

Wind Turbine Project Threatens Lake Erie Migration

by Gil Randell

The Ripley Hawk Watch, an affiliate of the Hawk Migration Association of North America, is located in Chautauqua County, NY on the south shore of Lake Erie between Erie PA and Buffalo NY. Each spring, the hawkwatch tallies approximately 20,000 migrating raptors in the southern Great Lakes flyway.

Ripley Hawk Watch can be an inhospitable place in early spring. Bitter winds off the icy waters of Lake Erie sting our eyes and chill our cups of coffee from Jack's Diner. Cars are positioned as windbreaks, and a handful of volunteer observers hunker down beside their sheltering cars to watch the skies and wait.

Two miles to the south and east, new buds from a native hardwood forest, broken here and there by grape vineyards, begin to color the steep slope from the Allegheny Plateau down to the lake plain. This escarpment, once the shore of an ancient inland sea, roughly parallels Lake Erie's shore. At the hawk watch the top of the escarpment comes within three miles of the lake, squeezing raptor migrants into a narrow corridor between the escarpment and the lake.

On days with northerly or easterly winds the face of the escarpment creates a surf of wind that raptors often ride, and the watch is conducted on the side or at the top of the mile-long slope. With southerly winds, the hawkwatchers move north, closer to the Lake Erie shore where the winds push the migrants, even the powerful peregrines, before they are turned aside into a northeasterly path by the lake barrier.

A wind turbine project proposed for the area of the hawk watch threatens to seriously affect not only our enjoyment of the migration spectacle but the even the migration itself. Chautauqua Windpower would site 34 turbines each 400 feet high along a 5.5 mile path in the towns of Ripley and Westfield along the edge of the ridge overlooking Lake Erie. Flights of migrating raptors flow through the area proposed for the turbines, frequently at altitudes that would put them at risk for collision with the turbine blades, which move at speeds of over 200 miles per hour at their tips.

Not only are raptors at risk. This area has among the highest passerine spring nocturnal migration rates documented over the past decade in North America. Recent radar studies showed the number of nocturnal migrants to be 10 times the number found in a radar survey just 60 miles inland at Wethersfield NY, the closest project with radar information available for comparison.

The best siting criteria for turbine projects currently available are those incorporated into the interim guidelines of the US Fish and Wildlife Service (USFWS). Among other

stipulations, these guidelines clearly advise **against** the following:

- 1) siting turbine projects on ridge lines,
- 2) siting projects in the path of major raptor and passerine migration flyways,
- 3) siting projects in areas where there are known concentrations of birds (as in important bird areas, as designated by the New York State Audubon Society),
- 4) siting projects in close proximity to nesting endangered or threatened species.

In defiance of these guidelines, the proposed Chautauqua Windpower project would be located

- 1) on a ridge line overlooking Lake Erie,
- 2) directly in the middle of a major raptor and passerine migration flyway,
- 3) in the middle of a NYS Audubon-designated important bird area,
- 4) in close proximity to several successful Bald Eagle nests.

Both the USFWS and New York State Department of Environmental Conservation (DEC) are concerned with the way the project disregards USFWS siting guidelines. In a letter to the towns of Ripley and Westfield, the DEC writes "wind projects should not be sited in documented locations of any species protected under the federal Endangered Species Act, should not be located in known local bird migration pathways and daily movement flyways, [and] should avoid areas or features of the landscape known to attract raptors [such as ridge tops]." But, the DEC letter observes, "The selected location for this project places the turbines on a ridge top, the site is in the direct path of a major migratory flyway, and the turbines are sited adjacent to two documented bald eagle nests."

In their letter to the towns, the USFWS states, "it is evident to us that the proposed project is poorly sited with respect to avian species because it is within a documented location of a species protected under the ESA, within a known concentrated avian migration pathway, and along a landscape feature, i.e. ridge line, known to attract large numbers of raptors. In addition, the project is proposed within an area designated as an important bird area. The siting of the turbine project is inconsistent with the recommendations in our Guidelines"

Although the USFWS and the DEC are opposed to the location of this turbine development they have no authority to prohibit it. Laws in place to protect wildlife, including the

bald eagles nesting in the vicinity of the proposed turbines, can only be enforced after a bird has been harmed or killed. In the case of this project, the final decision about whether the project goes ahead rests with the local municipalities. And regardless of opposition from federal or State agencies or conservation and birding groups, the towns may side with the developers and disregard the clear risk to raptors and other birds.

The developers have consistently argued that there will be little or no risk to migrating, wintering and nesting wildlife. Beginning in the year 2000, the developers wooed landowners with promises of significant money for leases and easements which has created eager local advocates for the project. They have met privately with town board members and applied for and received a commitment for funding of \$3.1 million from the New York State Energy Research and Development Authority (NYSERDA).

The application for funding to NYSERDA appeared to misrepresent the project in several ways. For example, the application incorrectly describes the project as being about one mile inland from the edge of the ridge, but the project's current configuration is at the edge of the ridge where it will be more likely to have a devastating impact on migrating and resident birds.

The application further described the project as being located on pastures and fallow fields, so the likelihood of impacting threatened or endangered species was low, but the project will destroy many acres of hardwood forest. Furthermore, significant numbers of threatened and endangered birds, including bald eagles and golden eagles, have been documented within the project area.

The application characterized the area as having a "mixed population of year-round birds . . . typical of rural farm areas" and mentioned that "hawks are known to frequent the lake plain area located at lower elevations away from the project area," but the turbine locations are located squarely in the middle of a well-documented significant bird migration flyway, designated as an important bird area by the New York State Audubon. New York State appears determined to expand energy production from wind power projects at any cost. When the chairman of the CCCRWP pointed out the discrepancies between the developers' application for funding and the current project specifications, NYSERDA bureaucratically shrugged its shoulders.

In November 2002, after the better part of three years of more-or-less clandestine operations, the developers held a public meeting jointly with NYSERDA to present the project to the communities of Ripley and Westfield. Only then did the Ripley Hawk Watch volunteers become aware of the project and actively and publicly begin to criticize its inappropriate siting. At the November presentations of the project, the developers and NYSERDA claimed that the Ripley Hawk Watch supported the project and the developer's claim that

the project held no risk to wildlife in its proposed location. Our immediate response was to aggressively refute this false characterization of our complicity. Our hawk watch volunteers knew at the outset that locating turbines in the middle of a migratory flyway made very little sense when billions of acres of less sensitive areas were available.

Len DeFrancisco, coordinator of the Ripley Hawk Watch, and others affiliated with the watch repeatedly voiced alarm in public meetings and rallied the conservation and birding community locally, nationally, and internationally to speak out about the siting of the project. Mostly due to Len's efforts, more than 25 organizations, including HMANA, wrote to the towns objecting to the project's location. In 2003, HMANA honored Len for alerting the conservation and birding community to the problems with the Chautauqua project and the likelihood of additional poorly sited wind power projects being proposed in other areas.

Other members of the community also were dismayed at the proposed industrial power generation project being sited in residential and forested areas with unique scenic and historic qualities. Working with these members of the community, hawk watch volunteers helped create the Chautauqua County Citizens for Responsible Wind Power (CCCRWP) to monitor the environmental and economic issues associated with the project and to educate the community about the likely problems the improperly sited project would bring with it.

In New York State, one of the first steps in the State environmental review is the completion of an environmental assessment form (EAF), which very generally evaluates the likelihood that the proposed project may affect the environment in undesirable ways. One of the main purposes of the EAF is to determine if a more exhaustive, more quantitative analysis of environmental impacts must be undertaken before municipalities decide to approve a project. The developer and its consultant performing the environmental work knew the project was being proposed in a migration flyway that saw many protected birds pass through the immediate area of the project every year. They also knew that the project was being proposed in an area that historically has seen the successful nesting of American Bald Eagles, and they knew that the project was being proposed in the vicinity of nesting birds of special concern in New York State. They also knew that members of the community had pointed out other environmental problems that would be likely to accompany the project. But the EAF the developers distributed in early 2003 to the towns, the DEC, and other agencies baldly asserted that no protected species would be affected by the project and that there was no likelihood that the project would have an undesired affect on the environment.

The false conclusion promulgated by the EAF, if accepted by the municipalities and the State, would mean that the more exhaustive quantitative environmental impact statement (EIS)

with required environmental risk assessments would be unnecessary. The developer would save money, and more importantly the project could move ahead quickly before local opposition could be organized and full advantage taken of enabling tax and other incentives.

Both the Ripley Hawk Watch and CCCRWP submitted detailed objections to the conclusions of the EAF, and in early summer of 2003 forced the towns to acknowledge the possibility of serious environmental impacts and the need for an EIS and an avian risk assessment. Our hawk watch and the CCCRWP were successful in forcing the towns to require a day-and-night radar study and a day-time visual study as part of an avian risk assessment, but the studies would be conducted only once in the spring with no plans for additional assessment in the fall of the year. Although the study was later expanded to include fall data, we were unsuccessful in getting the towns to require a multi-year study of both fall-and-spring, night-and-day migration as stipulated in USFWS guidelines.

In the early summer of 2004, the developer issued the draft avian risk assessment as part of the EIS, again claiming no risk to birds or bats from the project and denying the relevance of USFWS guidelines, despite having documented at least 15,000 migrating raptors and millions of night-time migrants flying directly over the six-mile long project. The deeply flawed and misleading avian risk assessment failed to address the concerns of the Ripley Hawk Watch, the U.S. Fish and Wildlife Service, the NYS Department of Environmental Conservation, New York State Audubon and other organizations.

Given the presumptive insult of proposing a project in defiance of USFWS and industry siting guidelines, the developers of the project needed to produce an avian risk assessment that clearly and unambiguously demonstrated no risk (or at the least an acceptable risk) to migrating birds and bats and to resident species, especially those protected by the Endangered Species Act. The avian risk assessment unscientifically predicted mortality for a completed Chautauqua Windpower project based on abundance and mortality rates for a project in the northwestern US and for a project called "E3" in Tarifa, Spain. Both of the studies used as a basis for the analysis looked at smaller towers than those proposed at the Chautauqua Windpower site, concerned different migrating species, from different geography, and different migration patterns. In fact, at 400 feet the turbines proposed for the Chautauqua Windpower project are nearly four times as tall as the turbines at Tarifa, Spain.

It is questionable whether data from existing projects can be used to extrapolate results for new locations, no matter how similar the locations may seem. Too many confounding variables come into play. In the case of the avian risk assessment for the Chautauqua Windpower project, the developers try to predict mortality rates at their proposed location on the

basis of information from wildly dissimilar sites.

Migration expert William R. Evans points out in a recent review that concentrated on the avian risk assessment's inappropriate use of data from western North America to project mortality rates at the Chautauqua Windpower site, "songbird mortality at tall man-made structures is a phenomenon that is well documented in eastern North America but does not appear to be as large a phenomenon in the west (Avery *et al.*, 1980). This has been theorized to be due to the lower density of nocturnal migration in the west and different weather patterns. Whatever the cause, figures from mortality studies in the west should not be used to project mortality rates at proposed wind sites in the east. To make this point in the extreme, one certainly would not use mortality studies from wind turbines at the North Pole to calculate the impacts of commercial wind energy on neotropical migrants in the U.S."

The mortality predictions made by the avian risk assessment for the Chautauqua Windpower project, based as they are on observations from northwestern U.S. and from Spain, lack scientific validity, but the risk assessment's most misleading use of inappropriate data was its attempt to extrapolate information meaningful to the Chautauqua Windpower project from studies of the Tarifa, Spain project. The studies of the Tarifa project were lacking in scientific methodology, especially in their estimate of abundance and mortality, the two factors the ARA used in building the model to predict mortality at the Chautauqua Windpower site.

Over the last two years Ripley Hawk Watch and Chautauqua County Citizens for Responsible Wind Power volunteers have spent thousands of hours coordinating grass-roots efforts, writing dozens of news releases, traveling to the State Capitol and Washington, D.C., successfully rallying the support of conservation and birding groups, persistently working with and monitoring the efforts of State and federal agencies, and securing the participation of recognized migration experts in the review of the avian risk assessment. Yet we may not be successful in averting this ill-conceived venture.

If this project is implemented, it may be the first project in the southern Great Lakes flyway where raptors are concentrated in significant numbers and one of the first projects at a major eastern U.S. migration site. Implementation would also establish a disturbing precedent. Any area in the eastern U.S. where migrating raptors concentrate would be vulnerable to exploitation by the wind industry. What's at issue is not the proliferation of wind turbine projects, but the proliferation of poorly sited wind turbine projects.

In his review cited earlier, Evans supports the contention that this project would have serious negative impacts far beyond Chautauqua County's 34-turbine project. Evans says, "if this project is permitted to go through, it would be very difficult to stop further wind development along the whole

southeastern escarpment of Lake Erie. Therefore, the precedent of this project may have significant avian ramifications beyond its bounds.” Based on U.S. Department of Energy projections, Evans speculates that the current number of approximately 300 turbines over 200 feet tall in the eastern U.S. could expand to potentially half a million over the next few decades.

Based on New York State’s goal of expanding its consumption of energy from renewable resources by 3700 megawatts in the next nine years, as many as 10,000 new turbines could be expected in New York State by the year 2013. If these thousand of turbines are sited as improperly as those proposed in the Chautauqua Windpower project, then in New York State alone the risk to migrating raptors and songbirds would be over 290 times greater than the risk posed by the Chautauqua Windpower project.

Every hawk watch in the eastern U.S. should anticipate future wind turbine proposals that could affect the raptors migrating in the skies above them. The disturbing implication of the cumulative effect of improperly sited turbine projects

is significant. The HMANA board recently approved a resolution in support of the need for a site-specific, careful study performed for every proposed turbine project to assure that the location of the project creates the least possible risk to migrating raptors and other birds.

One solution might be the creation of a special HMANA committee to address the issue of wind turbine projects in migratory flyways. Such a committee could establish liaison with other conservation groups to better coordinate appropriate action regarding the siting of turbine projects, providing coordination for hawk watch sites that are embroiled in turbine-siting issues. A HMANA-coordinated approach would help improve our understanding of where development pressures are most severe and assure that HMANA members have the opportunity to become fully informed regarding the issues. We at the Ripley hawk watch have learned that we cannot depend upon developers, the federal government, state government or local government to make the right decisions when raptors and other important natural resources are involved.

HMANA **Hawk Migration** **Association** **of** **North America**



*Preserving raptor populations
and their environments across the hemisphere
through programs of monitoring, recreation,
education, science and conservation.*

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Gil Randell (Ph.D. State University of New York at Buffalo, 1976) retired from the position of Planning Director for Chautauqua County (New York) in 2002. He has been a birder since 1956. For the last two years, he has helped coordinate the Ripley Hawk Watch, which is located on the south shore of Lake Erie between Buffalo, NY and Erie, PA. Gil also has been part of a small, but committed and active group of birders and concerned citizens opposed to the siting of a wind turbine project expected to imperil birds along the southern shore of Lake Erie.