

perspective. The Maple Ridge study documented avian fatalities between 3.1 to 9.6 birds per turbine per year (Jain et al., 2007). Applying these fatality rates, cumulative mortality for the five wind developments considered is estimated to be between 1,318 and 4,080 birds per year (Table 4-2).

Results from the Maple Ridge Wind Farm indicate that 68 percent of identified passerine fatalities occurred in September and October, during the fall migration period (Jain et al., 2007). While some mortality is likely to occur, the cumulative loss of birds is unlikely to adversely affect migrant bird populations found in these areas as these numbers represent a small percentage of the regional migratory population. Therefore, cumulative significant adverse affects to migrating and breeding birds are not anticipated to result from operation of the five wind generation facilities considered in this evaluation.

**Table 4-2**  
**Estimated Cumulative Avian Mortality from**  
**Wind Generation Facilities in Northern New York**

Project	Number of Turbines	Estimated Bird Fatalities per Year Based on NWCC 2004 National Average <u>1</u>	Estimated Bird Fatalities per Year Based on NWCC 2004 Eastern Average <u>2</u>	Estimated Range of Bird Fatalities per year based on 1 <sup>st</sup> Year Results of Maple Ridge Wind Farm <u>3</u>
St. Lawrence Windpower Project	53	122	228	164 - 509
Cape Vincent Wind Power Project	140	322	602	434 - 1344
Hounsfield Wind Farm	84	193	361	260 - 806
Horse Creek Wind Power Project	62	143	267	192 - 595
Wolfe Island Wind Project	86	198	370	267 - 826
Total	425	978	1,828	1,318 - 4,080

<sup>1</sup>National Wind Coordinating Collaborative (NWCC; 2004) reported national avian mortality rates of 2.3 birds per turbine per year (birds/turbine/year). Estimated rates of avian mortality in this table were derived by multiplying the number of turbines in each wind generation facility by the national average avian mortality rate.

<sup>2</sup> NWCC (2004) reported average avian mortality rates in the eastern US region of 4.3 birds/turbine/year. Estimated rates of avian mortality in this table were derived by multiplying the number of turbines in each wind generation facility by the eastern regional average avian mortality rate.

<sup>3</sup> Maple Ridge Wind Farm post-construction monitoring occurred from June through November, 2006 using several methods. Depending on the method employed, average fatalities ranged from 3.1 to 9.6 birds/turbine/year (Jain et al. 2007). Ranges reported in this table, based on data from Maple Ridge, were estimated by multiplying the low and high average mortality rates per turbine per year by the number of turbines in each wind facility.

**Raptors:** WEST concluded that both migrant and breeding raptor use of the Project Area were low, and thus Project impacts to raptors would also be low. From a regional perspective, the five