Belize Department of Civil Aviation

ADVISORY CIRCULAR

Subject: Wildlife and Fauna Impact Reports

DATE: 12/03/2025

AC No: BDCA AGA-006-2025

Initiated by: AGA Unit BDCA

Revision: 003

1. PURPOSE

The Belize Department of Civil Aviation (BDCA) is providing aerodrome operators methods acceptable to ensure compliance with the Wildlife Hazard Management Reduction requirements contained in the Belize Civil Aviation Regulations BCAR 139.

2. WHAT CANCELS THIS AC?

This Advisory Circular cancel CA BDCA-AGA-006-2022.

3. WHO DOES THE AC AFFECT?

a) Operators of national and international airports, aerodromes in general, all service providers, national and international air operators, ground operators and personnel working in the aeronautical field in general.

b) National and international aerodrome operators must be in regular communication with military and government entities in order to support the notification of wildlife impacts.

4. APPROVAL:

DIRECTOR OF BDCA CIVIL AVIATION

Nigel Carter
Director of Civil Aviation

5. TABLE OF CONTENTS

6. LEGAL BASIS.

a) Annex 14 Vol. I Aerodrome Design
b) BCAR 139.337 Wildlife (birds and animals) strike hazard reduction
c) Doc 9137-AN/898 Airport Services Manual; Part 3, (Reducing the danger posed by birds).
d) Doc 9332-AN/909 Manual on the ICAO Bird Strike Notification System (IBIS).

7. VALIDITY

a) At the time of publication.

8. SUBJECT

a) This Advisory Circular (AC) explains the importance of reporting collisions between aircraft and wildlife - more commonly referred to as wildlife strikes.

b) The Belize Department of Civil Aviation (BDCA) hereby provides aerodrome operators with acceptable methods for ensuring compliance with the Wildlife Hazard Management Reduction requirements contained in the Belize Civil Aviation Regulations BCAR 139.

9. BACKGROUND.

a) In Belize most bird species are protected by law for example, the “White Crown Pigeons, Laughing Gulls, Smooth Billed Ani or (black bird), Kill Deer, the raptors family of Common Night Hawks, Kestrels, Ospreys, the Great Heron, Egrets, and Night Herons. Nevertheless, these species have all been involved in aircraft incidents within Belize at some point or another, to date there is no record of these birds having brought down or caused major damage to any aircraft in Belize.

b) The general assumption is that strikes have steadily increased over the past two decades. However, strike reporting is not consistent across all stakeholders (pilots, air carriers, airport operators, air traffic control personnel, etc.)

c) It is believed that actual wildlife activity is much greater on average than is known through reporting. Notably, the pattern of disparity in the reporting of the strike rates for commercial air carriers into the country is minimal. However, the BDCA believes that the voluntary reporting program being proposed will adequately increase the rate of reporting to track national trends in wildlife strikes and determine the hazard level of wildlife species that are being struck.
d) For example: The first recorded bird strike that resulted in a plane crash occurred on April 3, 1912, when Calbraith Rogers - the first pilot to cross the United States from coast to coast - lost his life when his plane was completely wrecked after he flew into a flock of birds and crashed.

10. ACRONYMS AND ABBREVIATIONS.

AIC: Aeronautical Information Circular
AIS: Aeronautical Information Services
AC: Aircraft
ATC: Air Traffic Control
AWHM Avian Wildlife and Hazard Management
BDCA: Belize Department of Civil Aviation
BCARS: Belize Civil Aviation Regulations.
DWL: Damage within the limit.
FBO: Fixed Based Operation
FOD: Foreign Object Debris/Damage
GPWS: Ground Proximity Warning System
IBIS: ICAO Bird Strike Information System
ICAO: International Civil Aviation Organization
IFR: Instrument Flight Rules
ND: No damage.
OBD: Out-of-bounds damage.
PPE: Personal protective equipment.
SMS: Safety Management System
SSP: State Safety Program
TCAS: Traffic Alert and Collision Avoidance System
VFR: Visual Flight Rules
SMS: Safety Management System
WIN Wildlife Impact Notification

11. DEFINITIONS

Airport: Any aerodrome specially equipped and regularly used for passengers and/or cargo and which, in the opinion of the BDCA, has sufficient aeronautical infrastructure facilities and services to be an operator in civil aviation.

Incident: Any event related to the use of an aircraft that does not become an accident, that affects or may affect the safety of air operations.

Mitigation: The reduction of damages doctrine which is sometimes referred to as minimization of damages or the doctrine of avoidable consequences.

Avian and wildlife hazard: The term avian hazard refers to the risk of incidents and damage between the collision of birds or animals near the aerodrome and an aircraft in operation. Wildlife in general, especially birds, has posed a risk to aircraft since the early days of the aviation industry. The presence of birds and other fauna that are temporarily or permanently within the operational areas of an aerodrome are generally due to attractants such as: sources of food, water and places to settle, congregate, and/or rest.

Impacts with fauna: Collisions that occur between moving aircraft and species representing fauna, mainly birds and/or mammals.

Fauna: Refers to the set of animals that inhabit a certain territory. For the purposes of collisions with aircraft, any land animal - mainly mammals and birds - whether wild or domestic animals that are beyond the control of their owners.

Air traffic service (ATS): A generic expression that is applied, as the case may be, to flight information, warning, air traffic advice, air traffic control services (air control services, approach control and aerodrome control).

Standing Water: Regarding airplane performance, the term standing water denotes a runway condition where more than 25 per cent of the runway surface area (whether in isolated areas or not) within the required length and width being used is covered by water at a depth greater than 3 mm

Control Tower (TWR) A unit specially established to provide air traffic control services to airfield traffic.

Wildlife Hazard: Potential or actual damage to aircraft caused by their collision with birds or animals on or near an aerodrome.

12. HOW AN IMPACT WITH FAUNA IS DETECTED.

a) Impacts with fauna are detected by: direct visual observation; aircraft instrument records; the presence of tears, blood stains, or dents in the structural parts of the aircraft; the collection of injured or dead animals on or near the runway of aerodromes, their surrounding areas and/or in navigation routes.

13. WHERE DO IMPACTS WITH FAUNA OCCUR?

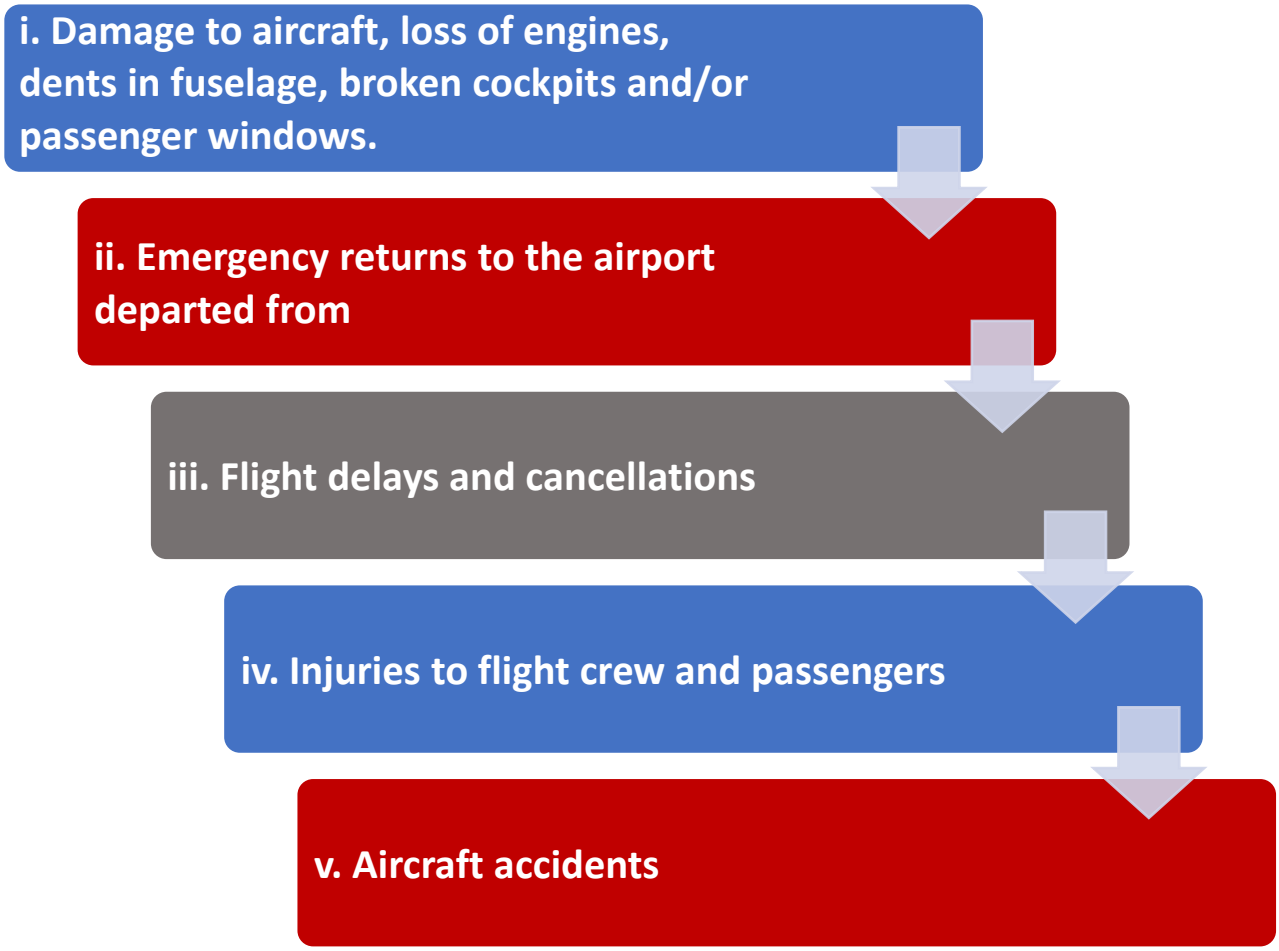
Impacts with Fauna		
At an Aerodrome	**Near an Aerodrome**	**Outside an Aerodrome**
During parking, taxiing, takeoff or landing phases	During approach, final approach, takeoff or landing	En route

a) They can occur with all kinds of aircraft including; military, commercial, civilian, regular and non-regular.

14. CONSEQUENCES OF IMPACTS WITH FAUNA

a) Collisions between aircraft and wildlife cause significant losses for aircraft operators due to: flight delays, damage to airport infrastructure, negative impacts on air traffic, and reduced public credibility in the country's aviation industry.

b) The most common consequences are:



15. WHEN TO REPORT A WILDLIFE-AIRCRAFT STRIKE OR NEAR-MISS

a) A strike between wildlife and an aircraft has been witnessed.
b) Evidence of a strike or damage to an aircraft has been identified.
c) Bird or other wildlife remains, whether in whole or in part, are found.

16. STRIKE CATEGORIES: IMPACTS BETWEEN AIRCRAFT & BIRDS/FAUNA

a) Confirmed strikes
b) Unconfirmed strikes
c) Serious incidents

17. PROCEDURE FOR REPORTING AIRCRAFT IMPACTS WITH FAUNA.

a) The reporting process specifies the steps to be taken to notify aerodrome operators of impacts between aircraft and wildlife/fauna. This will facilitate the operators' development and maintenance of a database recording such events and inform the actions taken to safeguard aircraft operations.

A. PILOTS

a) Pilots shall inform Air Traffic Service (ATS) of aircraft-wildlife impacts and the flight phase during which the impact occurred for initial registration. The pilot shall then notify ATS of his/her decision to: commence internal procedures for emergency return to the aerodrome of origin, declare an emergency, or continue in route to the flight destination.

b) The air traffic controller shall immediately notify the aerodrome operator's Avian Wildlife and Hazard Management (AWHM) officer of the report received. The AWHM officer shall record the information, verify the details, and activate the necessary procedures.

c) Pilots returning to the aerodrome where the impact was reported shall contact their Wildlife Impact Notification (WIN) officer and request a copy of the report form authorized by the aerodrome operator. They shall supplement the information provided to the air traffic controller and send it without delay to the AWHM officer.

d) The AWHM officer at the aerodrome may require that an aircraft inspection be conducted in coordination with the operator's notifier and the pilot, to gather additional information. If remains are found, the collection procedure established in numeral 17, 'Collection of fauna remains', must be followed. The remains shall then be transferred to the designated area for identification, registration and subsequent burial.

e) If/when general aviation pilots return to the aerodrome where an aircraft-wildlife impact occurred, they must immediately contact the relevant aerodrome personnel and report the incident.

f) In both cases, the air traffic controller must request a FOD inspection on the runway and taxiways where the aircraft travelled, in order to search for and recover any wildlife remains.

g) It is essential that a photographic record be made of the affected areas or damage suffered by the aircraft, as well as the individual (fauna), if it is in the aircraft. These images shall be attached to the corresponding form.

h) The AWHM officer will then review the information submitted. If there are inconsistencies, the AWHM officer must contact the WIN or general aviation pilot within 24 hours for joint validation.

B. GROUND HANDLING OPERATORS.

a) When the Aircraft Ground Handling Services personnel detect an impact and find evidence such as feather remains, body parts, traces of blood or any other indication of an impact with fauna, they must immediately notify the WIN of their organization. The latter must verify the situation in order to prepare and issue the wildlife impact report without delay to the person in charge of AWHM officer at the aerodrome.

b) The AWHM Officer must inspect the maneuvering area to identify wildlife remains and examine the aircraft for feathers, body parts, traces of blood, or any other indication of an aircraft-wildlife impact. If remains are found, the collection procedure established in numeral 17, 'Collection of fauna remains', must be followed. The remains shall then be transferred to the designated area for identification, registration and subsequent burial.

c) The preparation of a photographic record of the damaged sections and/or the damage sustained by the aircraft, including any wildlife specimen present on the aircraft, is essential. These photographs must be attached to the form authorized by the aerodrome operator.

d) Subsequently, the AWHM officer will examine the information submitted. If there are inconsistencies, the AWHM officer must contact the WIN or the general aviation pilot within 24 hours for joint validation.

e) If the form is incomplete and has unfilled fields, the context to which it refers must be specified in the comments section.

C. AIRCRAFT MAINTENANCE PERSONNEL.

a) When aeronautical personnel detect that an aircraft has suffered an impact with fauna, they must inform the AWHM Officer, providing all possible data. This officer must contact the control tower to notify the pilot of the incident, in the event that he is not aware of it.

b) The AWHM officer shall maintain constant communication with air traffic control so as to be informed of the pilot's decision, to either return to the aerodrome of origin, declare an emergency or continue en route to the final destination.

c) In the case of airline pilots returning to the aerodrome where the impact was reported, they must contact their WIN to obtain the report form authorized by the aerodrome operator, supplement the information given to the air traffic controller and send it without delay to the AWHM officer.

d) The AWHM officer of the aerodrome operator may require an inspection of the aircraft, in coordination with the operator's notifier and the pilot, to gather further information.

e) In the case of general aviation pilots, if they return to the aerodrome where the impact occurred, they must immediately contact aerodrome personnel to report the incident.

f) The AWHM officer must inspect the maneuvering area to identify wildlife remains and examine the aircraft for feathers, body parts, traces of blood, or any other

indication of impact with wildlife. If remains are found, the collection procedure established in numeral 17, 'Collection of fauna remains', must be followed, and transferred to the designated area for identification, registration and subsequent burial.

g) It is essential to photographically document the damaged areas or damage sustained by the aircraft, as well as any individuals (wildlife) present on the aircraft. These photographs must be attached to the form authorized by the aerodrome operator.

h) In both cases, the air traffic controller must request a FOD inspection on the runway and taxiways where the aircraft traveled, in order to look for wildlife remains.

18. GENERAL GUIDELINES

a) All operators of international and domestic airports shall designate a primary reporting officer to ensure the accuracy and reliability of the data recorded. This designation must be communicated to the airport wildlife management committee.

b) Form DOC. 9332-AN/909 "Manual on the ICAO Bird Strike Notification System (IBIS)", which is attached to this circular and posted on the BDCA website, is the official format for reporting wildlife incidents. Therefore, the person responsible for reporting these incidents by operators at international and domestic airports and general aviation pilots should contact the operator of the corresponding aerodrome to obtain the email address intended to receive the wildlife incident report form or the location of the office for physical delivery.

c) If the wildlife impact report is emailed, the subject should be formatted as follows: **"WILDLIFE IMPACT REPORT - AIRCRAFT REGISTRATION - DD/MM/YY".**

d) The aerodrome operator's procedure for reporting impacts with wildlife should be easily accessible, allowing all personnel to report such impacts, including those discovered during aerodrome inspections, as well as any other relevant risks identified.

e) The aerodrome operator is responsible for having sufficient copies available and distribution to all those involved, as well as having a database of all impacts that occur for control and monitoring.

19. INSTRUCTIONS FOR FILLING OUT THE FORM

a) The Wildlife Impact Form sourced from Doc. 9332 the Manual on the ICAO Bird Strike Information System (IBIS), which is found in Annex 1 (attached) describes the following concepts with their respective definitions to facilitate the correct completion of the form.

- **Operator:** Natural or legal person engaged in the operation of aircraft.
- **Aircraft Make/Model:** refers to the manufacturer's detailed information**.**
- **Brand / Model Motor:** refers to the manufacturer's detailed information on the brand/model motor.
- **Aircraft Registration:** Corresponds to the detailed information on the aircraft registration / registration (tail number) of the impacted aircraft.
- **Date:** Corresponds to the date (day, month, year format) when the impact with birds or other fauna occurred. The month shall be expressed numerically.
- **Local Time:** Expressed by the hour and minute when the impact takes place and is recorded using the 24-hour format.
- **Aerodrome Name:** Name of the airport where the impact occurs, in case it occurs en route, the flight phase and altitude are to be recorded.
- **Runway Used:** Corresponds to the runway used for the approach, landing or takeoff of an aircraft when the collision with birds or other fauna occurs. The position of the nearest taxiway or intersection can also be included.
- **Geographical Position:** Corresponds to the coordinates of the point of impact, or by reference in magnetic orientation and distance to a recognizable navigational aid or population.
- **Altitude:** Corresponds to the altitude indicated on the aircraft's instruments. (AMSL – above mean sea level).

- **Indicated Speed**: It is reported according to the aircraft's airspeed indicator or anemometer. Units correspond to knots (KT)

- **Flight Phases:** The description of the flight phases according to the ICAO is transcribed.

  - **Undetermined:** There is no knowledge of the flight phase and/or the impact was found during the ground inspection.

  - **Taxiing:** The aircraft moves on the surface of the aerodrome with its own strength, before takeoff or after landing.

  - **Takeoff:** From the application of takeoff power, during rotation and up to an altitude of 35 feet above the runway elevation.

  - **Climb:** From the end of the takeoff sub-phase to the first pre-citation power reduction, or until reaching 1000 feet above the runway or VFR circuit elevation, whichever comes first.

  - **Cruise/Route:** Instrument Flight Rules (IFR): From the completion of the initial ascent through the cruising altitude to the conclusion of the controlled descent to the initial approach position. Visual Flight Rules (VFR): From the conclusion of the initial ascent, through cruise and controlled descent to the altitude of the VFR circuit or 1000 feet above the runway elevation, whichever comes first.
  - **Descent:** IFR (Instrument Flight Rules) Descent from cruise to the initial position of the approach or entry to the VFR circuit. VFR: Cruising descent to enter the VFR circuit or 1000 feet above the slope elevation, whichever comes first.

  - **Approach:** Instrument Flight Rule (IFR): From the initial position point of the approach to the beginning of the alignment to land. Visual Flight Rules (VFR): From the point of entry to the VFR circuit, or 1000 feet above the runway elevation to the beginning of the alignment for landing.

- **Landing:** From the beginning of the landing line-up until the aircraft leaves or stops on the runway; or when takeoff power is applied in the case of "touch and takeoff" landings.

- **Towing:** The aircraft is in motion aided by a towing vehicle between hangars and its parking stall and vice versa; between parking stalls; or between its parking stall and the engine starting point.

➢ **Struck parts of the aircraft:** The affected parts should be listed according to the impact and the magnitude of the damage caused, as follows: ND when no damage occurs, DDL when the damage is within limits, or DFL when the damage is out of bounds. The limits referred to correspond to those that the aircraft's technical manuals provide for the continuation or suspension of its operation.

- **Radome**
- **Windscreen**
- **Nose (excluding the upper area)**
- **Engine No. 1**
- **Engine No. 2**
- **Engine No. 3**
- **Engine No. 4**
- **Propeller**
- **Wing/rotors (helicopter)**
- **Fuselage**
- **Landing gear**
- **Vertical/horizontal stabilizer (tail)**
- **Lights**
- **Other (please specify)**

➢ **Consequences for the flight:**

- **None:** The impact does not generate consequences of any kind on the fly.

- **Interrupted takeoff:** As a result of the impact, the aircraft is forced to abort its takeoff.

- **Precautionary landing:** As a result of the impact, the aircraft is forced to return to the airport of origin as a precaution against possible and/or unrecognized damage to it.

- **Engines were turned off:** As a result of the impact, the aircraft is forced to carry out emergency procedures and establish immediate communication with the ATC of the nearest aerodrome to report what happened and coordinate the procedures to be followed.

- **Other (please specify):** If a consequence occurs for the flight other than those described above, specify.

➢ **Sky conditions:**

- **Clear sky:** No cloud cover
- **Some clouds:** Medium cloud cover
- **Overcast Sky:** High cloud cover

➢ **Precipitation:**

- **Fog**
- **Rain**

➢ **Species of the bird / fauna:** The common or scientific name must be registered. For this purpose, there is an AWHM at the airport, who can provide advice on the recognition of the species.

➢ **Number of birds/fauna:** The number of birds/fauna that were observed in the visual plane of the aircraft and/or hit by the aircraft must be recorded.

➢ **Size of birds/fauna:** The size of the birds/fauna hit by the aircraft must be recorded.

➢ **Pilot advisories on bird/wildlife hazards:** Advisories issued regarding the presence of birds/fauna at an aerodrome must be recorded.

- **Observations:** refers to information that is considered relevant but that is not contained in the report form such as: description of damages, injuries, etcetera.

- **Notified by:** The name and position of the person preparing the form must be recorded.

b) The Annex 2 form is a supplement to this Circular used for reporting collisions with birds and includes information on operator costs and damage to engines. This information is confidential and shall be used to establish a database to determine the risk of the occurrence of these collisions, their severity, and potential consequences.

20. FAUNA RECORD OF THE AERODROME OPERATOR.

a) The documentation of reports on impacts with fauna must be completed by competent personnel for effective wildlife hazard management. This shall be done based on the number of aircraft movements, runways in use, the behaviour of wildlife, and other local factors deemed relevant. This data shall be analyzed to identify species that pose a hazard to the aerodrome at specific times of the day, year, and during different weather conditions.

b) The identification of the species involved in reported wildlife impacts shall be as accurate as possible since this data will be used to assess the safety risk level that each species poses to aircraft operations at the aerodrome. Accurate wildlife observations and impact statistics will facilitate data analysis and improve wildlife hazard management.

c) After receiving reports of impacts with fauna, the AWHM officer shall establish and/or implement reactive, proactive, and preventive measures to reduce the amount of fauna and evidence the result of these measures.

21. COLLECTION OF FAUNA REMAINS

a) The aerodrome operator's Avian Wildlife and Hazard Management (AWHM) Officer is tasked with inspecting the maneuvering area for animal remains and checking the aircraft for feathers, animal parts, blood stains, or any signs of collision with wildlife.

b) After determining animal species involved in a collision, a site shall be assigned inside/outside the facility for the burial of the remains. This also prevents the spread of bacteria that can cause serious problems. Therefore, animal remains shall not be discarded in common landfills.

c) This process must be carried out by rigorously using the appropriate personal protective equipment (PPE).

d) All aerodrome personnel that identify animal remains at the airfield shall contact the Avian Wildlife and Hazard Management Officer. This officer shall investigate to determine as much as possible the details of the impact.

22. PERSONAL PROTECTIVE EQUIPMENT (PPE) FOR THE COLLECTION OF WILDLIFE REMAINS

a) The following is the basic personal protective equipment to guarantee the health and well-being of those who carry out the collection of fauna. Additional equipment may be employed according to the needs and protection of health and well-being.

- Gloves
- Mask
- Safety glasses
- Alcohol spray or gel (for disinfection after the handling of fauna remains)

23. IDENTIFICATION OF FAUNA REMAINS.

a) The method selected for identifying wildlife remains is to be determined by the aerodrome operator, as this data must be included in the wildlife reporting forms and in the corresponding notifications to the BDCA.

b) The identification of wildlife remains shall be done as accurately as possible to ensure the establishment of a reliable database. This allows for the implementation of appropriate measures for each species present at the aerodrome and promotes safe air operations.

24. TRANSFER OF INFORMATION

a) International and domestic aerodromes operators are required to submit monthly wildlife collision reports to the Belize Department of Civil Aviation via email to info@civilaviation.gov.bz or hand delivery to the BDCA office at the airport compound, Ladyville, Belize District. The following information should be considered:

- Notifications shall be made when a collision with birds or other wildlife has been confirmed, and Unconfirmed strikes, Serious incidents.

- Wildlife collision reports must be submitted using the form provided in this circular, which supersedes any previous bird collision reporting form.

b) Reports on impacts with fauna received at the BDCA will be delivered to the Aerodromes and Ground Aids (AGA) Unit. AGA personnel will be responsible for verifying the veracity of these reports and will thereafter transfer them to the state SSP for submission to the ICAO NACC regional office.

c) BDCA AGA Unit personnel and the state SSP will be responsible for verifying follow-up of the reports, ensuring the implementation of effective mitigation measures for continuous improvement, and confirming that those involved implement this process successfully.

d) Thirty, (30), calendar days shall be granted for the integration of the information in this circular into the Aerodrome Operation Manuals (AOMs) of international aerodromes in Belize and will be evaluated in the corresponding area. National aerodromes are required to have physical and electronic copies of this circular, which will serve as a guide for the correct and responsible notification of impacts with fauna.

e) For any questions or concerns contact the Belize Department of Civil Aviation via email info@civilaviation.gov.bz or telephone number (501) 225-2014.

25. ANNEX 1 - 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	☐
fuselage	☐	27	☐
landing gear	☐	28	☐
tail	☐	29	☐
lights	☐	30	☐
others (specify)	☐	31	☐

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

Size of Bird 44

small	☐	S
medium	☐	M
large	☐	L

Pilot warned of Birds 45

yes ☐ Y no ☐ X

Remarks (describe damage, injuries and other pertinent information) 46/47

_____

Reported by _____
(Optional)

**Send all bird remains including feather fragments to:*

26. ANNEX 2

THIS INFORMATION IS REQUIRED FOR AVIATION SAFETY

A. BASIC DATA

Operator 01/02

Aircraft Make/Model 03/04

Engine Make/Model 05/06

Aircraft Registration 07

Date of Strike day ..... month ..... year 08

Aerodrome/Location if known 11/12/14

B. COST INFORMATION

Aircraft time out of service ..... hours 52

Estimated cost of repairs or replacement *U.S.$ (in thousands)* 53

Estimated other costs (e.g. loss of revenue, fuel, hotels) *U.S.$ (in thousands)* 54

C. SPECIAL INFORMATION ON ENGINE DAMAGE STRIKES

Engine position number	**1**		**2**		**3**		**4**	
Reason for failure/shutdown	55		56		57		58	
uncontained failure	☐	A	☐	A	☐	A	☐	A
fire	☐	B	☐	B	☐	B	☐	B
shutdown – vibration	☐	C	☐	C	☐	C	☐	C
shutdown – temperature	☐	D	☐	D	☐	D	☐	D
shutdown – fire warning	☐	E	☐	E	☐	E	☐	E
shutdown – other (specify)	☐	Y	☐	Y	☐	Y	☐	Y
shutdown – unknown	☐	Z	☐	Z	☐	Z	☐	Z
Estimated percentage of thrust loss*	.....	59	_____	60	_____	61	.....	62
Estimated number of birds ingested	.....	63	_____	64	_____	65	.....	66

Bird species 41

** These may be difficult to determine but even estimates are useful.*

Send all bird remains including feather fragments to:

Reported by .....