

“Wildlife FOD” An Operational Impact to Airlines and Airports

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Airport Wildlife Hazards Program*



**32nd National Aerospace FOD
Prevention Conference
DFW Airport, TX August 2011**

**WS Wildlife
Services**

Protecting People
Protecting Agriculture
Protecting Wildlife



United States Department of Agriculture
Animal and Plant Health Inspection Service

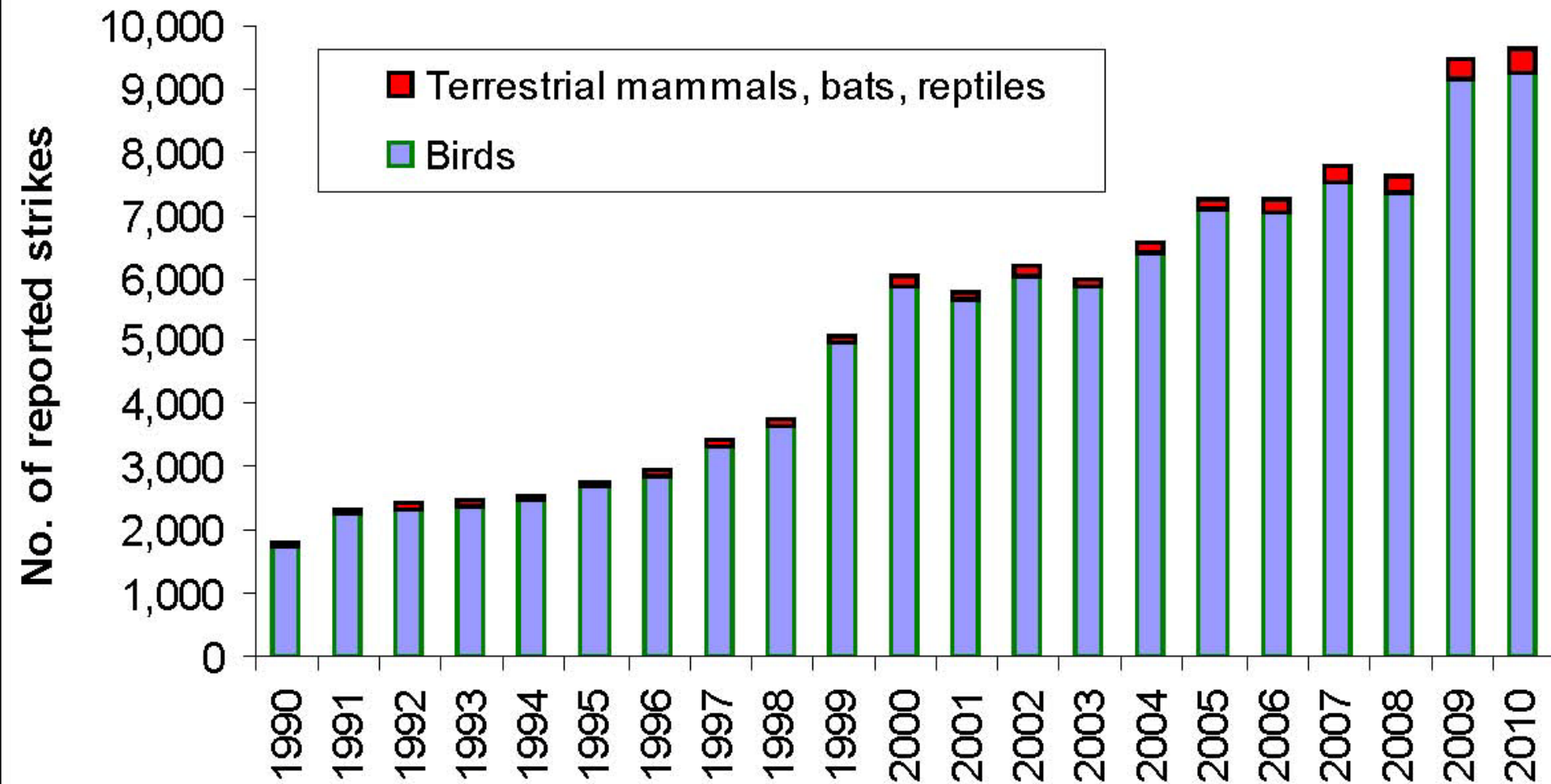
Mission: To provide federal leadership in managing problems between people and wildlife

Authority: [Act of March 2, 1931](#)... *may conduct a program of wildlife services with respect to injurious animal species and take any action the Secretary considers necessary*
[Act of December 22, 1987](#)... *to conduct activities and enter into agreements ... in the control of nuisance mammals and birds*



Resources protected: Agriculture, Natural Resources, Property and [Human Health and Safety](#)

Reported wildlife strikes



Current wildlife strike statistics

Year	Total	Damage
2009	9,474	603
2010	9,622	573



Person filing report of wildlife strike to civil aircraft

Person filing report	21-year total	% of total known
Airline Operations	23,890	26
Pilot	21,439	24
Carcass Found	19,734	22
Airport Operations	12,495	14
Tower	10,314	11
Other	2,304	3
Total known	90,176	100
Unknown	18,931	
Total	109,107	

Most wildlife involved in strikes are using the airport or its immediate vicinity, and the most logical place to begin correcting the problem is on and near the airport.

Wildlife = FOD

\$ 677 M / year

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Wildlife Hazard Management at Airports

A Manual for Airport Personnel



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6100 Columbus Avenue
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Second Edition, July 2005

<http://wildlife.faa.gov>



All strike reports are reviewed by personnel from the USDA, APHIS, Wildlife Services program, to ensure accurate and consistent information is entered into the National Wildlife Strike Database.

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U. S. DEPARTMENT
OF TRANSPORTATION
FEDERAL AVIATION
ADMINISTRATION

**WILDLIFE STRIKES
TO CIVIL AIRCRAFT
IN THE
UNITED STATES
1990-2009**



U. S. Department
of Agriculture
Animal and Plant
Health Inspection
Service
Wildlife Services

FEDERAL AVIATION ADMINISTRATION
NATIONAL WILDLIFE STRIKE DATABASE
SERIAL REPORT NUMBER 16

REPORT OF THE ASSOCIATE ADMINISTRATOR OF AIRPORTS
OFFICE OF AIRPORT SAFETY AND STANDARDS
AIRPORT SAFETY & CERTIFICATION
WASHINGTON, DC

2010





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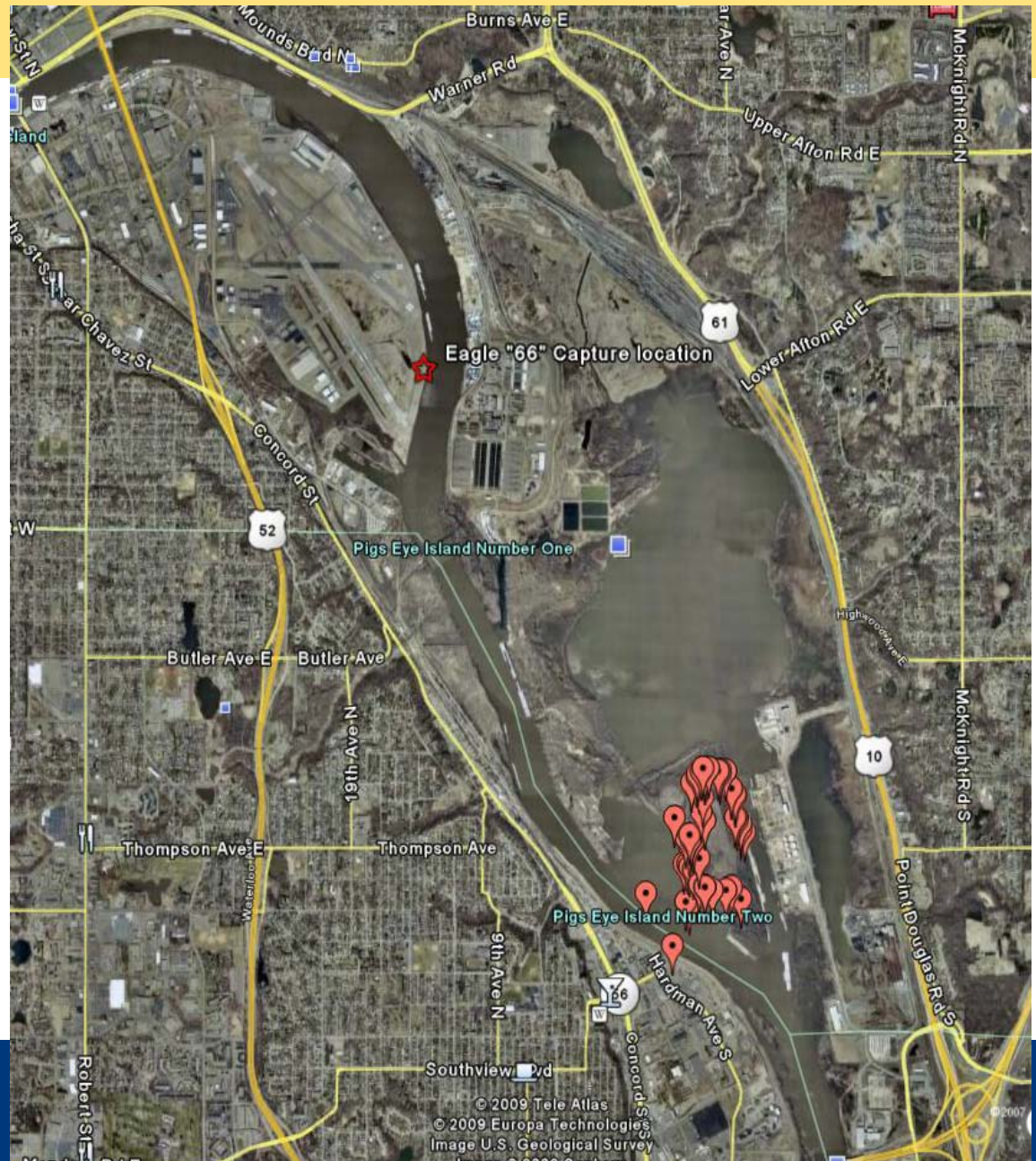


136 strike events 1990 – 2010
11 strike events 2010



50.7 % adverse effect on flight

Can we de-conflict air space between bald eagles and aircraft?





DEPARTMENT OF THE NAVY
COMMANDER, NAVY INSTALLATIONS COMMAND
716 SICARD STREET, SE, SUITE 1000
WASHINGTON NAVY YARD, DC 20374-5140

CNICINST 3700
N3
7 JUL 2011

CNIC INSTRUCTION 3700

From: COMMANDER, NAVY INSTALLATIONS COMMAND

Subj: NAVY BIRD/ANIMAL AIRCRAFT STRIKE HAZARD PROGRAM
IMPLEMENTING GUIDANCE

Ref: (a) OPNAVINST 3750.6
(b) CNIC BASH Program Manual
(c) FAA Advisory Circular 150/5200-32 a of 22 Dec 04
(d) FAA Advisory Circular 150/5200-33 b of 28 Aug 07
(e) OPNAVINST 11010.20
(f) USDA/CNIC Work/Financial Plan

1. Purpose

a. To establish policy and procedures for implementing the Commander, Navy Installations Command (CNIC) Bird/Animal Aircraft Strike Hazard (BASH) Program.

NAS Key West
NAS Pensacola
NAS JRB New Orleans
NAS Patuxent River
NAS Meridian
NAS Corpus Christi
NAS JRB Ft. Worth
NAS Kingsville
NAS Whidbey Island
NAS Oceana
NAS Jacksonville
NAS Whiting Field
NAS Coronado
NAS Ventura County
NAS Lemoore
Pacific Missile Range
NAS Fallon



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FOD/ Wildlife Joint Safety Analysis Team Proposal



Air Transport Association



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BIRD HAZARDS TO AVIATION

BIRD HAZARD RESEARCH

The Federal Aviation Agency and the U.S. Department of Interior are the principal investigating agencies in efforts toward reducing or solving the bird strike problem in the United States and in exchanging data with agencies in Canada, England, Holland, France, and other nations.

In 1960, an official of the International Air Transport Association wrote, "In general, it appears . . . that there is very little which can be done about the problem of the

ONE BIRD INGESTED THROUGH A JET ENGINE FREQUENTLY RESULTS IN DAMAGE REQUIRING MAJOR OVERHAUL OR COMPLETE REPLACEMENT OF THE ENTIRE MOTOR ASSEMBLY



AIRPORT AND MUNICIPAL RESPONSIBILITIES

Serious municipal attention and aggressive airport planning and implementing action should be taken to fill, level, and clear airport and adjacent lands of all ponds, swamps, silted waste dumps, feed pens, and berry and seed bearing shrubs and trees which create bird refuges and increase bird hazards as feeding, bathing, loafing, and nesting places. Birds are attracted to; garbage dumps; food and fish processing wastes; feed pens and piggeries; ponds, sloughs, and swamps (including man-made lakes and reflecting ponds); sewage lagoons and outfalls; seed and fruit producing plants and trees, tall grasses, reeds, and shrubbery.

Such areas should be eliminated from the airport vicinity by municipal pressure and influence; by relocation; or by draining, leveling, and surfacing with materials unattractive to bird life, such as gravel. Airport outleases to farmers should stipulate crops least attractive to birds, and cooperation of food and waste processors should be

BIRD HAZARD REDUCTION

The three most effective bird hazard deterrents are (1) denial of food, water and roosting areas; (2) clearing and gravel surfacing of airport open areas not immediately adjacent to pavements; and (3) scare device programs using recorded bird distress and natural enemy calls; carbide exploders, fuse strings, and explosive shotgun shells. Destruction or scaring of bird life is not a true solution as it is contrary to efforts at wildlife preservation and is only temporarily effective due to constant bird migrations. This does not get to the basic problem. The solution is to make the airport unattractive to bird life.

BIRD HAZARD REPORTING

Airport personnel, radar operators, and pilots should be urged to report birds observed and bird incidents in airport areas and air lanes. Bird hazard information should be included with weather and obstruction data briefing of pilots flying in hazardous

Even in perfect formation
flocks of birds
pose the largest risk for aircraft bird strikes.



www.birdstrike.org
12 – 15 September 2011
Niagara Falls, Canada





**USDA/APHIS Wildlife Services
Airport Wildlife Hazards Program**

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