Two types of impacts may result from wind facility construction on agricultural lands. The first is the permanent loss of productive agricultural land because it would be used for Project facilities such as access roads and turbine foundations. The second potential impact is reduced agricultural productivity of the soils disturbed during construction. Both types of impacts can be minimized or completely avoided with proper planning.

3.5.2.3 Future Land Use

The proposed Project would not interfere with alternative future plans to develop the land to be occupied by the wind energy facility or its ancillary facilities. Minimum buffers from wind turbines place a slight constraint on development that can be co-located on parcels that have wind turbines or are adjacent to wind turbines. However, capturing the wind asset provides an individual benefit to landowners, an economic benefit to the local community, and energy security, as well as environmental and human health benefits to the state. The buffers are not a significant impact on other equally desirable uses. There appears to be no conflict between the proposed Project and future residential developments.

3.5.3 Mitigation Measures

3.5.3.1 Towns of Cape Vincent and Lyme

The proposed Project is compliant with local zoning and land use regulations in Cape Vincent and Lyme.

3.5.3.2 Agricultural Land Use

To minimize impacts to agricultural resources, the Project has been sited and would be built in accordance with guidelines provided by the New York State Department of Agriculture and Markets (Appendix A). The agricultural protection measures provide guidance for siting wind power facilities, constructing access roads, staging and storage areas, vegetation clearing and disposal, excavation and backfilling, turbine erection, and restoration.

3.5.3.3 Future Land Use

Construction and operation of the proposed Project would not have a significant impact on future land uses. Consequently, no mitigation is necessary to address these impacts.

3.6 Utilities and Community Services

The Towns of Cape Vincent and Lyme are served by several community facilities and services including: public utilities, police protection, fire protection and emergency response, health facilities, education facilities, and parks and recreation facilities.

3.6.1 Affected Environment

These community facilities and services are briefly discussed below, and are generally considered adequate for the local population.

3.6.1.1 Public Utilities and Infrastructure

Public Utilities: Public utilities and infrastructure in the Project area include various overhead and underground facilities. Aboveground components include electric distribution and telephone lines along most of the public roads. Communications towers, including television and radio broadcast antennas and cellular phone communications towers also occur in and around the Project area. Underground utilities include sewer and water mains, telephone lines, and cable television lines. These utilities are concentrated in the towns and villages in the vicinity of the Project area.

Electrical services throughout Jefferson County are provided by National Grid, and natural gas is available along the Black River corridor and the southern portion of the I-81 corridor (Yarnall, 2002).

Police Protection: Three (3) police departments are located near the Project area. All emergency calls are dispatched by the Jefferson County 911 center. The New York State Police and Jefferson County Sheriff's Department have police protection jurisdiction in the Project area, and the Cape Vincent Village Police Department patrols within its respective village limits and does not have jurisdiction beyond its municipal boundaries. The County Sheriff's Department provides patrol cars for the Towns of Cape Vincent and Lyme (Jefferson County Sheriff's Department, 2006).

The New York State Police (Troop D) augments the Jefferson County Sheriff's Department and are headquartered in Oneida (New York State Police, 2006). The nearest satellite station is located about 25 miles southeast of the Project area in Watertown. The main police stations for the Project area include:

Cape Vincent Village Police Department
177 North James Street
Cape Vincent, New York 13618
(315) 654-3400

Jefferson County Sheriff's Department
753 Waterman Drive
Watertown, New York 13601
(315) 786-2700

New York State Police, Troop D, Zone 3 Station
25873 State Route 37
Watertown, New York 13601
(315) 782-2112

Fire Protection and Emergency Response: Two (2) fire departments are located near the proposed Project area. The Cape Vincent Volunteer Fire Department provides advanced emergency medical and critical care services, and the Chaumont Fire Department provides basic life support services (New York State Department of Health, 2006a). Other nearby local fire departments may provide additional support if needed and they would be chosen based on proximity and response time. Local fire departments in the Project area include the following:

Cape Vincent Volunteer Fire Department, Inc.
241 East Broadway Street
Cape Vincent, New York 13618
(315) 654-2004

Chaumont Fire Department
11385 New York State 12 East
Chaumont, New York 13622
(315) 649-2410

Health Care Facilities: Three (3) major hospitals are located in Jefferson County. The Samaritan Medical Center in Watertown and River Hospital in Alexandria Bay are both located about 26 miles from the Project area. The Carthage Area Hospital is located about 40 miles from the Project area in Carthage (New York State Department of Health, 2006b). As stated, local hospitals near the Project area include:

Samaritan Medical Center
830 Washington Street
Watertown, New York 13601
(315) 785-4000

River Hospital, Inc.
4 Fuller Street
Alexandria Bay, New York 13607
(315) 482-2511

Carthage Area Hospital
1001 West Street Road
Carthage, New York 13619
(315) 493-1000

Educational Facilities: Two (2) public school districts provide educational services to the Towns of Cape Vincent and Lyme, including associated villages and hamlets. The Project would be located in the Thousand Islands and Lyme Central school districts. The Thousand Islands Central School District total enrollment during the 2004 to 2005 academic school year for grades K through 12 was 1,162 students (New York State Education Department, 2006a). This school district is composed of two elementary schools, one middle school, and one high school. The Cape Vincent Elementary School is located in Cape Vincent and the other three school buildings are located in the Town of Clayton. Located in Chaumont about 10 miles from the Project area, the Lyme Central School District total enrollment during the 2004 to 2005 academic school year for grades K through 12 was 365 students (New York State Education Department, 2006b). No other public or private schools are located in the Project area. The school district offices are located as follows:

Thousand Islands Central School District, District Office
8481 High Street
Clayton, New York 13624
(315) 686-5594

Lyme Central School District
11868 Academy Street
Chaumont, New York 13622
(315) 649-2417

Parks and Recreation: The Project area and vicinity includes several parks and recreational facilities. These areas include two state parks near the water, four other points, two wildlife management areas (WMAs), and one fish hatchery that is managed by three groups. These parks and recreational facilities offer many recreational opportunities. Burnham Point and Cedar Point

state parks are located near the Project area (New York State Office of Parks, Recreation, and Historic Preservation, 2006). These parks accommodate activities such as boating, hunting, picnicking, camping, fishing, and swimming.

Other visitor areas near the Project area include Beadle Point, Tibbetts Point and Lighthouse, Wilson Point, and Dablon Point. The Tibbetts Point Lighthouse is located at the entrance from Lake Ontario into the St. Lawrence River, and is still actively maintained by the U.S. Coast Guard. After the lighthouse became fully automated in 1976, the light-keeper's room was converted into a hostel; the Lighthouse Museum is located adjacent to the hostel.

Two WMAs are located several miles from the Project area and include: French Creek WMA and Ashland Flats WMA. In addition, the historic Cape Vincent Fish Hatchery is located near the Project area. The State fish hatchery, formerly a Bureau of Fisheries building, was built in 1856, but is no longer managed by the government. Today, there is a program between the State, the Lake Ontario Fisheries Coalition, and the Village of Cape Vincent to raise Walleye in 13 of the 24 fish ponds in the Village of Cape Vincent that have been idle for over 30 years. Six ponds were opened in 2005, one additional pond was opened in 2006, and one additional each year for a total of 13 ponds. Each pond has the potential of raising 30,000 fingerlings each spring to be released (Village of Cape Vincent, 2005).

The New York State Seaway Trail is also a State designated recreational resource in the vicinity of the Project area. The Seaway Trail is an approximate 454 mile scenic route consisting of locals roads that parallel Lake Erie, the Niagara River, Lake Ontario, and the St. Lawrence River. The Seaway Trail has been selected as one of "America's Byways" by the United States Department of Transportation.

3.6.2 Potential Impacts

The Project is not anticipated to result in significant adverse effects on community facilities or services within the Project area, including utilities, emergency services, education facilities, and other community services.

3.6.2.1 Public Utilities and Infrastructure

Public Utilities: The Project would result in short- and long-term increases in energy usage associated with construction and operation of the Project. Short-term impacts during construction of the Project would be limited to minor increases in the demand for fossil fuels and petroleum products necessary for the operation and maintenance of construction equipment, machinery, and vehicles. Energy use would increase as a result of construction personnel traveling to and from

the site. However, neither of these represents significant impacts on energy resources. The Project would not result in significant increases in the demand for utilities such as telephone, water, and sanitary sewer needs. Utilities would be required during construction for the operation of the staging areas (e.g., job trailers).

There is a slight possibility that some overhead electrical distribution lines would have to be temporarily relocated to accommodate crane routes during construction. SLW would collaborate with utility owners to reduce impacts to their facilities to the maximum extent practicable. Impacts to existing utility distribution facilities are not anticipated as a result of Project operation and maintenance.

The Project would not result in significant adverse long-term impacts to local utilities and energy resources. Long-term energy use would increase slightly as a result of facility maintenance and operation personnel traveling to and from the site. However, these impacts 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. In addition, the Project will inject new power into the regional grid at the Lyme Substation increasing the local electricity supply and system reliability. As a result, no other improvements to the existing energy supply system would be necessary beyond any system upgrades identified by the NIMO [or National Grid] Facility Study to interconnect the Project transmission line to the Lyme Substation.

Emergency Services: The Project would not have significant adverse impacts on the demand for emergency services. Existing services (e.g., police, fire, ambulance, and health care) have the personnel and equipment necessary to respond to emergencies that could occur during both construction and operation of the Project. However, certain Project-related activities could affect the ability of emergency service providers to perform their duties. For instance, during construction, large vehicles and temporary road closures could block emergency vehicle access to area farms and homes. This is not anticipated to be a significant problem due to the small number of residents within the Project area, the general availability of alternate access routes, and correspondence and coordination that would occur between construction managers and local police departments. The Project also could experience vandalism and/or trespass problems that would require involvement of local police. Based on experience with other wind power projects in New York, this is not anticipated to be a significant impact.

The wind turbines themselves also pose a slight risk related to falling ice that may accumulate on rotor blades during the winter. Although ice can fall off the turbine blades under certain conditions during the winter, the maximum distance ice has been observed to fall from wind

turbines is less than 400 feet (Morgan *et al.*, 1998). A more typical scenario would involve any accumulated ice falling straight down and landing around the tower base. This is consistent with the findings of Morgan *et al.* (1998) and with anecdotal reports from other operating wind projects in the northeastern region of the country.

Educational Facilities: During construction, the Project would not adversely impact the local school districts. Temporary construction workers would not create significant demand for school district services or facilities because they would stay only for the duration of construction, which would be approximately 7 to 10 months. These workers typically would not relocate their families to the area for this short duration. Transportation planning for construction would take into account school bus routes and schedules.

During operation, the Project is not anticipated to result in a significant increase in the demand on educational facilities. The operating Project would employ one to three full-time employees. The existing educational facilities have sufficient capacity to accommodate this small number of school children in the area.

The Project could have a positive economic impact on the school districts. In New York, a portion of the funds from the Payment in Lieu of Taxes (PILOT) that SLW would negotiate in lieu of taxes is typically dedicated to the school districts. In other New York communities that host wind projects, PILOT funds to school districts have significantly increased the districts ability to pay down debt, advance capital improvements, and otherwise improve the educational experience for local students.

Park and Recreation Facilities: Other community services and facilities, such as libraries and park and recreation facilities would not be adversely affected by construction or operation of the Project. Some construction workers may stay in nearby campgrounds for the construction-duration of the Project, but this number is not significant. Additional municipal and county revenue generated by the Project would help maintain and possibly expand these services and facilities.

3.6.3 Mitigation Measures

The Project would have a beneficial impact on public utilities and infrastructure by providing clean renewable energy that can be used by the people of Jefferson County and New York State. In addition, this would advance the governor's goal of having 25 percent of the State's power provided by renewable sources by 2013 (American Wind Energy Association, 2006a, b, c, d).

Public Utilities: To protect local utilities and utility services, including aboveground electrical lines and/or poles, and buried natural gas lines, SLW would meet with the corresponding utility entities to review the Project components, Project construction schedule, identify crossing methodologies, and develop any relocation plans that may be required. Additionally, prior to construction, buried utilities would be identified by the contractor using Protection of Underground Facility procedures (16 NYCRR Part 753) and in accordance with the Dig Safely New York Program.

Emergency Services: Construction and operation of the proposed Project would not have a significant impact on most emergency services, such as police, ambulance, and health care facilities. To mitigate concerns of the local fire departments regarding inexperience with the components of the new wind facility, during construction and operation of the wind power facility, SLW would maintain appropriate level of preparedness and equipment for emergency rescue operations involving the nacelle and tower. In addition, the appropriate personnel involved with the Project would meet with the local emergency service personnel (police, fire, ambulance, and health care) to review and discuss the planned construction process. During this meeting the Project representative would review with the local personnel the important details involved with Project construction including the unique construction equipment, the overall construction process and construction scheduling. During this meeting all hazardous materials that may be present during construction and/or operation would be discussed.

Prior to construction of the Project, SLW would have established with the appropriate county, town, and/or local official a coordinated emergency response plan to be followed by all emergency response personnel in case of an emergency at the St. Lawrence Wind Power Facility. This Fire Prevention and Control Plan would be developed for the Project to ensure the safety of employees and local residents, visitors, and their property. Prior to the commencement of construction the Applicant would present, review, and finalize this Plan in cooperation with local fire departments.

Educational Facilities: Construction and operation of the proposed Project would not have a significant impact on educational facilities. Consequently, no mitigation is necessary to address these impacts.

Park and Recreation Facilities: Construction and operation of the proposed Project would not have a significant impact on other community services and facilities, such as libraries and park and recreation facilities. Consequently, no mitigation is necessary to address these impacts.