

Eagle Initiative

AWWI is improving understanding of the risks of wind energy to eagles and building tools to provide options to mitigate for impacts.

Background (The Challenge)

Multiple federal laws prohibit the taking (killing, wounding, or disturbing) of bald and golden eagles without a permit. Wind turbines can kill or disturb eagles, yet as the most commercially viable and scalable form of renewable energy, wind power is critical to limiting the effects of climate change.

The U.S. Fish and Wildlife Service (Service) has developed a framework for permitting lawful eagle take from otherwise lawful activities (2009 Eagle Rule) and has proposed voluntary measures that if followed would allow take from the construction and operation of wind energy facilities (2013 Eagle Conservation Plan Guidance Module 1, Version 2). The Eagle Rule and Eagle Guidance require that all practicable measures be taken to avoid and minimize this take, including the careful siting of wind energy projects. Furthermore, when eagle take is unavoidable, wind energy developers and operators must offset predicted eagle take through compensatory mitigation.

While there are large areas of the U.S. where eagle encounters with wind turbines are rare, the widespread range of eagles and the gaps in our understanding of eagle vulnerability to wind energy put most existing and future projects at risk of violating federal law with little ability to minimize that risk. Complying with the Eagle Rule has been a major challenge to the industry, slowing development and exposing developers to legal action – all without protecting eagles.

Goals of AWWI's Eagle Initiative

AWWI has developed a research framework and tools intended to be broadly accepted and allow for timely implementation of the Service's Eagle Conservation Plan Guidance. The products of the Eagle Initiative will improve the ability of stakeholders to:

- Accurately **predict take** of eagles from the siting and operation of a proposed wind energy facility
- Implement measures, or Advanced Conservation Practices (ACPs), that will **avoid and minimize the estimated take** to the maximum extent practicable
- **Compensate for unavoidable take** through management that increases eagle survival or eagle productivity

Laws and Regulations Surrounding Eagles:

Federal Laws

[Migratory Bird Treaty Act](#) (1918)

[Bald and Golden Eagle Protection Act](#) (1940)

Federal Rules and Guidance

[2009 Eagle Rule](#)

[2013 – 30 year permits available](#)

[2012 Land Based Wind Energy Guidelines](#)

[2013 Eagle Conservation Plan Guidance](#)

AWWI's Eagle Program Activities

Eagle Research Framework: *Predicting, Avoiding, and Minimizing Eagle Take*

The AWWI research framework is intended to guide the development of a national, coordinated, and hypothesis-driven research program that provides information necessary for reducing the take of golden and bald eagles at wind energy facilities.

Implementation of the framework will ensure that targeted, non-duplicative, and efficient research is conducted to provide needed information. The transparent, expert-driven research development process will facilitate adoption of the results by all stakeholders. AWWI intends to work with the Service and the National Fish and Wildlife Foundation to ensure effective implementation of the research framework. Specific priorities include:

- Improve ability to accurately predict potential take of eagles from collisions and disturbance: The issuance of permits under the 2009 Eagle Rule (including required advanced conservation practices and compensatory mitigation) is highly dependent on the ability to predict how many eagles will be taken by a given project. Improving these estimates will ensure that permit requirements are accurate and sufficient to preserve eagle populations.
- Develop and evaluate Advanced Conservation Practices (ACPs) to avoid and minimize predicted take: The Service acknowledges that as yet there are no approved ACPs for wind energy projects, and the Service welcomes partnership with industry to develop and evaluate siting and operational procedures that will lead to decreases in eagle take.
- Expand the available options for compensatory mitigation that demonstrably and quantifiably offset unavoidable take: There are currently few options for developers to offset unavoidable eagle take at wind energy facilities.

Compensatory Mitigation Tools: *Expanding Options to Compensate for Eagle Take*

AWWI has published a model based on voluntary lead shot abatement that can be used by wind energy companies to satisfy compensatory mitigation requirements of programmatic take permits and conserve eagles. In 2016, new models are being produced for additional mitigation options, with plans to develop a toolbox for developers to utilize when offsetting unavoidable take — saving the time and money it would take to develop and approve company-specific options.

Eagle and Wind Energy White Paper

AWWI's [White Paper on Eagles and Wind Energy](#) synthesizes current knowledge of eagle population trends, threats to eagles, and mitigation of eagle take, and identifies research priorities. AWWI developed the white paper with extensive input from eagle experts.

