

**5. Bird Identification:**

Accurate species identification is critical for bird-aircraft strike reduction programs. Wildlife biologists must know what species of animal they are dealing with in order to make proper management decisions. The FAA, the U.S. Air Force, and the U.S. Department of Agriculture – Wildlife Services are working closely with the Feather Identification Lab at the Smithsonian Institution, Museum of Natural History, to improve the understanding and prevention of bird-aircraft strike hazards. Bird strike remains that cannot be identified by airport personnel or by a local biologist can be sent (with FAA Form 5200-7) to the Smithsonian Museum for identification.

Feather identification of birds involved in bird-aircraft strikes will be provided free of charge to all U.S. airport operators, all U.S. aircraft owners/operators (regardless of where the strike happened), or to any foreign air carrier if the strike occurred at a U.S. airport.

Please observe the following guidelines for collecting and submitting feathers or other bird/wildlife remains for species identification. These guidelines help maintain species identification accuracy, reduce turn-around time, and maintain a comprehensive FAA National Wildlife Aircraft Strike Database.

1. Collect and submit remains as soon as possible.
2. Provide complete information regarding the incident
  - a. Fill out FAA Form 5200-7 – Bird/Other Wildlife Strike Report.
    - i. A copy of Form 5200-7 can be downloaded and or printed from:  
<http://wildlife-mitigation.tc.faa.gov/T>.
  - b. Mail report with feather material (see address below).
  - c. Provide your contact information if you wish to be informed of the species identification.
3. Collect as much material as possible in a clean plastic/ziplock bag. (Please, do not send whole birds).
  - a. Pluck/pick a variety of feathers from the wings, tail and body.
  - b. **Do not** cut off feathers. This removes the downy region needed to aid in identification.
  - c. Include any feathers with distinct colors or patterns.
  - d. Include any downy “fluff”.
  - e. Include beaks, feet, and talons if possible.
  - f. Where only a small amount of material is available, such as scrapings from an engine or smears on wings or windshields, send all of it.
  - g. **Do not** use any sticky substance such as tape or post-it notes to attach feathers.
4. Mail the Bird/Other Wildlife Strike Report and collected material to the Smithsonian’s Feather Identification Lab. They will forward the report to the FAA Staff Wildlife Biologist at the FAA’s Office of Airport Safety and Standards.

For Material Sent via Express Mail Service:	For Material Sent via US Postal Service:
Feather Identification Lab	Feather Identification Lab
Smithsonian Institution	Smithsonian Institution
NHB, E610, MRC 116	PO Box 37012
10 <sup>th</sup> & Constitution Ave. NW	NHB, E610, MRC 116
Washington, D.C. 20560-0116	Washington, D.C. 20013-7012
(This can be identified as “safety investigation material”)	(Not recommended for priority cases.)

December 22, 2004

The species identification turn around time is usually 24 hours from receipt. Once processed, the reports and species identification information are sent to the database Manager for entry into the FAA National Wildlife Aircraft Strike Database. Persons wishing to be notified of the species identification must include contact information (e-mail, phone, etc.) on the report.

For more information contact The FAA Staff Wildlife Biologist [(202) 267-3389], or the Smithsonian's Feather Identification Lab [(202) 633-0801].



for

David L. Bennett  
Director of Airport Safety and Standards

# CertAlert

DOT/Federal Aviation Administration, Southern Region Airports Division,  
Airport Certification Safety Team (ASO-620), P.O. Box 20636, Atlanta, Georgia 30320  
(404) 305-6700; FAX: (404) 305-6730

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Issued March 15, 2012

Number SO-12-03

This CertAlert pertains to:  
All Certificated Airports

## Documenting the Review of your Wildlife Hazard Management Plan (WHMP)

Wildlife hazards are a major safety concern at our nation's airports. In today's complex operating environment wildlife hazard management is at the very top of the list of safety concerns. The FAA Airports Division is in the process of revising wildlife-related advisory circulars to enhance the current airport wildlife management programs. From the requirements for wildlife hazard assessments and management plans to the qualifications for biologists and training of wildlife personnel it is still an evolving program. As these changes are adopted, approved, and implemented at your airport, it is of the utmost importance that **all documentation** is well prepared and available during FAA inspections.

As per 14 CFR part 139.337(f)(6), your Wildlife Hazard Management Plan must include procedures to review and evaluate the plan every 12 consecutive months or following a triggering event:

- An air carrier aircraft experiences multiple wildlife strikes
- An air carrier aircraft experiences substantial damage from striking wildlife
- An air carrier aircraft experiences an engine ingestion of wildlife

To assist airport operators in documenting this review, we have attached two sample forms. One form is for the "annual" review (every 12 consecutive months), and one for a review following a triggering event. Please feel free to modify these forms to suit your needs. This is only an example of the type of documentation you must maintain regarding the review of your Wildlife Hazard Management Plan. You can create your own.

Date: \_\_\_\_\_

**Subject: Wildlife Hazard Management Plan Review Following a Triggering Event**

Airport: \_\_\_\_\_

Airport ID: \_\_\_\_\_

On \_\_\_\_\_ we conducted a review the Wildlife Hazard Management Plan, as per the requirements of 139.337(f) (6).

Description of Triggering Event:

- **Date/Time** - Provide details of the event which triggered the review. Attach strike report, if available and any pertinent information; runway used, airline, take-off, landing, species, damage, etc.

General Information/ Significant findings:

- **Name of review coordinator**- (Person facilitating discussions and writing plan updates; usually the Wildlife Coordinator, Wildlife Biologist, or Airport Manager) & **participating airport personnel and representatives of other organizations** (As listed in 139.337(f)(1); may include members of airport management, the wildlife coordinator, airport operations/ wildlife staff, wildlife Biologist who conducted Wildlife Hazard Assessment, members of the wildlife hazard working group\*). Attach a sign-in sheet.
- **The plan's effectiveness in dealing with known wildlife hazards on and in the airport's vicinity**- Example: Review the current wildlife control log and evaluate recent strike reports or events. Make a determination as to whether the current program is working and what can be improved.
- **Aspects of the wildlife hazards described in the wildlife hazard assessment that should be reevaluated** – Review assessment to determine if everything is being addressed that was previously identified as a hazard or if other species are now present. Note: If other/additional new species are now present on or in the vicinity of the airport, another Wildlife Hazard Assessment may be needed.
- **Summary of progress and challenges in direct wildlife hazard management (i.e., dispersals, strike response) on the airfield** - (Review of procedures to be followed during air carrier operations as listed in 139.337(f)(5))
- **Changes to management strategies identified**
- **Changes to airport training program identified**
- **Changes/ updates to Wildlife Hazard Management Plan identified**  
(Submit any changes to the WHMP to the assigned FAA Airport Certification Safety Inspector)

\_\_\_\_\_  
Airport Manager/Director

\*The wildlife hazard working group is made up of representatives that own and/or manage properties, attractants, and habitats for wildlife (both on- and off- airport property) that impact airport safety. The function of the wildlife hazard working group, or of the airport's relationships with such representatives, is to cooperatively address the airport's specific wildlife hazard issues. During the annual review of the Plan, the effectiveness in addressing the issues should be evaluated, with any needed changes documented.

**AIRPORT SAFETY AND OPERATIONS DIVISION, AAS-300**

FOR INFORMATION, CONTACT John Weller, AAS-300, (202) 267-3778

DATE: June 11, 2009 No. 09-10  
TO: Airport Operators, FAA Airport Certification Safety Inspectors  
TOPIC: Wildlife Hazard Assessments in Accordance with Part 139 Requirements

**Purpose:** To remind airport operators of their obligations under Part 139 to conduct Wildlife Hazard Assessments if certain criteria are met.

**Background:** The risk of wildlife strikes to aircraft has been increasing. Many populations of wildlife species commonly involved in strikes have increased markedly in the last three decades and adapted to living in urban environments, including near airports. Thirteen of the 14 bird species in North America with mean body masses greater than 8 lbs have shown significant population increases during this time. For example, from 1980 to 2006, the resident (non-migratory) Canada goose population in the USA and Canada increased at a mean rate of 7.3 percent per year. In addition, commercial air traffic has increased from about 18 million aircraft movements in 1980 to over 28 million in 2007.

Part 139 requires certificated airports to conduct a Wildlife Hazard Assessment if they experience a triggering event.

According to section 139.337(b):

*"In a manner authorized by the Administrator, each certificate holder must ensure that a Wildlife Hazard Assessment is conducted when any of the following events occurs on or near the airport:*

- (1) An air carrier aircraft experiences multiple wildlife strikes;*
- (2) An air carrier aircraft experiences substantial damage from striking wildlife. As used in this paragraph, substantial damage means damage or structural failure incurred by an aircraft that adversely affects the structural strength, performance, or flight characteristics of the aircraft and that would normally require major repair or replacement of the affected component;*
- (3) An air carrier aircraft experiences an engine ingestion of wildlife; or*
- (4) Wildlife of a size, or in numbers, capable of causing an event described in paragraphs (b)(1), (b)(2), or (b)(3) of this section is observed to have access to any airport flight pattern or aircraft movement area."*

The Wildlife Hazard Assessment must be conducted by a qualified wildlife biologist who meets the requirements in Advisory Circular 150/5200-36, *Qualifications for Wildlife Biologists Conducting Wildlife Hazard Assessments and Training Curriculums for Airport Personnel Involved in Controlling Wildlife Hazards at Airports*. The Wildlife Hazard Assessment must be conducted in accordance with Advisory Circular 150/5200-33B, *Hazardous Wildlife Attractants On or Near Airports* and the Wildlife Hazard Management Manual. The Wildlife Hazard Management Manual can be viewed and downloaded free of charge from the FAA's wildlife hazard mitigation web site: <http://wildlife-mitigation.tc.FAA.gov/>. A Wildlife Hazard Assessment should include:

- (1) An analysis of the events or circumstances that prompted the assessment.
- (2) Identification of the wildlife species observed and their numbers, locations, local movements, and daily and seasonal occurrences.
- (3) Identification and location of features on and near the airport that attract wildlife.
- (4) A description of wildlife hazards to air carrier operations.
- (5) Recommended actions for reducing identified wildlife hazards to air carrier


The Office of Safety and Standards (AAS) has conducted a search of the National Wildlife Strike Database. We found a number of airports (see attachment) that appear to have experienced triggering events but we have no record that they have initiated the Wildlife Hazard Assessment (WHA) required by Part 139.

**Actions:** Airports that have experienced a triggering event, but have yet to undertake a wildlife hazard assessment, should be immediately contacted by their FAA Airport Certification Safety Inspector. Airport operators should be directed to review the FAA Wildlife Strike Database at [http://wildlife\\_mitigation.tc.faa.gov/public\\_html/index.html#access](http://wildlife_mitigation.tc.faa.gov/public_html/index.html#access). No password is required. Airport operators must immediately initiate action to start a Wildlife Hazard Assessment if they confirm their airport has experienced a triggering event

Airport Improvement Funds (AIP) for FY 2009 have been identified to assist airports doing WHAs. The money is available on a first come first served basis. For more information about funding options, airport operators should contact their nearest FAA Airports District Office.

As we move to Safety Management Systems, it is incumbent upon airports to be proactive and understand the risk of wildlife strikes before they experience a triggering event. In this regard, the FAA has initiated a rulemaking project that will require certificated airports to conduct WHAs and to periodically update them. However, as the rulemaking process will take a number of years, operators of 139 airports that have not experienced a triggering event, and who have not done a WHA are encouraged to do one. The FAA also asks airports that have WHAs that are more than five years old to voluntarily update them.

Attachment:

  
\_\_\_\_\_  
Michael W. Brown  
Manager, Airport Safety  
And Operations Division

June 11, 2009  
DATE

DISTRIBUTION CERTALERT

## DISTRIBUTION LIST

REGION	STATE	AIRPORT NAME	ASSOCIATED CITY	AIRPORT CODE	TRIGGERING EVENT
CENTRAL	Kansas	Liberal Muni	Liberal	LBL	1
CENTRAL	Missouri	Columbia Reg	Columbia	COU	12
CENTRAL	Nebraska	Central Nebraska Reg	Grand Island	GRI	1
CENTRAL	Nebraska	McCook Muni	McCook	MCK	4
EASTERN	Maryland	Salisbury-Ocean City Wicomico Reg	Salisbury	SBY	3
EASTERN	New York	Elmira/Corning Reg	Elmira	ELM	123
EASTERN	New York	Ithaca Tompkins Reg	Ithaca	ITH	1
EASTERN	New York	Massena Int'l - Richards Fld	Massena	MSS	1
EASTERN	Pennsylvania	John Murtha Johnstown-Cambria Co	Johnstown	JST	4
EASTERN	Pennsylvania	Lancaster	Lancaster	LNS	1
EASTERN	Pennsylvania	University Park	State College	UNV	123
EASTERN	Virginia	Lynchburg Reg/ Preston Glenn Fld	Lynchburg	LYH	4
NEW ENGLAND	Maine	Bangor Int'l	Bangor	BGR	1
NEW ENGLAND	Massachusetts	Barnstable Muni	Hyannis	HYA	1
NEW ENGLAND	Massachusetts	Worcester Reg	Worcester	ORH	1
NEW ENGLAND	New Hampshire	Lebanon Muni	Lebanon	LEB	1
NEW ENGLAND	New Hampshire	Manchester	Manchester	MHT	13
NEW ENGLAND	New Hampshire	Pease Int'l Tradeport	Portsmouth	PSM	14
NORTHWEST MOUNTAIN	Colorado	Aspen-Pitkin Co Sardy	Aspen	ASE	14
NORTHWEST MOUNTAIN	Colorado	Montrose Reg	Montrose	MTJ	1
NORTHWEST MOUNTAIN	Colorado	Pueblo Muni	Pueblo	PUB	134
NORTHWEST MOUNTAIN	Colorado	Rocky Mountain Metropolitan Airport	Denver	BJC	2
NORTHWEST MOUNTAIN	Colorado	Yampa Valley	Hayden	HDN	14
NORTHWEST MOUNTAIN	Idaho	Lewiston- Nez Perce Co	Lewiston	LWS	1
NORTHWEST MOUNTAIN	Idaho	Magic Valley Reg	Twin Falls	TWF	1
NORTHWEST MOUNTAIN	Montana	Bert Mooney	Butte	BTM	4
NORTHWEST MOUNTAIN	Montana	Great Falls Int'l	Great Falls	GTF	1

NORTHWEST MOUNTAIN	Montana	Helena Reg	Helena	HLN	2
NORTHWEST MOUNTAIN	Montana	LM Clayton	Wolf Point	OLF	234
NORTHWEST MOUNTAIN	Oregon	Klamath Falls Int'l	Klamath Falls	LMT	13
NORTHWEST MOUNTAIN	Utah	Cedar City Muni	Cedar City	CDC	24
NORTHWEST MOUNTAIN	Wyoming	Natrona Co Int'l	Casper	CPR	14
SOUTHERN	Alabama	Mobile Reg	Mobile	MOB	13
SOUTHERN	Florida	Eglin Air Force Base	Valparaiso	VPS	1
SOUTHERN	Florida	Gainesville Reg	Gainesville	GNV	13
SOUTHERN	Florida	Pensacola Reg	Pensacola	PNS	123
SOUTHERN	Georgia	Middle Georgia Reg	Macon	MCN	23
SOUTHERN	Georgia	Valdosta Reg	Valdosta	VLD	1
SOUTHERN	Kentucky	Owensboro-Davies Co	Owensboro	OWB	123
SOUTHERN	Mississippi	Jackson Int'l	Jackson	JAN	13
SOUTHERN	North Carolina	Albert J Ellis	Jacksonville	OAJ	13
SOUTHERN	North Carolina	Smith Reynolds	Winston-Salem	INT	14
SOUTHERN	Puerto Rico	Luis Munoz Marin Int'l	San Juan	SJU	3
SOUTHERN	Puerto Rico	Mercedita	Ponce	PSE	1
SOUTHERN	South Carolina	Charleston International	Charleston	CHS	1
SOUTHERN	South Carolina	Columbia Metro	Columbia	CAE	134
SOUTHERN	South Carolina	Greenville-Spartanburg	Greer	GSP	1
SOUTHERN	South Carolina	Myrtle Beach Jetport	Myrtle Beach	MYR	1
SOUTHERN	Tennessee	Lovell Fld	Chattanooga	CHA	134
SOUTHERN	Tennessee	McGhee Tyson	Knoxville	TYS	13
SOUTHERN	Tennessee	Tri-City Municipal	Bristol/ Johnson/ Kingsport	TRI	14
SOUTHERN	Virgin Islands	Cyril E King	Charlotte Amalie	STT	4
SOUTHWEST	Arkansas	Adams Fld	Little Rock	LIT	13
SOUTHWEST	Arkansas	Fort Smith Reg	Fort Smith	FSM	13
SOUTHWEST	Arkansas	Memorial Fld	Hot Springs	HOT	1
SOUTHWEST	Arkansas	Northwest Arkansas	Fayetteville	XNA	1234
SOUTHWEST	Arkansas	Texarkana Reg-Webb Fld	Texarkana	TXK	4
SOUTHWEST	Louisiana	Baton Rouge Metro-Ryan	Baton Rouge	BTR	1
SOUTHWEST	Louisiana	Lafayette Reg	Lafayette	LFT	14
SOUTHWEST	Louisiana	Lake Charles Reg	Lake Charles	LCH	1
SOUTHWEST	Louisiana	New Orleans Int'l	New Orleans	MSY	1234
SOUTHWEST	New Mexico	Grant Co	Silver City	SVC	4
SOUTHWEST	Texas	Austin Bergstrom Intl	Austin	AUS	1234



SOUTHWEST	Texas	Brownsville/ South Padre Island	Brownsville	BRO	1
SOUTHWEST	Texas	Bush Intercontinental	Houston	IAH	1234
SOUTHWEST	Texas	Corpus Christi Int'l	Corpus Christi	CRP	134
SOUTHWEST	Texas	Dallas Love Fld	Dallas	DAL	1234
SOUTHWEST	Texas	Easterwood Fld	College Station	CLL	1
SOUTHWEST	Texas	El Paso Int'l	El Paso	ELP	1234
SOUTHWEST	Texas	Gregg Co	Longview	GGG	1
SOUTHWEST	Texas	Jefferson Co	Beaumont/ Port Arthur	BPT	1
SOUTHWEST	Texas	Laredo Int'l	Laredo	LRD	12
SOUTHWEST	Texas	Lubbock Int'l	Lubbock	LBB	13
SOUTHWEST	Texas	Mathis Fld	San Angelo	SJT	3
SOUTHWEST	Texas	Midland Int'l	Midland	MAF	134
SOUTHWEST	Texas	San Antonio Int'l	San Antonio	SAT	123
SOUTHWEST	Texas	Shepard AFB/Wichita Falls	Wichita Falls	SPS	1
SOUTHWEST	Texas	Tyler Pounds Fld	Tyler	TYR	1
SOUTHWEST	Texas	Valley Int'l	Harlingen	HRL	123
SOUTHWEST	Texas	Waco Reg	Waco	ACT	123
SOUTHWEST	Texas	William Hobby	Houston	HOU	1234
WESTERN PACIFIC	Arizona	Ernest Love Fld	Prescott	PRC	1
WESTERN PACIFIC	Arizona	Show Low Muni	Show Low	SOW	24
WESTERN PACIFIC	Arizona	Tucson Int'l	Tucson	TUS	134
WESTERN PACIFIC	California	Arcata	Arcata/Eureka	ACV	1
WESTERN PACIFIC	California	Chico Muni	Chico	CIC	1
WESTERN PACIFIC	California	Fresno Yosemite Int'l	Fresno	FAT	1
WESTERN PACIFIC	California	Jack McNamara Fld	Crescent City	CEC	1
WESTERN PACIFIC	California	Long Beach/ Daugherty Fld	Long Beach	LGB	1234
WESTERN PACIFIC	California	Meadows Fld	Bakersfield	BFL	1
WESTERN PACIFIC	California	Monterey Peninsula	Monterey	MRY	134
WESTERN PACIFIC	California	Ontario Int'l	Ontario	ONT	1234
WESTERN PACIFIC	California	Oxnard	Oxnard	OXR	1
WESTERN PACIFIC	California	Redding Muni	Redding	RDD	1
WESTERN PACIFIC	Nevada	Elko Muni	Elko	EKO	1
WESTERN PACIFIC	Nevada	McCarran Int'l	Las Vegas	LAS	134

Trigger Codes

1. An air carrier experiences multiple wildlife strikes.
2. An air carrier experiences substantial damage from striking wildlife.
3. An air carrier experiences an engine ingestion of wildlife.
4. Wildlife of a size, or in numbers, capable of causing an event described in 1-3 above is observed to have access to any airport flight pattern or aircraft movement area.

# CERTALERT

**ADVISORY CAUTIONARY NON-DIRECTIVE**  
**AIRPORT SAFETY AND OPERATIONS DIVISION AAS-300**

FOR INFORMATION, CONTACT Ed Cleary, AAS-300, (202) 267-3389

**Date:** 11/21/2006 **No. 06-07**  
**To:** Airport Operators, FAA Airport Certification Safety Inspectors  
**Topic:** Requests by State Wildlife Agencies to Facilitate and Encourage Habitat for State-Listed Threatened and Endangered Species and Species of Special Concern on Airports

**PURPOSE:**

This Certalert describes procedures for responding to requests by state wildlife agencies to facilitate and encourage habitats for state-listed threatened and endangered species or species of special concern that occur on airports and may pose a threat to aviation safety. This Certalert does not apply to federally listed threatened and endangered species. Federal Aviation Administration (FAA) guidance on dealing with federally listed threatened and endangered species can be found in FAA Order 1050.1E, *Environmental Impacts - Policies and Procedures*, Appendix A, Section 8.

**BACKGROUND:**

An airport's air operations area (AOA) is an artificial environment that has been created and maintained for aircraft operations. Because an AOA can be markedly different from the surrounding native landscapes, it may attract wildlife species that do not normally occur, or that occur only in low numbers in the area. Some of the grassland species attracted to an airport's AOA are at the edge of their natural ranges, but are attracted to habitat features found in the airport environment. Also, some wildlife species may occur on the airport in higher numbers than occur naturally in the region because the airport offers habitat features the species prefer. Some of these wildlife species are state-listed threatened and endangered species or have been designated by state resource agencies as species of special concern.

Many state wildlife agencies have requested that airport operators facilitate and encourage habitat on airports for state-listed threatened and endangered species or species of special concern. Airport operators should exercise great caution in adopting new management techniques; new techniques may increase wildlife hazards and be inconsistent with safe airport operations. Managing the on-airport environment to facilitate or encourage the presence of hazardous wildlife species can create conditions that are incompatible with, or pose a threat to, aviation safety.

**DISCUSSION:**

Hazardous wildlife are those species of wildlife (50 CFR 10.12), including feral animals and domesticated animals not under control (14 CFR 139.5, Definitions), that are associated with aircraft strike problems, are capable of causing structural damage to airport facilities, or act as attractants to other wildlife that pose a strike hazard. (FAA Advisory Circular 150/5200-33A, *Hazardous Wildlife Attractants on or Near Airports*, July 27, 2004.) Not all state-listed threatened and endangered species or species of concern pose a direct threat to aviation safety. However, these species may pose an indirect threat and be hazardous because they attract other wildlife species or support prey species attractive to other species that are directly hazardous. Also, the habitat management practices that benefit these state-listed threatened and endangered species and species of special concern may attract other hazardous wildlife species. For example, the grassland habitat preferred by grasshopper sparrows, which are listed as threatened in New York<sup>1</sup>, also supports a wide variety of insects and small mammals. These insects and small mammals are an indirect threat to aviation safety because they are very attractive to hawks, owls, gulls and other birds. It is these large birds that can pose a direct threat to aviation safety. On-airport habitat and wildlife management practices designed to benefit wildlife that directly or indirectly create safety hazard where none existed before are incompatible with safe airport operations.

Airport operators must decline to adopt habitat management techniques that jeopardize aviation safety. Adopting such techniques could place them in violation of their obligations and subject to an FAA enforcement action and possible civil penalties under 49 U.S.C. §44706, as implemented by 14 CFR § 139.337. In particular, an airport operator that has received federal grant-in-aid assistance is obligated through its grant assurances to maintain compatible land uses. Failure to do so may lead to noncompliance with its grant obligations. Further, airports that serve commercial air carriers are required to be certificated under 49 U.S.C. §44706, as implemented by 14 CFR Part 139. Title 14 CFR § 139.337(a) requires airport operators holding a Part 139 certificate to “take immediate action to alleviate wildlife hazards whenever they are detected.” Accordingly, Part 139-certificated airport operators should make state wildlife agencies aware of the airport’s FAA-approved Wildlife Hazard Management Plan (WHMP), AC 150/5200-33A, and the joint FAA-Wildlife Services manual, *Wildlife Hazard Management at Airports* (6/05) (joint FAA/WS manual). Before making any changes in land management practices, the airport operator should carefully review the above documents to assure that any changes are consistent with its obligations under federal law to control wildlife hazards and attractants in the AOA. For ease of reference, the key land management practices bearing upon aviation safety are summarized and highlighted below:

#### **RECOMMENDATIONS:**

1. Adhere to the turf, landscaping, and habitat management practices described in the airport’s WHMP, AC 150/5200-33A, and the joint FAA/WS manual. Do not change these practices specifically to encourage the presence of, or to attract hazardous wildlife species even if the species are state-listed or of special concern.
  - a. Do not deliberately preserve or develop on-airport wildlife habitats such as wetlands, forest, brush, or native grasslands having characteristics that attract

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<sup>1</sup> Those species listed by states as threatened, endangered, or species of special concern vary from state to state. For information on state listed species, contact the appropriate state wildlife management Agency.

hazardous wildlife (See the airport's WHMP, AC 150/5200-33A, and the joint FAA/WS Manual.)

- b. Manage the airport's AOA vegetation as recommended in the airport's WHMP, AC 150/5200-33A, and the joint FAA/WS manual.
2. Adhere to the wildlife harassment and repellent techniques described in the airport's WHMP, AC 150/5200-33A, and the joint FAA/WS manual to prevent hazardous wildlife species from becoming established and complicating the ability to adhere to prescribed habitat management practices.
3. Do not allow hazardous state-listed threatened and endangered species or species of special concern to remain on the airport if it requires managing the airport environment contrary to FAA recommendations.
4. Reevaluate existing and evaluate future agreements with federal, state, or local wildlife agencies where the terms of the agreements are or may be contrary to federal obligations concerning hazardous wildlife on or near public-use airports and aviation safety.
5. Whenever practicable, wetland mitigation for state-listed threatened and endangered species or species of special concern should be sited off-airport (see AC 150/5200-33A, §2-4.c (1)).

OSB

11/21/2006

Ben Castellano, Manager  
Airport Safety & Operations Division

Date

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# CERTALERT

**ADVISORY CAUTIONARY NON-DIRECTIVE**  
**AIRPORT SAFETY AND OPERATIONS DIVISION AAS-300**

FOR INFORMATION, CONTACT Ed Cleary, (202) 267-3389, AAS-300 (202) 267-3389

**Date:** 12/13/2004 **No. 04-16**  
**To:** Airport Operators, FAA Airport Certification Safety Inspectors  
**Topic:** Deer Hazard to Aircraft and Deer Fencing

## **CANCELLATION:**

Certalert 01-01. Deer Aircraft Hazard, dated February 1, 2001; and Certalert 02-09. Alternative Deer Fencing, dated December 12, 2002, are cancelled.

## **BACKGROUND**

Elevated deer populations in the United States represent an increasingly serious threat to both Commercial and General Aviation Aircraft. It is currently estimated that there over 26 million deer in the United States. Because of increasing urbanization and rapidly expanding deer populations, deer are adapting to human environments, especially around airports, where they often find food and shelter. From 1990 to 2004, over 650 deer-aircraft collisions were reported to the Federal Aviation Administration (FAA). Of these reports, over 500 indicated the aircraft was damaged as a result of the collision.

In light of recent incidents where a Learjet landing at an airport in Alabama and a Learjet departing an airport in Oregon were destroyed after colliding with deer or elk, airport operators are reminded of the importance of controlling deer and other wild ungulates on and around airfields.

## **PURPOSE**

Proper fencing is the best way of keeping deer off aircraft movement areas. The FAA recommends a 10-12 foot chain link fence with 3-strand barbed wire outriggers. In some cases an airport may be able to use an 8-foot chain link fence with 3-strand barbed outriggers, depending upon the amount of deer activity in a local area.

All fencing must be properly installed and maintained. A 4-foot skirt of chain-link fence material, attached to the bottom of the fence and buried at a 45° angle on the outside of the fence will prevent animals from digging under the fence and

reduce the chance of washouts. This type of fencing also greatly increases airport security and safety. The fence line right-of-way must be kept free of excess vegetation. The fence line should be patrolled at least daily, and any washouts, breaks or other holes in the fence repaired as soon as they are discovered.

Gates should close with less than 6-inch gaps to prevent entry by deer.

When installation of chain link fencing is not feasible due to cost or environmental impacts, other types of fencing may be installed. (Cost alone is not an acceptable reason for rejecting the use of chain link fencing.) In some cases, electric fencing may offer a suitable alternative. Recent improvements in fencing components and design have greatly increased the effectiveness and ease of installation of electric fences. Tests by the USDA, National Wildlife Research Center have shown that some 4 to 6-foot, 5 to 9-strand electric fences designs can be 99% effective at stopping deer. Installation of some of the newer electric fences requires neither specialized equipment nor training and can be accomplished by airport personnel.

In limited situations, the use of non-conductive, composite, frangible electric fence posts and fence conductors may allow the installation of electric fence closer to the aircraft movement area than would normally be allowed with standard chain link fencing material.

If deer are observed on or near the aircraft movement area, immediate action must be taken to remove them.

Airport operators can contact the nearest USDA, Wildlife Services Office or the State Wildlife Management Agency for assistance with deer problems.



December 13, 2004

Ben Castellano, Manager  
Airport Safety & Operations Division

Date

DISTRIBUTION

CERTALERT DISTRIBUTION LIST

# CERTALERT

**ADVISORY \* CAUTIONARY \* NON-DIRECTIVE**

FOR INFORMATION, CONTACT ED CLEARY, AAS-317 (202) 267-3389

<b>DATE:</b>	<b>August 30, 2004</b>	<b>No. 04-09</b>
<b>TO:</b>	<b>Airport Certification Program Inspectors</b>	
<b>TOPIC:</b>	<b>Relationship Between FAA and WS</b>	

## **CANCELLATION**

Certalert 97-02, Relationship Between FAA And WS, Dated April 25, 1997, is cancelled.

## **PURPOSE**

This Certalert clarifies the roles of, and relationship between the Federal Aviation Administration (FAA) and the United States Department of Agriculture/Animal and Plant Health Inspection Service/Wildlife Services (WS) with regards to wildlife hazards on or near airports.

## **FEDERAL AVIATION ADMINISTRATION**

The FAA issues airport operating certificates for airports serving certain air carrier aircraft under Title 14, Code of Federal Regulations, Part 139. Section 139.337 requires certificated airports having a wildlife hazard problem to develop and implement a Wildlife Hazard Management Plan to manage and control wildlife, which present a risk to public safety, caused by aircraft collisions with wildlife. The FAA relies heavily on the assistance of WS to review and contribute to such plans.

## **ANIMAL DAMAGE CONTROL**

The Animal Damage Control Act of March 2, 1931, (7 USC 426-426c, as amended), charges the Secretary of Agriculture with management of wildlife injurious to agricultural interests, other wildlife, or human health and safety. Further, the Secretary is authorized to cooperate with States, individuals, public and private agencies, organizations, and institutions in the control of nuisance mammals and birds, including wildlife hazards to aviation. Because of the experience, training, and background of its personnel, WS is recognized throughout the world as an expert in dealing with wildlife damage management issues. WS has an active presence in all U.S. states and territories.

## **MEMORANDUM OF UNDERSTANDING**

A Memorandum of Understanding (MOU) between the FAA and WS (No. 12-4-71-0003-MOU) establishes a cooperative relationship between these agencies for resolving wildlife hazards to aviation.



## **AGENCY FUNDING**

Both agencies are funded by congressional appropriations. The majority of funding for the FAA comes from the Aviation Trust Fund with the remainder coming from the general funds of the U.S. Treasury. Any revenues generated by the FAA are returned to the U.S. Treasury. WS receives a limited amount of funds from the general fund of the U.S. Treasury that allows it to perform some services for the public good. However, WS's funding is also based upon its ability to enter into contracts to provide services and receive reimbursement for the cost of the services. Legislation allows WS to collect this money and return it to the program rather than the general funds of the U.S. Treasury. Consequently, WS may enter into a cooperative service agreement with an airport operator for reimbursement of services to perform a wildlife hazard assessment on an airport.

## **WILDLIFE HAZARD MANAGEMENT**

14 CFR 139.337(b) requires the certificate holder conduct a wildlife hazard assessment, acceptable to the FAA Administrator, when any of the following events occur on or near the airport:

- (b) (1) An air carrier aircraft experiences multiple wildlife strikes;
- (b) (2) An air carrier aircraft experiences substantial damage from striking wildlife. As used in this paragraph, substantial damage means damage or structural failure incurred by an aircraft that adversely affects the structural strength, performance, or flight characteristics of the aircraft and that would normally require major repair or replacement of the affected component;
- (b) (3) An air carrier aircraft experiences an engine ingestion of wildlife; or
- (b) (4) Wildlife of a size, or in numbers, capable of causing an event described in paragraph (b)(1), (2), or (3) of this section is observed to have access to any airport flight pattern or aircraft movement area.

The wildlife hazard assessment shall contain at least the following (14CFR 139.337(c)):

- (c) (1) An analysis of the events or circumstances that prompted the assessment.
- (c) (2) Identification of the wildlife species observed and their numbers, locations, local movements, and daily and seasonal occurrences.
- (c) (3) Identification and location of features on and near the airport that attract wildlife.
- (c) (4) A description of wildlife hazards to air carrier operations.
- (c) (5) Recommended actions for reducing identified wildlife hazards to air carrier operations.

The certificate holder may look to WS or to private consultants to conduct the required wildlife hazard assessment. The FAA uses the wildlife hazard assessment in determining if a wildlife hazard management plan is needed for the airport. Therefore, persons having the education, training, and experience necessary to adequately assess any wildlife hazards should conduct the assessment.

Depending on the availability of resources, WS may conduct a preliminary hazard assessments at no charge to the certificate holder. The certificate holder should determine in advance if WS will charge to conduct the preliminary hazard assessment. More detailed assessments may require the certificate holder to enter into a cooperative service agreement with WS.

OSB

Benedict D. Castellano

Manager, Airport Safety and Operations

August 30, 2004

Date



# CERTALERT

FEB 14 2005

APPROVED

**ADVISORY CAUTIONARY NON-DIRECTIVE**

FOR INFORMATION, CONTACT AIRPORT WILDLIFE SPECIALIST, AAS-317 (202) 267.3389

**DATE: September 21, 1998** **No. 98-05**  
**TO: Airport Operators,**  
**FAA Airport Certification Safety Inspectors**  
**TOPIC: Grasses Attractive To Hazardous Wildlife**

Recently, several reports have been received of airport owners or airport contractors planting disturbed areas (construction sites, re-grading projects, etc) with seed mixtures containing brown-top millet. All millets are a major attractant to doves and other seed eating birds.

Doves can be a major threat to aircraft safety. In the United States, between 1991 and 1997, doves were involved in 11% of all reported bird/aircraft strikes, 8% of the reported strikes that resulted in aircraft down time, and 8% of the reported strikes causing aircraft damage or other associated monetary losses.

Airport operators should ensure that grass species and other varieties of plants attractive to hazardous wildlife are not used on the airport. Disturbed areas or areas in need of re-vegetating should not be planted with seed mixtures containing millet or any other large-seed producing grass.

For airport property already planted with seed mixtures containing millet or other large-seed producing grasses, it is recommended that disking, plowing, or other suitable agricultural practice be employed to prevent plant maturation and seed head production.

For specific recommendations on grass management and seed selection, contact the State University Cooperative Extension Service, or the local office of the USDA, Wildlife Services.

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Benedict D. Castellano, Manager  
Airport Safety and Compliance Branch

September 21, 1998

FEB 14 2005

# CERTALERT

APPROVED

ADVISORY \* CAUTIONARY \* NON-DIRECTIVE

FOR INFORMATION, CONTACT AIRPORT WILDLIFE SPECIALIST, AAS-317 (202)  
267.3339

DATE: 17 November, 1997

No. 97-09

TO: AIRPORT CERTIFICATION SAFETY INSPECTORS

TOPIC: **Wildlife Hazard Management Plan Outline**

A increasing number of questions are being received concerning the preparation and content of an FAA approved airport Wildlife Hazard Management Plan. Title 14 Code of Federal Regulations, part 139.337, *Wildlife Hazard Management*, prescribes the specific issues that a Wildlife Hazard Management Plan must address for FAA approval and inclusion in the ACM.

A Wildlife Hazard Assessment, defined as an ecological study in part 139.337 (a), conducted by a wildlife damage management biologist, provides the scientific basis for the development, implementation, and refinement of a Wildlife Hazard Management Plan. Though parts of the Wildlife Hazard Assessment may be incorporated directly in the Wildlife Hazard Management Plan, they are two separate documents. Part of the Wildlife Hazard Management Plan can be prepared by the biologist(s) who conducts the Wildlife Hazard Assessment. However, some parts can be prepared only by the airport. For example, airport management assigns airport personnel responsibilities, commits airport funds, and purchases equipment and supplies. Airport management may request the wildlife biologist to review the finished plan.

The wildlife damage management biologist's primary responsibilities are:

- to provide information on the wildlife attractants that have been identified on or near the airport,
- to identify wildlife management techniques,
- to prioritize appropriate mitigation measures,
- to recommend necessary equipment and supplies, and
- to identify training requirements for the airport personnel who will implement the Wildlife Hazard Management Plan.

It is often helpful for the airport manager to appoint a Wildlife Hazard Management Group that has responsibility for the airport's wildlife management program. The

FEB 14 2005

biologist should assist the Wildlife Hazard Management Group with periodic evaluations of the plan and make recommendations for further refinements or modifications:

The following details the requirements of part 139.337 (e) and (f) and how those requirements should be addressed in an FAA-approved Wildlife Hazard Management Plan.

14 CFR 139.337	Comments
139.337(e). The (wildlife hazard management) plan shall include at least the following :	The Wildlife Hazard Management Plan must include, and/or identify the responsibility of, and/or actions to be taken, -
139.337(e)(1). The persons who have authority and responsibility for implementing the plan.	<p>Specific responsibilities for various sections of the Wildlife Hazard Management Plan must be assigned or delegated to various airport departments such as:</p> <ul style="list-style-type: none"> <li>Airport Director</li> <li>Operations Dept.</li> <li>Maintenance Dept.</li> <li>Security Dept.</li> <li>Planning Dept.</li> <li>Finance Dept.</li> <li>Wildlife Coordinator</li> <li>Wildlife Hazard Group</li> </ul> <p>Local law enforcement authorities that provide wildlife law enforcement and other support also have a role to play:</p> <ul style="list-style-type: none"> <li>State Fish and Game</li> <li>U.S. Fish and Wildlife Service</li> <li>City police</li> <li>County Sheriff</li> </ul>

14 CFR 139.337	Comments
<p>139.337(e)(2). Priorities for needed habitat modification and changes in land use identified in the ecological study with target dates for completion.</p>	<p>Attractants (food, cover, and water) identified in Wildlife Hazard Assessment, with priorities for mitigation and completion dates. Attractants can be grouped by areas and ownership. (A list of completed habitat modification or other projects designed to reduce the wildlife/aircraft strike potential can be included, and provides a history of work already accomplished.)</p> <p>Airport property:</p> <p style="padding-left: 40px;">Aircraft Operations Area (AOA).</p> <p style="padding-left: 40px;">Within 2 miles of aircraft movement areas.</p> <p style="padding-left: 40px;">Within 5 miles of aircraft movement areas.</p> <p style="padding-left: 40px;">Airport structures</p> <p>Non-airport property</p> <p style="padding-left: 40px;">Within 2 miles of aircraft movement areas.</p> <p style="padding-left: 40px;">Within 5 miles of aircraft movement areas.</p> <p style="padding-left: 40px;">Structures</p>

FAA AIRPORTS DIVISION  
AAL-600

FEB 14 2005

APPROVED

14 CFR 139.337	Comments
<p>Habitat/population management recommendations</p> <p>FAA AIRPORTS DIVISION AAL-600</p> <p>FEB 14 2005</p> <p>APPROVED</p>	<p>Management plans for specific areas, attractants, species, or situations, as identified in ecological study (Wildlife Hazard Assessment). This section may include any or all of the following:</p> <p>Food/Prey-base Management</p> <ul style="list-style-type: none"> <li>Rodents</li> <li>Earthworms</li> <li>Insects</li> <li>Other prey</li> <li>Trash and debris - handling, storage.</li> <li>Handouts</li> </ul> <p>Species specific population management i.e. deer, gulls, geese, coyotes</p> <ul style="list-style-type: none"> <li>Repelling</li> <li>Exclusion</li> <li>Removal</li> </ul> <p>Habitat Management</p> <ul style="list-style-type: none"> <li>Vegetation Management <ul style="list-style-type: none"> <li>AOA vegetation</li> <li>Drainage ditch(s) vegetation</li> <li>Landscaping</li> <li>Agriculture</li> </ul> </li> <li>Water Management <ul style="list-style-type: none"> <li>Permanent Water <ul style="list-style-type: none"> <li>Wetlands</li> <li>Canals/drainage ditches</li> <li>Detention/retention ponds</li> <li>Sewage (glycol) treatment ponds</li> <li>Other water areas</li> </ul> </li> <li>Ephemeral water <ul style="list-style-type: none"> <li>Runways, taxiways, &amp; aprons.</li> <li>Other wet areas</li> </ul> </li> </ul> </li> <li>Airport Buildings <ul style="list-style-type: none"> <li>Airfield structures</li> <li>Abandoned structures</li> <li>Terminal</li> </ul> </li> <li>Airport construction</li> </ul> <p>Resource Protection</p> <ul style="list-style-type: none"> <li>Exclusion</li> <li>Repelling <ul style="list-style-type: none"> <li>Chemical</li> <li>Auditory</li> <li>Visual</li> </ul> </li> </ul>



14 CFR 139.337	Comments
<p>139.337(e)(3). Requirements for and, where applicable, copies of local, state and Federal wildlife control permits.</p> <p>FAA AIRPORTS DIVISION AAL-600</p> <p>FEB 14 2005</p> <p>APPROVED</p>	<p>Wildlife can be protected at all levels of government – city, county, state, federal, or may not be protected at all, depending on location and species. Therefore the section should address the specific species involved and their legal status.</p> <p>Wildlife management permitting requirements and procedures (spelled out) Federal - 50 CFR parts 1 to 199. State - Fish and Game Code (or equivalent) City, county - ordinances</p> <p>If pesticides are to be used, then the following are also needed. Pesticide use regulations Federal- [Federal Insecticide, Fungicide, and Rodenticide Act, as amended (FIFRA)] State (varies by state) City/county (if applicable)</p> <p>Pesticide use licensing requirements State regulations</p>
<p>139.337(e)(4). Identification of resources to be provided by the certificate holder for implementation of the plan.</p>	<p>Lists identifying what the airport will supply in terms of:</p> <ul style="list-style-type: none"> <li>Personnel</li> <li>Time</li> <li>Equipment, (i.e. radios, vehicle(s), guns, and traps).</li> <li>Supplies (i.e. shellcrackers, mylar tape)</li> <li>Wildlife Patrol <ul style="list-style-type: none"> <li>Personnel</li> <li>Vehicle(s)</li> <li>Equipment</li> <li>Supplies</li> </ul> </li> <li>Pesticides <ul style="list-style-type: none"> <li>Restricted/non-restricted</li> <li>Application equipment</li> </ul> </li> <li>Sources of Supply</li> </ul>
<p>139.337(e)(5). Procedures to be followed during air carries operations, including at least...</p>	

14 CFR 139.337	Comments
139.337(e)(6)(i). Effectiveness in dealing with the wildlife hazard;	Input from all airport departments, ATC, wildlife biologist, as to effectiveness of plan. Good records are a must for evaluating the effectiveness of a program. Therefore need to know what records are kept, by who, how, where, and when.
139.337(e)(6)(ii). Indications that the existence of the wildlife hazard, as previously described in the ecological study, should be reevaluated.	Wildlife seen on AOA Request for wildlife dispersal from Tower, pilots, or others Wildlife strike database and other records. Good records are a must.
139.337(e)(7). A training program to provide airport personnel with the knowledge and skills needed to carry out the Wildlife Hazard Management Plan required by paragraph (d) of this section.	Wildlife Patrol personnel training All airport personnel – wildlife hazard awareness training Pesticide use training and certification
<p>139.337(f). Notwithstanding the other requirements of this section, each certificate holder shall take immediate measures to alleviate wildlife hazards whenever they are detected.</p> <p style="text-align: center;"><b>FAA AIRPORTS DIVISION</b> AAL-600</p> <p style="text-align: center;">FEB 14 2005</p> <p style="text-align: center;">APPROVED</p>	<p>Although not required as part of Wildlife Hazard Management Plan, this information should be included to fulfill part 139 requirements.</p> <p>Procedures and personnel responsibilities for notification regarding new or immediate hazards by and to:</p> <ul style="list-style-type: none"> <li>Wildlife Patrol</li> <li>Operations <ul style="list-style-type: none"> <li>NOTAM issuance/cancellation criteria and procedures</li> </ul> </li> <li>Maintenance</li> <li>Security</li> <li>Air Traffic Control</li> <li>Others</li> </ul> <p>Rapid response procedures for new or immediate hazards by:</p> <ul style="list-style-type: none"> <li>Wildlife Patrol</li> <li>Operations</li> <li>Maintenance</li> <li>Security</li> <li>Air Traffic Control</li> <li>Others</li> </ul>
139.337(g). FAA Advisory Circulars in the 150 series contain standards and procedures for wildlife hazard management at airports, which are acceptable to the Administrator.	AC 150/5200-33 Hazardous Wildlife Attractants on or Near Airports.

14 CFR 139.337	Comments
139.337(e)(5)(i). Assignment of personnel responsibilities for implementing the procedures;	Who, when, what circumstances Wildlife Patrol Wildlife Coordinator Operations Dept. Maintenance Dept. Security Dept. Air Traffic Control
139.337(e)(5)(ii). Conduct of physical inspections of the movement areas and other areas critical to wildlife hazard management sufficiently in advance of air carrier operations to allow time for wildlife controls to be effective;	Who, when, how, what circumstances -- Runway(s), taxiway(s), and ramp(s) sweeps, AOA monitoring Un-mitigated attractants
139.337(e)(5)(iii). Wildlife control measures:  FAA AIRPORTS DIVISION AAL-600  FEB 14 2005  APPROVED	Who, what circumstances, when, how is the Wildlife Patrol contacted. Wildlife Patrol Bird Control repel capture kill Mammal control repel capture kill
139.337(e)(5)(iv). Communication between wildlife control personnel and any air traffic control tower in operation at the airport.	Communication procedures Training in communication procedures Equipment needed Radios, mobile phones, etc. Lights
139.337(e)(6). Periodic evaluation and review of the Wildlife Hazard Management Plan for:	At a minimum the airport operator should hold annual meetings, or after an event described in 139.337(a)(1 to 3), with representatives from all airport departments involved in the airport's wildlife hazard management efforts and the wildlife damage management biologist who did the original ecological study (Wildlife Hazard Assessment).

Table 3. Threatened, endangered, and wildlife species of concern in Alaska, 3/1/2012

COMMON NAME	SCIENTIFIC NAME	STATE STATUS <sup>1</sup>	FEDERAL STATUS <sup>2</sup>
<b>MAMMALS</b>			
Bear, polar	<i>Ursus maritimus</i>		T
Bison, wood	<i>Bison bison athabascae</i>		E
Sea lion, Steller (West of 144°)	<i>Eumetopias jubatus</i>		E
Sea lion, Steller (East of 144°)	<i>Eumetopias jubatus</i>		T
Sea otter, Northern (SW AK pop.)	<i>Enhydra lutris kenyoni</i>		T
Seal, bearded	<i>Erignathus barbatus</i>		C
Seal, ringed	<i>Phoca hispida</i>		C
Walrus, Pacific	<i>Odobenus rosmarus</i>		C
Whale, beluga (Cook Inlet pop.)	<i>Delphinapterus leucas</i>		E
Whale, blue	<i>Balaenoptera physalus</i>	E	E
Whale, bowhead	<i>Balaena mysticetus</i>		E
Whale, fin	<i>Balaenoptera physalus</i>		E
Whale, humpback	<i>Megaptera novaeangliae</i>	E	E
Whale, North Pacific right	<i>Eubalaena japonica</i>	E	E
Whale, sei	<i>Balaenoptera borealis</i>		E
Whale, sperm	<i>Physeter macrocephalus</i>		E
<b>BIRDS</b>			
Albatross, black-footed	<i>Phoebastria nigripes</i>		C
Albatross, short-tailed	<i>Phoebastria albatrus</i>	E	E
Curlew, Eskimo	<i>Numenius borealis</i>	E	E
Eider, spectacled	<i>Somateria fischeri</i>		T
Eider, Steller's (AK breeding pop.)	<i>Polysticta stelleri</i>		T
Loon, yellow-billed	<i>Gavia adamsii</i>		C
Murrelet, Kittletz's	<i>Brachyramphus brevirostris</i>		C
<b>FISH</b>			
Herring, Pacific, (SE AK)	<i>Clupea pallasii</i>		C
<b>REPTILE</b>			
Sea turtle, green	<i>Chelonia mydas</i>		T
Sea turtle, leatherback	<i>Dermochelys coriacea</i>		E
Sea turtle, loggerhead	<i>Caretta caretta</i>		T
Sea turtle, Olive Ridley	<i>Lepidochelys olivacea</i>		T
<b>PLANTS</b>			
Fern, Aleutian shield	<i>Polystichum aleuticum</i>		E

<sup>1</sup>State Status  
E – Endangered

<sup>2</sup>Federal Status  
C – Candidate  
T – Threatened  
E – Endangered



STATE OF ALASKA  
DEPARTMENT OF FISH AND GAME  
P.O. Box 115526  
JUNEAU, ALASKA 99811-5526

Permit No. 14-068

Expires 1/31/2015

PUBLIC SAFETY PERMIT

This permit authorizes Paul Khera, Alaska Dept. of Transportation & Public Facilities, Southeast Region  
*(person, agency or organization)*  
of P.O. Box 112506, Juneau, AK 99811-2506  
*(address)* to conduct the following  
activities from February 12, 2014 to January 31, 2015 in accordance with AS 16.05.930.

Authority is granted the permittee and subpermittees to haze all birds to alleviate hazards to arriving and departing aircraft on state-operated airport property in Gustavus, Haines, Hoonah, Kake, Klawock, Petersburg, Sitka, Skagway, Wrangell, and Yakutat. Authority is also granted to take (i.e. kill), by use of pellet guns, .22 rifles, and/or shotguns with nontoxic shot, the species and numbers of birds specified on federal permits and all birds classified as "deleterious exotic wildlife" (pigeons, starlings, and house sparrows). This permit does not authorize the killing, injuring or capturing of eagles, except as allowed for under applicable federal permits. The attached Wildlife Salvage Protocol shall be followed and edible meat of all ducks, geese and cranes shall be donated to charity. If birds are not salvaged for human consumption, the annual report shall provide an explanation. All other conditions, including take or disturbance of eagles, same as federal permits.

Authority is granted the permittee and subpermittees to haze all mammals from state-operated airport property to alleviate hazards to arriving and departing aircraft (at the Kake airport, only bears within the fenced perimeter or bears attempting to breach the fence may be hazed). Soft rubber bullets may be fired at bears at ranges of 20-50 yards and "bean bags" may be fired at ranges of 10-40 yards. Projectiles fired at bears should be aimed at large muscle mass (e.g., front shoulder or rump) and avoid the soft loin region, belly and ribs. Effective aversion conditioning should include a combination of actions, such as (1) yelling to get a bear's attention; (2) hitting the bear in the rump with a soft rubber bullet; and (3) firing a cracker shell at a fleeing bear when it starts to slow ( $\approx$  75 yards). If any bear is killed or seriously injured, the hazing program shall be halted and the area biologist notified immediately (Douglas 465-4359; Ketchikan 225-2771; Petersburg 772-3801; Sitka 747-5449). In conjunction with bear hazing, a program to replace attractive vegetation within the airport area is strongly recommended, including the use of herbicides to remove clover and bluegrass.

(continued on page 2)

REPORT DUE January 20, 2015. The report shall include the information specified above.

GENERAL CONDITIONS, EXCEPTIONS AND RESTRICTIONS

1. This permit must be carried by person(s) specified during approved activities who shall show it on request to persons authorized to enforce Alaska's fish and game laws. This permit is nontransferable and will be revoked or renewal denied by the Commissioner of Fish and Game if the permittee violates any of its conditions, exceptions or restrictions. No redelegation of authority may be allowed under this permit unless specifically noted.
2. No specimens taken under authority hereof may be sold or bartered. All specimens must be deposited in a public museum or a public scientific or educational institution unless otherwise stated herein. Subpermittees shall not retain possession of live animals or other specimens.
3. The permittee shall keep records of all activities conducted under authority of this permit, available for inspection at all reasonable hours upon request of any authorized state enforcement officer.
4. Permits will not be renewed until detailed reports, as specified above, have been received by the department.
5. UNLESS SPECIFICALLY STATED HEREIN, THIS PERMIT DOES NOT AUTHORIZE the exportation of specimens or the taking of specimens in areas otherwise closed to hunting and fishing; without appropriate licenses required by state regulations; during closed seasons; or in any manner, by any means, at any time not permitted by those regulations.

Division of Wildlife Conservation

February 12, 2014

Date

FAA AIRPORTS APPROVAL  
DSW AAL BBS DATE 2-13-14

**State of Alaska**  
**Alaska Department of Fish and Game**  
**Public Safety Permit**  
**Page 2 of 2**

Permit No. 14-068

Permittee: Paul Khera  
Alaska Department of Transportation & Public Facilities, Southeast Region  
P.O. Box 112506  
Juneau, AK 99811-2506

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This permit does not authorize the killing of mammals (except for mammals classified as "deleterious exotic wildlife," i.e. raccoons, rats, mice, gerbils, other murid rodents, and Belgian hares) unless prior authorization is obtained from the local ADF&G area management biologist. However, at the Yakutat Airport, beavers and coyotes may be killed if they pose a hazard to aviation; permittee must notify Area Biologist Ryan Scott (465-4359) within 48 hours of killing a beaver or coyote for instructions on disposition of the carcass. At the Sitka Airport up to five (5) river otters may be killed to ensure safety of landing and departing aircraft, and to ensure safe and sanitary operation of other airport equipment lethal take of up to ten (10) mink is also authorized at the Sitka Airport. Please contact Sitka Area Management Biologist, Phil Mooney (747-5449) within 48 hours of killing an otter or mink for instructions on disposition of the carcass. Up to five (5) beavers may be killed at the Hoonah Airport to prevent flooding of runway construction projects. Please contact Sitka Area Management Biologist, Phil Mooney (747-5449) within 48 hours of killing a beaver for instructions on disposition of the carcass.

The primary permittee may designate subpermittees to conduct activities authorized by this permit. The primary permittee is responsible for the actions of all subpermittees and for ensuring their compliance with the conditions of this permit. Prior to conducting activities authorized by this permit, all subpermittees shall complete an annual airport wildlife hazard management training or refresher course considered adequate by the primary permittee. Persons conducting activities authorized by this permit are exempt from fish and game licensing requirements of AS 16.05.330.

A report of activities for the calendar year must be submitted electronically on a form provided by the department by the date specified below. Forms are available on the ADF&G website, or by contacting the Permits Section (465-4148; [dfg.dwc.permits@alaska.gov](mailto:dfg.dwc.permits@alaska.gov)). The report must include the following: (1) for each airport, a monthly summary (by species) of numbers of birds hazed or killed and the disposition of all carcasses; (2) for mammals, a daily summary (by date and location) of the species and number of mammals hazed or killed, the method of hazing or take, and the disposition of all carcasses; and (3) a complete list of subpermittees.

**THIS PERMIT AND VALID FEDERAL MIGRATORY BIRD AND EAGLE DEPREDATION PERMITS MUST BE IN POSSESSION WHILE CONDUCTING AUTHORIZED ACTIVITIES.**

FAA AIRPORTS APPROVAL  
NEW AIR 045 DATE 2-13-14

## Wildlife Salvage Protocol for ADF&G Collecting Permits

Unless otherwise specified on the permit, the following conditions shall apply to the salvage of game that is killed, whether intentionally or unintentionally, as a result of activities authorized under a department collecting permit.

After all tissue samples required for the authorized activity have been removed, the permittee shall salvage and surrender to the state or dispose of as directed by the local area biologist or Fish and Wildlife Protection officer

1. the "edible meat," as defined below in 5 AAC 92.990(a)(17), of game taken under the permit (for the purposes of this policy, "wild fowl" means ducks, geese, swans, cranes, ptarmigan and grouse);
2. the skinned hides of furbearers (except squirrels, weasels, and marmots) if the fur is prime or close to prime;
3. the skinned hides of brown bears if the fur is prime or close to prime.

Salvage of "edible meat" is not required when

1. the meat is unfit for human consumption;
2. immobilizing drugs have ever been administered to the animal;
3. in the judgment of the permittee, substantial logistical and/or safety reasons prevent removal of the edible meat or hide from the field. Carcasses left in the field will be gutted and the body cavity propped open for later removal if recovery is warranted. Carcasses left in the field must be left in such a way as not to present a hazard to health (e.g., in a stream) or serve as an attractive nuisance for wild animals (e.g., near human dwellings or popular fishing sites).

In addition to any reporting requirements specified by the permit, within 30 days of leaving the field, the permittee shall submit a report to the permitting office that includes the numbers and species of all game *unintentionally* killed; the circumstances of each animal's death; an account of the disposition of edible meat, if any; and a description of extenuating circumstances if the edible meat or hide was not salvaged.

**5 AAC 92.990 (a)(17) Definitions.** "edible meat" means, in the case of a big game animal, except a black bear [wolf, wolverine or brown bear], the meat of the ribs, neck, brisket, front quarters as far as the distal joint of the radius-ulna (knee), hindquarters as far as the distal joint of the tibia-fibula (hock), and the meat along the backbone between the front and hindquarters; in the case of a black bear, the meat of the front quarters and hindquarters and meat along the backbone (backstrap); in the case of wild fowl, the meat of the breast; however, "edible meat" of big game or wild fowl does not include meat of the head, meat that has been damaged and made inedible by the method of taking, bones, sinew, incidental meat reasonably lost as a result of boning or a close trimming of the bones, or viscera.

Revised 1/31/00

FAA AIRPORTS APPROVAL  
NEW AIRCRAFT DATE 2-13-14



STATE OF ALASKA  
DEPARTMENT OF FISH & GAME  
P.O. BOX 115526  
JUNEAU, ALASKA 99811-5526

PUBLIC SAFETY PERMIT AMENDMENT

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AMENDMENT NO. 1

03/04/2014

Permit No. 14-068

Permittee: Paul Khera  
Alaska Dept. of Transportation & Public Facilities- Southeast  
P.O. Box 112506  
Juneau, AK 99811-2506

Permit 14-068 is amended as follows:

At the Yakutat airport only, authority is granted to take (i.e. kill) geese by use of a .204 caliber rifle.

All conditions of federal permits must be followed regarding methods of take, ammunition restrictions, and numbers of birds taken. Permittee and subpermittees are solely responsible for additional training and safety precautions.

All other conditions same as permit 14-068.

Division of Wildlife Conservation

FAA AIRPORTS APPROVAL  
D&W ANALYSIS DATE: 3-17-14





STATE OF ALASKA  
DEPARTMENT OF FISH & GAME  
P.O. BOX 115526  
JUNEAU, ALASKA 99811-5526

PUBLIC SAFETY PERMIT AMENDMENT

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AMENDMENT NO. 1

01/31/2014

Permit No. 13-017

Permittee: Paul Khera  
ADOT & PF, Southeast  
P.O. Box 112506  
Juneau, AK 99811-2506

Permit 13-017 is amended as follows:

The expiration date for this permit is extended through February 28, 2014 or until renewed permit is received, whichever occurs first.

All other conditions same as permit 13-017.

Division of Wildlife Conservation

FAA AIRPORTS APPROVAL  
DATE 2-3-14