2013

Wildlife in Airport Environments: Appendix, Index and Back Cover

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From Wildlife in Airport Environments: Preventing Animal-Aircraft Collisions through Science-Based Management, ed. T.L. DeVault, B.F. Blackwell, & J.L. Belant (Baltimore: Johns Hopkins University Press, 2013).

Appendix

Regulations for Wildlife Management at Airports

RICHARD A. DOLBEER

In 1990, the 190 member nations of the International Civil Aviation Organization (ICAO) adopted, in Annex 14 to the Convention on Civil International Aviation, three recommended management practices regarding bird hazards to aviation. The recommended practices required that aviation authorities within each nation (1) assess the extent of the hazard posed by birds at and in the vicinity of airports certificated for passenger traffic, (2) take necessary action to decrease the number of birds, and (3) eliminate or prevent the establishment of any site in the vicinity of the airport that could attract birds and thereby present a danger to aviation. Because of the increasing threat posed by birds to aviation worldwide, member states voted to make these recommendations mandatory ICAO standards, effective November 2003. In 2009, ICAO expanded these standards to include terrestrial wildlife such as large mammals and reptiles that pose a risk at airports (ICAO 2009).

To comply with ICAO standards, the Federal Aviation Administration (2004) requires airports in the USA that are certificated for passenger traffic to conduct Wildlife Hazard Assessments (WHAs). In 2012, there were 550 such airports in the USA. General aviation airports receiving federal funding also may be required to conduct WHAs. Based on the findings of the WHA, most airports are required to develop and implement a Wildlife Hazard Management Plan (WHMP). These WHMPs, as dictated by requirements outlined in Federal Aviation Administration (2004), must address (1) removal of habitat and food attractive to wildlife; (2) use of techniques to exclude, disperse, or remove wildlife that pose a risk to aircraft; (3) training of airport personnel in wildlife management techniques; and (4) establishment of an Airport Wildlife Hazard Working Group. In addition, Federal Aviation Administration (2007) provides guidance on land uses that attract hazardous wildlife and are thus incompatible with aviation safety within 13 km (8 miles) of aircraft operating surfaces at airports (e.g., garbage landfills).

In implementing WHMPs in the USA, airports must deal with numerous regulatory constraints related to environmental issues at the federal, state, and local levels. First, most birds are federally protected under the Migratory Bird Treaty Act (MBTA), which is administered by the U.S. Department of Interior, Fish and Wildlife Service (USFWS). The MBTA (16 U.S.C. § 703–712) is an international treaty signed by the USA, Mexico, Canada, Russia, and Japan (USFWS 2013). State laws protecting birds can be even more (but not less) restrictive. State laws regulate most other wildlife, including mammals and reptiles. Before any management action can be taken to kill, trap and translocate, or disrupt reproduction of any species covered by these laws, federal and state permits must be obtained. These permits dictate allowable management methods and the numbers of animals or eggs that can be removed by species. The management of wildlife species classified as endangered has additional constraints under the Endangered Species Act (16 U.S.C. § 1531–1544), also administered by the Department of Interior. Most states have their own endangered species legislation, as well.

A constraint in implementing WHMPs at many airports relates to the management of wetlands that are attractive to birds. Under Section 404 of the Clean Water Act of 1972 (33 U.S.C. § 1251 and related legislation), most wetlands cannot be removed without obtaining a permit from the U.S. Army Corps of Engineers. These permits typically require that any removed or negatively altered wetland must be mitigated by the establishment of wetlands in other locations within the same watershed.

The U.S. Environmental Protection Agency (2012) oversees, through the Federal Insecticide, Fungicide and Rodenticide Act (7 U.S.C. § 136.40), the use of pesticides such as chemical toxicants and repellents that may be used to manage wildlife at airports. All pesticides must be registered with the Environmental Protection Agency as either general or restricted use before they can be applied under specified label directions. Restricted-use pesticides can only be applied by state-licensed applicators. Finally, state and local regulations may also constrain the use of firearms, traps, and bird-frightening devices that emit loud noises (e.g., propane cannons).

At international and national levels, the ICAO and civil aviation authorities, respectively, mandate that airports assess and manage the risk caused by birds and other wildlife in the airport environment. This task is made uniquely challenging, however, as described above, by the numerous constraints imposed by complex environmental regulations overseen by various federal, state, and local agencies. These environmental regulations, although unquestionably beneficial for society as a whole, are often at cross-purposes with aviation safety in the airport environment. The FAA and U.S. Department of Agriculture have published a 348-page manual, *Wildlife Hazard Management at Airports* by Cleary and Dolbeer (2005), which provides detailed guidance and background material for personnel conducting WHAs and implementing WHMPs in relation to environmental regulations.

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Page numbers in *italics* indicate figures and tables.

THE PILOT WATCHES the instrument panel and prepares for touchdown—a routine landing until a burst of birds, a coyote, or a herd of deer crosses the runway! Every year, pilots experience this tension and many aircraft come into direct contact with birds and other wildlife, resulting in more than one billion dollars in damage annually. The United States Federal Aviation Administration has recorded a rise in these incidents over the past decade due to the combined effects of more reporting, rebounding wildlife populations, and an increased number of flights. *Wildlife in Airport Environments* tackles the issue of what to do about encounters with wildlife in and around airports—from rural, small-craft airparks to major international hubs.

Whether the problem is birds or bats in the flight path or a moose on the runway, the authors provide a thorough overview of the science behind wildlife management at airports. This well-written, carefully documented volume presents a clear synthesis for researchers, wildlife managers, and airport professionals. The book belongs in the hands of all those charged with minimizing the risks that wildlife pose to air travel.

Wildlife in Airport Environments is the first book in the series Wildlife Management and Conservation and is published in association with The Wildlife Society.

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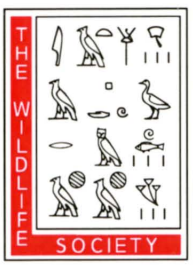

WILDLIFE MANAGEMENT & CONSERVATION
Paul R. Krausman, *Series Editor*

Published in association with
The Wildlife Society

JOHNS HOPKINS
Baltimore | www.press.jhu.edu

ISBN 13: 978-1-4214-1082-1
ISBN 10: 1-4214-1082-6

Cover design: *Martha Sewall*
Cover illustration: © *istockphoto.com*