

National Wildlife Strike Databases

Reporting, Summary and Evaluation

ICAO CAR/SAM Regional Bird/ Wildlife
Hazard Prevention Committee Meeting and
Conference, Asuncion, Paraguay

November 6th, 2013

John R Weller



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National Wildlife Strike Databases

- Civil Aviation Authority will determine voluntary / mandatory reporting system
- Development / maintain strike database, analyze and summarize data
- Reporting options – electronic / paper
- Identification assistance – museum, university, wildlife / environmental agency
- Determine gaps & target gaps – locally and nationally



ICAO Annex 14 — Aerodromes

9.4 Wildlife strike hazard reduction

9.4.1 The wildlife strike hazard on, or in the vicinity of, an aerodrome shall be assessed through:

a) the establishment of a national procedure for recording and reporting wildlife strikes to aircraft;



National Wildlife Strike Database Management

FAA contracts USDA



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Strike remains / feather identification

FAA contracts Smithsonian Institution



Strike Reporting – Voluntary vs Mandatory

- You want Quality and Quantity
- You need enough data to...
 - track national trends
 - determine hazard level of species struck
 - provide scientific foundation for regulatory guidance concerning mitigation of risks from wildlife strikes
- You will need to systematically evaluate usefulness of data collection





STRIKES SHOULD BE DOCUMENTED IF:

- **Strike is observed**
- **Strike evidence is discovered on aircraft**
- **Animal remains found within 250 feet of the runway centerline or within 1,000 feet of a runway end (unless another reason for the animals death is suspected)**

Source of Information for Reported Strikes 1990 - 2012

Source	1990–2012		2012 only	
	Total	% of total	Total	% of total
FAA Form 5200-7E ¹ (Electronic)	53,335	41	9,245	86
FAA Form 5200-7 ¹ (Paper)	41,526	32	453	4
Airline report	14,444	11	252	2
Multiple ²	10,314	8	471	4
Airport report	5,969	5	133	1
Other ³	1,739	1	54	1
Daily Report (FAA)	886	1	114	1
Preliminary Aircraft Incident Report	983	1	0	0
Engine manufacturer	822	1	0	0
Aircraft Incident Report	711	1	0	0
Aviation Safety Reporting System	197	<1	0	0
National Transportation Safety Board	81	<1	1	0
Aircraft Incident Preliminary Notice	67	<1	1	<1
Transport Canada	22	<1	2	<1
Total	131,096	100	10,726	100

Wildlife Strike Reporting to the FAA

<http://wildlife.faa.gov>

Paper or Electronic Report Forms

Form Approved OMB NO. 2120-0044

BIRD/OTHER WILDLIFE STRIKE REPORT

1. Name of Operator

2. Aircraft Make/Model

3. Engine Make/Model

4. Aircraft Registration

5. Date of Incident
Month Day Year

6. Local Time of Incident
☐ Dawn ☐ Day ☐ Night ☐ AM ☐ PM

7. Airport Name

8. Runway Used

9. Location if En Route (Nearest Town/Reference & State)

10. Height (AGL)

11. Speed (KAS)

12. Phase of Flight

13. Part(s) of Aircraft Struck or Damaged

14. Effect on Flight

15. Sky Condition

16. Precipitation

17. Bird/Other Wildlife Species

18. Number of birds seen and/or struck

19. Size of Bird(s)

20. Pilot Warned of Birds ☐ Yes ☐ No

21. Remarks (Describe damage, injuries and other pertinent information)

22. Aircraft time out of service: hours

23. Estimated cost of repairs or replacement (U.S. \$)

24. Estimated other cost (U.S. \$) (e.g. loss of revenue, fuel, landing)

Reported by (Optional)

Microsoft Internet Explorer

Address: <http://wildlife.faa.gov/aircraft/wildlifeform/birdstrikeform.html>

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Reported by (Optional)



Airport Technology R&D Branch
Airport Wildlife Hazard Mitigation



Search the Database

Report a Strike

Edit a Strike Report

About the FAA Wildlife Strike Database

The FAA Wildlife Strike Database contains records of reported wildlife strikes since 1990. Strike reporting is voluntary. Therefore, this database only represents the information we have received from airlines, airports, pilots, and other sources.

There are two ways to view information in the database:

1. Do a quick search from the [Search the Database](#) page. You can export the results to Microsoft Excel.
2. Download the complete FAA Wildlife Strike Database in Microsoft Access format, and create your own queries.

Our search tool shows key information for each wildlife strike, including Date, Airport, Airline, Aircraft, and Species. To view all 94 fields of information for one or more reports, you must open the complete database. You can also visit the FAQ page for [Frequently Asked Questions](#) about wildlife strikes.

Quick Facts

The FAA has maintained a wildlife strike database since 1990.

The FAA wildlife strike database has recorded over 121,000 (Civil and USAF) wildlife strikes between 1990 and 2010.

92% of the bird strikes to commercial aircraft occur at or below 3,500 ft AGL (above ground level).

In 2010, 52% of the birds struck were identified to the species level.

<http://wildlife-mitigation.tc.faa.gov/wildlife/default.aspx>

12/2/2011

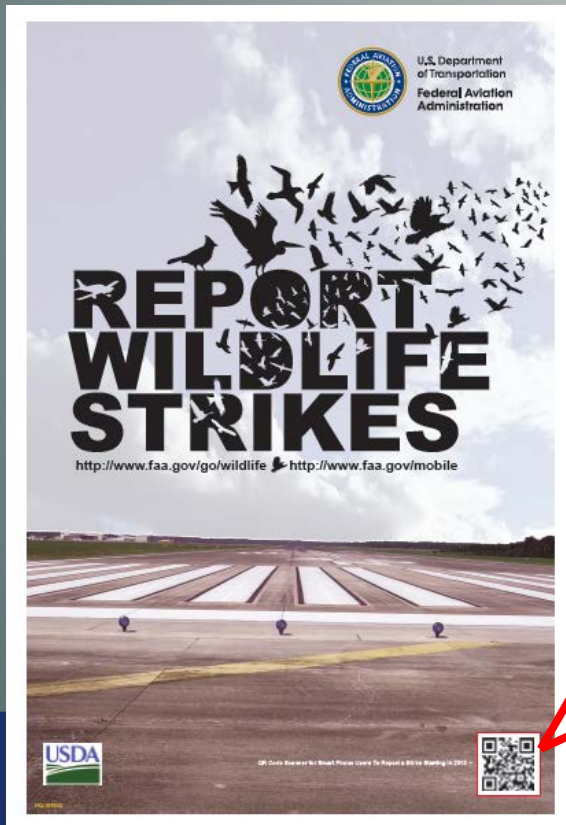


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Electronic Reporting Options

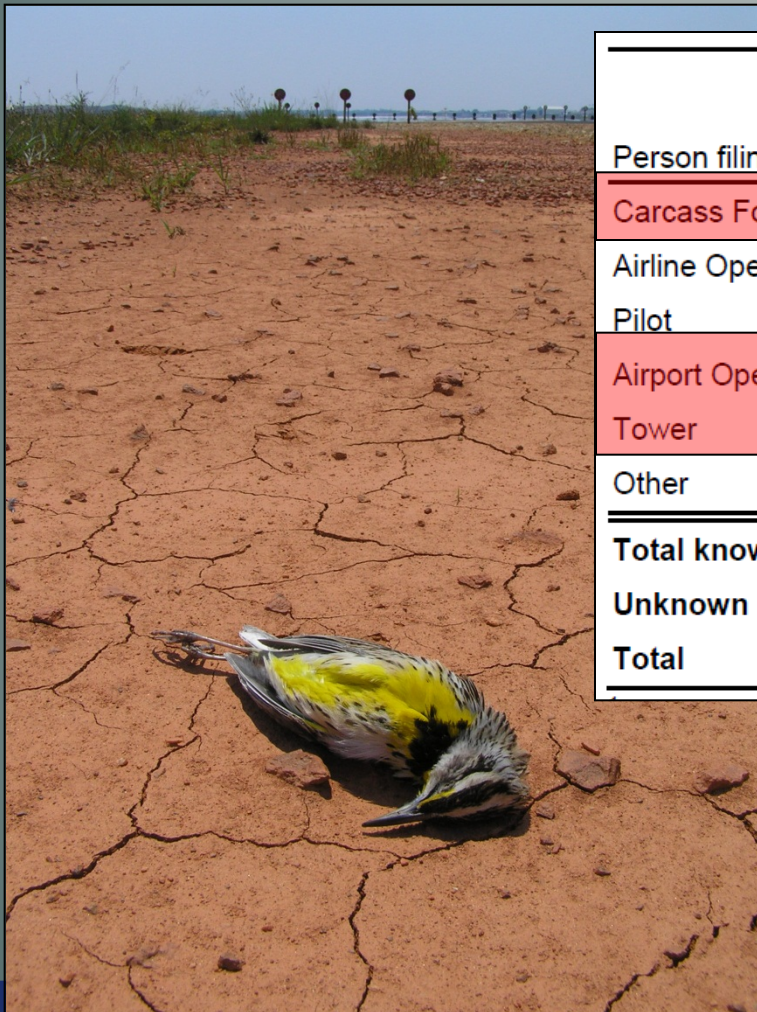


QR Code



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Who Reports Strikes?



Person filing report	1990–2012		2012 only	
	Total	% of total	Total	% of total
Carcass Found	26,733	24	3,381	33
Airline Operations	26,458	24	1,103	11
Pilot	25,651	23	2,289	23
Airport Operations	17,830	16	2,718	27
Tower	11,215	10	425	4
Other	2,865	3	203	2
Total known	110,752	100	10,119	100
Unknown	20,344		607	
Total	131,096		10,726	



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National Wildlife Strike Database Report



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Wildlife / Aircraft Strikes

- from the ground up -

0-3,500 ft AGL = 92% of strikes

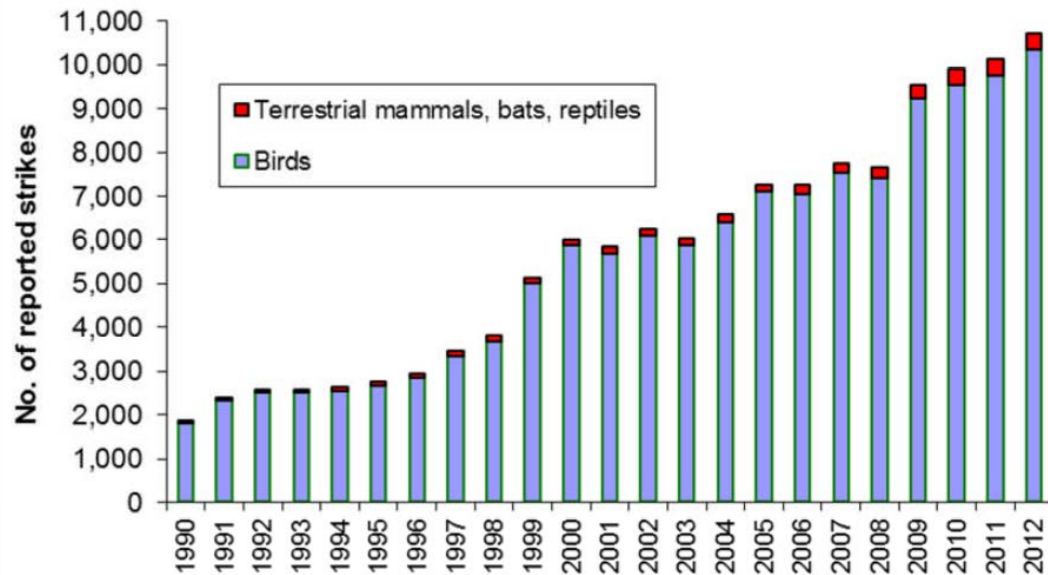


0-500 ft AGL = 72% of strikes



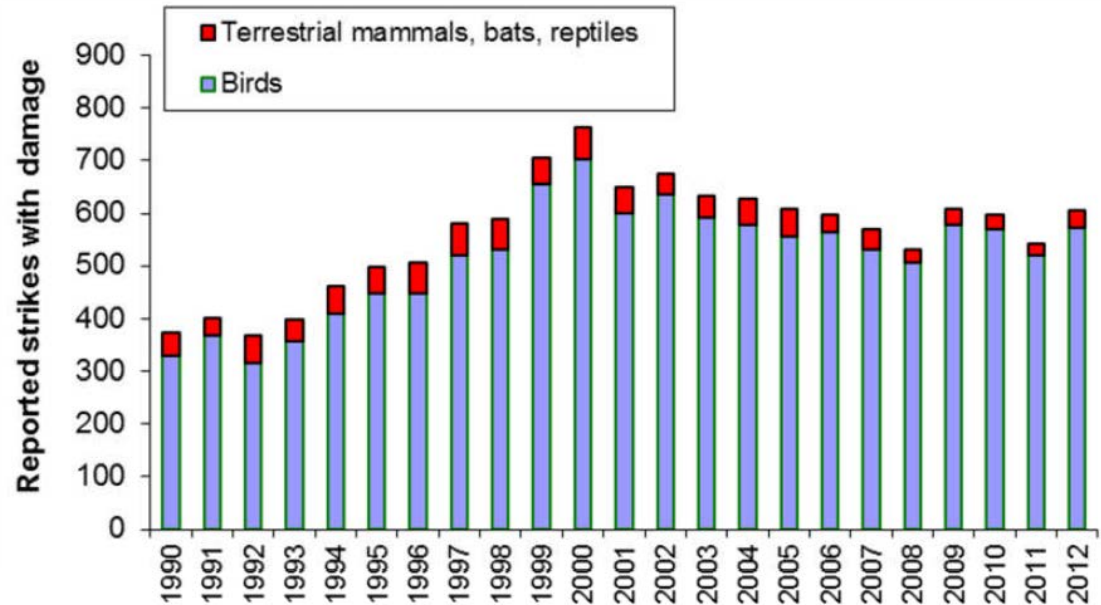
0 ft AGL = 41% of strikes





Strikes Reported to Civil Aircraft, USA: 1990 - 2012

Damaging Strikes to Civil Aircraft, USA: 1990 - 2012



Time of occurrence of wildlife strikes to civil aircraft, USA: 1990 - 2012

Time of day	Birds		Terrestrial mammals	
	23-year total	% of total known	23-year total	% of total known
Dawn	3,038	4	51	3
Day	51,403	62	425	25
Dusk	3,805	5	142	8
Night	24,019	29	1,066	63
Total known	82,265	100	1,684	100
Unknown ²	44,947		1,262	
Total	127,212		2,946	



Majority of wildlife strikes occur in airport environment



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Don't Wait for Reality to Smack You in the Face



- **Systematically evaluate strike data every few years**
- **Determine data gaps**
- **Target data gaps – locally and nationally through outreach or regulatory guidance**



Outreach

Strike Posters

2011 & 2012

12,000 posters each year

- Airports
- Flight Schools
- Airlines
- Pilots Association
- Engine Manufacturers
- Aviation Industry



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Questions?

