

Due to location and sensitivity of the site, traditional methods of managing vole populations were restricted. In the fall of 2008 zinc phosphide-treated oats were applied to the site using PVC bait stations. Snap-trapping efforts indicate that the use of bait stations and zinc phosphide grain baits can greatly reduce vole populations in urban environments. Follow-up applications of diphacinone bait will be applied in the winter of 2008–2009. Results from the diphacinone treatment as well as additional management efforts will be presented.

Genetic Analysis of Population Dynamics of the Southeastern Coyote (*Canis latrans*)

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Coyotes (*Canis latrans*) have been extremely successful in dispersing and expanding their range that now includes all fifty states of the United States in addition to Canada and parts of Central America. These animals have generally been considered a pest species due to their adaptive ability, high reproductivity, and impact as a top predator on commercial agricultural business. Population dynamics of coyotes is still poorly understood, yet such knowledge would be beneficial to management of coyotes in all areas. The goal of this study is to determine population structure in Alabama by using microsatellite DNA markers. In addition we plan to examine patterns of gene flow across an urban to rural gradient. This research is extremely applicable in urban coyote management as we will be able to describe gene flow between and among population of coyotes. Information gained about population structure among coyotes in east-central Alabama could be informative about populations across the southeastern region. It is our expectation that such biological data will be consolidated with the vast knowledge of the ecology of the southeastern coyote gathered to date to inform and aid management plans and decisions across the region. Approaching both conservation and management issues with a more unbiased view of the ecology of coyote populations will allow greater effectiveness in management practices for this species.

Native and Naturalized Turf Species Suitable for Use on Airfields Managed for Wildlife Hazards in the Northeast

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Habitat management is an important component of an integrated approach for reducing wildlife hazards on airfields. This research examines alternative turf species that are either native or naturalized in the northeastern United States. Many native turf species tend to not be attractive to wildlife due to their low palatability and seed production. These species may have uses on airfields, golf courses and in residential areas where geese and other wildlife are in conflict with humans. While the low seed productivity in some native species is a wildlife deterrent, this same

trait is associated with poor establishment rates. Our goal was to find the most successful means of germinating these species using a hydroseeding application so they can be utilized as part of an airfield vegetation management design. Our data will show the evaluation of plant vigor conducted under controlled greenhouse conditions. Some of the species tested include Pennsylvania sedge (*Carex pennsylvanica*), little bluestem (*Schizachyrium scoparium*), crinkled hair grass (*Deschampsia flexuosa*), and purple love grass (*Eragrostis spectabilis*). By evaluating each species for their suitability for hydroseeding, germination, and early vigor we are able to make recommendations for hydroseeding native species at airfields managed for reducing wildlife hazards.

Parameters Affecting Bird Use of Stormwater Impoundments in the Southeastern United States: Implications for Hazardous Wildlife Management at Airports

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Stormwater impoundments within Federal Aviation Administration (FAA) citing criteria (10,000 ft from the air operations area) increase the risk of bird-aircraft collisions (strikes) by providing bird habitat. The number of wildlife strikes (97.5% involving birds) reported in the U.S. annually is increasing and, consequently, annual losses to the U.S. civil aviation industry from strikes now exceed \$625 million. Wildlife managers must find ways to reduce this risk, while still managing stormwater for environmental quality compliance and safe aircraft ground movements. Existing guidelines for wildlife-hazard management at airports do not quantify the role of pond and landscape characteristics in attracting birds to stormwater impoundments. In a collaborative effort with the FAA and the U.S. Department of Agriculture's Wildlife Services program, we are quantifying bird use of 40 stormwater detention ponds near Auburn, AL, over a two-year period. We will use the observer data and analyses via geographic information systems to develop bird-habitat models and, subsequently, improved BMPs to reduce bird use of stormwater impoundments in and around airports. We will present our development of this project and its objectives, as well as the project's preliminary data and analyses to date.

Southeastern Coyote Home Range Size Across an Urban to Rural Gradient

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In recent years, both human and coyote populations have expanded in the southeastern United States bringing the question of what makes suitable coyote habitat in urban areas to the forefront. Home range size is based on population density, minimum resource requirements of the individual, and availability of resources; typically, the smaller the home range size, the better