

## **HMANA Industrial Wind Turbine Siting and Monitoring Policy**

The following update to the July 2008 policy on industrial wind turbine siting and monitoring was adopted by the HMANA Board of Directors on June 17, 2013. This update reflects changes between the U.S. Fish and Wildlife Service's interim guidelines (2003) and its current (2013) Land-Based Wind Energy Guidelines (LBWEG). This update also reflects HMANA's concerns about the USFWS commitment to extending the life of incidental eagle-take permits from five to 30 years.

The Hawk Migration Association of North America's official mission is to conserve raptor populations through the scientific study, enjoyment and appreciation of raptor migration. As a scientific, educational and conservation organization, HMANA collects data from hundreds of affiliated raptor monitoring sites throughout the United States, Canada and Mexico, and publishes a journal Hawk Migration Studies that includes data from participating hawk watches as well as articles on raptor conservation and other issues impacting raptors.

HMANA is concerned about the threat posed by industrial wind energy developments to migrating, nesting and wintering raptors. Wind conditions favorable for industrial wind energy projects may coincide with locations where concentrations of raptors occur. Industrial wind projects have been placed and are being proposed along known migratory flyways and near nesting and wintering concentrations of raptors. Some industrial wind energy developments have been clearly demonstrated to cause high mortality rates in a variety of raptor species, frequently as a result of inappropriate siting.

The National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the Migratory Bird Treaty Act (MBTA) and other federal legislation require federal agencies to carefully consider and assess the possible adverse effects in their projects and permitting practices. HMANA supports federal guidelines for the siting of wind power projects that are consistent with and at least as rigorous as provisions in the NEPA, the ESA, the MBTA and other existing federal legislation. Accordingly, although the U.S. Fish and Wildlife Services's recently released, Land-based Wind Energy Guidelines (LBWEG) purport to encourage the development of environmentally responsible wind energy facilities, because compliance with the guidelines is voluntary

and because of other problems with the guidance, these guidelines do not appear to meet the stringent standards established by NEPA, ESA or MBTA.

Other problems with the LBWEG as perceived by HMANA include its failure to require that developers of industrial wind energy projects avoid known bird migration pathways and daily movement flyways, avoid features of the landscape known to attract raptors (such as ridge lines and coastlines), avoid areas formally designated as Important Bird Areas and avoid documented locations of any species protected under the federal Endangered Species Act. Such requirements would have been consistent with the U.S. Fish and Wildlife Service interim siting guidelines proposed in July 2003, which HMANA strongly supported. Unfortunately, the current LBWEG constitute a significant departure from the interim guidelines, failing to establish permanent and binding regulations or guidelines that provide clear, unambiguous federal guidance to the state and local governments that must make decisions regarding the proper siting of proposed projects.

As articulated by the U.S. General Accountability Office report of 2005 and the National Academy of Science report of 2007, there is currently a lack of knowledge about the impacts of new-generation turbines on raptors. Unfortunately, it appears necessary to go beyond the current LBWEG's recommendations in order to establish and consistently apply pre-construction and post-construction monitoring procedures for industrial wind power projects that are capable of improving the understanding of risk to wildlife posed by industrial wind power projects. Because knowledge of raptor migration and other behavior patterns is incomplete and raptor monitoring demonstrates high year-to-year variability in numbers of migrants at most sites, mandatory design and siting standards should require the collection of at least three years of pre-construction study data for projects where landscape features, natural history patterns or other data suggest raptor concentration is possible. Pre-construction studies of raptor behavior should not be limited to migration issues but should be comprehensive and include not only the risk associated with direct turbine strikes and possible avoidance behavior, but also terrestrial habitat degradation and its effects on nesting and wintering raptors, as well as the effect of such degradation on migrating raptors' roosting needs.

When multi-year preconstruction studies confirm migration, wintering or breeding season concentrations of raptors in a particular area, then plans for development in that area should be abandoned and development forbidden; if such study shows minimal concentration of raptors, or if specific designs can be demonstrated to pose minimal danger to wildlife present in the area, then projects can be considered. In such cases, when developers have invested in diligent efforts to locate wind power development appropriately, it is still possible that post-construction monitoring might show an entire project or individual turbines to be particularly fatal to raptors: when this happens, turbines must be decommissioned or their operation suspended during the periods when the problematic turbines are found to be most destructive. Developers must agree to such remedial action as a precondition of project approval by federal, state and local permitting agencies.

HMANA urges that international, national and state and provincial standards for pre- and post-construction monitoring be promulgated and enforced that will make possible the scientifically valid assessment of risk associated with industrial wind power development. In light of the absence of binding standards for pre- and post-construction monitoring, monitoring protocols must be specifically designed for each project by qualified and independent consultants in collaboration with federal or national regulatory and conservation agencies (e.g. the USFWS), state or provincial agencies, appropriate non-governmental conservation and scientific organizations and independent experts. The protocol for this monitoring and the monitoring results must be peer-reviewed and publicly accessible.

The USFWS should be closely involved with designing and implementing preconstruction studies and post construction monitoring of projects. Since compliance with USFWS guidelines is only voluntary for developers, such close collaboration with the USFWS in individual projects is far from assured. An incidental Bald and Golden Eagle take-permitting process has been created in part to encourage developers to consult with the service in the development and implementation of energy projects. The USFWS grants incidental take permits on the basis of a developer's commitment to incorporate specific features and standards in their projects and perhaps engage in certain activities that mitigate damage to wildlife that may occur as a result of any specific project.

Currently, incidental take permits must be renewed every five years, but the service is proposing to extend the life of a take permit to 30 years. While this may further encourage developers to engage with the USFWS through the permitting process, thereby allowing the service to more aggressively seek the incorporation of specific safeguards (or studies or monitoring activities) in the design and implementation of energy projects, such extensions of take permits from five to 30 years neutralize the effectiveness of post-construction mortality monitoring and protect the developer from submitting to any public review of a project's damages to eagles or to a review of the project's compliance with the conditions of the take permit. HMANA opposes any extension of the time period for take permits that removes the necessity for periodic public review, and HMANA finds the current five-year life span of take permits to be appropriate.

Incidental eagle take permits can require modifications to a project that reduce the risk that project poses to eagles; take permits can also require mitigation activities that are meant to compensate for anticipated harm to eagles. Such compensatory actions can include initiatives largely unrelated to the specific risks posed by specific projects, such as the donation of land to conservation trusts or to land conservancies. While mitigation actions unrelated to the specific risks of an energy project may generally be environmentally advantageous, they should not replace actions that would directly address the specific risks of a project.

HMANA supports alternative energy technologies if they can be shown to pose minimal risk to wildlife when appropriately designed, sited and developed. New approaches to wind turbine technology and design in particular might be possible in the near future that pose less risk to wildlife and habitat. HMANA urges investment in research into such new technologies and their development.