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Brian J. Fox
Auburn University, AL

James B. Armstrong
Auburn University, AL

Bradley F. Blackwell
USDA Wildlife Services

James B. Grand
Auburn University, AL

Wesley B. Holland
USDA Wildlife Services

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Parameters Affecting Bird Use of Stormwater Detention Ponds in the Southeastern United States: Implications for Bird-Aircraft Collisions

Brian J. Fox and James B. Armstrong

Auburn University, School of Forestry and Wildlife Sciences, 3301 Forestry & Wildlife Sciences Building, Auburn University, AL 36849 USA

Bradley F. Blackwell

USDA Wildlife Services, National Wildlife Research Center, 6100 Columbus Ave., Sandusky, OH 44870 USA

James B. Grand

Alabama Cooperative Fish & Wildlife Research Unit, 3301 Forestry & Wildlife Sciences Bldg., Auburn University, AL 36849 USA

Wesley B. Holland

USDA Wildlife Services, 3301 Forestry & Wildlife Sciences Bldg., Auburn University, AL 36849 USA

Stormwater impoundments within Federal Aviation Administration (FAA) sighting criteria (10,000 foot line of sight around airport perimeter) increase the risk of bird-aircraft collisions by providing bird habitat, but the factors which influence this risk have only recently been investigated. Managers must find ways to reduce this risk, while still managing stormwater for environmental quality compliance. The FAA provides guidelines for stormwater management to reduce hazardous wildlife attraction (AC150/5200-33B). However, these guidelines do not quantify the role of pond and landscape characteristics in attracting birds to stormwater ponds. In a collaborative effort with the FAA and the U.S. Department of Agriculture's (USDA) Wildlife Services, we are quantifying bird use of stormwater detention ponds. For this project we are conducting point counts at 40 stormwater ponds in the Auburn, AL area on a rotating basis. We are quantifying pond and landscape characteristics with a combination of observer data and geographic information systems. The data

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generated will provide a basis for understanding factors influencing bird-aircraft collision risks created by the presence of stormwater ponds. We will present our development of *a priori* models to describe bird use of stormwater ponds and discuss the project's objectives, including the development of improved Best Management Practices for hazardous birds at stormwater ponds. We will also summarize the project's preliminary data and analyses to date.