August 12, 2010

To: Honourable John Gerretsen
Minister of the Environment
77 Wellesley Street West
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Toronto ON
M7A 2T5

Honorable Alexander "Pete" Grannis
Commissioner
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David Stilwell
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Gentlemen:

This letter expresses our deep concern about the potential impacts on birds, specifically raptors (eagles, hawks, owls), grassland birds, the Purple Martin (and other aerial insectivores), as well as bats from industrial wind energy development in the vicinity of northeastern Lake Ontario and the upper St. Lawrence River.[1] The impetus for this letter is the results from the July-December 2009 bird & bat fatality study at the Wolfe Island Wind Project[2], which provide the first concrete evidence substantiating these concerns.

In only six months of study, part of which occurred during a cyclical low in raptor numbers, the raptor fatality rate at the Wolfe Island Wind Project was already among the highest documented in eastern North America. What is especially troubling about this high raptor fatality rate at the Wolfe Island Wind Project is that one third of the fatality study was conducted during November-December 2009 during a cyclical low in raptor numbers. The winter of 2009-2010 had very low numbers of most species of winter raptors on Wolfe Island and in much of the grassland region around northeastern Lake Ontario and the upper St. Lawrence River valley.[3] There is a complex 3-5 year cycle of raptor abundance in this region that corresponds with vole population cycles, i.e., high raptor abundance linked to high vole density.[4] An even higher raptor fatality rate at the Wolfe Island Wind Project appears inevitable during winters when raptors are more abundant on Wolfe Island.

[1] Concern was formally stated by Environment Canada and Ontario Dept. of Natural Resources in comments for the Wolfe Island environmental review in 2005. We have previously submitted written comments on our concern about avian impacts for the Wolfe Island Wind Project and other proposed wind projects in this region. The US Fish & Wildlife Service, New York Department of Environmental Conservation, and various NGOs have echoed concern about avian impacts from these projects in similarly submitted comments.

[2] Wolfe Island Ecopower® Centre Post-Construction Followup Plan Bird And Bat Resources Monitoring Report No. 2. July - December 2009. May 2010. Stantec Consulting Ltd. Guelph On.

[3] W. Evans unpub. data.; G. Smith unpub. data. Stantec Jul-Dec, May 2009 Wolfe Island post-construction study report (see footnote #2 for full citation).

[4] Regional Christmas Bird Count data; G. Smith, unpub. data.

Further substantiating our concern is the fact that six fatalities of the Turkey Vulture *Cathartes aura* were reported. Vultures have similar soaring behavior as many raptors. It should be noted that no vulture fatalities have been documented at other regional wind energy projects, including the Maple Ridge Wind Project, 70 km to the southeast of Wolfe Is. We speculate that the Turkey Vulture fatalities at the Wolfe Island Wind Project are due to migratory concentration dynamics caused by Lake Ontario and the St. Lawrence River. Our colleagues concur with us that the high number of November TV fatalities is likely in part due to the lack of thermals at that time of year (i.e., lower flying birds). We also point out that there was limited bird kill due to botulism in northeastern Lake Ontario in 2009. Such an event (e.g., as occurred in 2007) may cause substantial increases in vulture activity and lingering at locations like Wolfe Island, and we anticipate this would lead to higher vulture fatalities at the Wolfe Island Wind Project.

The Wolfe Island raptor mortality to date suggests that commercial wind development in the grassland-shrubland region proximal to the entire northeastern Lake Ontario and upper St. Lawrence River region may have elevated raptor impacts. The precise area of elevated raptor impacts is difficult to demarcate, but our 40 years of experience in the region suggests the red areas in the map below would be involved.

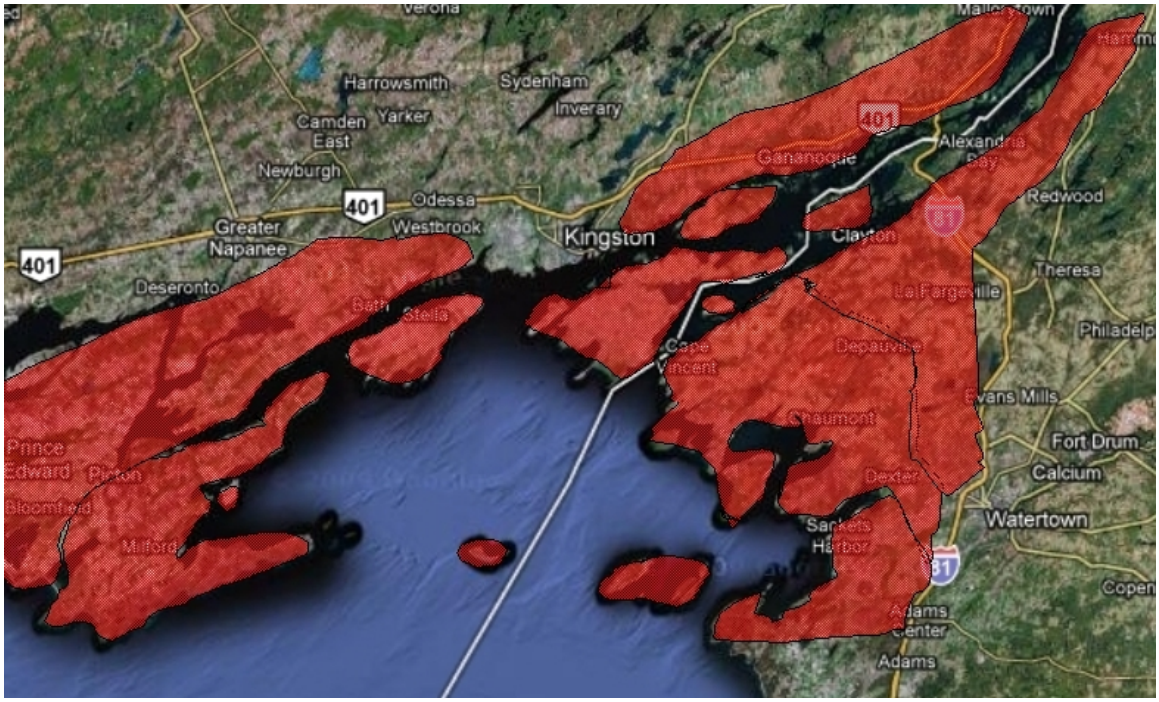

Fig. 1. Map of known or suspected areas of elevated migratory and winter raptor concentrations.

It will be several more years before winter raptor numbers peak again on Wolfe Island enabling the extent of raptor impacts during such incursions to be documented. In the meantime, there are at least 400 1.5 MW or greater MW wind turbines proposed and in active siting consideration within this periodically raptor-laden grassland region proximal

to northeastern Lake Ontario and the upper St. Lawrence River valley.[5] The size and juxtaposition of this grassland complex to the important upper St. Lawrence River/Lake Ontario Coastal migration corridor may very well equate to an avian and bat habitat of national significance.

This area shown in red in Fig. 1 also holds an important population of grassland birds in northeastern North America, including the highest breeding densities of Henslow's Sparrow *Ammodramus henslowii* and Upland Sandpiper *Bartramia longicauda*.[6] We note that both these species are in steep decline in this region of the continent[7] and Upland Sandpiper was recently documented as a fatality at the Wolfe Island Wind Project.[8]

In addition to our concern with raptors and grassland birds, we note that an unprecedented 28 Tree Swallow *Tachycineta bicolor* and 7 Purple Martin *Progne subis* fatalities were documented in the July-December 2009 fatality report. We believe this is the highest documented rate of fatality at a wind project for these species, and it comes amidst concern of declining populations of these species and others in the aerial foraging guild in parts of Ontario.[9] We are particularly concerned about the Purple Martin, which represented 7% of the documented fatalities, or an estimated **40+** individuals after scavenging, surveyor efficiency, and percent of area covered are factored in.

The Purple Martin has declined in Ontario at an average rate of 4.3% annually from 1980-2007.[10] While the downward trend is not particularly evident in Breeding Bird Survey data from New York during this time, the New York State Breeding Bird Atlas data show a staggering 45% loss of confirmed breeding blocks for this species in NY in the 20 years between the first and second atlases.[11] While we realize that there other causes at the root of these declines, wind energy development in the northeastern Lake Ontario and the upper St. Lawrence River region will last for decades and, based on the preliminary Wolfe Island Wind Project fatality data, will be at odds with any attempts to mitigate decline of this species and other aerial insectivores in the region.

While we trust that Canadian and US Federal, State and Provincial wildlife agencies are aware of the status of species in their own jurisdictions and are addressing potential impacts of wind energy developments, we are concerned about the apparent lack of a mechanism for cooperation between the Canadian and US governments with regard to the fate of bird and bat populations affected by wind energy development in the border region.

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[5] Hounsfield Wind Energy Project (~77 WTGs); St. Lawrence Wind Energy Project (~56 WTGs), Cape Vincent Wind Energy Project (~140 WTGs); Horse Creek Wind Energy Project (~52 WTGs); Hammond Wind Energy Project (~75 WTGs); Ostrander Point Wind Project (~12 WTGs).

[6] http://www.dec.ny.gov/cfmx/extapps/bba/bbaMaps.cfm?bndcode=HESP&order=2&year=2000&comp=1
http://www.dec.ny.gov/cfmx/extapps/bba/bbaMaps.cfm?bndcode=UPSA&order=2&year=2000&comp=1

[7] *The Second Atlas* of *Breeding Birds in New York State.* McGowan, K.J., Corwin, K. (Eds.) Cornell University Press, Ithaca, NY. Online version available at http://www.dec.ny.gov/animals/7312.html

[8] Wolfe Island Ecopower® Centre Post-Construction Followup Plan Bird And Bat Resources Monitoring Report No. 2. July - December 2009. May 2010. Stantec Consulting Ltd. Guelph On.

[9] http://www.obsf.ca/sf/files/BSC_Stateofthebirds.pdf

[10] http://www.mbr-pwrc.usgs.gov/cgi-bin/atlasa99.pl?06110&1&07

[11] http://www.dec.ny.gov/cfmx/extapps/bba/bbaMaps.cfm?bndcode=PUMA&order=2&year=2000&comp=1

For example, we note:

1. The Indiana Bat *Myotis sodalis* is a Federally listed Endangered Species in the US, however just a few kilometers across the St. Lawrence River in Canada it is documented to be present[12] but is unprotected. The protocol for identifying bat fatalities at the Wolfe Island Wind Project has been flawed in that carcasses mutilated by rotor collision are not identified to species and are simply buried.[13]

2. The Upland Sandpiper is a New York State listed Threatened Species, but is unlisted in Ontario just a few kilometers across the St. Lawrence River. An individual of this species was a fatality at the Wolfe Island Wind Project in 2009.[14]

Furthermore, there appears to be no mechanism in place between the Canadian and US governments for assessing cumulative wildlife impacts from wind energy in the border region. Each government is apparently addressing this independently instead of cooperatively. Needless to say, the latter approach is more beneficial for wildlife populations of concern that span the border.

We see these issues as a primary basis for requesting a moratorium on further wind energy development in the region noted in red in Fig. 1. We believe such a moratorium should be instituted until the pertinent Canadian and US wildlife agencies formally:

1. Consider the irregularity of their current wildlife protection laws along their shared border and the resulting discordance for protecting certain threatened and endangered wildlife populations. Some sort of agreement needs to be implemented for each country to respect each other's Federal, State, and Provincial wildlife laws and environmental review standards when wind energy projects occur within a certain zone along their shared border (e.g., within 20 km of the border).

2. Design and implement a cooperative approach with respect to cumulative wind power impact assessment on birds and bats from commercial wind energy development in the stated region of concern shown in red in Fig. 1.

In advising the Canadian and US government agencies of the current situation we urgently request that all responsible agencies, including local governments, respect a three-year moratorium on new onshore wind energy development in the region specified in the map above. Such a moratorium would:

[12] Sanders Environmental Inc. (SEI) 2007. Report on Indiana Bat (*Myotis sodalis*): Night Time Radio Telemetry on Bats Captured Outside of Cape Vincent, New York, Jefferson County, New York, July and August 2007. Sanders Environmental Inc., Centre Hall, Pennsylvania.
[13] Pers. comm. Stantec Consulting, (the environment firm coordinating the fatality study at the Wolfe Island wind project).
[14] Wolfe Island Ecopower® Centre Post-Construction Followup Plan Bird And Bat Resources Monitoring Report No. 2. July - December 2009. May 2010. Stantec Consulting Ltd. Guelph On.

1. Allow 2.5 years of additional fatality results from the Wolfe Island Wind Project to be evaluated and cumulative impacts from proposed additional wind projects in the region to be more accurately projected for raptors, vultures, grassland birds, and aerial insectivores (e.g., Purple Martin).
2. Allow time for the Canadian and US governments to develop a working agreement with regard to respecting "across the border" threatened and endangered species laws (e.g., within 20 km of the border).

In conclusion, the evidence from the first six months of fatality study at the Wolfe Island Wind Project indicates serious impacts may occur to raptors, grassland birds, and aerial insectivores from large-scale commercial wind energy development proximal to northeastern Lake Ontario and the upper St. Lawrence River valley. We suspect that the unique species composition of avian fatalities indicated at the Wolfe Island Wind Project may be similar at other wind energy developments in this region. We believe this information should be integrated into a cooperatively-crafted, cumulative impact model by the Canadian and US governments with regard to wind energy impacts on birds and bats in this region. A cumulative, region-wide impact assessment is determined to be the only way a complete and accurate impact assessment can be obtained for this region of concern – not on an individual wind project basis. Previous attempts at cumulative assessment by several proposed wind projects in this region were carried out without any pertinent fatality data. The Wolfe Island fatality data needs to be incorporated into the cumulative impact equation for bird and bat populations in this region.

Please note that we have submitted this letter to pertinent nongovernmental organizations for their endorsement and you may receive letters endorsing the call for a 3-year moratorium on wind development in the region we specify in this letter.

Respectfully submitted,

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[15] Evans is director of the nonprofit Old Bird Inc. based in Ithaca, NY. He has been a consultant to the wind power industry for more than 10 years carrying out pre- and postconstruction wildlife monitoring studies at nine commercial wind projects in the US. This includes the pending Hounsfield Wind Energy project on Galloo Island in northeastern Lake Ontario for which he carried out three years of winter raptor surveys and was involved with assessment and mitigation of impacts to grassland birds. He also regularly reviews and critiques environmental impact assessments of wind projects including the Cape Wind and Wolfe Island projects. Evans co-authored the avian section of the US Government's (Minerals Management Service) datagap analysis for offshore wind energy in 2007.

[16] Smith is currently President of the Onondaga Audubon Society based in central New York and a co-founder of the Derby Hill Bird Observatory where he managed the spring raptor count for 15 years. He is widely regarded by government and NGOs as the most experienced field ornithologists in Northern New York State, having birded the region since 1963. He has been a land steward for The Nature Conservancy in NY, managing over 15,000 acres in northern NY and regularly works as a land management consultant for land trusts and other conservation organizations in New York.