9-1-2011

ICAO Document 9137 New and Improved

Nicholas Carter
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Bird Strike Association of Canada Steering Committee Meeting

11:00 AM – 12:00 PM — Oakes South Room

Gary Searing

Open to Steering Committee Members only. All Steering Committee Members are requested to attend.

Opening Remarks

12:50 PM – 1:00 PM — Oakes South Room

Welcome to the 2011 Bird Strike North America Conference
Gary Searing

Welcome from Host Sponsor, Accipiter Radar Technologies
Timothy J Nohara, President & CEO

Keynote Speaker

Latest developments of ICAO on bird/wildlife hazard reduction

1:00 PM – 1:30 PM — Oakes South Room

Yong Wang

Through Amendment 10 to Annex 14 — Aerodromes, Volume I — Aerodrome Design and Operations, which became applicable on 19 November 2009, ICAO has introduced new and amended international Standards and Recommended Practices (SARPs) on wildlife strike hazard reduction. This includes expanding the scope of efforts to cover both strikes by birds and other animals, ongoing evaluation of the wildlife hazard on or in the vicinity of aerodromes by competent personnel and responsibilities of States to give consideration to aviation safety concerns related to land developments in the vicinity of an aerodrome that may attract wildlife, etc. ICAO has also updated the guidance material in this regard and has recently posted on the ICAONet a new edition of Airport Services Manual, Part 3 — Wildlife Control and Reduction (Doc 9137). The keynote speaker presentation will provide the conference with a brief introduction of the above, as well as a global analysis of bird strikes based on the ICAO Bird Strike Information System (IBIS).

Session 1: Risk Assessment & Management Part 1

1:30 PM – 3:00 PM — Oakes South Room

Moderator: Rolph Davis

Birds in the Vicinity of the Airport, Now what?

1:30 PM

Edward Coleman

Birdstrikes continue as a hazard to aircraft despite the best efforts of airport staff everywhere. Experts have found ways to reduce available habitat, identify roosting areas, use radar to track movement and analyze DNA to identify the species being struck, but risks remain. The problem with the current system is the people taking the risks, the aircrew and owners, have the least amount of information available to make an accurate risk decision. Tune in the ATIS at almost any civil airfield and you will hear the weather, some local NOTAMs and that there are "birds in the vicinity of the airport". What does that last statement tell a flight crew? Not much, it could mean there are a few birds roaming around the ramp or there is an entire flock crossing the landing threshold. It is impossible for a flight crew to properly assess the risk to their aircraft with this level of information. The U.S. Air Force uses a Bird Watch Condition (BWC) code to alert flight crews of hazards created by bird activity at the airfield. The different codes have a specific meaning and associated risk. Creation of a standard BWC will help increase flight crew awareness of bird activity and allow a better risk analysis. Use of a standard BWC will also allow individual companies to use their Safety Management System (SMS) to determine what actions a flight crew should take based on the risk associated with each BWC.

Airlines' pilots' perceptions concerning recommended practices that reduce the risk of bird strikes

2:00 PM

Flávio Mendonça

There has never been an aircraft accident related to civil aviation in Brazil that claimed a life as a consequence of a bird strike. Airlines have had direct losses of over $6,000,000.00 per year since 2001. Although having just a few crew members injured because of bird strikes, usually pilots, Brazilian airlines and aviation companies cannot afford the risk of an accident and its probable consequences. Bird strike risk management is a defense in depth: airplane certification/construction standards, action by airport operators, procedures by aircrews and standard regulations by ICAO and national regulators. Safety is typically managed from a systemic perspective in which the accident results from a chain of events. Yet, pilots are usually the last domino piece before a mishap occurs, and most of the time they are also the last people who could avoid an accident. But they are also the ones who are always in contact with all sorts of hazards. The purpose of this study is to assess the Brazilian airlines' pilots' knowledge of recommended practices that could reduce the risk of accidents due to bird strikes. The Safety Management Systems (SMS) principles, the pilots' knowledge of bird hazard and safety management systems as well as previous studies by safety professionals will help explain why and how pilots play a big role in managing the risk of bird hazard. The results show that Standard Operating Procedures (SOPs) and safety training comprising recommended practices for pilots can help reduce the risk of bird hazard.

ICAO Document 9137 – New and Improved

2:30 PM

Nicholas B. Carter

Less than two months ago, ICAO finally produced a final version of Document 9137 of the Airport Services Manual covering Bird/Wildlife Control and Reduction. Long overdue for updating, ICAO has finally revised the text of the manual in a comprehensive manner, with the assistance and review of numerous birdstrike experts across the world. This presentation will address the changes implemented in the document and present an overview of the content and approach to birdstrike issues being issued to States across the world. We will discuss the various ways in which ICAO has sought to provide airport personnel with the information necessary to develop and implement an effective bird/wildlife control organization for their aerodromes, as well as the specific guidance presented in the manual. We will compare this to the existing bird/wildlife manuals for the FAA and Transport Canada and note the strengths and weaknesses of the ICAO document relative to those manuals. Finally, we will address the future of ICAO's bird/wildlife management guidance and the current state of affairs for its existing

ICAO Document 9137
New and Improved

Dr. Nicholas Carter
Birdstrike Control Program
IBSC, CARSAMPAF

Doc 9137 - AN/901
Part 3

Airport Services Manual
Part 3

Wildlife Control and Reduction

Fourth Edition - 2011

Notice to Users

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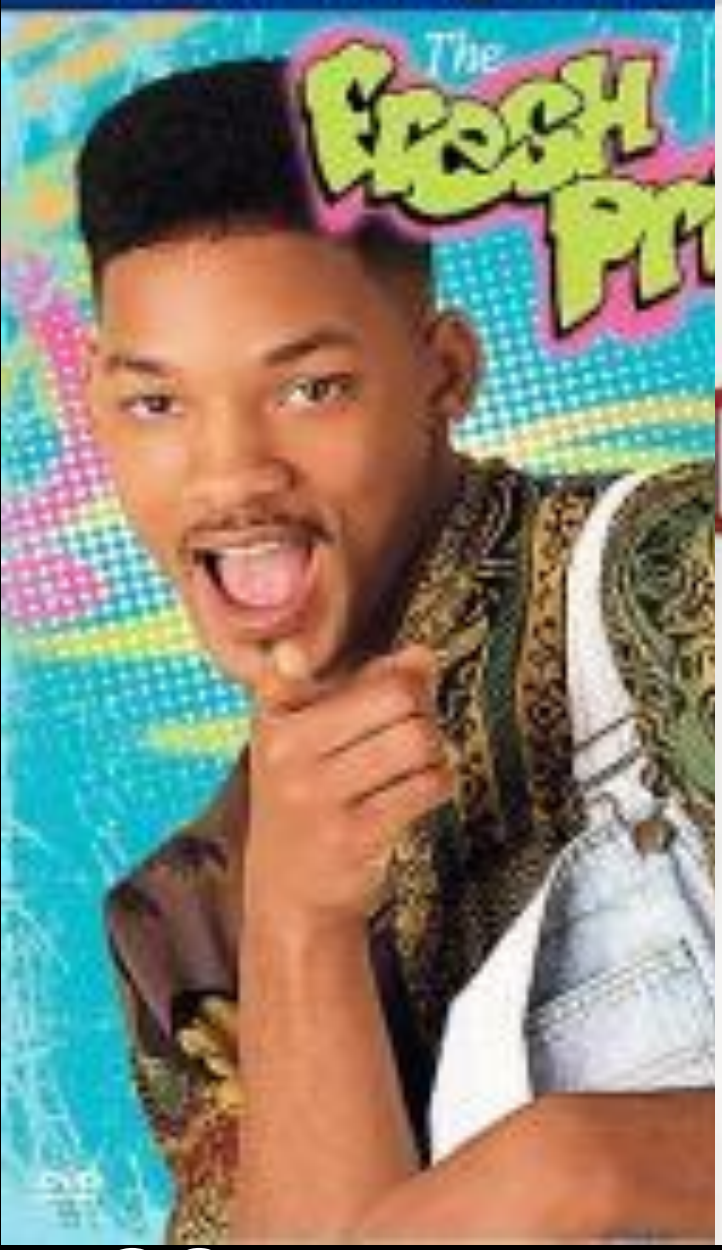
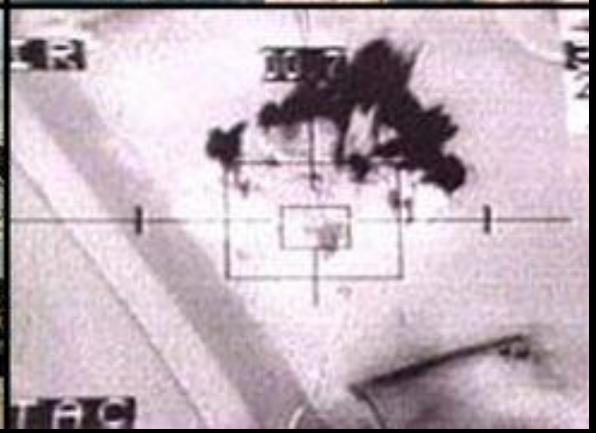
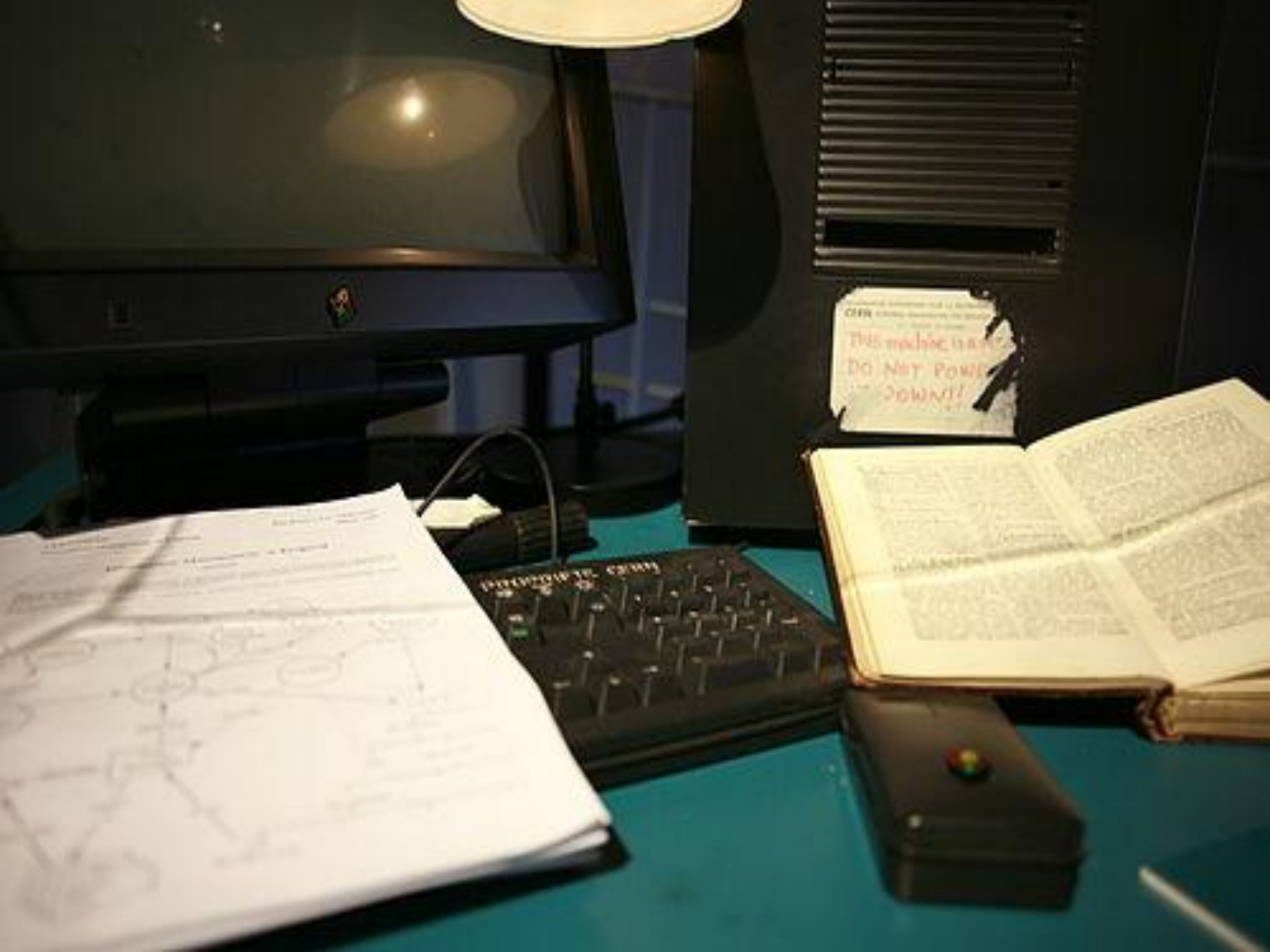
1st edition – 1975
2nd edition – 1978


1st edition – 1975
2nd edition – 1978
3rd edition - 1991



20 years ago…



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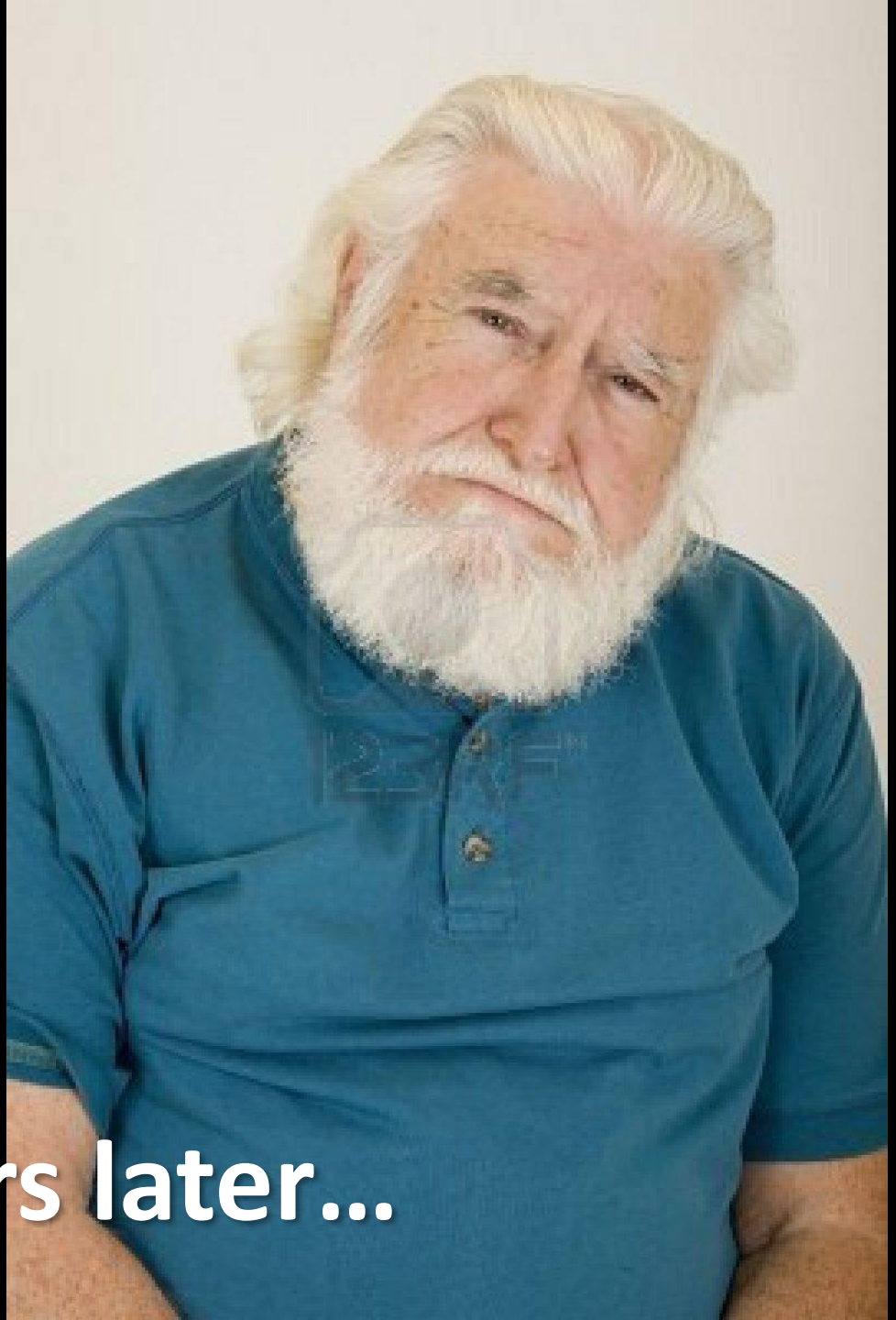


20 years later…

Overview

Reviewed by 10 birdstrike experts from all parts of the world
(expanded to 16 for final draft)

Took about two years to complete review

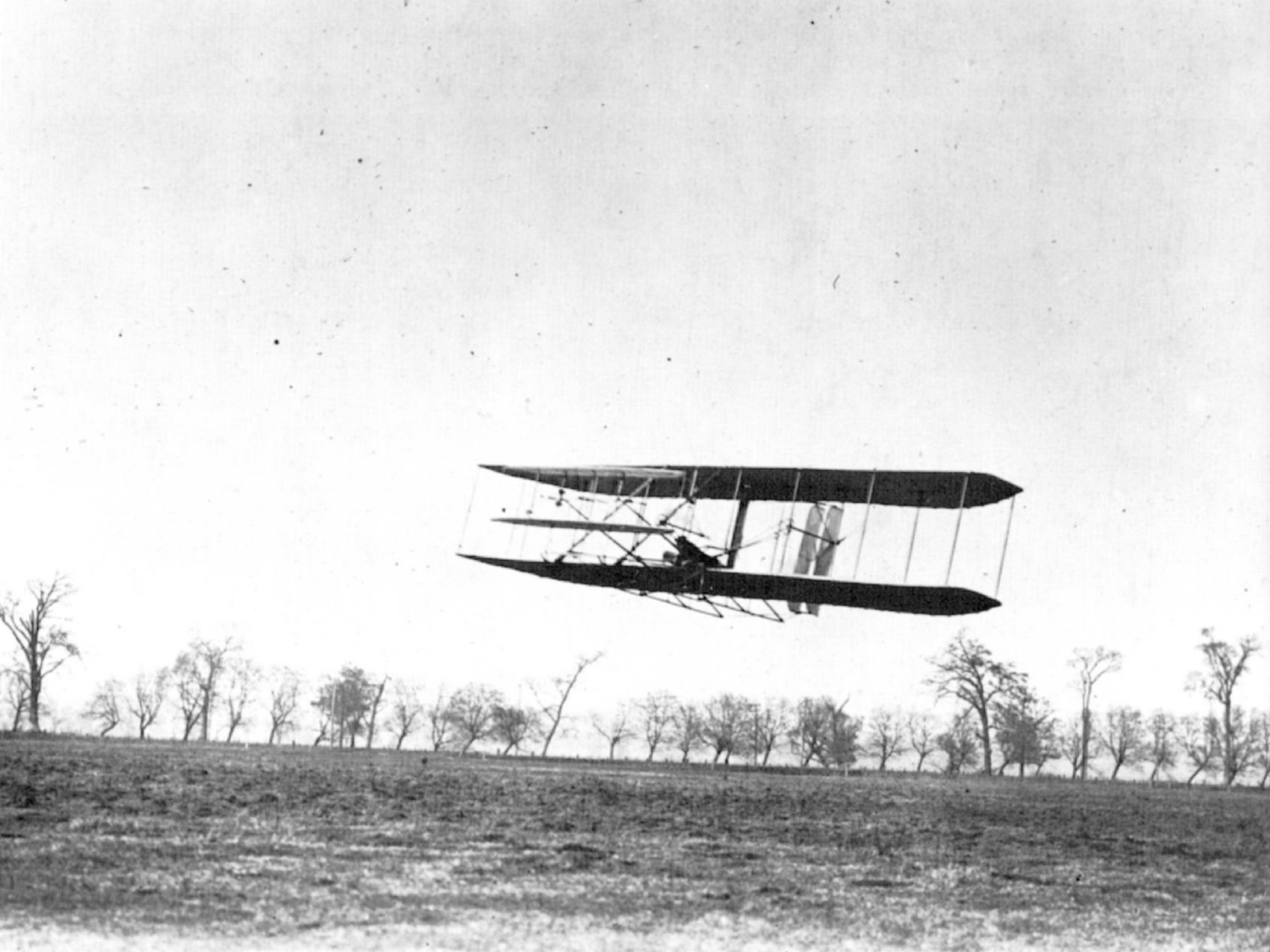
Overview

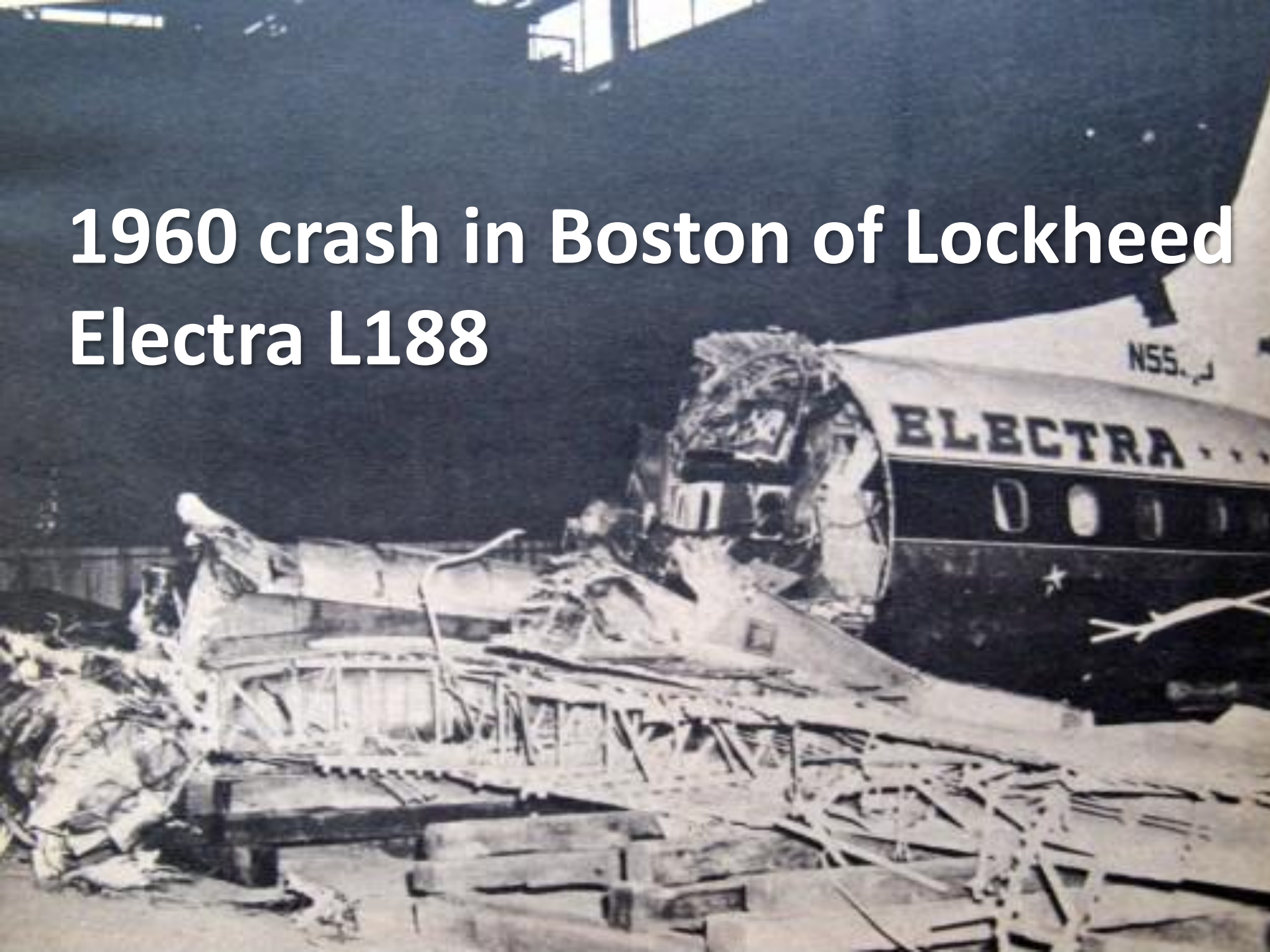
Contains 39 pages

FAA manual – 362 pages

Transport Canada – 270 pages

Contents





1960 crash in Boston of Lockheed Electra L188


IBIS

National Committees

Composition
Roles/Responsibilities
Airport Committee

Birdstrike Reporting

Importance
Mandatory Risk Assessment
Mandatory Forwarding to IBIS
But No Mandatory Reporting

BIRD STRIKE REPORTING FORM

Send to:

Operator..... 01/02

Aircraft Make/Model 03/04

Engine Make/Model..... 05/06

Aircraft Registration..... 07

Date day ..... month ..... year 08

Local time..... 09

dawn □A day □B dusk □C night □D 10

Aerodrome Name 11/12

Runway Used 13

Location if En Route 14

Height AGL ..... *ft* 15

Speed (IAS)..... *kt* 16

Phase of Flight 17

parked	□A	*en route*	□E
taxi	□B	*descent*	□F
take-off run	□C	*approach*	□G
climb	□D	*landing roll*	□H

Part(s) of Aircraft

	Struck		*Damaged*
radome	□	18	□
windshield	□	19	□
nose (excluding above)	□	20	□
engine no. 1	□	21	□
2	□	22	□
3	□	23	□
4	□	24	□
propeller	□	25	□
wing/rotor	□	26	□

Effect on Flight

none	□32
aborted take-off	□33
precautionary landing	□34
engines shut down	□35
other (specify)	□36

Sky Condition 37

no cloud	□A
some cloud	□B
overcast	□C

Precipitation

fog	□38
rain	□39
snow	□40

Bird Species* 41

Number of Birds

	Seen 42	*Struck* 43
1	□A	□A
2-10	□B	□B
11-100	□C	□C
more	□D	□D

Airport Birdstrike Program

Personnel

Logging of wildlife activity / strikes (DNA)

Risk Assessment

Species Group	Overall Risk Ranking	Relative Hazard Percentage
Canada Geese	1	100
Snow Geese	2	94
Seagulls (all species)	3	8
Ducks	4	6
Vultures	5	5
Flocking Birds*	6	4
Raptors	7	1
Egrets/Herons	8	1
Crows	9	<1
Songbirds	10	<1
Shorebirds	11	<1
Kestrels	12	<1
Owls	13	<1
Swallows	14	<1
Groundhogs	15	<1
Deer	16	<1
Foxes	17	<1
Rabbits	18	<1

* Flocking birds consists of species such as red-winged blackbirds, starlings, grackles, etc.

Staff Training

Aircraft Operator Duties

Vegetation Management

Brief overview

Vegetation Management

Brief overview

Difficult with worldwide environments

Vegetation Management

Brief overview
Difficult with worldwide environments

Vegetation Management

Brief overview
Difficult with worldwide environments

Typical Attractants

Food

Water

Shelter

Active Management

Brief overview – introduction to various techniques

Chemical Repellants

Auditory Devices

Gas Cannons

Auditory Devices

Gas Cannons
Distress Calls

Auditory Devices

Gas Cannons
Distress Calls
Pyrotechnics

Visual Repellants

Ineffective nature of models

Visual Repellants

Vulture Effigies

Visual Repellants

Lasers

Real Predators

Border Collies
Keys to Successful Program

Real Predators

Falconry

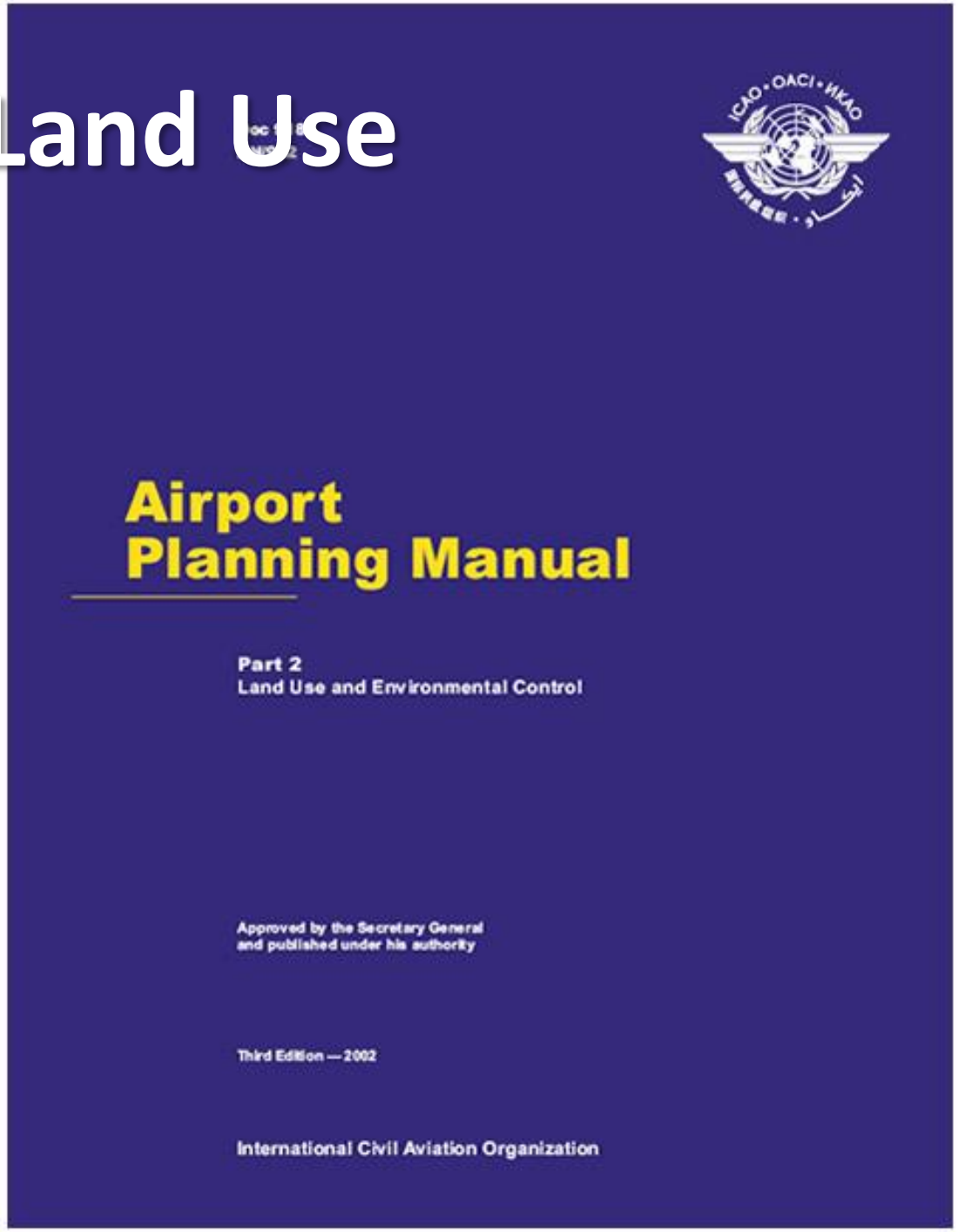
Remote-control Vehicles

Non-lethal Projectiles

Best Practices

Incompatible Land Use

ICAO Doc 9184 (Part 2)

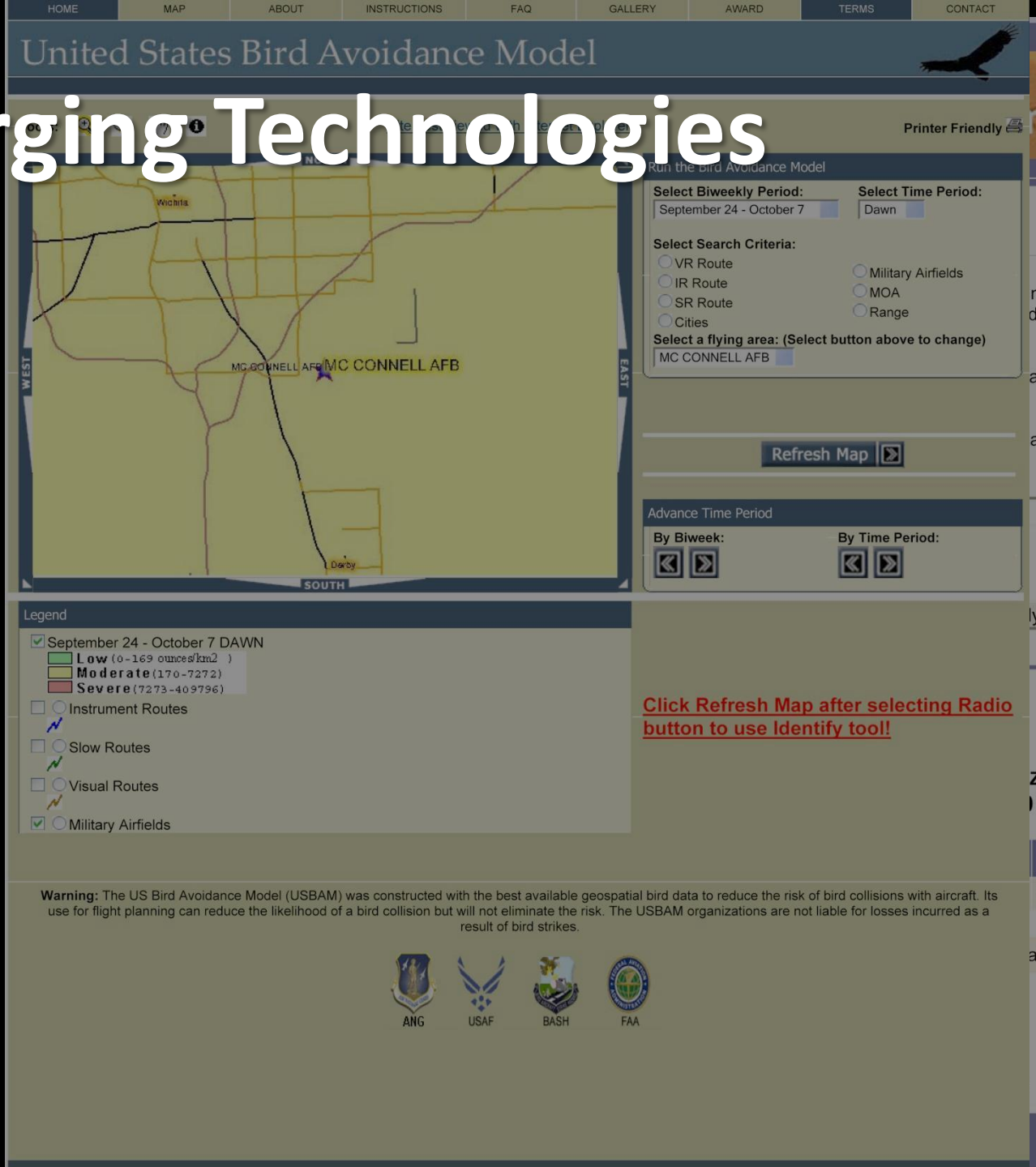


Evaluating Wildlife Program

14 Basic Questions

1. Is there a wildlife control officer responsible for the management of wildlife on the airport?
2. Has a land use plan been established with regard to effective land use on and off airport as it pertains to the wildlife control programme?
3. What ecological measures are implemented to reduce wildlife attractiveness at the airport and in the vicinity?
4. Is there a habitat management programme on the airport?
5. Are garbage dumps forbidden around the airport? At what distance?
6. Is the airport fence suitable to prevent hazardous animal incursions?
7. Which scaring methods are implemented at the airport?

Emerging Technologies



Emerging Technologies

Communications

USA/Canada Birdstrike Conference 2011

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