Wildlife Services
Protecting People
Protecting Agriculture
Protecting Wildlife

Factsheet
September 2012

Safer Skies: For Birds and People

Wildlife Services (WS), a program within the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS), provides Federal leadership and expertise to resolve wildlife conflicts that threaten the Nation's agricultural and natural resources, human health and safety, and property.

Birds and other wildlife can pose significant threats to both human safety and property when they appear near airports. Through a balanced effort of research and wildlife management, WS biologists are reducing the risk of wildlife-caused damage to U.S. aviation.

The wings of planes and of nature often compete for the same airspace at the same time. When that happens, collisions may occur that result in damage to aircraft and sometimes in injuries or even death to passengers and crew. The January 2009 emergency landing of Flight 1539 on the Hudson River dramatically demonstrated this hazard.

To help reduce the risk of these potentially dangerous interactions, WS biologists provide airport operators across the Nation with advice and recommendations on how to keep runways and flight paths clear of wildlife. WS' Airport Wildlife Hazards Program works closely with the military, the civil aviation industry, and the U.S. Department of Transportation's Federal Aviation Administration (FAA) to reduce the safety risks and economic impacts to aviation caused by birds, mammals, and other wildlife.

Airports in the Eastern and Southeastern United States experience the greatest number of wildlife-aircraft collisions, but the problem exists nationwide. The FAA estimates that birds and other wildlife cause about $718 million in damage each year to civil aircraft in this country. U.S. military aircraft incur several millions of dollars in wildlife damage annually. Indirect costs, such as flight delays, aircraft changes, and loss of revenues, add immeasurably to direct costs.

How WS Helps

In fiscal year (FY) 2011, WS biologists provided assistance in reducing wildlife hazards at 785 airports located in 50 States, 3 Territories, and 7 foreign countries. Altogether, they provided 217 staff-years of assistance at 695 civil airports, 115 civil-military joint-use facilities, and 90 military airbases. WS assisted at airpoirts that served a total of 537 million commercial passengers and recorded 17.6 million commercial aircraft movements. The 373 general aviation (GA) airports where WS provided assistance recorded 11.3 million GA aircraft movements.

Wildlife Services employees routinely train and assist airport officials on techniques to reduce collisions between wildlife and aircraft.

Airports face ecologically and legally complex issues in controlling wildlife hazards. Each airport presents unique geographic and environmental conditions requiring professional expertise in wildlife damage management. With more than 400 personnel trained in airport-wildlife management, WS provides assistance, drawing on its network of experienced staff and the research conducted at its National Wildlife Research Center (NWRC). When the Nation's airports experience wildlife conflicts, the FAA recognizes that WS is available to assist.

WS offers technical and direct assistance. Technical, or informational, assistance includes: consultations; hazard assessments; development of hazard management plans; and environmental assessments. The program trained more than 3,572 employees at 332 airports in wildlife hazards awareness, wildlife identification, and control methods in FY 2011.

WS offers direct assistance with the two basic foundations of wildlife hazard management: habitat modification and wildlife dispersal. This includes conducting nonlethal dispersal activities, modifying habitats to make airfields less attractive to animals, and capturing and relocating wildlife. Lethal control may be used when imminent danger is observed or when other methods are ineffective or impractical. Non-lethal techniques include:

- using sound- and noise-making devices, such as pyrotechnics, propane cannons, and bird-distress tapes
- reducing water and garbage sources
- installing wildlife-resistant fences
- modifying or removing vegetation, trees, and roosting sites
- trapping and relocating wildlife

NWRC conducts research on wildlife behavior, habitat management, new harassment methods, and the impact of activities near airports on bird–aircraft strikes. This research helps WS develop new integrated ways to minimize wildlife hazards at airports.

All program activities comply with Federal and State laws, regulations, and policies. Airports request the work, which is conducted on a user-fee basis. Program biologists are active in professional groups, such as The Wildlife Society, the American Association of Airport Executives, and Bird Strike Committee-USA.

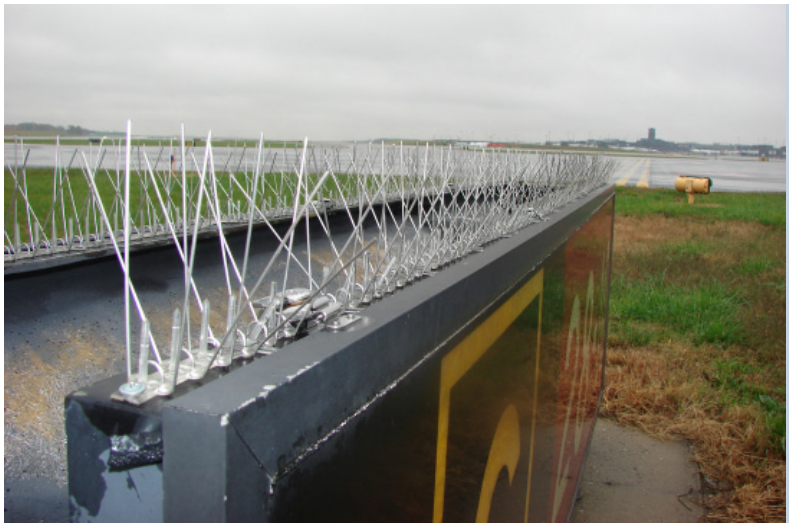
Memoranda of understanding with several groups recognize WS' expertise and experience in the management and mitigation of wildlife strikes. These include the FAA, the U.S. Department of Defense, and the National Association of State Aviation Officials.

WS biologists provide assistance at more than 300 general aviation airports.

The History of Wildlife Strikes

The first reported wildlife-aircraft strike that resulted in a fatality occurred on April 12, 1912, when a Model EX Wright Pusher collided with a gull and crashed into the ocean, killing the pilot. Recent data shows that bird strikes with civil and military aircraft caused at least 229 human deaths and destruction of 221 aircraft between 1988 and January 2012. The following are examples of the widespread and diverse nature of wildlife strikes.

Birds and other wildlife cause about $718 million in damage each year to civil aircraft in the United States.



Airport Wildlife Hazards Program: FY 2011 Quick Facts

- *Assisted 785 airports and airbases*
- *Provided 217 staff-years of assistance*
- *Trained 3,572 airport personnel in wildlife identification and strike management*
- *Live-trapped and relocated wildlife at 93 airports*
- *Conducted habitat modification projects at 196 airports*

- In 1960, a plane taking off from Boston's Logan Airport struck a large flock of starlings and went down, resulting in 62 human deaths. Despite their relatively small size, starlings pose a significant hazard due to their body density and flocking behaviors.
- In 1975, a plane sucked herring gulls into one engine at John F. Kennedy International Airport. The engine exploded and separated from the aircraft. The plane caught fire and was destroyed. No fatalities occurred in the aborted takeoff, largely because all 139 passengers were airline employees trained in evacuation procedures.
- On two separate occasions in 1994, commercial aircraft struck a coyote during takeoff at a Chicago airport.
- In 2001, a Learjet collided with two deer on the runway at an Alabama airport. The aircraft ran off the runway and burst into flames. Firefighters kept the flames at bay for 40 minutes until the pilots could be rescued.
- In 2008, a DC-10 on descent at 9,700 feet collided with Snow geese. Repairs required 8 days out-of-service at a cost of $220,000. Another DC-10 required 78 hours out-of-service and $913,678 to repair engine and cowling damage caused by ingesting Gadwall duck.
- In 2008, white pelicans and Canada geese were implicated in strikes that resulted in human fatalities.

National Wildlife Strike Database

WS maintains the National Wildlife Strike Database for the FAA and compiles regularly published reports. Information, covering 1990–2011, shows:

- A total of 119,917 reported bird strikes and 2,754 terrestrial mammal strikes.
- Of the strike reports indicating the level of damage, 90 percent of the bird strikes and 65 percent of the terrestrial mammal strikes identified no damage to aircraft.
- Where the level of damage was indicated, total destruction of the aircraft was reported in less than 1 percent of bird strikes and 1 percent of terrestrial mammal strikes, or a total of 57 aircraft.
- Of aircraft totally destroyed, 56 percent were struck at general aviation airports and 63 percent were small general aviation aircraft.
- Of the destroyed aircraft, 15 strikes occurred away from an airport, 8 occurred at U.S. airports certified for passenger service, and 2 occurred at a foreign airport certified for passenger service.
- Current studies suggest that approximately 39 percent of all strikes are reported to the system.

In fiscal year 2011, WS trained personnel at 332 airports in wildlife hazards awareness, wildlife identification, and control methods.

Technical and Direct Management Assistance Provided by Wildlife Services' Biologists To Reduce Wildlife Hazards at Airports[1], FY 2011

Category of assistance	Type of assistance to reduce wildlife hazards	No. of airports
Technical	Consultation regarding wildlife issues	751
	Training of airport personnel	332
	Wildlife hazard assessment	202
	Wildlife hazard management Plan	164
	Environmental assessment	46
Direct	Lethal control of hazardous wildlife	314
	Non-lethal dispersal of hazardous wildlife	277
	Habitat modification	196
	Live-trap/translocation of wildlife from airport	93

[1] A total of 785 airports were assisted.

[2] Number of airports where training took place; personnel from additional airports attended some training courses.

Additional Information

For more information about managing wildlife damage at airports or other WS operations, please call 1-866-4USDA-WS (1-866-487-3297) or visit the Web site www.aphis.usda.gov/wildlife_damage/.

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Animal and Plant Health Inspection Service