



Working to Minimize Risk: Expanding DFW Airport's Wildlife Hazard Management Program Beyond its Borders

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Dallas/Fort Worth International Airport

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DFW Airport Overview

International Routes - DFW has an extensive international route network spanning five continents



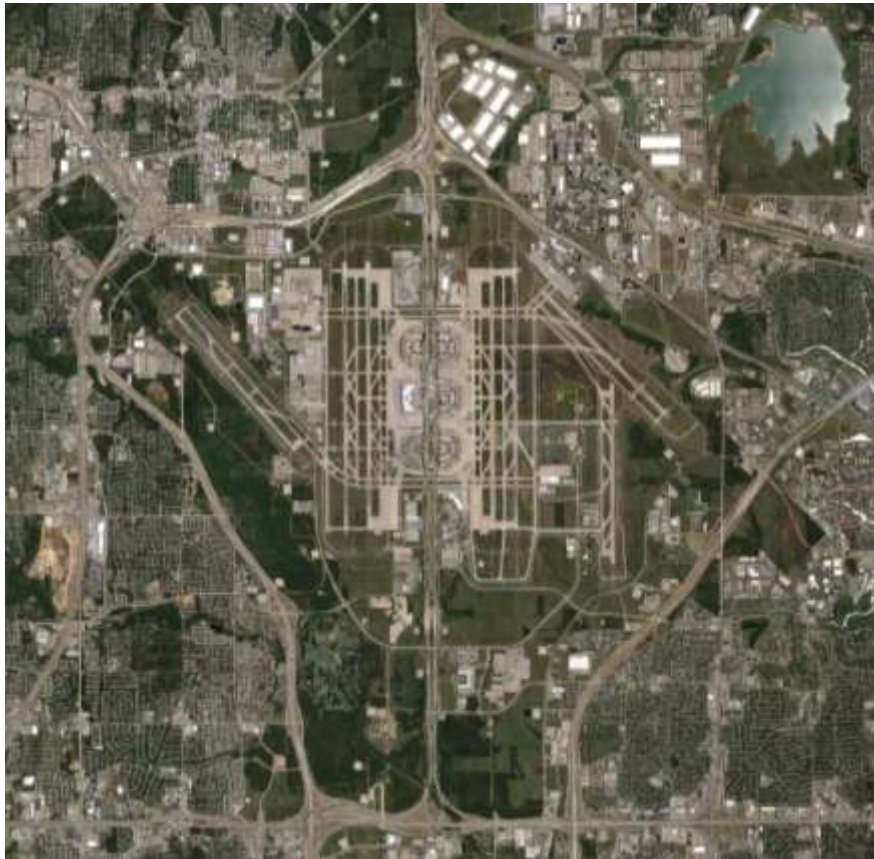
48 International Routes

DFW Airport Overview

Domestic Routes - DFW is the pre-eminent southern mid-continent U.S. hub.



DFW Airport Overview



- Airport is located between the cities of Dallas and Fort Worth in Texas
- Airport property is 17,207 acres
- 7 runways
- 4 aircraft can land simultaneously under Visual Flight Rules (VFR) conditions
- 3 aircraft can land simultaneously under Instrument Flight Rules (IFR) CAT III conditions
- 646,803 operations in 2011
- 3 FAA control towers (2 active – 24/7)
- 5 terminals, 155 gates

Wildlife at DFW Airport

Mammals:

Coyotes
Bobcats
Feral/
Domestic dogs
Feral/domestic cats
Mice
Moles
Rabbits
Skunks
Raccoons
Armadillo
White-tailed Deer
Mice/Rats

Other terrestrial:

Opossums
Kangaroo
Rat Snake
Bull Snake
Copperhead Snake
Red Eared Slider
Snapping Turtle
Various frogs/toads

Insects/Worms

June bugs
Mayflies
Grasshoppers
Ants
Dragonflies
Butterflies
Moths
Mosquitoes

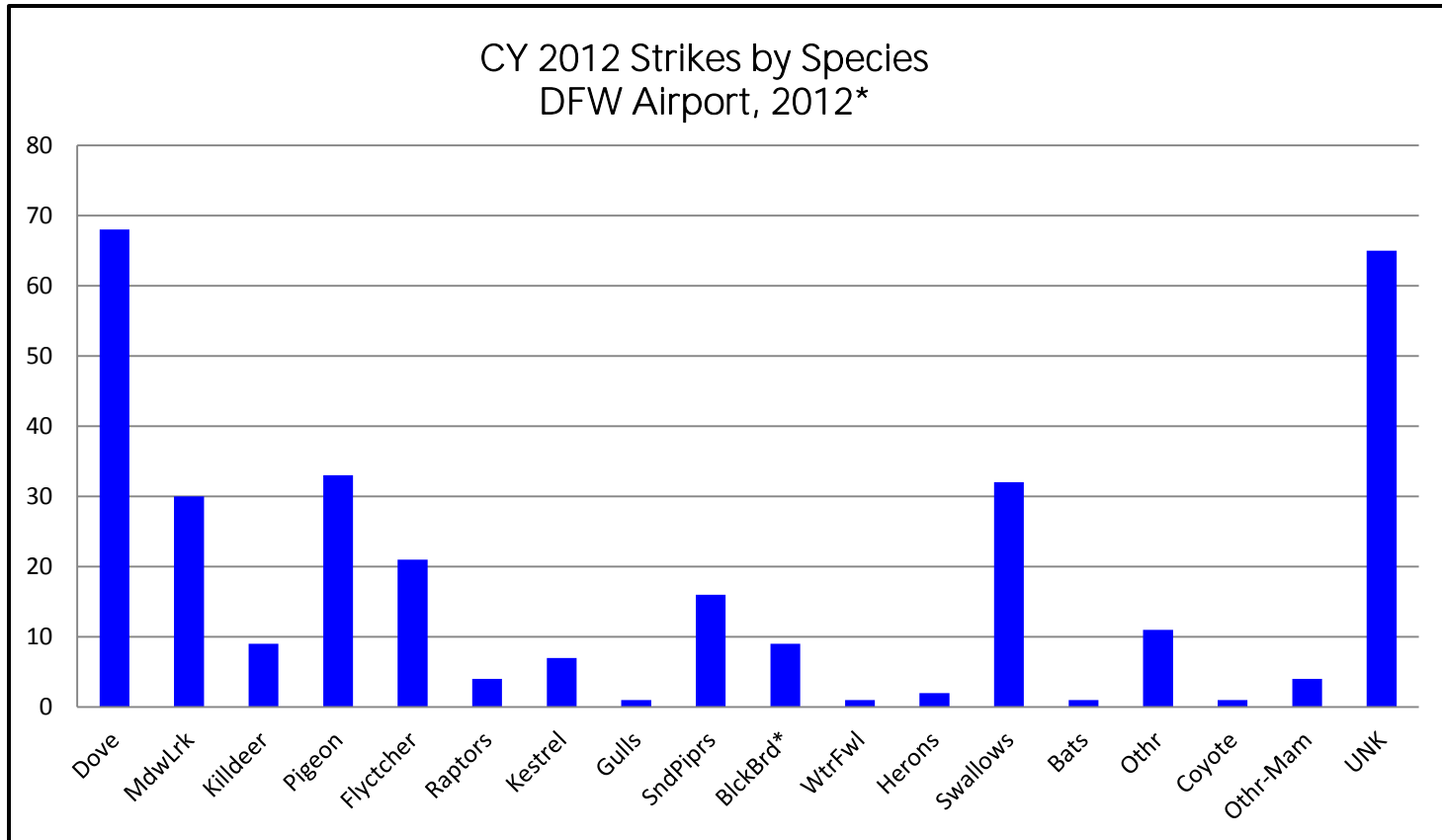
Birds:

American Coot
American Crow
American Kestrel
American Robin
American Wigeon
American Woodcock
Baird's Sandpiper
Barn Owl
Barn Swallow
Belted Kingfisher
Black Vulture
Black-crowned Night Heron
Blue-winged Teal
Bonaparte's Gull
Brewer's Blackbird
Brown-headed Cowbird
Bufflehead
Canada Goose
Cape May Warbler
Carolina Chickadee
Carolina Wren
Cattle Egret
Cedar Waxwing
Chimney Swift
Chuck-will's-Widow
Cliff Swallow
Common Grackle
Common Nighthawk
Cooper's Hawk
Dark-eyed Junco
Dickcissel
Double-crested Cormorant
Eastern Bluebird

Eastern Kingbird
Eastern Phoebe
European Starling
Field Sparrow
Franklin's Gull
Glossy Ibis
Gadwall
Grasshopper Sparrow
Great Blue Heron
Great Egret
Great Horned Owl
Great-tailed Grackle
Greater Roadrunner
Greater Yellowlegs
Green Heron
Harris's Sparrow
Herring Gull
Hooded Merganser
House Finch
House Sparrow
Killdeer
Lark Sparrow
Least Grebe
Least Sandpiper
Lesser Scaup
Lesser Yellowlegs
Little Blue Heron
Loggerhead Shrike
Long-billed Curlew
Mallard
Mississippi Kite
Mourning Dove
Mourning Warbler
Northern Cardinal

Northern Flicker
Northern Harrier
Northern Mockingbird
Northern Shoveler
Osprey
Ovenbird
Painted Bunting
Pectoral Sandpiper
Red-shouldered Hawk
Red-tailed Hawk
Red-winged Blackbird
Ring-billed Gull
Rock Pigeon
Roseate Spoonbill
Ruby-throated Hummingbird
Sandhill Crane
Savannah Sparrow
Semipalmated Sandpiper
Scissor-tailed Flycatcher
Short-eared Owl
Snowy Egret
Song Sparrow
Spotted Sandpiper
Swainson's Hawk
Turkey Vulture
Upland Sandpiper
Western Kingbird
Western Meadowlark
White-crowned Sparrow
White-faced Ibis
White-winged Dove
Wild Turkey
Wilson's Snipe
Wood Duck
Yellow-billed Cuckoo

Wildlife Strikes by Species – Calendar Year 2012



*Subject to change. FAA Strike Database not yet updated through 2012.

Wildlife Program at DFW Airport

- Passive Approaches (Preventive)

- Habitat Management
- Fences
- Planning
- Communication
- Training



- “Hybrid” Measures

- “Snarge” Collection Agreement Procedures with Airlines
- Regional Consortium
- BASH Meetings

- Active Approaches

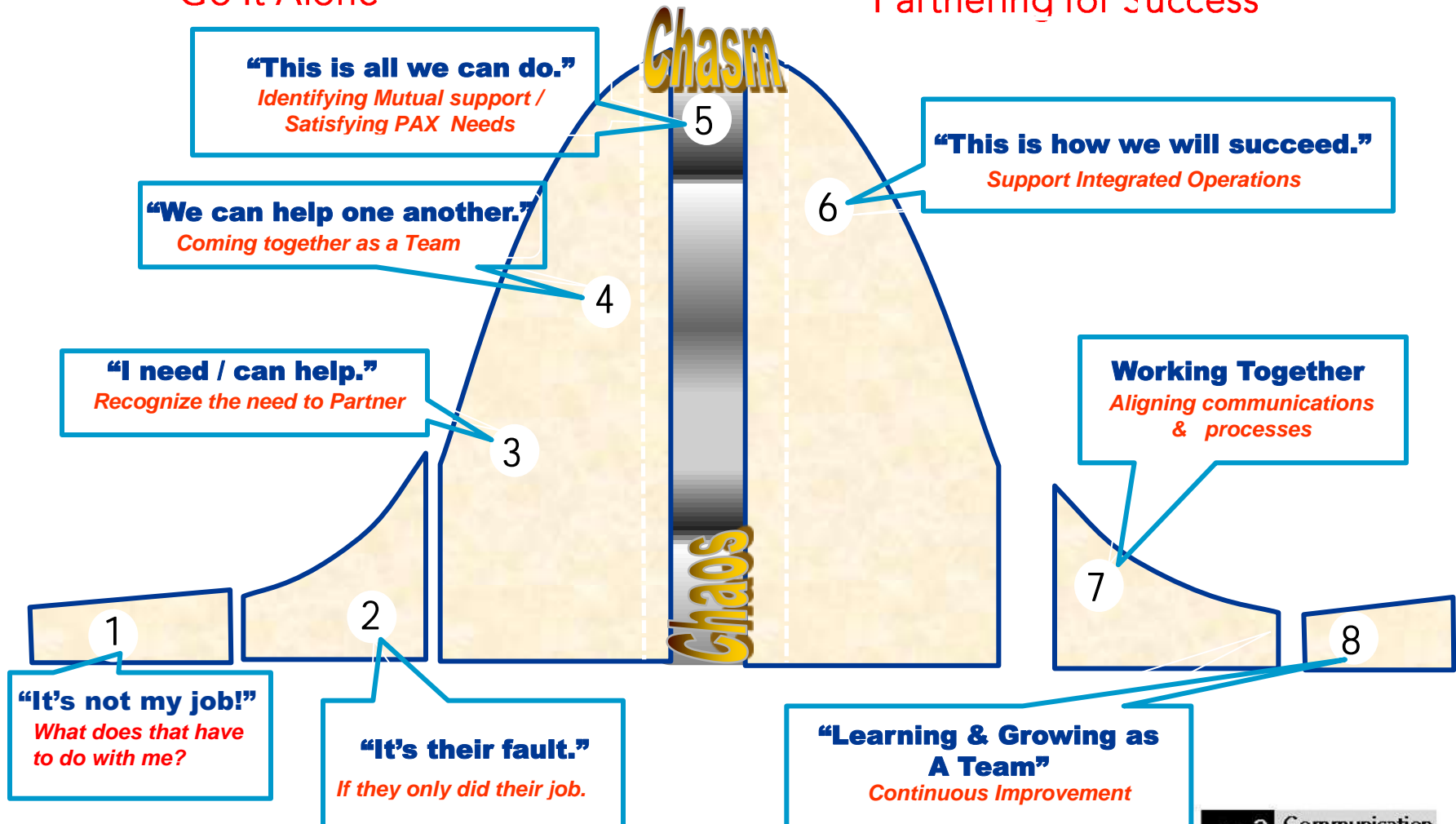
- Pyrotechnics
- Lights
- Live shells
- Other creative or new approaches that might fit individual airport design and needs (falconry, dogs)
- Training

What more can we do to mitigate wildlife hazard challenges?
 Can we share what we know and experience with other area airports?
 Do area airports experience similar wildlife activity?
 What can we at DFW Airport learn from other area airports?

Challenge to Effective Partnering

"Go It Alone"

"Partnering for Success"



C³: *Communication, Collaboration, Coordination*

Formation of the North Central Texas Consortium

- Inquiry sent out in April 2010 to Regional Airports to gauge interest in forming a Consortium of Airports to:
 - Address Wildlife Concerns and Challenges
 - Share Best Practices in Addressing Wildlife at Airports
 - Draw on each other as resources

- First meeting August 2010 included Part 139, General Aviation, Military, the North Central Texas Council of Governments-- Aviation Division, and USDA Wildlife Services

North Central Texas Wildlife Consortium Region



North Central Texas Wildlife Consortium

- First Meeting Agenda Items
 - Share backgrounds, familiarity with wildlife mitigation
 - Roundtable discussion of challenges
 - Community, budgets, laws and restrictions, resources
 - What are the most current FAA requirements and guidance's
 - What are Wildlife Assessments
 - What are Wildlife Hazard Management Plans
 - What licensing, permits, and regulations are required for Mitigation
 - What equipment and tools are available
 - What other resources are available

North Central Texas Wildlife Consortium

- First Meeting Eye Openers:
 - Level of familiarity with recommendations and requirements for wildlife mitigation varied widely
 - Knowledge and use of the tools and resources available varied
 - Airports worked under different local restrictions
 - We shared similar challenges
 - We all had information to share and things to learn from one another


North Central Texas Wildlife Consortium

- Early Meeting Outcomes
 - Quarterly meeting schedule
 - Scheduled an 8-Hour Classroom and Hands-On Wildlife Training
 - Pyrotechnics, species identification, resources available
 - Shared the application processes for permits, licenses
 - Contacts were formed with area (wildlife) professionals
 - Wildlife Awareness Brochure- produced by NCTCOG

Current Progress of the Consortium:


- Qualified Biologist-led 8-hour wildlife workshop covering State and federal rules and guidelines, wildlife attractants and reporting, species identification of common and T&E species, Strike reporting (including Snarge collection), tools of the trade, and hands-on pyrotechnics training
- Member participation in 3-day ERAU Wildlife Workshop
- Member participation in Bird Strike BSC Conferences
- Member expansion (Greenville)
- Two member airports proactively initiated the process for conducting a Wildlife Hazard Assessment
- Two documents published by the NCTCOG and used by Airport Personnel to:
 1. Communicate the importance and requirements of addressing wildlife at airports to the community
 2. Directly assist area airports in their endeavors

North Central Texas Council of Governments

**NCTCOG**
North Central Texas Council of Governments

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About NCTCOG

The North Central Texas Council of Governments (NCTCOG) is a voluntary association of, by and for local governments, and was established to assist local governments in planning for common needs, cooperating for mutual benefit, and coordinating for sound regional development. NCTCOG's purpose is to strengthen both the individual and collective power of local governments and to help them recognize regional opportunities, eliminate unnecessary duplication, and make joint decisions.

NCTCOG serves a [16-county region](#) of North Central Texas, which is centered around the two urban centers of Dallas and Fort Worth. NCTCOG has over 230 member governments including 16 counties, numerous cities, school districts, and special districts. [Click here](#) for more information about membership in NCTCOG.

Each member government appoints a COG voting representative from its governing body. These voting representatives make up the General Assembly, which annually elects the Executive Board. The [Executive Board](#), composed of 13 locally elected officials, is the policy-making body for all activities undertaken by the Council of Governments, including program activities and decisions, regional plans, and fiscal and budgetary policies. The Board is supported by technical, study, and policy development committees and a professional staff headed by Mike Eastland, Executive Director.

For more about Council of Governments in Texas, visit the [Texas Association of Regional Councils](#) web site. For a complete list of Council of Governments in the U.S., visit the [National Association of Regional Councils](#)

North Central Texas Council of Governments, Aviation Division



The screenshot shows a web browser window displaying the website for the North Central Texas Council of Governments, Aviation Division. The page title is "North Central Texas General Aviation and Heliport System Plan". The navigation menu on the left includes: Home, Study Information, Airport Recommendations, Regional Characteristics, Mapping, NCTairportdata.com, **Tools** (highlighted with a blue arrow), Educational Videos, Sustainability, [Website](#), Land Use, ICA Assessment, Importance of GA, ACV, Vertical Flight, Airport Community Value, and Study Files. The main content area features a "Tools" section with a sub-header "Tools" and a paragraph: "Materials developed during the System Plan study are designed to support GA stakeholders who desire to maintain the airport facilities and to benefit from the tremendous economic development opportunities that present themselves in the aviation sector. Tools which are discussed in this section include educational videos, land use and how to address incompatibility issues, wildlife and other hazards, a summary of the importance of GA, and the unique airport community value metric developed during the study." To the right of the text is a photograph of a white twin-engine propeller aircraft on a tarmac. At the bottom of the page, there is a footer with a gear icon, the text "CONTACT US | SITE MAP | LEGAL", and contact information: "North Central Texas Council of Governments | 610 So. Fogg Drive P.O. Box 5388 Arlington, TX 76010-5388. Main Operator: (817) 840-5388 | Fax: (817) 840-7838".

North Central Texas Council of Governments, Aviation Division

North Central Texas

General Aviation and Heliport System Plan

- Home
- Study Information
- Airport Recommendations
- Regional Characteristics
- Mapping
- NCTairportdata.com
- Tools**
- Educational Videos
- Sustainability
- Wildlife
- Land Use
- RSA Assessment
- Importance of GA
- ACV
- Vertical Flight**
- Airport Community Value**
- Study Files**



Wildlife

Wildlife impacts on airports and aircraft can have a direct effect on sustainability and safety. Attracted to an airport because of food, water, or a desirable habitat, wildlife can create significant hazards for pilots and airport operations. According to the FAA, wildlife is attracted to waste disposal operations such as landfills, stormwater management ponds, drainage channels, wetlands, golf courses, and agricultural activities. Moreover, birds and mammals striking aircraft during take-off, landing, or in flight cause millions of dollars in damages annually and threaten lives. Airport sponsors and managers are federally obligated to ensure a safe operating environment. It is the airport's goal to make their property as unattractive to wildlife as possible by removing food, water, and shelter. Reducing the amount of wildlife on and near an airport greatly reduces the chance of wildlife colliding with aircraft.

The Federal Aviation Administration is placing a high value on reducing the impacts of wildlife with the National Airspace System. Many GA airports will be mandated in the future to have detailed mitigation plans in place to ensure aircraft safety. This may come in the form of a Wildlife Hazard Assessment and Management Plan by a certified wildlife biologist. An assessment will identify the wildlife present, including seasonal wildlife, and a management plan will detail how best to remove the hazard.

The removal of the attractant may solve a wildlife problem, yet some destructive animals may be adaptable to habitat modifications. Auditory and visual frightening devices can be effective in controlling wildlife but must be alternated on a regular basis. Falcons and dogs can be trained to frighten creatures away, and traps can be set to capture and relocate animals. Sometimes, extermination, which requires U.S. Fish and Wildlife approval or a federal permit, is the best option to eliminate the potential of strikes. Applicable federal, state, and local laws should be reviewed prior to any removal or handling of any wildlife species.


Resources, such as the materials produced by the System Plan, are designed to assist airport staff and policy officials to properly mitigate wildlife impacts.

Resource tools available online and in print:

- [Airport Wildlife Brochure](#) is designed to be a guide for the public on the importance of mitigating wildlife at airports. This brochure contains information on the importance of mitigating wildlife at airports.




North Central Texas Council of Governments, Aviation Division



Airports and Wildlife

What you Need to Know

A Guide for the Public



CONNECTING GLOBALLY
North Central Texas Regional Council of Governments and Airport System Plan

Why is Wildlife a Concern at Airports?

Many people are now familiar with the January 15, 2009, landing of US Airways Flight 1549 in the Hudson River, known to some as the "Miracle on the Hudson." On departure from New York's LaGuardia Airport, the airplane struck a flock of Canada geese at about 3,000 feet, sucking birds into both engines. Subsequently, the aircraft lost power in both engines and was forced to land in the Hudson River. While the aircraft was lost, thankfully all passengers and crew survived.

This crash demonstrated the real hazard that wildlife presents to aircraft. While most wildlife strikes are with birds, they could also include mammals and, on rare occasions, reptiles. Texas ranked second behind California in reported wildlife strikes between 1990 and 2010. Of these strikes, 97% were bird-related. The remaining 3% consisted of mammals (e.g. deer, coyotes, and bats).

You may wonder: *"What is my local airport community doing to prevent a wildlife strike?"*

Airport sponsors and managers have a legal responsibility under federal regulations to ensure a safe operating environment. Airport sponsors and managers must assess the risk and magnitude of the wildlife strike problems for their airport.



Location of Bird-strike Damage in Aircraft

Photo courtesy FAA

Cover Photo: Fotoblog

Rate adapted from Boeing

Prevention and Repellent Techniques

Wildlife can be discouraged by removing food, nesting sites and water. Screens for small openings, porcupine wire and other exclusion devices can be used at potential roosting and nesting sites. Wire grids can be placed over water to prevent use.

Reducing agricultural practices around an airport and regular mowing will make the grass less appealing to feeding birds and mammals. Habitats surrounding water features should be mowed to eliminate aquatic and wetland vegetation that may attract waterfowl. Closing trash cans will also deter birds and mammals. The best way to keep mammals from aircraft operations areas is high woven wire fences.

Auditory and visual frightening devices can be effective when used as part of a wildlife habitat mitigation plan. When all mitigation options are exhausted, it may be necessary to remove wildlife, which requires a permit from the US Fish and Wildlife Services and Texas Parks and Wildlife.



Photo courtesy Doby Blythe, DFW Airport

How Can I Help?


The public can help prevent a wildlife strike. Sometimes, airports are located near parks, restaurants or other high-traffic pedestrian areas where people may enjoy watching planes take off and land. Feeding the ducks and other birds encourages wildlife to congregate in these areas and can attract large flocks of pigeons or gulls. Make sure trash is properly disposed of. If you see large animals on the airport, inform staff. Your help reducing strikes is integral to a successful wildlife management policy.

DO	DON'T
<ul style="list-style-type: none"> - Inform airport staff of wildlife - Cover trash cans - Pick up trash 	<ul style="list-style-type: none"> - Feed the birds near an airport - Litter - Abandon pets at the airport

North Central Texas Council of Governments
www.nctcog.org/aviation
Developed with assistance from the North Central Texas Airport Wildlife Consortium

North Central Texas Council of Governments, Aviation Division

<p>Tools</p> <ul style="list-style-type: none">Educational VideosSustainabilityWildlifeLand UseRSA AssessmentImportance of GAACV	<p>and agricultural activities. Moreover, birds and mammals striking aircraft during take-off, landing, or in flight cause millions of dollars in damages annually and threaten lives. Airport sponsors and managers are federally obligated to ensure a safe operating environment. It is the airport's goal to make their property as unattractive to wildlife as possible by removing food, water, and shelter. Reducing the amount of wildlife on and near an airport greatly reduces the chance of wildlife colliding with aircraft.</p> <p>The Federal Aviation Administration is placing a high value on reducing the impacts of wildlife with the National Airspace System. Many GA airports will be mandated in the future to have detailed mitigation plans in place to ensure aircraft safety. This may come in the form of a <i>Wildlife Hazard Assessment and Management Plan</i> by a certified wildlife biologist. An assessment will identify the wildlife present, including seasonal wildlife, and a management plan will detail how best to remove the hazard.</p>
<p>Vertical Flight</p> <p>Airport Community Value</p> <p>Study Files</p>	<p>The removal of the attractant may solve a wildlife problem, yet some destructive animals may be adaptable to habitat modifications. Auditory and visual frightening devices can be effective in controlling wildlife but must be alternated on a regular basis. Falcons and dogs can be trained to frighten creatures away, and traps can be set to capture and relocate animals. Sometimes, extermination, which requires U.S. Fish and Wildlife approval or a federal permit, is the best option to eliminate the potential of strikes. Applicable federal, state, and local laws should be reviewed prior to any removal or handling of any wildlife species.</p> <p>Resources, such as the materials produced by the System Plan, are designed to assist airport staff and policy officials to properly mitigate wildlife impacts.</p> <p>Resource tools available online and in print.</p> <ul style="list-style-type: none">→ Airport Wildlife Brochure is designed to be a guide for the public on the importance of mitigating wildlife at airports. This brochure explains why wildlife is a major concern to airports, how the airports mitigate wildlife, and provides resources on federal and state regulations as well as how the public can help.→ Airport Mitigation Handbook is designed to be a quick reference field guide for airport operators. This handbook has information on the regional wildlife, mitigation techniques, regulations, and commonly used resources and contact information.

 CONTACT US | SITE MAP | LEGAL

North Central Texas Council of Governments | 618 Six Flags Drive P.O. Box 5888 Arlington, TX 76005-5888
Main Operator: (817) 640-3300 | Fax: (817) 640-7500

Current State of the Consortium:

- Consortium continues to meet quarterly
 - Progress reports on current projects, programs
 - Discuss challenges, review current/seasonal wildlife activity
 - Learn hands-on approaches to wildlife challenges by area professionals
 - Share current aviation/wildlife related news and updates
 - Continue to improve and expand knowledge base and membership, in order to enhance aviation safety



Questions...?

