

# Responsiveness Summary

## Guidelines for Conducting Bird and Bat Studies at Commercial Wind Projects

January 2009

1. **Comment:** Many comments expressed a need for the *Guidelines* to be published as requirements rather than recommendations, for DEC to make studies mandatory, and/or for stronger language to be used when describing recommended studies.

**Response:** DEC produces this guidance pursuant to its general authorities, rather than a specific permitting authority. DEC does so to fulfill the State's policy to "conserve, improve and protect its natural resources and environment" as well as to foster, promote, create and maintain conditions under which man and nature can thrive in harmony with each other...[p]romoting patterns of development and technology which minimize adverse impact on the environment." (See Environmental Conservation Law (ECL) §1-0101(1) and (3)(c)).

In order to carry out this policy in the context of wind farm development, DEC has the general power under ECL §3-0301(1), (s), (t), and (u) to:

- "Encourage industrial, commercial, residential and community development which provides for the best usage of land areas, maximizes environmental benefits and minimizes the effects of less desirable environmental conditions";
- "Assess new and changing technology and development patterns to identify long-range implications for the environment and encourage alternatives which minimize adverse environmental impact";
- "Monitor the environment to afford more effective and efficient control practices, to identify changes and conditions in ecological systems..."; and
- "Encourage activities consistent with the purposes of [the ECL] by advising and assisting local governments, institutions, industries, and individuals".

Additional general authority is available to DEC to review proposed actions for potential adverse environmental impacts pursuant to the State Environmental Quality Review Act (SEQRA) (Article 8). This includes advising a lead agency, such as a municipality, regarding adverse and positive environmental impacts of a proposed action. The general powers and duties of DEC also include the authority to identify and protect rare, threatened and endangered species (ECL Article 11, Title 5) and bird conservation areas (ECL Article 11, Title 20). DEC may exercise additional authority with respect to specific development sites, depending on the requirements of actions proposed by developers or lead agencies. Note, however, that DEC would do so under circumstances requiring that DEC exercise specific permitting authority pursuant to the ECL, which is not the case here. Given the broad scope and general nature of the information being

provided by DEC, and the authorities cited above, DEC finds that it is appropriate to provide guidance to interested parties rather than impose additional requirements by promulgating regulations.

**2. Comment:** Many terms and criteria throughout the document should be defined and/or justified.

**Response:** To the extent possible, terms and criteria have been defined, clarified or changed, and additional explanations provided where needed. For example, see page 1 for definition of adverse impact.

**3. Comment:** The *Guidelines* should encompass off-shore wind development.

**Response:** These *Guidelines* are not intended to cover study needs for off-shore wind energy development in either the Great Lakes or Atlantic Ocean. As off-shore development becomes more feasible, research needs and protocols for evaluating the potential risks and impacts to birds, bats, and other wildlife from siting turbines in New York's waters will be developed.

**4. Comment:** Some comments identified the need to outline a decision making process defining issues such as: how the data will be used by DEC; what results will warrant expanded pre-and post-construction studies; what criteria will trigger DEC to recommend either against building or giving the go ahead for a project; what adaptive mitigation would entail; a timeline for agency responses on each project; and, a data-sharing website or information dissemination process is needed for the public and developers to utilize in planning and reviewing individual projects.

**Response:** DEC agrees that the decision-making process should be outlined and is taking steps to develop a process document. With regard to availability of data, DEC is currently upgrading the website where links to all publicly available pre-and post-construction bird and bat studies will be made available. To date, most information is accessible through project sponsors' websites and/or local town halls that have copies of Environmental Impact Statements (EIS) and other project-related documents.

**5. Comment:** Assuming that abundance or exposure of birds and bats at a given site is equivalent to a likelihood of impact is unwarranted and inappropriate in the context of the *Guidelines*.

**Response:** The *Guidelines* are intended to characterize the general bird and bat species composition at and overall use of a site, with emphasis on rare, threatened, and endangered species. Although there is evidence that abundance relates to risk for some species (e.g., raptors), DEC does not automatically perceive the presence of a given species on site to put it in undue danger of experiencing a direct or indirect adverse impact. However, DEC recognizes that any disturbance to habitat and direct mortality to individuals constitutes an impact to wildlife, and if a given species is present on site, some risk of disturbance exists.

6. **Comment:** Several comments were made regarding the need for all pre- and post-construction environmental studies to be done by independent parties that are paid for, selected by, and/or approved by DEC, and for all work plans, data, and results to be made public and available for peer-review.

**Response:** DEC cannot endorse, select, approve, or fund any particular company, organization, or individual to conduct environmental monitoring, including pre- and post-construction bird and bat surveys, for wind projects that DEC is reviewing permit applications, lead agency requests, or study results. Every project sponsor who consults with DEC publishes an EIS containing work plans, agency correspondence, and final reports for all environmental studies pertaining to the proposed wind project. This document is made available for public review by the lead agency for the project.

7. **Comment:** The *Guidelines* should include a cost-benefit analysis comparing the impact to birds and bats from wind energy development with other sources of electricity, as well as other potential man-made mortality sources.

**Response:** The *Guidelines* are not intended to provide such a “cost-benefit” comparison and analysis, as that is beyond the scope of the Department’s regulatory involvement in wind power development in New York. The *Guidelines* are geared toward providing a framework for collecting information that can be used to evaluate the potential environmental impacts on birds and bats from wind projects at specific locations throughout the state.

8. **Comment:** The *Guidelines* should acknowledge the existing body of data for both pre- and post-construction work at proposed and existing wind power projects.

**Response:** In initial consultations with the Department, most developers come armed with knowledge of research previously conducted in New York and elsewhere pertaining to birds, bats, and wind power. The existence of these studies, however, does not preclude any given proposed project from needing to conduct site-specific surveys. Depending on site characteristics and local variables, potential species presence and abundance, the results of studies from nearby locations, each site may need to do more or less intensive surveys than another. The input and recommendations of DEC staff and other knowledgeable parties is also critical to the refinement of this process.

9. **Comment:** When studies by a developer have been done as agreed upon, DEC should provide the developer and lead agency with a written letter of study completion/acceptance stating that no further studies are needed at that site.

**Response:** DEC regularly provides written feedback, comments, and recommendations to project sponsors and their consultants on work plans, interim reports, and final results throughout the duration of the study planning and execution process. Given the variabilities of weather and bird and bat population movements or changes, it would not be appropriate to state that further studies would never again be needed at any given site.

10. **Comment:** The request for detailed preliminary, potentially proprietary, project information early in the planning process is not necessary for conducting bird and bat studies.

**Response:** To facilitate a thorough environmental review of a project, it is important for DEC to have as much pertinent information as possible about a project, including the preliminary locations of turbines, access roads, collection and transmission lines, substations, storage/staging areas, and other project components. DEC understands that some of these details may be proprietary and/or not be finalized at the time bird and bat studies are initiated, and are subject to change as development of a project moves forward. It is hoped that companies looking to construct wind projects in New York would be willing to share information regarding their planned activities in order to develop a project that will result in a minimal impact on wildlife and their habitats. The *Guidelines* have been revised to reflect this.

11. **Comment:** Several commenters requested that various additional areas or natural features of the state be included in the list of “landscape features and resources of concern”, and/or that the Department increase the minimum distance from a proposed project to such features.

**Response:** The *Guidelines* have been revised to address this concern to the extent possible. Based on best current knowledge, the Department finds that the 5 mile setback distance from shorelines is adequate to minimize impacts to birds and bats using shoreline habitats for migratory, feeding or breeding purposes.

12. **Comment:** More emphasis should be placed on the use of NEXRAD for pre- and post-construction studies at all project sites in the state.

**Response:** NEXRAD is not a suitable tool for determining site-specific conditions at a site. NEXRAD can be used to evaluate large-scale migration events and how they change over time relative to certain weather conditions. With only 5 NEXRAD stations in the state, most projects are too geographically distant from a given station for relevant information to be gathered. Additional discussion of NEXRAD has been included in the *Guidelines*.

13. **Comment:** Many comments were received concerning the recommended pre- and post-construction study methods and durations as applied to projects of different sizes and locations. These include: the technology, equipment, and survey methods should not be “one-size-fits-all”, but flexible to allow for an accelerated/shortened study time frame for projects proposed in areas that are already disturbed or developed, have a small number of turbines, are not near features/resources of concern, or where relevant data have already been collected nearby; DEC should allow for improvements that are constantly being made to the equipment, software, analyses, and interpretation of bird and bat data collection methods and results; all proposed projects regardless of size and location should be subject to the same rigorous (e.g., expanded) survey methods for pre- and post-construction; a minimum of two to five years of pre-construction study is needed; and, more than one year of pre-construction at any given site is excessive.

**Response:** The recommendations provided in the *Guidelines* allow for varying degrees of duration and intensity for conducting studies at projects of differing sizes and locations. DEC recognizes that, potentially, some areas of the state are more likely than others to experience direct or indirect impacts to birds, bats, and their habitats if a proposed project is constructed in or near such areas. The standard and expanded study recommendations are intended to address such differences between sites. Data collection equipment and techniques such as radar units, bat acoustical detectors, and recording software are constantly being improved. Specific equipment is not recommended in the *Guidelines*, and methods are not intended to remain static in the face of updated data, reports, results, and other information becoming available. Although in most cases one year of pre-construction data will be sufficient for evaluation of bird and bat use of the site, more than one year of information will be needed at locations where significant resources are known to exist and for which in-depth study is needed to characterize use of the site by wildlife.

14. **Comment:** Many comments were made regarding the efficacy, relevance, applicability, comparability, timing, coverage of and need for pre- and/or post-construction migratory and breeding bird surveys.

**Response:** Collecting data on migratory and breeding bird use of a proposed project area is an important part of understanding pre-construction conditions and the effects of a project during post-construction operation on birds in New York. In response to these comments, certain aspects of the migratory and breeding bird survey methodologies have been modified for pre- and post-construction surveys.

15. **Comment:** Comments regarding the pre- and/or post-construction raptor migration surveys included suggestions to modify the survey dates and methods to provide an adequate sample of bird movement and use of a given site; and that the duration and number of recommended surveys are unwarranted for an area not known to be a migratory pathway.

**Response:** The recommended dates for spring and fall raptor surveys have been changed to include an earlier spring start date and a later fall ending date. This is primarily to cover golden eagle migration, as well as red-tailed hawks and *Accipiters*. The recommended frequency of surveys has also been increased. If observations or data already exist showing that an area is not a migratory pathway, the project developer can work with DEC to customize survey protocols or eliminate the need for surveys.

16. **Comment:** Some comments concerning bird acoustical monitoring were made, including: include this method as a standard study method at all projects; and, bird acoustical monitoring is superfluous, as the information obtained is not indicative of risk to birds and does not assist in siting turbines.

**Response:** DEC recognizes the utility of acoustical bird monitoring in estimating the use of the site by certain species and groups of birds during migratory periods; however, this method is not currently recommended for all projects because of the current limited availability of personnel experienced in avian acoustical monitoring .

17. **Comment:** Several comments addressed issues with bats and the efficacy, relevance, applicability, comparability, timing, coverage of and need for pre- and/or post-construction study methods as outlined in the *Guidelines*. Some concerns included: many aspects of the standard and expanded bat survey methods are unclear and/or unwarranted; further explanation and clarification is needed on recommended survey methodology; the bat genetic and stable isotope analysis and expanded pre- and post-construction bat study methods are beyond the scope of what SEQR requires for a wind energy project, and the burden of funding such activities should not be on the developer and, DEC should provide or arrange funding for these studies, as well as secure sources of carcasses for post-construction bias correction surveys.

**Response:** In light of White Nose Syndrome (WNS) in the northeast, and the unexpected level of bat mortality caused by turbines nationwide, DEC is currently re-evaluating the best approach for collecting pre-construction phase data needed regarding resident and migratory bats, and how wind turbines may impact the remaining populations. The recommendations in the *Guidelines* reflect the latest methodologies intended to gather information and provide insight into bat use of a given site, as well as landscape-level population sizes and habitat use. As many turbine-killed bat carcasses are likely to be needed for research into WNS and the genetic and stable isotope analysis, a general shortage is expected for use in post-construction carcass search surveys. DEC has coordinated, and will continue to coordinate, with developers to make suitable arrangements for obtaining carcasses or using surrogate animals for bias testing during post-construction surveys. The bat genetics and stable isotope studies have been removed from the body of the *Guidelines*, and included as an Appendix as a voluntary effort to aid in this research.

18. **Comment:** A number of comments were submitted regarding post-construction survey methodology, timing, duration, intensity and need.

**Response:** The recommendations set forth in the *Guidelines* for post-construction studies represent the Department's best knowledge of how such studies should be conducted. Study work plans are developed through agency consultation prior to the start of project operation; the public and other appropriate agencies and local government entities are typically involved in this effort.

19. **Comment:** Other agencies, groups, and organizations should be granted access to wind project areas to conduct independent studies on birds, bats, and other areas of interest.

**Response:** It is not within DEC's purview to grant access to project areas, which are typically and have to date been sited on private land. It is at the discretion of the landowner and/or project developer to grant access.

20. **Comment:** The *Guidelines* should provide methods to evaluate the potential effects of low- and high-frequency noise, stray voltage, increased magnetic and electric emissions, and altered wind patterns on birds, bats, insects, mammals, reptiles and amphibians.

**Response:** These issues are not within the intended scope of the *Guidelines*. These issues may be evaluated on a site-by-site basis, if appropriate, pursuant to a SEQR review.

21. **Comment:** A few comments referenced the use of dogs during post-construction monitoring, suggesting either that dogs should be used at all sites; that methods for use of dogs should be fully explained in the *Guidelines*; or that dogs were not at all necessary during any post-construction survey.

**Response:** All references to using dogs have been removed from the *Guidelines* due to the very few instances in which they have been used. Developers proposing to use dogs can discuss the proposal with DEC and work out protocols specific to the site conditions and study design.

22. **Comment:** Some comments raised issues with the flow chart in Figure 1 of the draft *Guidelines*, including the applicability of an “endless mitigation” loop, and the need for DEC to include other interested parties in each step of the review process.

**Response:** Figure 1 has been revised to eliminate the appearance of an endless loop; however, as long as a project continues to operate, adverse impacts are possible. The adaptive management plan would include on-going action to maintain the lowest level of impact possible (e.g., feathering blades, stopping operation, etc.).