

(20) WASHINGTON DULLES INTERNATIONAL AIRPORT CONSTRUCTION AND ITS IMPLICATIONS ON WILDLIFE DAMAGE MANAGEMENT

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The construction boom, starting in 1999, at Washington Dulles International Airport (IAD) has caused airport management and wildlife managers to re-assess wildlife damage management strategies on a regular basis. IAD is currently developing an Environmental Impact Statement (EIS) for the airport expansion project that will encompass two additional runways with attaching taxiways, two terminal buildings, a subway system, an air traffic control tower, and supporting roads and structures. Since 2000, USDA Wildlife Services (USDA WS) has been involved in the planning and development phase of construction projects to reduce the creation of wildlife attractants. USDA WS has worked with airport management on the construction of seven new detention ponds, educating contractors on the proper installation of temporary fence when the permanent security fence was breached due to construction, planting of non-palatable ground covers in disturbed areas, and ensuring displaced wildlife from lost habitat would not gain access to the AOA (and have a plan in place to alleviate the problem if this occurred). Increased surveillance of the AOA security fence and maintenance of any breaches, alleviation of airfield attractants (e.g., temporary standing water and wildlife food sources), and removal of all woodland habitats were components of the plan. Increased human activity associated with the construction was both beneficial and detrimental to wildlife management. Benefits included having more eyes on the airfield during working hours to identify hazardous wildlife conditions, whereas detriments were increased vigilance and safety of construction workers and their equipment in the control of wildlife and entrance points left open for easy vehicle access (and potentially wildlife). The construction at IAD has forced construction planners, airport engineers, airport management, and wildlife managers to learn the diverse intricacies of airport construction. Ultimately, this will foster a long-range integrated wildlife damage management plan into all phases of airport construction for the ever-changing airport environment.

(21) BEHAVIORAL RESPONSE OF GULLS TO A LETHAL CONTROL PROGRAM AT A NEW YORK AIRPORT

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An airport in southeastern New York reported 80-315 bird-aircraft collisions annually from 1979-1999, causing millions of dollars in damage to aircraft and resulting in 65 aborted take-offs and 60 damaged engines. U. S. Department of Agriculture (USDA) biologists initiated a management program in 1991 to reduce strikes by shooting gulls (*Larus* sp.) attempting to fly over the airport. In 2000 and 2001, we documented behavioral responses of great black-backed gulls (*L. marinus*), herring gulls (*L. argentatus*), laughing gulls (*L. atricilla*), and ring-billed gulls (*L. delawarensis*) to active shooting stations, simulated shooting stations, and concealed

observers along the south boundary of the airport to determine if gulls exhibited general or species-specific avoidance of shooting stations. We counted gulls within the 150-m radius sampling area around the observation points during 21, 2-hr observation periods per year. Of the gulls included in this study, fewer approached within 50 m of the observation points when shooting occurred than during other treatments. Preliminary analyses indicate that negative behavioral responses were more frequent during the shooting treatment for black-backed gulls, herring gulls, and laughing gulls. These findings suggest that in addition to lethal effects, shooting has a general non-lethal hazing effect on gulls in the airport environment.

(22) URBAN CANADA GOOSE MANAGEMENT IN WESTERN WASHINGTON: USING A UNIFIED POLITICAL APPROACH

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Like many other urban areas throughout the United States, western Washington has experienced substantial increases in resident Canada geese, potentially leading to more birdstrikes at the 11 airports located within King, Snohomish, and Thurston counties. Two coalitions were formed in 1989 and 1998 in King/Snohomish County and Thurston County, respectively. These committees were comprised primarily of county and city officials, state and federal wildlife biologists, and park managers. In addition, input was also solicited from hunters, bird conservation groups, and animal rights groups. Following numerous meetings, goose population estimates were developed, problem areas were identified, and management objectives and alternatives were established. An integrated goose control plan was initiated, which included habitat management, public education, egg addling, harassment, and relocation of geese to other locations in the state. It soon became apparent that egg addling and habitat management alone were not sufficient to suppress the population, whereas relocation and harassment simply transferred the problem to someone else. In 1999, the decision was made to use lethal removal to reduce regional populations of urban Canada geese to more acceptable levels. From 2000 to 2003, 10,813 geese were removed from urban areas of western Washington upon request of the individual property owners where geese were causing damage. Reducing goose numbers at problem locations has augmented the effectiveness other methods (e.g., egg addling, harassment, and habitat management). Since the implementation of lethal control, Canada goose complaints are down, park use is up, and city, county, and private residents continue to express their approval of the program's success. Canada goose strikes within the project area declined from 11 strikes between 1995 and 1999 to 4 strikes between 2000 and 2003 (2.2 and 1 per year, respectively). The regional committees continue to implement an integrated goose control program, but the amount of lethal control has been substantially reduced as urban goose populations approach target levels. The selective removal of geese from problem locations has been a successful component of an integrated management program and should continue to be implemented, if and when necessary, to maintain urban goose numbers at levels acceptable to the public.

(23) PROGRESS WITH ENDOPHYTES IN GRASSES FOR THE AVIATION INDUSTRY