target points that assist in developing photographic simulations, a balloon visibility study has not been conducted for this Project for several reasons:

- Balloon studies require relatively calm conditions to assure reliable balloon positioning. By their very nature, wind energy sites are inherently windy places.
- The proposed wind energy facility includes up to 96 wind turbine locations. Raising 96 balloons simultaneously would be a difficult exercise at best. While it is certainly possible to launch three or five balloons representing a small sample of the total number of turbines, such an exercise would not offer a reliable representation of the full extent of the proposed project. Moreover, it is likely that none of the sample balloons would be visible from many potentially affected resources. This would result in false interpretation of Project impacts by untrained observers. Similarly, using fewer than 96 balloons would result in numerous photographs taken with no visible balloons, thus defeating the purpose of using the balloons as survey targets for photo simulation.
- As discussed, current three-dimensional modeling technology allows for highly accurate simulation of the proposed Project within the context of an existing condition photograph without use of target balloons.

This information not withstanding, SLW is prepared to conduct a balloon visibility study in a timely manner should the Lead Agency determine that such a study is useful and desirable.

3.9 Air Quality

3.9.1 Affected Environment

The NYSDEC Division of Air Resources publishes air quality data annually. The most recent air quality data available is the *2005 Annual New York State Air Quality Report - Ambient Air Monitoring System* (NYSDEC, 2006a). This report includes ambient air quality data through 2005, as well as long-term monitoring trends in air quality derived from data collected at monitoring stations across the State. The following is a summary of existing air quality as reported therein:

Concentrations are taken from monitoring stations located in Jefferson County, New York, or the nearest location. Ambient air quality standards are shown in parentheses. Short-term concentrations are based on the highest and second-highest measured concentrations (consistent with the applicable standard not to be exceeded more than once per year) unless otherwise noted.

Sulfur Dioxide (SO_2) [Nick's Lake #2167-03]
Annual - 0.0009 parts per million (ppm) (0.03 ppm)

24-hour - 0.007 ppm (0.14 ppm)
3-hour - 0.011 ppm (0.50 ppm)

Inhalable Particulates (PM10) [Nick's Lake #2167-03]
2004 Annual – 13 micrograms per cubic meter (ug/m^3)
(2005 data not yet available)

Inhalable Particulates Less Than 2.5 Microns (PM2.5) [Potsdam #4477-01]
Annual Average of Last 3 Years – 7.7 ug/mg^3 (15 ug/m^3)
Average of 98th Percentile of Last Three Years – 23 ug/mg^3 (65 ug/m^3)

Ozone (O_3) [Perch River #2223-01]
4th Highest Daily Maximum 8-hour Average During Last 3 Years - 0.080 ppm (0.08 ppm)

PM10 (Sulfates and Nitrates) [Nick's Lake #2167-03]
Sulfate Fraction
2004 Annual – 3.7 ug/m^3 (2005 data not yet available)
Nitrates Fraction
2004 Annual – 0.2 ug/ m^3 (2005 data not yet available)

The EPA Green Book (EPA, 2006c) lists Currently Designated Non-Attainment Areas for all criteria pollutants by county for the entire United States. As of its last update on March 15, 2006, Jefferson County is designated as within attainment for all major pollutants monitored, with the exception of 8-hour (hr) ozone, which is out of compliance in part of the county.

3.9.2 Potential Impacts

Development of wind-powered electrical generation, such as the proposed Project, would result in an improvement to air quality by offsetting emissions created by fossil-fuel-burning power plants. Based upon calculations for other wind farms in New York, SLW scaled pollutant offsets for the proposed Project to determine the pollutant offsets that would likely result if the Project was built. The pollutant offset calculations were based on 2002 emissions data for sources located in New York State, which were reported to the EPA. These estimates also take into account approximate wind farm capacity factors:

Average emission factors x 136 MW = estimated emission offsets:

SO_2: 4.918 tons/MW x 136 MW = 668.8 tons per year (tpy)
NO_2: 1.735 tons/MW x 136 MW = 236.0 tpy
CO_2: 1,166 tons/MW x 136MW= 158,576 tpy

Based upon these assumptions, the proposed Project would result in estimated annual reductions of approximately 669 tons of nitrogen oxides (NO_2), 236 tons of sulfur dioxide (SO_2), and substantial quantities of other pollutants including particulate matter, carbon monoxide, and volatile organic compounds. This not only leads to healthier air, but also helps to reduce climate change impacts associated with fossil-fuel burning power plants. Carbon dioxide (CO_2) emissions contribute to global warming. The proposed Project would offset approximately 158,576 tons of carbon dioxide annually that would otherwise be released into the atmosphere. By offsetting air pollutants and greenhouse gases, the Project provides a benefit to environmental resources and human health.

However, during construction there may be short-term localized air quality impacts. Temporary, minor adverse impacts to air quality may result from the operation of construction equipment and vehicles. Impacts would occur as a result of emissions from engine exhaust and the generation of fugitive dust during earth-moving activities and travel on unpaved roads. The increased dust and emissions would likely not be sufficient to significantly impact local air quality. However, dust could cause annoyance at certain yards and residences located adjacent to unpaved town roads or project access roads.

3.9.3 Mitigation Measures

The Project would have a long-term beneficial impact on air quality, so displacing emissions of air pollutants may be viewed as mitigation for other environmental impacts associated with the Project.

Construction generated dust would be mitigated by a number of standard best management practices (BMPs). First, SLW would minimize the extent of exposed or disturbed areas on the site at any one time, and those areas would be restored or stabilized as soon as practicable. During construction, dust problems would be identified and reported to the construction project manager and the contractor. Water (or other DOT approved dust control substances) would be used to wet down dusty roads as needed during the duration of construction activities. Other standard dust control mitigation measures include:

- 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