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Green Roofs in the Airport Environment: Pleasant Dreams or Nightmares?

Ryan M. Swearingin
USDA Wildlife Services

Craig Pullins
USDA Wildlife Services

Travis Guerrant
USDA Wildlife Services

Brian Washburn
USDA Wildlife Services

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Ryan M. Swearingin, Craig K. Pullins, and **Travis Guerrant**
USDA Wildlife Services, O'Hare International Airport, AMC Bldg., Room 241, P.O. Box 66142, Chicago, IL 60666 USA

Brian E. Washburn
USDA Wildlife Services, National Wildlife Research Center, 6100 Columbus Avenue, Sandusky, OH 44870 USA

Green roofs on buildings are becoming very popular in urban areas of the United States. Public benefits of green roof projects include stormwater runoff reduction, improved water quality, reduced urban heat island effects, and aesthetic values. Several green roofs have been constructed in downtown Chicago and large-scale green roofs are currently being planned and implemented at O'Hare International Airport (ORD). Similar to any airport landscaping, green roofs on buildings in the airport environment might attract wildlife hazardous to aviation and could increase the risk of bird-aircraft collisions. No information currently exists in regard to this potential problem. During 2007–2008, we conducted a study to evaluate the wildlife use of a newly constructed green roof on the Airfield Rescue and Fire Fighting building at ORD. This green roof was approximately 320 m^2 in area and consisted of *Sedum* spp. for vegetation. Wildlife surveys were conducted on the green roof each week from January 2007 to March 2008. During the 13-month study, a total of 157 birds were observed flying over or using the green roof; 34% were using the green roof itself, whereas 66% were flying by the green roof and did not exhibit any perceived interest. Of the birds actually using the green roof, 72%, 13%, and 9% were killdeer, European starlings, and mourning doves, respectively. Killdeer nested on green roof, whereas the other species were perched or loafing. Birds used the green roof only between May and October. Overall, wildlife use of the green roof was minimal and appeared to be similar to use of adjacent buildings with traditional roofs. Although green roofs with vegetation types that offer forage and/or cover to birds might be attractive, the *Sedum* spp.-vegetated green roof in this study did not attract wildlife hazardous to aviation or increase the risk of bird strikes.

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