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OREGON STRATEGIES FOR TRANSPORTATION COMPLIANCE WITH THE MIGRATORY BIRD TREATY ACT

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Abstract: The Migratory Bird Treaty Act (MBTA), a federal law enforced by the U.S. Fish and Wildlife Service (USFWS), has no provision for incidental (i.e., unintentional) take of migratory birds during transportation projects. Because more than 400 species of migratory birds live in Oregon and more than 300 of them nest in highway right-of-ways and on bridges, Oregon Department of Transportation (ODOT) is at risk of non-compliance with the MBTA as the agency carries out its mission ‘to provide a safe, efficient transportation system.’ Although the MBTA is one of the oldest laws in the nation to protect species and natural resources (enacted in 1918), state DOTs have not been provided with guidance at the federal level on how to resolve transportation conflicts with migratory birds when they arise. In the absence of take permits for unintentional harm to migratory birds, ODOT has implemented a multi-faceted migratory bird strategy that not only increases migratory bird protection during transportation projects, but also minimizes the risk of prosecution should an ODOT MBTA violation inadvertently occur.

Initially, ODOT developed a MBTA Highway Division Directive. The purpose of the Directive is to provide agency personnel involved in project delivery, construction, and maintenance with guidelines and strategies to ensure that appropriate and reasonable measures are taken to prevent injury to and death of migratory birds. The Directive emphasizes that all employees must practice due diligence to safeguard migratory birds while they carry out ODOT’s transportation mission. Subsequently, ODOT signed inter-governmental agreements with USDA-APHIS-Wildlife Services (U.S. Department of Agriculture – Animal Plant Health Inspection Service). Wildlife Services is authorized by Congress to conduct animal control activities. When ODOT contracts with Wildlife Services for migratory bird management on projects, incidental take is covered under Wildlife Services’ take permits. Currently, ODOT is developing an Avian Protection Plan (APP), a voluntary agency-specific program of best management practices designed to protect and conserve migratory birds that is endorsed by USFWS. USFWS Enforcement has MBTA prosecutorial discretion, and an agency operating under an APP is allowed to fulfill its mission without the need for formal USFWS concurrence on every action that has potential to impact migratory birds. ODOT will implement its APP following development of an agency-wide bird mortality tracking system.

Background

The United States recognizes that migratory birds are a shared resource with other nations, and as such has ratified four international, bilateral conventions for the conservation of migratory birds: Convention for the Protection of Migratory Birds with Great Britain on behalf of Canada (1916), Convention for the Protection of Migratory Birds and Game Mammals with Mexico (1936), Convention for the Protection of Birds and Their Environment with Japan (1972), and Convention for the Conservation of Migratory Birds and Their Environment with the former Union of Soviet Socialist Republics (1978). The United States implements these international conventions through the Migratory Bird Treaty Act (MBTA, 16 USC 703-712), one of the oldest environmental laws in the nation.

The primary motivation for the 1916 treaty with Canada and the passage of the MBTA in 1918 was to stop the indiscriminate slaughter of migratory birds by market hunters. However, the MBTA reaches far beyond intentional kill of migratory birds for profit. Under the MBTA it is illegal for anyone to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to Federal regulations. ‘Take’ under the MBTA means to pursue, hunt, shoot, wound, kill, trap, capture, collect, or possess migratory birds, their eggs or young, or to attempt to do any of these (50 CFR 10.12). Habitat destruction, inactive nest removal, and harassment that do not result in the injury or death of a migratory bird are not violations of the MBTA.

The United States Fish and Wildlife Service (USFWS) is the principal federal agency responsible for conserving, protecting, and enhancing fish, wildlife, plants, and their habitats. The MBTA authorizes the USFWS to issue migratory bird take permits for 11 categories of activities: import/export, scientific collecting, taxidermy, waterfowl sale and disposal, educational use, falconry, raptor propagation, rehabilitation, predation, special purpose, and a special Canada goose permit. Unlike the federal Endangered Species Act (ESA, 16 USC 1531-1544), the MBTA has no provision for incidental take permits. ‘Incidental take’ is that which results from, but is not the purpose of, carrying out an otherwise lawful activity. Although road projects may be authorized to proceed under permits issued by the USFWS pursuant to the regulations in 50 CFR Parts 13 and 21 (National Research Council 2005), many state transportation agencies, including Oregon Department of Transportation (ODOT), have been largely unsuccessful at obtaining MBTA permits.

The MBTA is a ‘strict liability law,’ which means that a party can be convicted under the statute without demonstration of specific intent or guilty knowledge. Generally, American criminal laws seek to punish only those who act with specific intent or knowledge of their actions and their consequences (Jenkins 1997). But legislatures may dispense with the traditional notions of criminal intent in most if not all environmental crimes, including MBTA violations (Jenkins 1997). Highlights of USFWS Enforcement investigations into MBTA violations are available in the annual reports of the USFWS Division of Law Enforcement and in ‘The Federal Wildlife Officer,’ a publication of the Federal Wildlife Officers Association.

The Migratory Bird Treaty Reform Act of 2004 (MBTRA, 118 Statute 2809), the most recent amendment to the MBTA, required the USFWS to provide a list of avian species not covered under the MBTA. The MBTRA excludes coverage to species not considered native to the United States when the MBTA was enacted in 1918, i.e., species that have been introduced by humans everywhere they occur in the nation (70 FR 12710). Regardless, the most recent USFWS list of
avian species proposed for MBTA protection identifies 972 species (71 FR 50194). Approximately 400 of these species are found in Oregon, and more than 300 of them breed in the state. In effect, all species of wild birds in Oregon are protected by the MBTA with the exception of European starling (Sturnus vulgaris), rock dove (i.e., feral pigeon, Columba livia), house sparrow (Passer domesticus), and mute swan (Cygnus olor).

Migratory birds are routinely associated with transportation projects. Conflicts are most likely to occur during the nesting season when active nests (i.e., nests containing eggs or young) may be present. Adult birds are capable of leaving a project site when threatened by construction or maintenance activities, but eggs and flightless young are not. These early life stages of birds may be directly impacted by activities such as clearing and grubbing vegetation, and cleaning, painting, reconstructing, and demolishing bridges. In Oregon, many of these activities occur concurrent with migratory bird nesting because of off-season weather constraints, temporal restraints of other environmental regulations (e.g., in-water work periods to protect fisheries resources, ODFW 2000), and the numerous species of birds that collectively produce active nests more than half of the year.

Because of the high probability of encountering active nests on transportation construction and maintenance projects, no MBTA incidental take permits, and the strict liability aspect of the MBTA, ODOT considers the MBTA to be one of the most difficult environmental laws with which to comply as the agency carries out its mission ‘to provide a safe, efficient transportation system.’ To date, the Federal Highway Administration (FHWA) has not provided state transportation departments with official guidance for MBTA compliance.

In 2001, President Bill Clinton signed Executive Order 13186 which outlines ‘Responsibilities of Federal Agencies to Protect Migratory Birds’ (FR Doc. 01-1387). Under the Executive Order, “Each Federal agency taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations is directed to develop and implement, within two years, a Memorandum of Understanding (MOU) with the Fish and Wildlife Service that shall promote the conservation of migratory bird populations” (Sec. 3(a)). In addition, “Each agency shall ... support the conservation intent of the migratory bird conventions by integrating bird conservation principles, measures, and practices into agency activities and by avoiding or minimizing, to the extent practicable [italics added], adverse impacts on migratory bird resources when conducting agency actions” (Sec. 3(e)(1)). Six years after the Executive Order, only the Department of Defense and the Department of Energy have signed migratory bird MOU agreements with USFWS (http://www.fws.gov/migratorybirds/). FHWA has developed a draft MOU, but it has not been accepted by USFWS.

With high risk for MBTA non-compliance and the absence of national level guidance for state transportation departments, each state faces the risk of MBTA non-compliance individually. Rather than wait for national direction, ODOT has been developing and implementing a multi-faceted MBTA compliance strategy that increases migratory bird protection during transportation projects and minimizes the risk of prosecution should incidental take occur. The three strategies are described below.

**ODOT MBTA Highway Division Directive**

Although roads may inhibit the presence and breeding of some avian species (e.g., Reijnen et al. 1995, Rottenborn 1999, Forman and Deblinger 2000, Forman et al. 2002), transportation corridors and structures provide attractive habitat for other species. For example, raptors may use roadsides more often than adjacent habitat because of the greater availability of perch sites (Knight and Kawashima 1993, Meunier et al. 2000) and less energy-demanding hunting behavior because of landscape openness (Meunier et al. 2000), while ravens and other avian scavengers may concentrate along highways because of vehicle-generated carrion (Knight and Kawashima 1993, Forman et al. 2003). Some bird species appear to favor foraging and nesting on managed roadsides rather than adjacent fields (Laursen 1981), and a variety of birds nest on bridges (e.g., Hobson and Wilson 1985, Cade and Bird 1990, Stenzel et al. 1995, Brown and Brown 1996, Airola and Grantham 2003).

Because migratory birds are common along highways and encounters with them are frequent on transportation projects, ODOT staff, consultants, and contractors have been seeking guidance on how best to pursue compliance with the MBTA. In response to this need, ODOT developed a MBTA Highway Division Directive (http://www.oregon.gov/ODOT/HWY/GEONVIRONMENTAL/index.shtml) and began implementing it in January 2006. The purpose of the Directive is to provide agency personnel involved in project delivery, construction, and maintenance with guidelines and strategies to ensure that appropriate and reasonable measures are taken to prevent injury to and death of migratory birds. The Directive emphasizes that all employees are expected to practice due diligence to safeguard migratory birds while they carry out ODOT’s transportation mission in ways that protect and enhance the environment.

Recognizing that each transportation project has its own unique set of MBTA compliance challenges, the ODOT Highway Directive is not prescriptive. Instead, it identifies general construction and maintenance situations where migratory bird conflicts commonly occur, and for each situation, a suite of possible actions are identified that could be implemented on projects to eliminate or minimize injury to birds. Conservation of bird habitat also is addressed. For example, the migratory bird goal for snag removal in the MBTA Directive is to avoid felling snags that contain active nests. One suggestion for meeting this goal is to avoid removing snags unless necessary for safety or project implementation. The Directive also acknowledges that for some projects, none of the proposed strategies may be practicable. Under these circumstances, ODOT staff is directed to develop project-specific measures to prevent migratory bird harm and to minimize harm when prevention is not practicable.
With the intention of being pro-active rather than reactive, the Highway Directive expects project development teams to consider possible sources of migratory bird conflict significantly in advance of project implementation. If sources of conflict can be identified early in project development, projects can be intentionally designed to minimize harm to migratory birds instead of modifying projects after-the fact. In the long run, this approach saves transportation projects time and money while providing superior benefits to the avian resource. Additionally, the Directive requires individuals involved in project delivery to identify and incorporate migratory bird conservation principles and practices into ODOT projects and contracts through collaboration with appropriate federal, state, and non-governmental groups during planning efforts. This Directive expectation is largely accomplished through continuous dialogue with the 15 liaisons that ODOT funds with state and federal regulatory agencies.

Migratory bird conservation at the project planning stage focuses on habitat. ODOT has four habitat-centric approaches: (1) preservation – to ensure that project activities are designed such that migratory bird habitat will not be disturbed unnecessarily during project implementation and that nesting habitat will not be disturbed during the nesting season; (2) restoration – to ensure that migratory bird habitat that will be negatively impacted during project implementation is restored where feasible; (3) enhancement – to improve migratory bird habitat within project areas if feasible and reasonable; and (4) mitigation – to enhance bird habitat off-site when on-site preservation, restoration, and enhancement opportunities are limited.

The MBTA Highway Division Directive is a valuable first step in raising awareness within the ODOT community about migratory birds and their protection, and in providing ODOT employees with a suite of strategies to guide project decision-making regarding MBTA compliance. In addition, the Directive makes it an employee duty to protect avian resources to the greatest extent practicable. If the Directive guidelines and strategies are followed and incidental take occurs in the absence of a USFWS authorized permit, ODOT, rather than the individual, will be accountable (Oregon Department of Administrative Services Policy Number 125-7-202).

**Inter-Governmental Agreements with Wildlife Services**

ODOT’s second MBTA compliance strategy was to remove the risk of take and take liability from the agency by entering into Inter-Governmental Agreements (IGA) with USDA-APHIS-Wildlife Services (U.S. Department of Agriculture – Animal Plant Health Inspection Service – Wildlife Services). Wildlife Services is the congressionally-authorized federal agency that conducts animal control activities and enters into cooperative programs for animal conflict management with government agencies, public or private institutions, organizations, and associations (7 USC 426c; WS Policy Directives 1.210 and 3.101). Wildlife Services also has the federal responsibility to respond to migratory bird conflicts and to provide assistance in resolving the conflicts upon request from either the public or private sector (WS Policy Directive 2.301). By being involved in the management of ODOT wildlife conflicts, Wildlife Services helps ensure that wildlife management activities are environmentally sound and conducted in compliance with applicable federal, state, and local laws and regulations.

The State Directors of Wildlife Services negotiate annually with the appropriate USFWS regional migratory bird offices for authorized levels of take associated with their permits, including migratory bird take. Take limits are for all Wildlife Services activities within a state and they usually are modest. Furthermore, third parties that have contracted with Wildlife Services are not covered by the permits. These permit conditions are important to ODOT for several reasons. Because Wildlife Services take permits are non-transferrable, only take incurred by Wildlife Services employees, not ODOT personnel, is covered. Additionally, because the permit limits on take are modest, the primary strategy of Wildlife Services for migratory bird management on ODOT projects is active nest prevention. Although nest prevention is a time and labor intensive endeavor, it benefits the avian resource by minimizing the risk of take.

ODOT entered into two IGAs with Wildlife Services in March 2006. One provides for a Wildlife Services liaison to manage ODOT MBTA compliance performed by Wildlife Services personnel across Oregon. The second IGA covers time and materials. To date, Wildlife Services has had its most significant influence in the ODOT OTIA III (Oregon Transportation Investment Act III) State Bridge Delivery Program. In 2003, the Oregon State Legislature passed House Bill 2041 which provides $1.3 billion over a 10-year period for the replacement and repair of more than 300 bridges on Oregon state highways. Several species of migratory birds that routinely nest on bridges can be problematic for ODOT from a MBTA compliance perspective. Barn swallows (*Hirundo rustica*) and cliff swallows (*Petrochelidon pyrrhonota*) are particularly challenging because of their tenacious, communal nesting habits (Jackson and Burchfield 1975, Brown and Brown 1996).

Most bridges being replaced or repaired in Oregon are over water, and the Oregon Department of Fish and Wildlife (ODFW) regulates the timing of in-water work to minimize potential impacts to fish, wildlife, and habitat resources (ODFW 2000). In most instances, recommended in-water work periods overlap with the swallow nesting season. Consequently, nesting on bridges must be prevented until the repair work is done or the structure is demolished. Wildlife Services conducts most of the nest prevention work for ODOT and for many of ODOT’s contractors.

The particular method that Wildlife Services utilizes to prevent nesting on a bridge depends on characteristics of a bridge such as height, length, structural complexity, and intensity of bird use. On bridges where nest locations are relatively inaccessible, partial nests and inactive nests are removed using extendable poles. When nests are relatively inaccessible, partial and inactive nests are shattered with paintballs. Paintball color is given low priority on bridges.
scheduled for demolition, but clear paintballs are a high priority on historic bridges being repaired or upgraded. Bridges with inaccessible nest sites or bridges that have a history of intense swallow nesting usually are netted to exclude birds from the structure, but only if the nets will not impact the safety of the traveling public.

In addition to assistance on ODOT bridge projects, Wildlife Services has assumed responsibility for migratory bird management on a number of projects that involve vegetation removal during the nesting season. Although vegetation removal outside the nesting season is always the preferred option to prevent birds from nesting in vegetation, it is not always the practical option. Winter is the season when most precipitation occurs in Oregon. If vegetation cover is absent during the rainy season, significant erosion is likely to occur, particularly when mountainous terrain is involved. As with nesting prevention on bridges, Wildlife Services initiates nest prevention measures prior to the nesting season. Because nesting birds can be difficult to locate in vegetation, particularly if the vegetation is structurally complex or the area is large, nest prevention in vegetation is inherently more challenging than nest prevention on bridges and the risk of take is greater.

Despite the challenges Wildlife Services has faced while assisting ODOT with MBTA compliance, the value of the collaboration between the two agencies is indisputable. In 2006, Wildlife Services assumed the responsibility of migratory bird management on more than 50 ODOT projects. Across all these projects, take was limited to 17 eggs and three chicks. More than half of the take was a direct result of third party tampering with bird-exclusion netting on a bridge that allowed swallows to nest successfully on the structure. This year (2007), Wildlife Services is involved in more than 80 ODOT projects.

**Avian Protection Plan**

Despite the success of ODOT’s collaboration with Wildlife Services on migratory bird management, there are/will be occasions when Wildlife Services is/will be unable to provide project assistance. These situations are uncommon, but the following are some examples: a bridge cannot be accessed because construction of a temporary work bridge is delayed; the structural design of a bridge makes it impracticable to access nests and use of bird-exclusion netting is not a viable option; or vegetation must be cleared unexpectedly during the nesting season and no nest prevention activities were undertaken. Situations such as these highlight the need for an ODOT Avian Protection Plan (APP).

An APP is a voluntary agency-specific program of best management practices designed to protect and conserve migratory birds that is endorsed by the Enforcement Branch of USFWS. USFWS Enforcement has MBTA prosecutorial discretion, and an agency operating under an APP is allowed to fulfill its mission without the need for formal USFWS concurrence on every action that has potential to impact migratory birds. The APP is not an incidental take permit, nor does it result in a take permit. Rather, it is an agency’s demonstration that it is doing its best to fulfill the intent of the MBTA, migratory bird protection and conservation.

In 2003, USFWS and the utility industry agreed to develop a process whereby the industry could voluntarily and without the need for formal service concurrence address avian electrocutions and strikes (FWS/AMP/DMBM/020719). The result was the development of a template for an APP that was agreed to by the utility industry and endorsed by USFWS (APLIC and USFWS 2005). Numerous utility companies have developed company-specific APPs since the template became available, and workshops are routinely held across the nation to train utility company personnel in avian protection and APP development.

Given that USFWS actively encourages utility companies to develop APPs as an acceptable way to demonstrate commitment to migratory bird protection and conservation, ODOT made a decision in 2005 to collaborate with USFWS in the development of a transportation-centric APP. The framework for ODOT’s APP comes directly from the strategies and guidance contained in the MBTA Highway Division Directive. Additional best management practices and mitigation measures identified by others (e.g., Gucinski 2000, Carey 2004, Jacobson 2005) are being evaluated for possible inclusion in the APP, and Wildlife Services is sharing with ODOT its extensive knowledge of migratory bird conflict resolution as the APP develops. ODOT is targeting 2007 for completion of its APP following development of an agency-wide bird mortality tracking system.

**Summary**

ODOT is committed to taking appropriate and reasonable measures to prevent injury to and death of migratory birds while carrying out its mission to provide a safe and efficient transportation system. This commitment is demonstrated by a multi-faceted MBTA compliance strategy that ODOT has been developing and implementing to increase migratory bird protection during transportation projects. ODOT initially developed a MBTA Highway Division Directive. The Directive requires due diligence to safeguard migratory birds as ODOT personnel carry out their assigned duties. The Directive also includes a suite of strategies to protect avian resources for possible implementation on transportation projects. Subsequent to the Highway Directive, ODOT entered into inter-governmental agreements with USDA-APHIS-Wildlife Services for migratory bird conflict resolution. As the federal agency responsible for responding to migratory bird conflicts, Wildlife Services has USFWS authorized bird take. Following the lead of the utilities industry, ODOT currently is developing an APP. An APP is a voluntary, agency-specific, USFWS endorsed program of best management practices designed to protect and conserve migratory birds. ODOT is sharing information about its MBTA compliance strategy in the hope that it will provide ideas to other transportation agencies struggling with MBTA challenges.
Biographical Sketch: Chris Maguire is the Terrestrial Biology Program Coordinator for the Oregon Department of Transportation (ODOT). She has held this position since January 2005. Prior to ODOT, Chris had academic appointments in biology/ecology/wildlife at Oregon State University, Western Washington University, Unity College in Maine, and Rutgers University and Bloomfield College in New Jersey. Chris has also held research positions with the U.S. Environmental Protection Agency in Oregon and the U.S. Forest Service in Washington. Chris has a Masters and a PhD in Animal Ecology from Rutgers University, and she is a Certified Wildlife Biologist.

References


