposed Mitigation
Visual - Cumulative	Construction of the SLW Project and the BP projects in relatively close proximity to one another may have the potential to create cumulative visual impacts. There may be locations where turbines from projects would be visible, either at the same time or in rapid succession while traveling on area road-ways. In most locations within the study area, only small portions of either project would be visible. However, in some open elevated settings, it is possible that large portions of projects would be visible.	The proposed mitigation described above would be employed.
Air Quality	Temporary minor adverse impacts to air quality may result from the operation of construction equipment and vehicles.	A Dust Control Plan would be developed and implemented for the construction period.
Noise	The proposed Project would generate noise during construction.	Adhering to regular construction work hours Mondays through Saturdays, and typically not working on Sundays or after hours. Implementing best management procedures during construction, such as using appropriate mufflers. Notifying adjacent landowners of noise impacts in advance.
	The Project would not have significant noise impacts during operation.	Noise impacts will be avoided by buffers from property lines, residences, roads and other sensitive areas, and by obtaining vendor sound levels produced by the proposed turbines. No mitigation necessary because the Sound Level Study demonstrated that the Project would produce sound levels that are below the significant impacts level and are allowable under applicable regulations.
Telecommunications	It is unlikely that there would be a significant impact to television signal coverage during Project operation.	If Project operation results in any impacts to existing off-air television coverage, SLW would address and resolve each individual problem as necessary. Mitigation actions could include adjusting existing receiving antennas, upgrading the antenna, or providing cable or satellite systems to the affected households.
	It is unlikely that the Project would impact government communications.	Should the NTIA identify any Project-related concerns related to signal blockage following their 30-day review of the Project, SLW would mitigate impacts as required.

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	There is a remote possibility that ice shed from turbines could cause personal or property injury.	The use of buffers from roads and property lines and public control measures would minimize the already low public safety risk of ice shed. All turbines would have automatic braking and shutdown. Ice detectors would be installed at previously determined locations to notify maintenance personnel of icing conditions, which would allow the operator to take the appropriate actions.
Safety and Security	There is a remote possibility that tower collapse or turbine failure could cause personal or property injury.	The use of buffers from roads and property lines and public control measures would minimize the already low public safety risk associated with tower collapse or blade failure. The standard engineering design and protection systems incorporated into modern wind turbines would prevent and minimize problems that could lead to tower collapse or blade failure.
	Wind power facilities have the potential to create stray voltage only if the electrical system is both poorly grounded and located near underground or poorly grounded metal objects.	Stray voltage concerns would be addressed through proper electrical engineering design and installation of all Project electrical components.
	Due to their height, physical dimensions, and complexity, wind turbines may present response difficulties to local emergency responders should a fire occur within or near the structures. Storage and use of diesel fuels, lubricating oils, and hydraulic fluids within the Project boundary also create the potential for fire or medical emergencies.	A Fire Prevention and Control Plan would be developed for the Project to ensure the safety of company employees and local residents, visitors, and their property. Prior to the commencement of construction SLW would present, review and finalize the Fire Prevention and Control Plan in cooperation with local fire departments.
	Due the height and materials used to construct, the wind turbines are susceptible to lightning strikes.	The standard lightning protection system installed within the rotor blades would be used to prevent and minimize problems associated with lightning strikes.
	It is not anticipated that the proposed Project would be a target for any homeland security concerns.	SLW would design all facilities in accordance with guidance and regulations of the Department of Homeland Security.