

#### 4.17 CUMULATIVE IMPACTS

##### **Written Comment 400:**

Section 8.0 of the DEIS discusses cumulative impacts that may be expected from the development of all currently planned and operating wind farms in the region, including wind farms proposed in Cold Spring, Machias, Ashford, and those operating in Eagle and Wethersfield. A combined project in Centerville and Ashford has reportedly been abandoned, but another wind farm planned for Orangeville and the operating wind farm in Sheldon (both in Wyoming Co., the location of the Wethersfield wind farm) were not considered. Cumulative impacts expected would increase, compared to what is discussed in the DEIS, when the Centerville-Ashford project is omitted and the Sheldon and Orangeville projects are added.

##### **Response to Written Comment 400:**

According to [thedailynewsonline.com](http://thedailynewsonline.com), the Sheldon Wind Farm consists of 75 turbines, and according to [inveneryllc.com](http://inveneryllc.com), this project became operational in 2009. It is assumed that the Orangeville project mentioned by the commentor is the Stony Creek Wind Farm, proposed to be located in the Town of Orangeville. This project is proposed to consist of up to 59 wind turbines. These projects are located approximately 40 miles northeast of the proposed Allegany Wind Power Project, and therefore will not affect the Project Site or the surrounding area within and near the Town of Allegany.

With respect to operational impacts, neither the Sheldon nor Stony Creek projects will create cumulative noise or shadow flicker impacts, due to their distance from the Allegany Wind Power Project. Lastly, there are not expected to be any cumulative visual impacts between these two projects and the Allegany Wind Power Project because of distance. While unlikely, even if all three projects were visible from one central location, they would not be simultaneously visible with the Allegany Wind Power Project because of viewer orientation (i.e., they are in opposite directions). The only potential cumulative impacts arising from simultaneous operation of these three projects are avian and bat impacts. Cumulative avian and bat impacts may occur, regardless of the distance between proposed facilities. The DEIS identifies a total of 257 wind turbines in a three-county area (Cattaraugus, Allegany, and Wyoming Counties), which increases to 391 when considering the Sheldon and Stony Creek projects. With respect to avian impacts, based upon analyses completed in 2007 and 2008 for the Maple Ridge Wind Power Project (located in Lewis County, NY), avian collision with wind turbines is estimated to range from 5.67 to 9 fatalities per turbine per year (Jain et al., 2007; Jain et al., 2008). Applying this range of impacts, the 391 total turbines could result in an estimated range of 2,217 to 3,519 cumulative avian fatalities per year.

With respect to bats, an analysis of bat fatalities at wind energy facilities across the U.S. resulted in an estimate of 3.4 bats per turbine per year (NWCC, 2004). However, because recent studies suggest that bat fatalities at wind farms may be higher in the eastern U.S., it is useful to again include results from the 2007 and 2008 Maple Ridge Wind Power Project bat fatality study. The estimates derived from these studies range from 8.18 to 18.53 bat fatalities per turbine per year (Jain et al., 2007; Jain et al., 2008). Applying this range to the 391 total turbines could result in an estimated range of 3,198 to 7,245 cumulative bat fatalities per year.

**Written Comment 4PP:**

The DEIS discussion of cumulative impacts is limited to birds and bats, at a very general and thus vague scope. No particular species of birds are discussed, for example. However, bald eagle is reported at most of these sites, as this species is rebounding in the region, and especially in the location of the Everpower project, along the Allegheny River, where it is common to see bald eagle when traveling on I-86 along the river. It has been estimated “that U.S. wind turbines kill between 75,000 and 275,000 birds per year.” and outside of migratory flyways slow-flying raptors appear to be most at risk. The DEIS states that, without considering the three Cattaraugus County proposed wind projects, bird mortality from the wind farms in the region, including the Everpower project, can be expected to be “1,457 to 2,313 cumulative avian fatalities per year. Adding back the county project proposals, and the Sheldon and Orangeville projects, the numbers would be substantially higher. However, the DEIS fails to discuss expected impacts on raptors, including the bald eagle. The information should be supplemented with a look at raptors in particular, taking into account the full build-out of wind project operating and planned for the region.

**Response to Written Comment 4PP:**

As described in Section 3.3.1.2.6 of the DEIS, bald eagles are typically found near larger bodies of water and nest within 2.5 miles of these water bodies. Bald eagles are found along the Allegheny River. However, at its closest point the Allegheny River is 3 miles from the nearest turbine, therefore the site is not likely used for nesting by bald eagles. In addition, no bald eagles were documented on-site during the breeding bird surveys in 2007 and 2008. Bald eagles are not likely to use the Project Site for foraging, since there are no large water bodies within the boundaries. Therefore, the only bald eagles likely to occur at the Project Site are migrant or transient birds. In addition, after more than 50,000 individual turbine searches at turbine facilities across the United States, not a single Bald Eagle has been found dead or injured, suggesting that Bald Eagles are not “vulnerable to turbine mortality”. The only reported bald eagle fatality associated with turbines was in Norfolk County, Ontario.

As discussed in section 3.3.2.2.2 of the DEIS, there are no known raptor migration corridors in the vicinity of the Project Site, and no major topographical features. This suggests that migrating raptors are likely to be widely dispersed over the landscape by the time they reach the Project Site. Raptor fatalities from wind turbines are low, even at sites with a high number of migrating raptors; therefore the number of raptor collisions from the proposed Project are expected to be small.

As discussed in the Cumulative Impacts section of the DEIS, no information is publicly available for the three Projects in the NYISO queue proposed for Cattaraugus County, and impacts from them are not reasonably foreseeable; there is no application under review for any other Cattaraugus County wind farm. Therefore, including these three projects in the cumulative impacts analysis for avian species is not possible to calculate at this time, because the number of turbines proposed for each of these Projects is not publicly available, nor a foreseeable possibility. However, Response to Written Comment 400 above addresses additional projects (specifically the operating Sheldon Wind Farm and proposed Stony Creek Wind Farm) at the request of the commentor. Cumulative impacts to raptor species, including bald eagles, is not likely to be biologically significant given the lack of raptor migration corridors in the vicinity of the proposed Allegany Project.

**Written Comment 4QQ:**

Although similarly vague, the DEIS acknowledges that “recent studies suggest that bat fatalities at wind farms may be higher in the eastern U.S.,” and estimates of cumulative bat mortality up to 4,762 bat deaths per year at the five projects considered. However, the DEIS provides no specific information on bat habitat in and around the Everpower project area. As with the issue of bird/raptor mortality, the DEIS should be supplemented with site specific information on bat species and their habitat in and around the project area, and a cumulative mortality estimate taking into account the full build-out of wind projects in the region should be provided.

**Response to Written Comment 4QQ:**

With respect to both avian and bat resources, information presented in the DEIS is based on a site-specific work plan developed in consultation with the NYSDEC (see the Final Environmental Studies Workplan provided in Appendix I of the DEIS). With respect to “site specific information on bat species”, a significant amount of such information (i.e., data) is provided in DEIS Section 3.3.1.2.2. These data were collected during site-specific studies/surveys conducted in the Fall of 2007, Spring of 2008, Summer of 2008, and Fall of 2008.

**Written Comment 4RR:**

Once this additional information is provided, the Planning Board and the Town Board will be able to assess the burden on avian species, for purposes of comparison to project benefits.

**Response to Written Comment 4RR:**

Cumulative impacts have been addressed in the DEIS and this FEIS. To the extent relevant under SEQRA, the additional information requested by the commenter had been provided above in Response to Written Comments 4OO through 4QQ.