Kristina Rudzki, Senior Project Evaluator

Ministry of the Environment

Operations Division Environmental Approvals Branch

2 St, Clair Ave. W, Floor 12A

Toronto, ON M4V 1L5

February 17, 2012

Dear Ms. Rudzki,

**Re: EBR Registry No: 011-5239**

**Nature Canada and Ontario Nature respectfully request the Ontario Ministry of the Environment to reject the application by Gilead Power Inc. for a Renewable Energy Approval Permit for a proposed wind energy project at Ostrander Point Crown Land Block (EBR 011-5239)**. Ostrander Point is in the heart of the globally-significant Prince Edward County South Shore Important Bird Area, and is well-known for its significance to migrating and breeding birds. A wind energy plant at this location poses a high and permanent risk to plant life, animal life and the natural environment. This project would damage the reputation of the *Green Energy Act*, and undermine the most important non-governmental site-based collaborative conservation program for birds on earth.

In rejecting this application, the Ministry of the Environment will demonstrate that the Renewable Energy Application process and *Green Energy Act* can be reasonable and flexible when inappropriately sited projects are proposed.

Nature Canada is a charitable non-profit with the mission to protect and conserve Canada’s wildlife by working with people and advocating for nature. Nature Canada has over 40,000 supporters and members and is the national voice for the Canadian Nature Network, the information network of 375 nature groups across Canada with over 100,000 members.

Ontario Nature protects Ontario’s wild species and wild spaces through conservation, education and public engagement. Established in 1931, Ontario Nature is a charitable, membership-based conservation organization with over 140 member groups and 30,000 individual members and supporters.

Our organizations believe that climate change poses one of the greatest risks to biodiversity. We support the government’s intention to expand the use of clean and renewable sources of energy through the *Green Energy and Green Economy Act, 2009.* However, in responding to climate change, we must not lose sight of the importance of protecting wildlife and intact ecosystems to enhance landscape resilience. Protecting wild species and wild spaces is vital if we are to buffer the effects of climate change and provide options for wildlife that must cope with predicted changes.

We have compiled nine specific reasons based on sound science and local knowledge that explain why this application must be rejected. Each reason presents a sufficiently strong case to reject this application. Together they represent overwhelming and compelling grounds to reject this application and an equally strong case to formally protect Ostrander Point Crown Land Block.

**-- OVERVIEW OF COMMENTS --**

Biological consequences

1. Migration function disrupted and birds and bats killed in perpetuity. High risk of project surpassing provincial guidance thresholds for bird and bat casualties. (*Page 4*)

Findings:

Ostrander Point, within the Prince Edward Point South Shore Important Bird Area, is a significant migration corridor and migratory stop-over. This is ample reason to not permit any form of industrial development within the Crown Land Block. **An Industrial Wind Turbine facility at Ostrander Point would cause significant disruption to the function of this Important Bird Area.**

1. Significant community of breeding birds permanently degraded. (*Page 11*)

Findings:

Ostrander Point is a high quality habitat and of major significance to the breeding bird community. **There is increasing evidence that both the turbines and the effects of habitat fragmentation would be a direct threat and cause serious harm to the breeding bird community.**

1. Species at Risk habitat destroyed and species at risk killed and threatened in perpetuity. (*Page 12*)

Findings:

Due to the quality of habitat and the geography of Ostrander Point, **a wind energy project on this location will destroy the habitat of Species at Risk, kill them, and pose a continual and permanent risk to local populations.** For these species whose populations are already compromised, Ostrander Point should be preserved as safe, productive habitat.

1. Contribution to cumulative impact – approval of this project will facilitate approval of other local projects that will collectively damage bird and bat populations. (*Page 16*)

Findings:

The Proponent’s cumulative impact assessment on birds and bats was too limited in scope. **The high risk scenario to wildlife caused by Ostrander Point becomes magnified as additional wind projects are constructed.**

Planning and policy consequences

1. Significance of Ostrander Point establishing this project in an area recognized for its biological significance undermines the intent and effectiveness of provincial and international conservation initiatives. (*Page 19*)

Findings:

Ostrander Point has major local, regional and international significance for birds and other natural history values. **Approval of this project will significantly disrupt the function of an internationally recognized Important Bird Area (IBA), a candidate Area of Natural and Scientific Interest (ANSI), and a significant woodland.**

1. Provincial responsibility to international biodiversity conventions neglected. (*Page 21*)

Findings:

The Ministry of the Environment must observe the obligations it has under international agreements and not allow for any destruction of function to one of the most significant migration corridors for birds, breeding bird habitat, and habitat for five provincially listed Species at Risk. **This project directly neglects the importance of international agreements that made biological diversity conservation a provincial responsibility.**

1. Opportunity for the Province to show their responsibility to integrate *Ontario’s Biodiversity Strategy* on public lands missed. (*Page 21*)

Findings:

The Ministry of the Environment must recognize their responsibility in protecting the ecological function of Ostrander Point Crown Block and integrate biodiversity principles into decision-making. **This project goes against the goals outlined by the Biodiversity Council and would be a major lost opportunity for the Government to demonstrate their commitment to biodiversity on their own land.**

1. Mitigation measures will not work at Ostrander Point. (*Page 22*)

Findings:

Mitigation of the potential impacts of plant operations on birds and bats was inadequately addressed by the Proponent. **With respect to bird casualties, there are very few examples of successful mitigation in relieving or eliminating a threat. The measures outlined by the Proponent would not work.**

1. Threat of project to fundamental value of Prince Edward Point National Wildlife Area. (*Page 23*)

Findings:

The project at Ostrander Point would cause a high risk to birds, and bats moving along the Long Point Peninsula to and from the Prince Edward Point National Wildlife Area. **There is a strong likelihood that the project would compromise the very reasons why the National Wildlife Area was created.**

**-- BACKGROUND AND CONTEXT --**

We have made our position clear both in writing on many occasions, and in face to face meetings both with Gilead Power Inc. (‘the Proponent’), and with officials from the Ontario Government. Since the time of our last comments on the Natural Heritage Assessment by the Proponent in 2010, more evidence has come to light that reinforces our position that this project must not proceed. We will present our full range of arguments along new evidence in this report.

Ostrander Point is an anchor in the globally significant Prince Edward County South Shore Important Bird Area. Important Bird Areas is a program of BirdLife International, delivered in Canada by Nature Canada and Bird Studies Canada[[1]](#footnote-1). One of Nature Canada’s roles in the delivery of this program is to conserve and protect IBAs.

Ostrander Point supports a rich breeding bird community and is of great significance for migrating birds. To quote the comments on this project from Environment Canada in their letter dated February 24, 2010, “In terms of overall quality, it is one of the best areas for birds EC has seen in southern Ontario.” In their guidance document released in February, 2007[[2]](#footnote-2) Environment Canada states “Depending on the findings of baseline studies, project proponents whose projects fall into this category may be encouraged or even required to seek alternative locations if significant adverse effects on birds are anticipated.”[[3]](#footnote-3) Given Ostrander Point’s reputation for birds, its geography, and what we consider irrefutable evidence of its significance in both the consultant’s reporting and in supporting data from the Prince Edward Point Bird Observatory, we are convinced that this project is not in the best interest of Ontarians, and that it would cause unjustifiable and irrevocable harm to birds and bats. From our perspective this project is a most egregious example of a renewable energy project that is simply located in the wrong place.

**-- DETAILED COMMENTS –**

**Biological reasons**

1. **Migration function disrupted and birds and bats killed in perpetuity. High risk of project surpassing provincial guidance thresholds for bird and bat casualties:**

Significance of the landform as a factor in concentrating migrating birds

As a large patch of natural and ecologically diverse coastal habitats on a Great Lakes peninsula, Ostrander Point is part of one of the most significant landscapes for migrating birds in eastern Ontario, and meets global criteria for its importance to birds. Ostrander Point functions as a highly significant migration corridor and migration stopover because of its physiographic characteristics. Naturally vegetated Great Lakes shorelines are of very high and disproportionate significance to migrating birds as stop-overs, feeding areas, and concentration points. Most of the coastal habitat of the lower Great Lakes – Ontario, Erie and Huron, has been modified or transformed into anthropogenic landscapes. Little natural coastline remains. The fact that Ostrander Point is on a narrow peninsula that is natural as opposed to anthropogenic habitat, multiplies the importance of this site for birds. The peninsula focuses the migration (more birds packed into a smaller space) and concentrates migrants at greater densities, a fact well known by seasoned ornithologists and naturalists, and confirmed by the Proponent’s own data.

Ostrander Point is on the south shore of the narrow Long Point peninsula which projects 15 kilometres eastward into Lake Ontario. To the south, the nearest land is about 60 kilometres away at Oswego New York. To the east south east is a chain of islands that arc from Prince Edward Point to Robert G Wehle State Park in Upper State New York. The maximum distance between the islands along this chain is 18 kilometres, offering the shortest and safest route for landbirds to cross eastern Lake Ontario. There is considerable evidence that birds rely on landforms and geography such as coastlines and chains of islands for navigation and refuge during their migrations. [[4]](#footnote-4) [[5]](#footnote-5)

Importance of natural habitats in supporting migrating birds

The Ostrander Point Crown land block is a mixture of diverse natural habitats, including permanent and seasonal wetlands described in section 3.1 of the consultant’s Natural Heritage Assessment[[6]](#footnote-6), along with woodland, and sparsely-treed alvar described in Section 3.3.4. Much of Ostrander Point is very wet in the spring due to the shallow soils and surface hydrology. Its proximity to the shoreline combined with its physiological conditions make it highly productive for insects. Large numbers of birds take advantage of this during migration, based on the data from the Proponent as well as local naturalists (Okines, personal communications).

During southward migration in the late summer and fall, birds concentrate in large numbers along the southern shore of Prince Edward County. Banding recovery data from nearby Prince Edward Point Bird Observatory (PEPtBO), less than 10 kilometres to the east and connected by more-or-less contiguous vegetative cover, confirms that the area serves as a migratory stop-over for many species. During the spring migration most of the birds seen are passerines, and many descend from migrating heights (hundreds of metres above the land and water) to the first land they see at daybreak after making the 60 kilometre crossing of Lake Ontario. During fall migration, in addition to large numbers of passerines (songbirds), hawks and owls are extremely abundant. PEPtBO observes (by capturing and banding) more Northern Saw Whet Owls than any other migration monitoring station in North America[[7]](#footnote-7). Hawks and owls and other diurnal migrants like Blue Jays and blackbirds are known to fly back and forth, parallel to the South Shore until there are favourable conditions for crossing the lake. PEPtBO observers have noted that a large proportion of these birds use the whole south shore of Prince Edward County as staging areas.[[8]](#footnote-8)

A recently published study, not captured in the Proponent’s Natural Heritage Assessment (by Dr. Phil Taylor et al, 2011), tracked 6 species of birds and one species of bat over several days during spring and fall migration on a large Great Lakes peninsula (Long Point on Lake Erie)[[9]](#footnote-9). This study defines ‘stopover landscape’ as the time and space where birds rest and refuel for subsequent migratory flights. Of the 322 individual birds tracked over several days, up to 50% were observed making stopover flights of .1km to 30 km from their point of initial capture. 52% of stopover flights occurred 24 hours or more after capture, mostly at night and 20% at or near dawn.

“Results show that many individuals leaving their capture site relocate within the same landscape at some point during stopover, moving as much as 30 km distant from their site of initial capture. We show that many apparent nocturnal departures from stopover sites are not a resumption of migration in the strictest sense, but are instead relocations that represent continued stopover at a broader spatial scale”[[10]](#footnote-10)

The same behaviour migrating birds exhibit at the Long Point on Lake Erie exists at the Long Point of Prince Edward County and in Ostrander Point specifically. Such behaviour underlines the value of all of the natural ecosystems within the Prince Edward Point South Shore Important Bird Area for sustaining migration and the health of migrating birds, and likely other fauna. Birds not only pass through the air space of Ostrander Point, but likely stop there to feed, to find shelter, and to add body mass to sustain their migrations of hundreds or thousands of kilometres. This is confirmed through migration monitoring efforts at PEPtBO:

"There is significant recapture data at Prince Edward Point Bird Observatory to show that Prince Edward Point functions as a migratory stop over for many individuals of many species, in fact, in 2011 alone there were over 1800 recapture records of birds caught after their original banding date, and likely by extrapolation, both Ostrander Point and the whole of the PEC South Shore IBA, also have birds stopping over[[11]](#footnote-11)".

The Proponent did not consider the importance of Ostrander Point as a migration stop over. This integral function of Ostrander Point should have been part of the evaluation. However, their analysis was essentially limited to within 120 metres of the project components, defined as “the Project location.” “The field surveys undertaken detail current conditions within the Project Location and the 120 metre investigation zone.” Given the global significance of the area for migrating birds, the proponent’s misleading methodology could never adequately consider the significance of this area, and their data can only be considered grossly inadequate at describing the importance of Ostrander Point for thousands of migrating birds.

David Ewert, in a 2011 report for the Nature Conservancy entitled “Wind Energy: Great Lakes Regional Guideline” summarized many recent studies that describe and document the disproportionate importance of the shoreline and near-shoreline areas, both aquatic and terrestrial, for migrating birds: [[12]](#footnote-12)

Many of the recent studies along Great Lakes shorelines describe what he calls “shoreline effect,” or areas along and in from the shore where landbirds concentrate during their migration. This distance varies between study and researcher from 0.4 km to 2-3 km from the shoreline.[[13]](#footnote-13) Great Lakes shoreline peninsulas and wooded wetlands in particular are recognized as being “disproportionately used by migrating landbirds.[[14]](#footnote-14)” These circumstances found at Ostrander Point are missing from the Proponent’s environmental reporting or simply misrepresented. For example, in Section 2.2.1 of the Environmental Screening Report of 2010, the Proponent states: “no wetland features were identified within the project location.[[15]](#footnote-15)" Site visits were taken to Ostrander Point on June 1, 2011, and showed extensive wetland features including standing water with toad and frog tadpoles, wetland indicator plants such as *Spirea alba*, *Juncus* species, *Cornus stolinifera*, and mosses, only metres away from proposed base of Turbine #2. One of the crane pad stakes was submerged and in the middle of the wetland. This situation is documented on video on Nature Canada’s website. [[16]](#footnote-16) Additionally, Turbine # 4, is only 250 metres from the shore, and approximately 100 metres from a large coastal wetland. Three other turbines are only 200 metres from the shore and in wetlands are all of the ingredients to be highly damaging to migrating birds and bats.

Ewert’s 2011 Report was not considered by the Proponent, or by the Ontario Ministry of Natural Resources in developing their Bird and Bat guidelines (no mention of Great Lakes shorelines significance). The new information must be considered when reviewing this proposal as it points to a previous gap in the research body and demonstrates the vulnerability of Ostrander Point.

Raptor migration significance of Ostrander Point

Raptor studies by the Proponent or cited in the reports confirm that large numbers of hawks, owls, eagles, falcons, ospreys and harriers migrate through Ostrander point on their fall migrations. In section 4.3 **of** Appendix C, the Bird Report and Acadia Radar Study of the Draft Environmental Review Report [[17]](#footnote-17) (henceforth called the Bird Report) it is stated: “fall migration raptor surveys found relatively high raptor movement at the Study Area, peaking in early October with 70 observations/hour on October 5, 2006 and 109 observations/hour on October 8, 2009.” In terms of direction of flight it was said “many raptors appeared to be moving eastward, towards the tip of the Prince Edward Point peninsula but many were also observed moving west, towards Point Petre.” When compared with numbers of birds from other hawk watching stations on Lake Ontario and Lake Erie (which support some of the highest concentrations of birds of prey in the interior of North America, excluding coastal areas), the report states the following: “Numbers at the Study Area were generally similar to or slightly higher than at the other count locations.“ The Bird Report notes also that on October 29, 2008, 63 Golden Eagles, provincially endangered in Ontario, and over 1,000 Red-tailed Hawks flew over nearby Prince Edward Point. Ostrander Point’s significance to raptors is demonstrated by the high observational numbers, the risk of disrupted function is too high to allow turbine development.

This is also a major Owl migrations area. The Bird Report discussed the migration of the Northern Saw-whet Owls, monitored regularly by mist netting at nearby Prince Edward Point Bird Observatory inside the Prince Edward Point National Wildlife Area. The observatory captures the highest number of migrating Northern Saw-whet Owls of any bird observatory in Canada. The small owls flood past in the month of October, with numbers captured and banded usually exceeding 500 per year. The Report cites those who have observed the phenomenal Saw-whet migration as stating “that most of the Northern Saw-whet Owls arrive at Prince Edward Point via a land route from the mainland moving eastward down the peninsula. They also hypothesized that most owls do not cross Lake Ontario, but instead backtrack westward upon reaching the point.” This hypothesis, based on observation implies that the Saw-whets would cross the area of Ostrander Point twice, once on their way east, and a second time on their way back west. The Bird Report also states that “the manner and height at which (Northern Saw-whet Owls) fly is poorly understood.”

Despite concerns about the potential impact of the proposed wind energy project by Environment Canada, the Proponent has no answer to the question of whether the project is likely to impact Saw-whet Owls, and did not conduct any specific studies to address this important question.

The data presented are irrefutable in attesting to the high number of birds of prey migrating through Ostrander Point. Draft mortality thresholds from the Ontario Ministry of Natural Resources (MNR, pg. 10, October, 2010) set the threshold for raptors fatalities at 0.2 per turbine or a total of 2 for a project with fewer than 10 turbines (such as this project). Given the high concentration of both diurnal and nocturnal raptors, it would seem that the likelihood of exceeding the threshold would be very high.

Significance of site for aerial insectivores and inadequate sampling

The surveys completed by Stantec were poorly timed and thus did not properly capture the true nature of site usage. For example, aerial insectivores are a group of bird species that share a common feeding technique of capturing most of their food (flying insects such as moths and mosquitos for example) while flying and includes familiar species like the Purple Martin and Barn Swallow. Their feeding behaviour renders them particularly vulnerable to being struck by the fast moving turbine blades (tip speed is over 200 km/hr). Swallows, swifts and nightjars declined by over 80% over the last 40 years. Six swallow species, Tree, Bank, Barn (recently listed by COSEWIC)[[18]](#footnote-18), Cliff, Northern Rough-winged[[19]](#footnote-19), and Purple Martin were noted in both the spring and the fall surveys by Stantec[[20]](#footnote-20). The fall migration of swallows along the Great Lakes coastal areas, particularly for Eastern Lake Ontario and the St. Lawrence, is very impressive. Based on the data presented in Stantec’s Bird Report and Acadia Radar Study (2009), their surveys started on August 12, which is after much of the post breeding swallow migration had already occurred. This is a major concern, as wind turbines constructed and operating in congregatory locations for swallows such as the southern coastline of Prince Edward County, or Wolfe Island poses a disproportionate risk to this declining group of birds. Tree Swallow and Purple Martin in particular, have suffered the highest casualty rates of all species at the nearby Wolfe Island wind farm, with several casualties occurring in the July and August period that was not monitored by Stantec. Swallows are aerial insectivores, and hunt at various heights depending upon air pressure and prey height. This, combined with evidence that wind turbines attract insects,[[21]](#footnote-21) predisposes swallows to the risk of collision with turbine blades. The highest numbers of individuals for all species of swallows occurred within the first five days of the fall sampling period, and for three of the species on the very first day (August 12), suggesting that Stantec did not adequately document the migration of Swallows.

The Common Nighthawk a listed Species at Risk (Threatened, federally and Special Concern, provincially), was not detected in the fall migration study, but frequents the south shore of Prince Edward County during fall migration. It is observed annually at the nearby Prince Edward Point Bird Observatory. In 2009, 52 Common Nighthawks were observed moving through the migration monitoring station between August 23 and September 1, including a high of 25 individuals on August 24. Common Nighthawk is well-known to concentrate along and follow the Great Lakes coastlines during migration. As it is an aerial insectivore, it feeds on flying insects like the swallows do, and is subject to the same risks. Areas proximate to the shoreline, such as Ostrander point, have higher concentrations of insects such as midges and mayflies than inland areas as much of the project is in or beside wetland habitat where insects will proliferate whether or not turbines attract them. Birds and bats evolved to use this site in fall staging for this reason and will continue to do so. We therefore believe that the potential of the wind turbines to attract insects, which in turn attract bats and birds such as the Common Nighthawk and Whip-poor-will (discussed below), is high at Ostrander Point.

The failure of the Proponent to detect Common Nighthawk in their bird surveys does not mean that this bird is not present at Ostrander Point. Rather, it underlines a deficiency in their survey methods and consequent conclusions, which should have included a discussion of Common Nighthawk, a federally and provincially listed Species At Risk, and used bird migration data from Prince Edward Point Bird Observatory to fill this gap.

Migratory behaviour of nocturnal migrants ascending and descending enhances risks

Information provided by the Proponent including radar studies conducted in the spring and fall of 2008 confirm that large numbers of birds move through Ostrander Point and suggest that a wind energy project at Ostrander Point could present a significant risk to a large number of birds, and perhaps bats. 70,355 “targets”[[22]](#footnote-22) were detected in the spring, of which 41% were considered within the range of the turbine blades, and 160,649 “targets” were detected in the fall, of which 50% were within the height of the turbine blades.[[23]](#footnote-23) Perhaps the most concerning observation was that the birds appear to move in multiple directions at lower altitudes in the fall[[24]](#footnote-24), perhaps indicating that they attempt to get their bearings and orient themselves as they gain altitude and commence migration. Many of the birds may, in fact, simply be moving around their migratory stop-overs in the IBA. Such behaviour could put large numbers of birds at risk. The geography of the Long Point Peninsula and southern Prince Edward Point concentrates large numbers of birds along the peninsula’s east-west axis in the fall.

Ewert (2011) notes that angle and rates of ascent and descent from stopover sites have received little attention in the scientific literature, but that this information is “is critical information needed to define buffer zones”[[25]](#footnote-25). The Acadia Radar study did show that birds move through the air at the height of the turbine blades in large numbers and exhibit behavior that would expose them to a higher risk than if they simply dropped out of the sky, or ascended rapidly.

Ewert’s (2011) recommendations with regard to Great Lakes features like Ostrander Point are unequivocal:

“Wind turbine development should avoid areas where large numbers of migrating birds concentrate (e.g. Important Bird Areas), including agricultural fields traditionally used by large numbers of migrating/wintering birds, or where large numbers of migrating birds are predicted to occur (Ewert et al. 2005). Placing wind turbines, or other tall structures, in areas where relatively large numbers of birds occur increases the risk of collision with the structure and may have both local and cumulative consequences for bird populations.”[[26]](#footnote-26)

All of the turbines on the Ostrander Point Crown Land Block would be built within one kilometre of Lake Ontario, and three within approximately 200 metres of the shoreline. This is directly in the path of bird migration and movements.

In light of the overwhelming body of evidence about the significance of Great Lakes coastline, Ewert recommends that “wind energy development be avoided within 5 miles (8km) of the nearest coast or shoreline, either mainland or island.”[[27]](#footnote-27)

In reviewing data on migrating birds, both songbirds and raptors, the only conclusion one can reach is that there is high confidence in suggesting that the site will have significant impacts on birds, and that the potential for the site having catastrophic impact is high.

From the perspective as an important migratory location, an Environmental Assessment Officer with Environment Canada’s Protection and Operations Division – Ontario has described Ostrander Point in the following way:

“This is one of the most important landfall sites in Ontario. Unique about this particular site is that birds are ascending and descending during migration, whereas normally they migrate over the landscape in a broad front above the typical height of wind turbines. Since birds on migration in this area can therefore be found at tower height, and are typically very tired and stressed when descending, they may be more at risk of collision with wind turbines.”[[28]](#footnote-28)

The US National Wind Coordinating Collaborative, a body comprised of industry, government and some non-governmental groups, concludes:

“There is a need to conduct studies to identify migratory pathways, congregation areas such as staging and stopover habitats, and other areas of high concentration to aid in risk assessment and avoidance of high risk sites when developing wind power.” [[29]](#footnote-29) Surely Ostrander Point would meet and surpass all of the criteria suggested by this advisory body.

-**Section 1 Findings**-

The function of Ostrander Point, within the Prince Edward Point South Shore Important Bird Area is a significant migration corridor and migratory stop-over this is ample reason to not permit any form of industrial development within the Crown Land Block. **An Industrial Wind Turbine facility at Ostrander Point would cause significant disruption to the function of this Important Bird Area.**

1. **Significant community of breeding birds destroyed permanently**

If the proposed wind energy plant is built, it is estimated that each turbine will result in the loss of approximately 0.5 hectares of habitat, much of it scrub alvar with its scrub land and grassland bird community. Perhaps even more significantly, it will result in the fragmentation of the entire ecosystem, through its network of roads, infrastructure and the associated disturbance. Ewert (2011) concludes that “habitat fragmentation and loss appears to affect grassland biota more than direct mortality from collisions with turbines.”[[30]](#footnote-30) Leddy (1996)[[31]](#footnote-31) as reported by Ewert, found reduced avian use of Conservation Reserve Program (CRP) grasslands near turbines was attributed to avoidance of turbine noise and maintenance activities, or reduced habitat effectiveness because of the presence of access roads and large gravel pads surrounding turbines.[[32]](#footnote-32) It is important to note that all of these features, access roads, large gravel pads and regular disturbance, will be an unavoidable feature of the Ostrander Point Wind Energy Park if it goes ahead.

Currently, the scrub alvar, wetland and patchy forest community is highly significant for breeding birds with many species of conservation concern occurring within the habitats of Ostrander Point. Fourteen conservation priority species from Partners in Flight, a multi-party, North American alliance of governmental and non-governmental groups concerned with landbird conservation, breed within Ostrander Point. This includes Northern Harrier, Whip-poor-will (Threatened federally and provincially), Black-billed Cuckoo, Northern Flicker, Willow Flycatcher, Eastern Kingbird, Wood Thrush, Brown Thrasher, Field Sparrow, Savannah Sparrow, Grasshopper Sparrow, Eastern Towhee, Eastern Meadowlark and Baltimore Oriole. Most of these species are experiencing serious declines in Ontario (Atlas of the Breeding Birds of Ontario, 2001 – 2005). The State of Canada’s Birds Report, due for release in spring of 2012, describes the grassland bird community and aerial insectivores as two of the most imperilled groups of species in Canada. Grassland birds in the Great Lakes St Lawrence ecozone have declined by over 70% in the past 40 years, with species like Eastern Meadowlark, Eastern Kingbird, Field Sparrow and Grasshopper Sparrow experiencing some of the greatest declines. Eastern Meadowlark was recently added to COSEWIC’s list of Threatened Species.

The area also has high densities of Wilson’s Snipe and American Woodcock, two species of which the males conduct aerial displays at approximately the height of the turbine blades. The report concludes that these species “may be at higher risk to collisions with turbines.” These species have both turned up on the casualty list of the nearby Wolfe Island Wind Energy Park[[33]](#footnote-33).

The combination of habitat loss and fragmentation, disturbance from the road system, the operating turbines, and associated infrastructure will degrade the significant bird community at Ostrander Point. Some of the proposed turbines are within or very close to provincially significant woodland or provincially significant wetland. Most are proposed to be built on rare scrub alvar – prime breeding habitat for many of the species listed above. All of the area is currently in natural habitat, not anthropogenic habitat such as farm fields.

-**Section 2 Findings**-

Ostrander Point is a high quality habitat and of major significance to the breeding bird community. **There is increasing evidence that both the turbines and the effects of habitat fragmentation would be a direct threat and cause serious harm to the breeding bird community.**

1. **Species at Risk habitat destroyed and species at risk killed and threatened in perpetuity**

The project poses a high risk to several Species at Risk, due to the risk of death from the turbines, the infrastructure, and through the direct destruction of habitat. The Proponent identified many potential species at risk that could be impacted by its project in its Natural Heritage Assessment. With regard to birds, they reported that:

“Four designated species at risk were observed during migration but are not expected to be

breeding in the Subject Property:

* One Golden-winged Warbler (federally threatened and a species of special concern provincially) was observed during spring migration.
* One Short-eared Owl, (a species of special concern federally and provincially) was observed during fall migration.
* 179 Rusty Blackbirds (a species of special concern federally, but not listed provincially) were observed during fall migration.
* Four Bald Eagles (not at risk federally, special concern provincially) were observed flying over the Subject Property during the 2006 fall raptor migration study and 34 were observed during the 2009 fall raptor migration study. Eighty percent of Bald Eagles recorded during 2009 surveys were flying above blade sweep height (i.e. greater than 125 m). Bald Eagle was not considered to be breeding or wintering in the Subject Property.”

After their limited field work, they dismissed the importance of Ostrander Point for species at risk:

“Given the small numbers of these species and the transitory presence through the site, the Subject Property is not considered candidate significant wildlife habitat based on the presence of species at risk or low S-rank species.” [[34]](#footnote-34)

Despite this claim in their Natural Heritage Assessment, in June, 2011, the Proponent applied for a permit under Section 17 of the Provincial Endangered Species Act to allow Gilead Power Corporation to kill, harm and harass Blanding’s Turtle and Whip-poor-will as well as damage and destroy the habitat of Whip-poor-will for the purpose of the development and operation of Ostrander Point Wind Energy Park: an admission that these species are resident to Ostrander Point Crown Land Block, and that the project has a high likelihood to killing these endangered species and damaging their habitat.

Whip-poor-will

Whip-poor-will, a threatened species both nationally and provincially, survives and reproduces successfully in this ideal habitat of woodland edges, open scrubland and exposed bedrock at Ostrander Point. Several hectares of both breeding and foraging habitat will be destroyed by the construction of access roads and turbines. Its functionality as habitat will be further impaired by the operation of the turbines. Though Whip-poor-will generally forage below the tree canopy, there is no reason to believe that under certain atmospheric conditions, individuals would not forage within the range of the turbine blades, exposing them to collision risk. In addition, there is evidence that insects are attracted to wind turbines[[35]](#footnote-35), and given the prolific hatches of insects proximate to Lake Ontario, we believe that there would be an increased likelihood of insect concentrations around the turbines, providing an added attraction to the insect-foraging whip-poor-will, and exposing it further to the risk of collision. As whip-poor-will is known to roost on gravel roads, we believe that road improvements and increased use for service vehicles and members of the public will expose the birds to further risk of collision with vehicles. From a cumulative effects perspective, the proposed project is only one of many others being contemplated for the eastern shore of Lake Ontario, including the nearby White Pine Wind Energy Project, which risk further displacing whip-poor-will once turbines are constructed.

Blanding’s Turtle

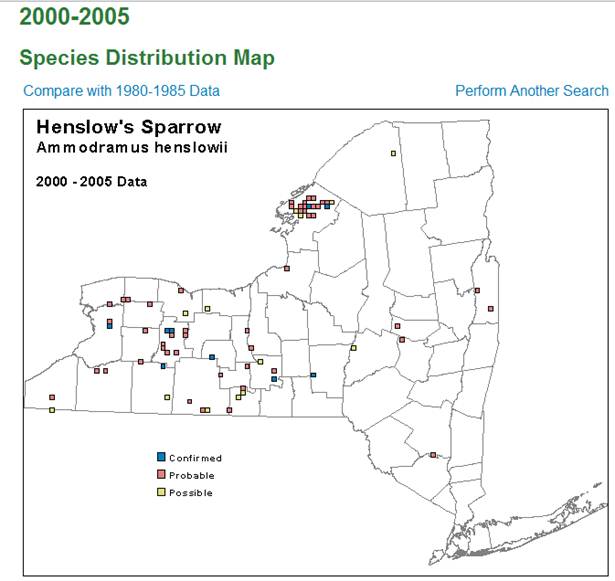
Blanding’s turtle, a threatened species federally and provincially, is also found on Ostrander Point. This species was located at several wetlands throughout the site and on adjacent roads. Blanding’s turtle has a number of life history characteristics that make populations extremely vulnerable to decline from any increase in adult mortality. These turtles do not reach maturity to close to 20 years and population sustainability relies on extremely high adult survivorship (over 90% per year)[[36]](#footnote-36). The primary causes of decline in this species are a) loss of their wetland habitat and b) increased additive adult mortality, primarily on roads because individuals undergo large terrestrial movements between wetlands and to nesting habitat.

Despite Blanding’s turtles being present throughout the study area, Stantec only included “potential overwintering habitat” as “critical habitat” and claim that the proposed development would not affect habitats essential for the survival of the species.[[37]](#footnote-37) However, as mapped in Figure 1 of Appendix A in the assessment of Blanding’s turtle habitat, the proposed wind turbines and access roads would both cross and affect a number of oviposition sites required for recruitment and wetlands known to be used by Blanding’s turtle individuals for foraging. We fail to comprehend how foraging wetlands and nesting sites would not be considered essential for this population. We believe that placing additional roads in this site would have a significant negative effect on Blanding’s turtle because a) road mortality to adults is one of the largest threats to this species, and b) construction of roads through wetlands would alter the hydrology and function of these habitats for this species. Road construction surrounding and through wetlands has been linked to loss of reptile and amphibian biodiversity in southern Ontario[[38]](#footnote-38), and we believe the function of the small ephemeral wetlands in the study site would be compromised by the proposed construction. This would contribute to the decline of Blanding’s turtle from this site, and likely cause a negative net effect.

In addition to the adults of this species affected, the proposed project will likely also influence hatchlings dispersing from oviposition sites. Although at the time of the assessment very little was known about the movements, habitat preferences, and overwintering sites of hatchlings, a recent study using telemetry in Algonquin Provincial Park indicates hatchlings of this species may overwinter terrestrially and in portions of wetlands with much shallower water than adults[[39]](#footnote-39). This indicates that the proposed infrastructure may compromise overwintering sites of hatchlings and reduce recruitment. Even if workers are trained to avoid adult Blanding’s turtles on roads, hatchlings are very small (3 cm long) and would likely be missed even by trained observers. The proposed access roads would likely bisect routes used by hatchlings moving from oviposition sites to overwintering sites, and individuals may be struck on roads.

Henslow’s Sparrow

The Great Lakes Region is very important to the global range of the Endangered Henslow’s Sparrow, a Federally and Provincially Endangered Species. The Henslow's Sparrow (Ammodramus henslowii) is one of the rarest birds in Ontario. During the Atlas of Breeding Birds of Ontario 2001 to 2005, there were only 8 possible records of the species in the entire province. For years, a breeding population of this tiny sparrow has persisted in upper New York State, not far from Prince Edward County, near the east end of Lake Ontario. The New York population shown in the figure below[[40]](#footnote-40) would be the “source” population for re-colonization of nearby areas like Prince Edward County.

  
Henslow’s Sparrow was one of a few Endangered Species identified by Stantec as a priority for their preconstruction surveying for Gilead Power Corporation. In the Environmental Review Report of 2009, Stantec reported the following:

“An assessment of the Study Area for potential Henslow’s Sparrow breeding habitat was completed. No optimal habitat was identified (Section 3.5.3 of Appendix C1). Three relatively small patches of marginal habitat for the Henslow’s Sparrow were the subject of playback surveys. No Henslow’s Sparrows were detected. The species has experienced significant decline in Ontario, and it should be considered absent from the Study Area.”

While the species may have been absent from the “Study Area” (within 120 metres of the proposed turbines according to their definition), we contend that Ostrander Point does contain Henslow’s Sparrow habitat, and moreover, the Ontario Ministry of Natural Resources itself invested funds and effort in restoring Henslow’s Sparrow habitat at Ostrander Point in the late 1990’s that included brushing and prescribed burning. These efforts were successful, which is documented in the Recovery Strategy for Henslow’s Sparrow published by Environment Canada[[41]](#footnote-41):

“In 1998, an adaptive habitat management project was initiated at Ostrander Point in Prince Edward County. Approximately one third of the area identified for treatment was mowed and cleared of brush. In 1999, bird surveys were conducted to determine if the mowing and clearing of brush had had a positive impact on Henslow’s Sparrow. Several singing males were heard in 1999 and again in 2000, indicating that with careful habitat management, this species may again breed at this site (Environment Canada 2006).”

Both the Federal and Provincial Governments have invested in the recovery of this species, so from our perspective, it is incomprehensible that the habitat which was restored, and which will likely attract more of one of the most endangered birds in Ontario from its nearby source population in upper New York State, is being considered for an industrial wind energy project.

Ewert (2011), describes protection of Henslow’s Sparrow habitat and populations as one of only two “target” species in the Nature Conservancy’s proposed Wind Energy Guidelines, making the following recommendation:

“Because of their sensitivity to fragmentation and behavioral responses to turbine construction, operation, and maintenance, grassland birds, rather than other species or processes, drive our recommendations for development in or near grassland habitat in the Great Lakes region. Because of the scarcity of grassland habitat, we recommend avoiding construction in patches of grassland >76 acres (30 ha) in the Great Lakes region to minimize effects on Henslow’s Sparrow.”

We have not discussed the presence of other species at risk, though the Proponent’s studies revealed the presence of several others including Golden-winged Warbler, Rusty Blackbird (peaked at 108 individuals on October 18), Eastern Meadowlark, and Bobolink.

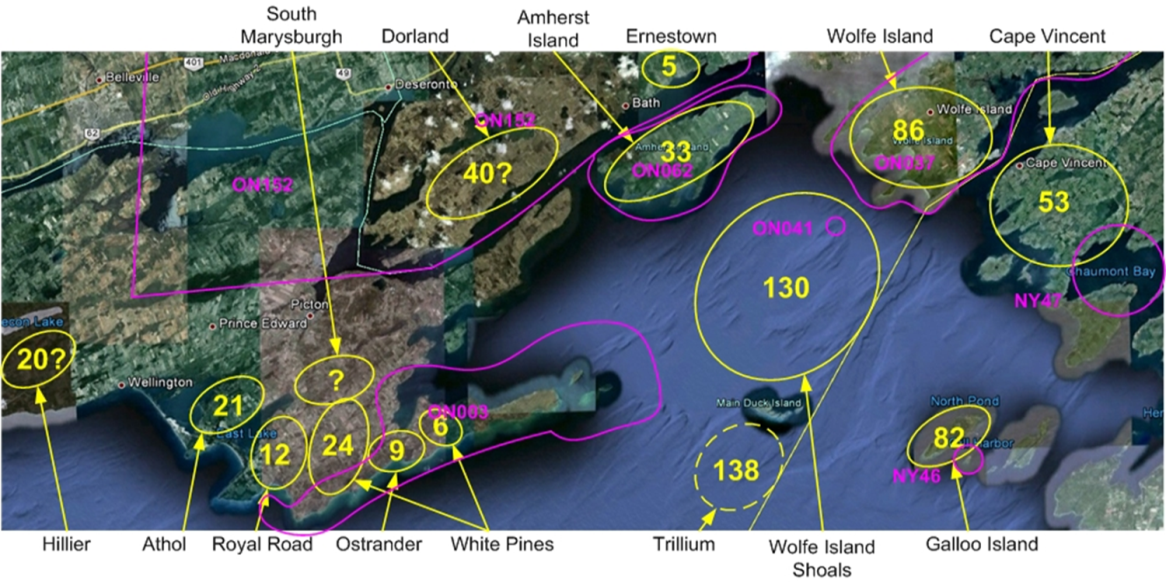
-**Section 3 Findings**-

Due to the quality of habitat and the geography of Ostrander Point, **a wind energy project on this location will destroy the habitat of Species as Risk, kill them, and pose a continual and permanent risk to local populations.** For these species whose populations are already compromised, Ostrander Point should be preserved as safe, productive habitat.

1. **Contribution to cumulative impact – populations of some species will be impacted.**

Over the next several years, and subject to the Great Lakes off-shore moratorium being lifted, several hundred wind turbines are proposed for the eastern Lake Ontario basin lands and waters[[42]](#footnote-42).

|  |  |  |
| --- | --- | --- |
| **Wind Project** | **Status** | **No. Of Turbines** |
| Ostrander Point | OPA Contract | 9 |
| White Pines | OPA Contract | 29-30 |
| Amherst Island | OPA Contract | 30-35 |
| Ernestown | OPA contract | 4-6 |
| Wolfe Island | Operating | 86 |
| Loyalist I and II | Awaiting ECT | 21 |
| White Pines II | Proposed | 36 |
| Dorland | Proposed on Gilead website | 20-40 |
| Prince Edward County Off-shore | Proposed on Gilead website, subject to offshore moratorium | 110 to 120 |
| Wolfe Island Shoals | Subject to offshore moratorium | 60-150 |
| Trillium I and II | Subject to offshore moratorium | 282 |
| **Total of land-based Turbines** |  | **199-227** |
| **Total of all proposed Turbines** |  | 651-779 |



PEC offshore (Gilead)

120

Figure 1: Approximate locations of proposed and existing wind energy plants in the Eastern Lake Ontario basin

The cumulative impact of this high concentration of wind turbines has the potential to significantly impact populations of many species of wildlife. The only regional example from which to predict impacts is the nearby Wolfe Island Wind Energy Park, which has been operating for about 2.5 years. TransAlta's Wolfe Island Wind Energy Park has one of the highest annual rates of casualties in North America and the highest in Canada, reporting 16.5 birds per turbine and 43.7 bats per turbine, based on the 6 month study period from July 1 to December 31, 2010. [[43]](#footnote-43) This would amount to approximately 1500 birds and about 3800 bats killed over a one year period, assuming similar casualty rates for the other months. Only one wind plant of the 45 reported on in a landmark 2010 study by the US National Wind Coordinating Committee had higher casualty rates per turbine, the Buffalo Mountain Wind Farm in Tennessee, which consisted of only three .66 MW turbines at the time of the study.[[44]](#footnote-44) 600 to 800 wind turbines on the migration route of hundreds of thousands, if not millions of bird has a high potential to cause inflict serious damage on some species populations.

The species that are being impacted on Wolfe Island are a cause for concern, as they including large numbers of Swallows which are all declining in Ontario, as well as the Bobolink, which was recently listed as Threatened by COSEWIC, birds of prey including resident Red-tailed Hawks, and species of migratory bats, or which very little is known with regard to population size, but which we do know have very low rates of reproduction, and which are already threatened by other factors including white nose syndrome.[[45]](#footnote-45) For this reason, assessing the cumulative impact based on aggregate casualty rates is misleading as species casualties are not random. Rather, they are heavily biased towards certain species of birds and bats. Raptors, swallows, and birds with aerial behaviours are susceptible to death by moving wind turbine blades, just as migratory bats are predisposed to succumb to the sudden drop of air pressure near the blade tips causing “barotrauma.” The cumulative impact of wind energy projects on these vulnerable species must be determined before it is too late.

While the Proponent considered cumulative impact in one entire chapter or their draft environmental report, they limited the scope of the assessment to effects within Prince Edward County. [[46]](#footnote-46) In their discussion on potential effects to birds, they conclude:

“Given the low rate of bird mortality at constructed wind facilities in Ontario, the anticipated level of mortality at all facilities in the CEA Study Area is not expected to combine to have a population level effect. Similarly, a larger number of turbines are expected to result in a larger number of bat fatalities. In the case of bats, very little information exists regarding bat populations, long-term population trends, and migration routes for Ontario bats (MNR, 2007), and there is resulting uncertainty regarding the cumulative significance of potential bat mortality.”[[47]](#footnote-47)

The problem with the Proponent’s assessment is that it was made before post construction data was published from Wolfe Island, which negates the initial assertion on “low rates of bird mortality at constructed wind facilities in Ontario” and which undermines the significance of the area for migrating bats.

Secondly, it underestimates the likelihood of population-level effects for birds. In their report on Wind Turbine interactions with Wildlife, the National Wind Coordinating Committee recognizes that “. . . as wind energy facilities become substantially more numerous and as wind development continues to grow, fatalities and thus the potential for biologically-significant impacts to local populations increases (NAS 2007; Erickson et al. 2002; Manville 2009).”[[48]](#footnote-48)

Therefore, the level of assessment of cumulative impact by the Proponent is inadequate in space and time. It does not consider the increasing number of hazards and risks faced by birds and bats migrating through the Eastern Lake Ontario Basin. A recent review of the effectiveness of cumulative impact assessment for wind energy projects in the UK, reached a conclusion that assessments that are too limited in scope in space and time are inadequate:

“Cumulative impacts are currently considered on restricted scales (spatial and temporal) relating to individual development EIAs. We propose that benefits would be gained from elevating CIA to a strategic level as a component of spatially explicit planning[[49]](#footnote-49).

While Ostrander Point seems like a small project in the context of the other projects, we consider it the most significant through what it represents. It is on publically-owned natural habitat with well documented natural heritage features within very close proximity to the shoreline in the middle of Globally Significant Important Bird Area. It is our contention that if a wind energy plant is permitted in these circumstances, all other applications (assuming that one day the offshore moratorium is lifted) would easily pass into reality, and the true cumulative impact would be felt by many species of wildlife far too late for us to make a difference.

-**Section 4 Findings**-

The Proponent’s cumulative impact assessment on birds and bats was too limited in scope. **The high risk scenario to wildlife caused by Ostrander Point becomes magnified as additional wind projects are constructed.**

**Planning and Policy reasons**

1. **Significance of the area**

Ostrander Point is situated in the Prince Edward Point South Shore Important Bird Area. Important Bird Areas (IBAs) are, simply put, the most important sites for birds on earth. Conceived and developed into a global program by BirdLife International, the world authority on bird conservation and status, IBAs are discrete sites that support specific groups of birds: threatened birds, large groups of birds, and birds restricted by range or by habitat. IBAs range in size from very tiny patches of habitat to large tracts of land or water. They may encompass private or public land, and they may or may not overlap partially or entirely with legally protected sites.

IBAs are identified using criteria that are internationally agreed upon, standardized, quantitative, and scientifically defensible. This gives them a conservation currency that transcends international borders and promotes international collaboration for the conservation of the world’s birds. It also makes IBAs an important tool for identifying conservation priorities, and fostering greater success in the conservation of bird populations. Canada’s IBAs were identified by an intensive process of site nominations and technical reviews which culminated in the recognition of approximately 600 IBAs.

The Prince Edward County South Shore IBA is globally significant for migrating landbirds, congregating waterbirds and species at risk. Within the large IBA that covers the entire south shore of the county, extending about 5 kilometres out into the lake, a few areas stand out, including Prince Edward Point National Wildlife Area, Ostrander Point Crown Land Block, and Point Petre. These areas are terrestrial hot-spots within the IBA, where diverse habitats create ideal conditions for migrant birds to concentrate and for species at risk to breed and find refuge.

Between 1999 and 2001, the Federal Government invested over one million dollars in the development of conservation plans for approximately 90 high priority IBAs across the country. The Prince Edward County South Shore Community Conservation plan was produced in 2001[[50]](#footnote-50) and represented the views of 20 individuals and 11 organizations and agencies including the local government, the Ontario Ministry of Natural Resources, the Canadian Wildlife Service, the local Land Trust, and groups such as Ducks Unlimited. Ostrander Point Crown Land block was noted in the plant as a potential site for colonization by the Endangered Henslow’s Sparrow and the MNR’s work to this end was lauded.

Though not a government program, both Federal and Provincial governments have been highly supportive and recognizant of the IBA program over the years, contributing funds, data and in-kind assistance to advancing various conservation initiatives. IBAs will figure prominently as a key site-based conservation tool in the first State of Canada’s Birds Report, expected to be published in May 2012.

In December 2011 Senator Bob Runciman, who represents the Quinte-Thousand Islands Region, introduced a motion to the Canadian Senate calling on a moratorium on wind energy projects within three kilometres of Lake Ontario, until the risk to birds and bats is thoroughly understood. The motion passed unanimously:

**“**That, in the opinion of the Senate, the province of Ontario should institute a moratorium on the approval of wind energy projects on islands and onshore areas within three kilometres of the shoreline in the Upper St. Lawrence-Eastern Lake Ontario region, from the western tip of Prince Edward County to the eastern edge of Wolfe Island, until the significant threat to congregating, migrating or breeding birds and migrating bats is investigated thoroughly and restrictions imposed to protect internationally recognized Important Bird Areas from such developments.”

In addition to IBA status, the project is located within the Candidate Provincially Significant Life Science ANSI because of the alvar habitat, significant woodland, rare species habitat and its recognized function as a migration corridor. MNR correspondence indicates that the ANSI status is currently unconfirmed and therefore an evaluation of significance is not required and the feature is not subject to development prohibitions or setbacks (MNR, March 8, 2010).[[51]](#footnote-51)

-**Section 5 Findings**-

Ostrander Point has major local, regional and international significance for birds and other natural history values. **Approval of this project will significantly disrupt the function of an internationally recognized Important Bird Area (IBA), a candidate Area of Natural and Scientific Interest (ANSI), and a significant woodland.**

1. **Provincial responsibility to international biodiversity conventions**

The diversity of life and biological significance of Ostrander Point has been clearly laid out in the above sections. The Government of Canada has acknowledged the importance of preserving the nation’s biodiversity and have made international commitments as a signatory to the Convention of Biological Diversity, in 1992. Pointed out by the Environmental Commissioner of Ontario (ECO), in their most recent report, it is the direct obligation of the Government of Ontario and in turn, the Ministry of Environment to ‘fulfill Canada’s responsibilities’, by virtue of the Canadian Constitution[[52]](#footnote-52). The province and all ministries must integrate biodiversity preservation into their decision making and land-use planning decisions where negative effects will occur. The Ministry of the Environment must recognize the “pervasive impact of biodiversity loss on almost every sector of our society“[[53]](#footnote-53) and must not allow their programs to further enhance this problem.

*Biodiversity loss and climate change are the most pressing global environmental crises of our time. When possible government actions should be deliberately complementary to action taken on the other*. [[54]](#footnote-54)

This Renewable Energy Application is a perfect example of where the MOE must acknowledge both of these pressing issues the people of Ontario face. Due to the biological significance of Ostrander Point we must not allow this harm to occur in order to increase our renewable energy supply.

-**Section 6 Findings**-

The Ministry of the Environment must observe the obligations it has under international agreements and not allow for any destruction of function to one of the most significant migration corridors for birds, breeding bird habitat, and habitat for five provincially listed Species at Risk. **This project directly neglects the importance of international agreements made regarding biological diversity conservation as a provincial responsibility.**

1. **Provincial responsibility to integrate *Ontario’s Biodiversity Strategy* on public lands**

Through protecting the ecological functions of the biologically significant Ostrander Point from the effects of this project, the government has the opportunity to show its commitment to *Ontario’s Biodiversity Strategy* on public lands. The Government of Ontario has demonstrated their commitment to further integrating biodiversity values into decision making through establishing the Ontario Biodiversity Council. This multi-stakeholder group set up by the Ministry of Natural Resources is tasked with creating a biodiversity strategy in the province. This group identifies habitat loss as the most significant threat to Ontario’s biodiversity. It would be a major oversight for the Province to miss this opportunity to protect publicly owned lands which hold such a high biological value to the province.

The three goals of this provincial strategy are to:

1. Maintain biodiversity by incorporating biodiversity consideration into decision making across the province in different sectors…;
2. Protect, restore and recover Ontario’s genetic, species and ecosystem diversity and related ecosystem functions and processes; and
3. Use Ontario’s biological assets sustainably[[55]](#footnote-55).

The Ministry of Environment should recognize these goals by protecting Ostrander Point and ensuring the Government is doing its part on the small parcels of publicly owned land in southern Ontario to reach these goals. The example must be set on public lands if the expectation of private stewardship is to occur in Ontario. This proposal by Gilead Power Corporation, as outlined in the above sections, would have a serious negative impact to the ecosystem functions and very much contradicts the vision of the Biodiversity Council.

-**Section 7 Findings**-

The Ministry of the Environment must recognize their responsibility in protecting the ecological function of Ostrander Point Crown Block and integrate biodiversity principles into their decisions. **This project goes against the goals outlined by the Biodiversity Council and would be a major lost opportunity for the Government to demonstrate their commitment to biodiversity on their own land.**

1. **Mitigation will not work at Ostrander Point**

One of the “key conclusions” of the Proponent’s Environmental Review Report was:

“Further, potentially significant adverse environmental effects have been avoided through careful site selection, following good planning principles, and adherence to regulatory requirements. All potentially net adverse effects that could not be avoided by siting, can be effectively mitigated using proven, industry accepted methods and technologies. No significant net adverse environmental effects are expected.”[[56]](#footnote-56)

With regard to migrating birds, they contend that the final site plan is an example of “mitigation” because it is a departure from an earlier draft (our emphasis):

“The final site plan incorporated changes to the layout to provide an increased turbine setback of 250 m (from the original 50 m), to the Lake Ontario shoreline. For potential direct effects related to mortality of birds and bats during operation, **this is the most important mitigation measure** **implemented for the Ostrander Point Wind Energy Park**. “Nearshore” turbines (defined as those within 250 m of the lakeshore) were shown to be responsible for a disproportionate amount of bird and bat mortality at the Erie Shores Wind Project, which is located at a similar shoreline location in a raptor migration area (but along Lake Erie) (James, 2008a). ”[[57]](#footnote-57)

This claim is misleading for many reasons. Firstly, mitigation refers to reduction of operational risks. Once operations begin, and risks are realized, mitigation can occur. Therefore, the Proponent cannot claim that shifting locations of turbines on paper is “the most important mitigation measure.” A plan for true mitigation would explain what the proponent would do in the event that their turbines cause high levels of casualties in practice. That scenario is not discussed. Secondly, the Erie Shores Wind Project is not comparable to the Ostrander Point project for many reasons including: a) Erie Shores is on farm land whereas Ostrander Point is natural habitat and wetlands, and b) Erie Shores is not on a Great Lakes Peninsula that focuses and concentrates migrants. Finally, there is evidence presented elsewhere in these comments that demonstrates that the area of concentrated bird migration is much greater than 200 metres[[58]](#footnote-58) and more likely one kilometre or more.

The other key concern about mitigation is that there is little evidence that in practice current methods reduce the effects of wind energy plants on birds. Altamont Pass Wind Farm, a huge and highly destructive wind installation in California, was ordered to implement mitigation techniques following years of concern about extremely high numbers of raptor casualties. A study on the success of the mitigation efforts, two years after implementation, revealed that casualty rates actually increased, and many of the measures that were intended were not implemented[[59]](#footnote-59) . . . a case of failed mitigation. Another example closer to home is TransAlta’s Wind Energy Park on Wolfe Island. Despite surpassing “reporting thresholds” for numbers of casualties for many individual turbines several times over their 2.5 years of operation, the company is yet to take any mitigation action such as turning the blades off, or feathering the blades. These examples underline the difference between a promise and reality. Mitigation is promised, but in our two examples involving wind energy plants in bad locations, despite the knowledge that the operations are damaging biodiversity, and despite promises to mitigate, the damage continues.

-**Section 8 Findings**-

Mitigation of the potential impacts of plant operations on birds and bats was inadequately addressed by the Proponent. **With respect to bird casualties, there are very few examples of successful mitigation in relieving or eliminating a threat, the measures outlined by the Proponent would not work.**

1. **Threat to National Wildlife Area (identified due to significance for migrant land birds)**

Each spring and autumn, Prince Edward Point National Wildlife Area (NWA) comes alive with songbirds and raptors. Located on a major migration route on the eastern tip of Prince Edward County, this 560-hectare parcel of wilderness was established in 1978 to protect migratory landbird habitat – the only NWA specifically established for this reason. The Prince Edward Point Bird Observatory operates a migration monitoring station within the NWA, one of 25 across the country that track three to five billion birds as they leave the boreal forest every fall on their way south to their non-breeding territories, and return to Canada the following spring. These migration monitoring stations are the only real way to monitor these species’ populations. Usually over 2,000 hawks, eagles and falcons are documented per fall at the Bird Observatory, including Bald Eagles, Golden Eagles and Peregrine Falcons, underlining the significance of this location to migrating raptors.

Prince Edward Point NWA is one of 51 of Canada's best wildlife habitats scattered across the country. Established and protected under the Federal *Canada Wildlife Act*, each NWA is nationally significant for migratory birds, wildlife, or ecosystems at risk, or represents rare or unusual wildlife habitat. They collectively represent the best wildlife areas in Canada. Every one of them protects water resources, filters the air, and provides ecological services that benefit all forms of life, including humans.

The importance of the National Wildlife Area to Prince Edward County's economy is evident in the numbers of people participating in the Birding Festival mid-May.  "Taste the County" statistics show that tourists attracted by the natural heritage of PEC revisit for the historic home market, wineries and museums. Yet the Prince Edward Point National Wildlife Area faces severe threats.

Ostrander Point Crown Land Block is about 6 kilometres directly west of the National Wildlife Area on the narrow Long Point Peninsula. If the Ostrander Point Wind Energy Park goes ahead, it could disrupt migration patterns and create a permanent major physical threat to the hundreds of thousands of birds that migrate along the shoreline toward or away from the only National Wildlife Area in Canada created specifically for its significance for migratory landbirds.

-**Section 9 Findings**-

The project at Ostrander Point would cause a high risk to birds, and bats moving along the Long Point Peninsula to and from the Prince Edward Point National Wildlife Area. **There is a strong likelihood that the project would compromise the very reasons why the National Wildlife Area was created.**

**-- SUMMARY --**

**We have presented nine compelling reasons based on sound science and local knowledge explaining why Gilead Power’s Application for a Renewable Energy Permit must be rejected. In our view, each individual reason presents a sufficiently strong case to reject the application. Together, they represent an overwhelming argument against this project, and a very strong case to formalize protection and management of this ecological gem and lynchpin of biodiversity in the Prince Edward County South Shore Important Bird Area. We encourage the Ministry of the Environment to make the right decision and also we encourage the Proponent to pursue its interests in building renewable energy projects in areas where the threats to biodiversity are minimal.**

Respectfully,

Ted Cheskey Joshua Wise

Manager of Bird Conservation Programs Greenway Program Coordinator

Nature Canada Ontario Nature

1. [www.ibacanada.ca](http://www.ibacanada.ca) [↑](#footnote-ref-1)
2. Environment Canada, Canadian Wildlife Service. 2007. Wind Turbines and Birds Guidance Document for Environmental Assessment [↑](#footnote-ref-2)
3. Wind Turbines and Birds A Guidance Document for Environmental Assessment. Environment Canada, Canadian Wildlife Service, February, 2007. [↑](#footnote-ref-3)
4. See Ewert, D.N., J.B. Cole, and E. Grman. 2011. Wind energy: Great Lakes

   regional guidelines. Unpublished report, The Nature Conservancy, Lansing, Michigan. Pp 24, 25. [↑](#footnote-ref-4)
5. François Gagnon, Jacques Ibarzabal, Jean-Pierre L. Savard, Pierre Vaillancourt, Marc Bélisle, and Charles M. Francis. 2011 Weather Effects on Autumn Nocturnal Migration of Passerines on Opposite Shores of the St. Lawrence Estuary *The Auk* 128(1):99:112, 2011 [↑](#footnote-ref-5)
6. Stantec Consulting. October, 2010. Ostrander Point Wind Energy Park Natural Heritage Assessment and Environmental Impact Study. Guelph, ON sections 3.3.1- 3.3.4 [↑](#footnote-ref-6)
7. Audrey Heagy, personal communications [↑](#footnote-ref-7)
8. David Okines, personal communications. Okines has been the Field Ornithologist and Bander-in-charge of the Prince Edward Point Bird Observatory for over 10 years. [↑](#footnote-ref-8)
9. Taylor, P.D., S.A. Mackenzie, B.G. Thurber, A.M. Calvert, A.M. Mills, L.P. McGuire & C.G. Guglielmo. Landscape Movements of Migratory Birds and Bats Reveal an Expanded Scale of Stopover. Invitation for re-review. PLOS One, May 2011. [↑](#footnote-ref-9)
10. Ibid. [↑](#footnote-ref-10)
11. David Okines, personal communications. [↑](#footnote-ref-11)
12. Ewert, D.N., J.B. Cole, and E. Grman. 2011. Wind energy: Great Lakes

    regional guidelines. Unpublished report, The Nature Conservancy, Lansing, Michigan. [↑](#footnote-ref-12)
13. Ibid, pps 24-25. [↑](#footnote-ref-13)
14. Ibid [↑](#footnote-ref-14)
15. Stantec Consulting Ltd. February 2009. “Ostrander Point Wind Energy Park: Draft Environmental Review Report.” 2.2.1 [↑](#footnote-ref-15)
16. http://naturecanadablog.blogspot.com/2012/02/ostrander-point-turbines-proposed-in.html [↑](#footnote-ref-16)
17. Stantec Consulting. February, 2009. Ostrander Point Wind Energy Park. Draft Environmental Review Report Appendix C. Bird Report and Acadia Radar Study: Appendices C and F [↑](#footnote-ref-17)
18. COSEWIC (Committee on the Status of Endangered Wildlife in Canada) is a committee of experts that assesses and designates which wildlife species are in some danger of disappearing from Canada [↑](#footnote-ref-18)
19. Not on Stantec list, but large numbers observed in May at nearby Prince Edward Point Bird Observatory. [↑](#footnote-ref-19)
20. Stantec Consulting. February, 2009. Ostrander Point Wind Energy Park. Draft Environmental Review Report Appendix C. Bird Report and Acadia Radar Study: Appendices C and F [↑](#footnote-ref-20)
21. C. V. Long & J. A. Flint & P. A. Lepper, Insect attraction to wind turbines: does colour play a role? European Journal of Wildlife Research Volume 57 Number 2 (2011) 57:323-331 [↑](#footnote-ref-21)
22. There is a full discussion in the Appendix C of Bird Report and Acadia Radar Study [↑](#footnote-ref-22)
23. Stantec Consulting. February, 2009. Ostrander Point Wind Energy Park. Draft Environmental Review Report Appendix C. Bird Report and Acadia Radar Study. [↑](#footnote-ref-23)
24. Ibid. See summary data for the fall, with several references to mixed directional movements. [↑](#footnote-ref-24)
25. Ewert, et al. 2011. pg. 11. [↑](#footnote-ref-25)
26. Ibid. pg. 13. [↑](#footnote-ref-26)
27. Ibid, pg. 28 [↑](#footnote-ref-27)
28. Email, Denise Fell to Marnie Dawson, Mar 4, 2008. [↑](#footnote-ref-28)
29. National Wind Coordinating Collaborative. 2010. Wind Turbine Interaction with Birds, Bats and their Habitats: A Summary of Research Results and Priority Question. Pg. 8. [↑](#footnote-ref-29)
30. Ewert et al. pg. 29. [↑](#footnote-ref-30)
31. Leddy, K. L. 1996. Effects of wind turbines on nongame birds in Conservation Reserve Program

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32. Ewert, et al. pg. 30. [↑](#footnote-ref-32)
33. WOLFE ISLAND WIND PLANT POST-CONSTRUCTION FOLLOWUP PLAN BIRD AND BAT RESOURCES. MONITORING REPORT NO. 5 JANUARY - JUNE 2011, December 2011, Stantec Consulting Ltd. [↑](#footnote-ref-33)
34. Stantec, 2010. Pg. 3.15 [↑](#footnote-ref-34)
35. C.V. Long, et al, 2011 [↑](#footnote-ref-35)
36. Congdon, J.D., Dunham, A.E., and Van Loben Sels, R.C. 1993. Delayed Sexual Maturity and Demographics of Blanding's Turtles (*Emydoidea blandingii*): Implications for Conservation and Management of Long-Lived Organisms. Conservation Biology 7(3): 826-833. [↑](#footnote-ref-36)
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