



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Office of Law Enforcement  
2800 Cottage Way, W-2928  
Sacramento, CA 95825



In Reply Refer To:  
FWS/OLE

VIA CERTIFIED MAIL

Company XX  
123 Main Street

Dear XX:

The U.S. Fish and Wildlife Service (Service) supports the development of alternative energy sources, including solar energy. We fully recognize the importance of such development to both the Nation's economy and the global environment. Any form of energy production, however, including renewable energy, comes with certain environmental responsibilities. Our office is aware that you are engaged in solar energy development within our regional jurisdiction of California and Nevada. The purpose of this letter is to inform XXX of your responsibilities and potential liabilities associated with solar energy projects under the natural resource protection laws administered by the Service.

The Service holds certain resources in trust for the American people, including migratory birds, inter-jurisdictional fishes, federally-listed threatened and endangered species, and units of the National Wildlife Refuge System. The Service administers natural resource protection laws germane to solar energy production and transmission. These statutes include the Migratory Bird Treaty Act (MBTA)(16 U.S.C. 703 et seq.); the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668d); the Endangered Species Act (ESA) (16 U.S.C. 1531 et. seq.); the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57); and, the National Environmental Policy Act (Pub. L. 91-190, 42 U.S.C. 4321-4347, January 1, 1970, et. seq.).

Studies on wildlife and solar energy facilities are scarce; however, recent information collected at solar facilities by Service personnel indicates that wildlife, particularly avian species, can be negatively affected by solar energy development. For example, directly when birds or bats collide with solar panels and mirrors, or are exposed to elevated levels of solar flux; and, we also anticipate indirectly when wildlife species are displaced by altering or removing key components of their habitat. Such impacts likely can be reduced or avoided by strategic design and placement of solar panels, mirrors and towers, and other associated infrastructure (e.g., access roads and distribution and transmission lines), as well as other management practices.

The Service would like to help you make informed decisions in siting, constructing, and operating your facility to reduce impacts such as those mentioned above, and to ensure you are aware of the potential for liability associated with un-permitted "take" of wildlife, including take related to habitat alteration. We hope you will engage in dialog with the Service early in your planning process and during operation to effectively monitor for negative impacts to wildlife

resources and to plan collaboratively to minimize or otherwise mitigate such impacts for your projects planned or permitted/authorized in California and Nevada, as well as any additional future projects.

### **Migratory Birds and Eagles**

The Migratory Bird Treaty Act (MBTA), 16 U.S.C. 703, is the cornerstone of migratory bird conservation and protection in the United States. The MBTA implements four treaties that provide for international protection of migratory birds. The MBTA protects most native species of birds in the United States, including those likely to occur in your project area; you can find a list of species protected by the MBTA under 50 CFR 10.13. The MBTA prohibits the “take” or possession of protected species of migratory birds. With reference to the MBTA, take means to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempts to do so (50 CFR 10.12).

The MBTA is a strict liability statute, meaning that proof of intent, knowledge, or negligence is not an element of an MBTA violation. The statute’s language is clear in that actions resulting in “take” of protected species are a violation of the MBTA. The MBTA does not specifically authorize the incidental take of migratory birds, and the Service does not issue permits authorizing the incidental take of migratory birds. In the absence of a permit from the Service, such as a Special Purpose Utility (SPUT) permit, the temporary or permanent possession of protected migratory birds and their carcasses is also a violation of the MBTA.

Under authority of the Bald and Golden Eagle Protection Act (BGEPA), 16 U.S.C. 668–668d, bald eagles and golden eagles are afforded additional legal protection. The BGEPA prohibits the take, among other prohibited actions, at any time or in any manner, of any bald or golden eagle, alive or dead, or any part, nest, or egg thereof. “Take” under BGEPA is defined as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb.” Under the BGEPA, “disturb” is further defined as agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior (50 CFR 22.2 & 22.3).

The BGEPA authorizes the Service to permit the take of eagles for certain purposes and under certain circumstances, including scientific or exhibition purposes, religious purposes of Indian tribes, and the protection of wildlife, agricultural, or other interests, so long as that take is compatible with the preservation of eagles, 16 U.S.C. 668a. In 2009, the Service promulgated a final rule on two new permit regulations that, for the first time, specifically authorize the incidental take of eagles and eagle nests in certain situations under BGEPA (50 CFR 22.26 & 22.27).

Information and analyses indicates that golden eagle populations are generally stable; however, in the western United States, occupied breeding areas may be declining locally or regionally. The Service is concerned with any solar energy projects that could result in further take of the species; for solar energy development we anticipate this would be most likely to occur through disturbance, loss of foraging habitat, or interaction with elevated levels of solar flux.

## **Threatened and Endangered Species**

Under section 9 of the ESA, it is unlawful for any person to “take” any federally-listed threatened or endangered fish, wildlife, or plant species, without special exemption. Consequently, it is a violation of Federal law to take endangered species *or their habitat* without appropriate permits, even if the take is accidental (e.g., mortality as a result of collision with a man-made object such as a solar panel, distribution line, or building).

The Service may provide an exemption from the take prohibitions through the issuance of a biological opinion for take of federally-listed species incidental to a lawful activity under section 7(a)(2) of the ESA, whenever a Federal agency, Federal funding, or a Federal permit is involved. Otherwise, a person or entity may seek an incidental take permit under section 10(a)(1)(B) of the ESA upon completion of a satisfactory habitat conservation plan (HCP) for listed species. There is no mechanism for authorizing incidental take “after-the-fact.”

For more information regarding formal consultation and HCPs, please see the Endangered Species Consultation Handbook, [www.fws.gov/endangered/consultations/s7hndbk/s7hndbk.htm](http://www.fws.gov/endangered/consultations/s7hndbk/s7hndbk.htm) and the Service’s HCP website, <http://www.fws.gov/endangered/what-we-do/hcp-overview.html>

## **Office of Law Enforcement**

The Service carries out its mission to protect wildlife and plant resources by fostering relationships with entities that have taken effective steps to avoid take, by encouraging others to implement measures to avoid take, and through investigations and enforcement when appropriate. Companies are encouraged to work closely with the Service to identify available avoidance and protective measures when developing project plans to safeguard wildlife and to implement those measures where applicable. It is also important to work closely with Service biologists to develop and implement robust monitoring plans to detect and assess the impact of the project to wildlife, and to implement adaptive management as warranted by the results of monitoring.

Given the scarcity of information about the impacts of commercial scale solar facilities on birds, we recommend the use of technologically advanced cameras and radar as an experimental means of detecting and monitoring bird and bat movement in and around solar facilities. For facilities utilizing concentrating solar power that involves concentrated solar flux fields which pose a hazard to aerial species, determining bird and bat passage rates through the flux field during operations can provide valuable information on the potential effects on aerial species. Further, the higher than projected level of bird mortality events currently occurring at concentrated solar power tower projects suggests that use of new commercially available technology involving an audio and visual “deterrence system” may be warranted as an experimental adaptive measure, even prior to evaluating results of robust monitoring.

The development and implementation of an avian plan and adaptive measures to minimize take of migratory birds, including bald and golden eagles, does not limit or preclude the Service from exercising its authority under any law, statute, or regulation. However, our Office of Law Enforcement focuses its resources on investigating and prosecuting those individuals and companies that do not identify and implement all reasonable, prudent and effective measures to

avoid the take of migratory birds (including eagles), and then subsequently take individuals of such species.

Ideally, a high quality, scientifically valid, and robust avian plan that is implemented in a timely and effective manner, and regularly reviewed and revised as needed, will maximize avoidance of species protected under our various laws while allowing for project development in the most environmentally conscientious ways practicable. Companies are also strongly encouraged to apply for permits authorizing otherwise prohibited activity, including Special Purpose Utility (SPUT) permits for various actions involving migratory birds, eagle take permits where eagle take is possible, and ESA take authorization under section 10(a)(1)(B), as appropriate.

Ultimately it is the responsibility of those involved with the planning, design, construction, operation, maintenance, and decommissioning of projects to conduct relevant wildlife and habitat evaluation and determine which, if any, species may be affected; to avoid take of species to the extent practicable, and to seek and obtain necessary permits to avoid liability.

### **Service Contacts**

We offer technical assistance in evaluating these negative impacts on our nation's trust wildlife and habitat resources from your existing and proposed solar energy facilities in order to avoid or minimize such impacts. Service personnel from the Ecological Services, Migratory Birds and Law Enforcement programs are available to meet and discuss this or any other facility you may have in California or Nevada.

If you have any questions, please feel free to contact any of the following individuals for further information or to arrange a meeting:

Amedee Brickey, Deputy Chief Migratory Birds, 916-414-6480  
Ashleigh Blackford, Renewable Energy Coordinator, 916-414-6537  
Heather Beeler, Eagle Permit Specialist, 916-414-6651

Sincerely,

Daniel Crum  
Assistant Special Agent in Charge  
Pacific Southwest Region