

- Vehicles used during construction would comply with applicable Federal and State air quality regulations;
- Limiting engine idling time and equipment shut down when not in use;
- Dust suppression on unpaved access roads, parking areas and staging areas, and using water or DOT approved dust suppression materials in compliance with State and local regulations;
- Traffic speeds on access roads would be kept to 25 mph to minimize generation of dust;
- Car-pooling among construction workers would be encouraged to minimize construction-related traffic and associated emissions;
- Disturbed areas would be re-planted or graveled to reduce wind-blown dust; and
- Erosion control measures would limit deposition of silt to roadways.

3.10 Noise

3.10.1 Affected Environment

The areas in the Towns of Cape Vincent and Lyme surrounding the proposed Project have existing ambient noise conditions that should be considered as part of the noise impact analysis. These sources include, but are not limited to, windy conditions in the vicinity of the Project, background traffic conditions, farming equipment, etc. Potential receptors are houses, schools, churches and other buildings and structures in the general vicinity of the Project. The regulations and guidance that govern potential noise associated with the Project include, but are not limited to, Article 8 of the Environmental Conservation Law (ECL) and 6 NYCRR Part 617, SEQR and applicable local land use laws and ordinances associated with wind turbine operation in the Town of Cape Vincent.

3.10.2 Potential Impact

The proposed Project would generate noise during and after construction. Construction noise would include noise generated during the transport of Project materials and equipment, and the installation of project components. Temporary noise impacts may occur during the construction phase of the project at the closest residences. However, construction-related noises would not be significantly louder than routine daily events such as vehicles passing on the road or operating farm machinery. In addition, construction-related noise would be a relatively short-term phenomenon.

Although SLW has not yet determined the specific turbine that will be installed, SLW has evaluated a typical 2.0 MW turbine for purposes of noise analysis at this time. This analysis uses the Gamesa G87 2.0 MW wind turbine. Noise levels generated by this turbine are slightly louder than levels generated by a possible 3.0 MW turbine. All of the turbines would be assumed to

operate at their maximum sound level, which occurs at wind speeds of 8 meters/second and above, as measured at 10 meters above the ground. Operational noise would be associated with the wind turbine gearbox and movement of the rotors. To address operational noise impacts, TtEC prepared a Sound Level Report to study potential Project noise impacts. This report is included as Appendix D. The report concluded that predicted sound levels from the Project turbines operating at maximum sound level producing conditions are quite low at the surrounding residences (i.e. < 48.3 decibels [dBA]) and would not add significantly to existing ambient sound levels, nor create a significant noise impact. In general, the Project turbines would be inaudible at most residences outside the projected noise contours. Predicted levels are in compliance with the NYSDEC document entitled “Assessing and Mitigating Noise Impacts”, and the local draft ordinance in the Town of Cape Vincent associated with commercial wind turbine operation.

The Sound Level Report was based upon calculating sound levels that would be generated by Project operation. The commercially available CadnaA software model, developed by Datakustik GmbH, was used for this analysis. The software takes into account spreading losses, ground and atmospheric effects, shielding from terrain, barriers and buildings, and reflections from surfaces. The software is standards-based and the International Organization for Standardization 9613-2 standard was used for air absorption and other noise propagation calculations. The model results are presented in two ways. First, TtEC depicted noise contours that show the distribution of noise levels from 45 dBA up to 55 dBA over the entire Project area. Secondly, TtEC depicted the calculated sound level at specific receptor points, which include the nearest residences.

Predicted sound levels at the 246 nearest residences and one (1) school identified in the area vary from 22.9 to 48.3 dBA. The predicted turbine sound level at the Thousand Islands High School at the northeastern tip of the Project is only 41.1 dBA which is below the existing ambient level and does not appear to pose noise concerns. The predicted increase in sound levels over existing ambient levels are all below the 6 dBA increase identified by the NYSDEC as having the potential to produce noise impacts.

As a result, noise levels from the proposed St. Lawrence Wind Energy Project are in compliance with State guidelines and would not produce noise impacts above NYSDEC policy.

3.10.3 Mitigation Measures

Although noise impacts are expected to be minor, mitigation measures would include:

- Adhering to regular construction work hours Mondays through Saturdays, and typically not working on Sundays or after hours;
- Implementing BMPs during construction, such as using appropriate mufflers; and
- Notifying adjacent landowners of noise impacts in advance (such as if blasting becomes necessary).

3.11 Socioeconomics

To understand the effects this Project would have on the socioeconomic conditions in the Towns of Cape Vincent and Lyme, in Jefferson County, New York, it is important to understand the current state of the economy in the area. Socioeconomic information is described in terms of population and housing, economy and employment, and municipal revenues and taxes.

3.11.1 Affected Environment

Existing population and housing, employment and income, and municipal revenues and taxes in the County, Towns of Cape Vincent and Lyme, and Villages of Cape Vincent and Chaumont are described and evaluated below.

3.11.1.1 Population and Housing

The estimated population of Jefferson County in 2005 was 116,384. Between 1990 and 2000, the County's population increased by 0.7 percent and between 2000 and 2005 it increased by 4.2 percent (U.S. Census Bureau, 2006).

According to U.S. Census Bureau (2006) data for 2000, the Towns of Cape Vincent and Lyme have populations of 3,345 and 2,015, respectively; and the Villages of Cape Vincent and Chaumont have populations of 760 and 592, respectively. All but the Village of Chaumont experienced a population increase in the Project area between 1990 and 2000. The Towns of Cape Vincent and Lyme experienced population increases of 20.8 percent and 18.5 percent, respectively and the Village of Cape Vincent experienced an increase of 11.3 percent. The Village of Chaumont experienced a slight decrease of 0.2 percent (1 person) between 1990 and 2000 (U.S. Census Bureau, 2006).

Housing units for Jefferson County, and each municipality for 2000, are presented in Table 3-4. In 2000, the number of total available housing units in the two Towns and two Villages varied. The Town of Cape Vincent had the most number of housing units and the highest vacancy rate at 2,783 total units, of which 867 units (31.2 percent) were occupied and 1,916 units (68.8 percent) were vacant. The Town of Lyme had a similarly high vacancy rate and low occupancy rate. The Villages had higher occupancy rates ranging from 69.3 percent to 85.3 percent (Table 3-10).