

# Wildlife Hazard Management Plan

Submitted to



**Yuma International Airport**  
**2191 E. 32nd St. Suite 218**  
**Yuma, AZ 85365**

Submitted by

Airport Wildlife Consultants, LLC



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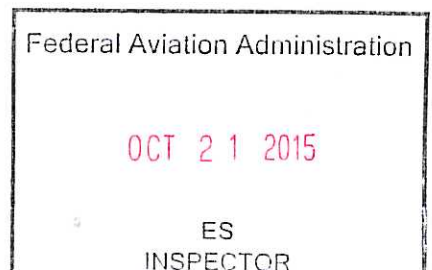
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- A. RULES AND REGULATIONS
- B. WILDLIFE CONTROL PROCEDURES
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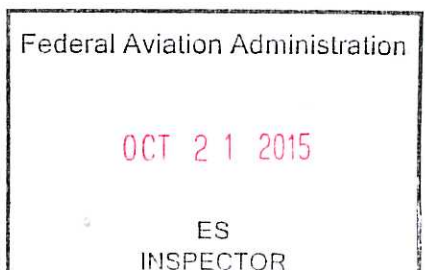


## EXECUTIVE SUMMARY

Pursuant to the Code of Federal Regulations (CFR) Title 14 Part (§) 139.337, Yuma International Airport (YIA) developed this Wildlife Hazard Management Plan (WHMP) in cooperation with Airport Wildlife Consultants. This plan shall be reviewed every 12 consecutive months and shall be updated as changing circumstances merit. All changes made to the WHMP shall be sent to the Federal Aviation Administration (FAA) for approval, and shall be documented in the Table of Revisions of this document.

According to provisions of 14 CFR § 139.337(a) YIA is required to take immediate action to alleviate wildlife hazards whenever they are detected. To reduce the potential of wildlife hazards, YIA will implement this WHMP which outlines steps for monitoring, documenting, and reporting potential wildlife hazards and strikes. The WHMP contains protocols for responding to hazardous wildlife situations, roles and responsibilities of airport personnel, and wildlife control techniques for birds and mammals.

The WHMP outlines habitat management techniques on and around the airfield that reduces or eliminates the area's attractiveness to wildlife. The Plan outlines priorities for habitat management, including target dates for completion (Chapter 3). The legal status of wildlife is described, including laws and regulations pertaining to permits needed for control actions, including harassment and take of animals (Chapter 4). YIA's wildlife-related permits will be obtained and included in appendices. Monitoring and management of wildlife hazards requires application of control techniques conducted in a coordinated manner. Supplies and equipment for these activities will be obtained and maintained responsibly within YIA's Operations Division. These materials include, but are not limited to: frightening devices (e.g., pyrotechnics, propane exploders, mylar tape), wildlife restraint equipment (e.g., traps), and firearms. YIA personnel will be trained to properly identify wildlife and apply wildlife control techniques in a safe, effective, and efficient manner, as outlined in this document.





## SIGNATORIES

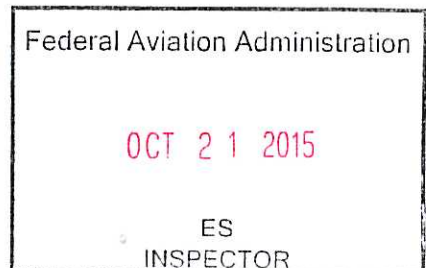
The following Wildlife Hazard Management Plan for YIA has been reviewed and approved by the Airport Manager, and the FAA Certification and Safety Inspector.

  
\_\_\_\_\_  
Airport Manager  
Yuma International Airport

16 OCTOBER 2015  
Date

  
\_\_\_\_\_  
FAA Airport Certification and Safety Inspector

10/21/15  
Date

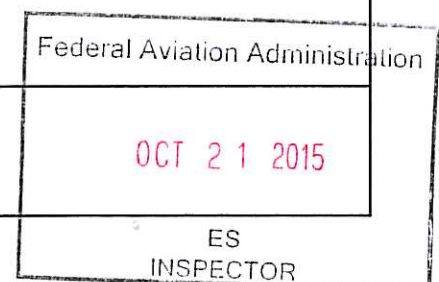


# PREFACE

This Wildlife Hazard Management Plan was written to fulfill the requirements of CFR Title 14 § 139.337 for YIA. This plan is intended specifically for the Airport's use to monitor and reduce wildlife hazards.

## DISTRIBUTION OF WILDLIFE HAZARD MANAGEMENT PLAN

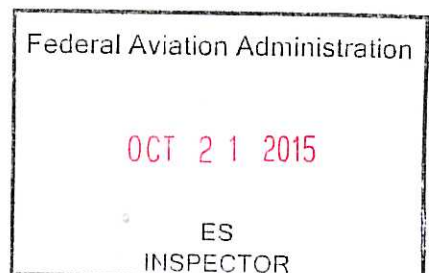
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## TABLE OF REVISIONS

This Wildlife Hazard Management Plan is incorporated into the YIA Airport Certification Manual. The bottom of each page contains a date in the footer, which is the date that the particular page was printed. The latest dated page will be the most current. The master document is contained in the office of the YIA Wildlife Coordinator. Revisions to this plan will be recorded on this page in the table below.

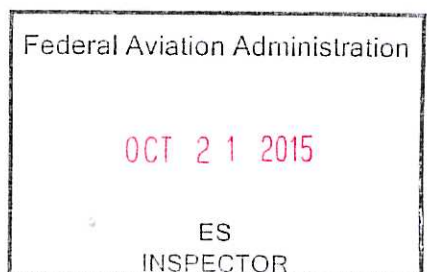
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## LIST OF ACRONYMS

<b>AAC</b>	Arizona Administrative Codes
<b>AC</b>	Advisory Circular
<b>ACOE</b>	United States Army Corps of Engineers
<b>ADO</b>	Airports District Office
<b>ADOT</b>	Arizona Department of Transportation
<b>AGFD</b>	Arizona Game and Fish Department
<b>AGL</b>	Above Ground Level
<b>AOA</b>	Aircraft Operations Area
<b>ARS</b>	Arizona Revised Statutes
<b>ATIS</b>	Automatic Terminal Information Service
<b>AZ</b>	Arizona
<b>AWC</b>	Airport Wildlife Consultants
<b>CFR</b>	Code of Federal Regulations
<b>EPA</b>	Environmental Protection Agency
<b>FAA</b>	Federal Aviation Administration
<b>FOD</b>	Foreign Object Debris
<b>MBTA</b>	Migratory Bird Treaty Act
<b>NEPA</b>	National Environmental Policy Act
<b>NOTAM</b>	Notice to Airmen
<b>OPM</b>	Office of Pest Management
<b>T&amp;E</b>	Threatened and Endangered
<b>USFWS</b>	United States Fish and Wildlife Service
<b>WHA</b>	Wildlife Hazard Assessment
<b>WHMP</b>	Wildlife Hazard Management Plan
<b>YIA</b>	Yuma International Airport



# 1 – INTRODUCTION

## 1.1 OVERVIEW

Wildlife hazard management plans address the responsibilities, policies, and procedures necessary to reduce wildlife hazards at airports. Recognizing the potential hazards wildlife pose to aircraft and public safety, the Federal Aviation Administration (FAA) requires airports that incur bird-aircraft strikes to develop and implement a WHMP according to CFR Title 14 §139.337 (Appendix A). The WHMP must include seven required components, each of which is a separate chapter in this document. These required components are as follows:

1. Identification of personnel with the authority and responsibility for implementing the plan (Chapter 2, Authorities and Responsibilities).
2. Identification of hazardous wildlife attractants and a list prioritizing actions for habitat and wildlife population management, including target dates for their initiation and completion (Chapter 3, Habitat Management).
3. Requirements for and, where applicable, copies of local, state, and Federal Wildlife Control permits (Chapter 4, Permits and Regulations).
4. Identification of resources to be provided by the certificate holder for implementation of the plan (Chapter 5, Resources).
5. Procedures to be followed during air carrier operations (Chapter 6, Wildlife Hazard Management Procedures), including at least:
  - A. Assignment of personnel responsibilities for implementing the procedures;
  - B. Provisions to conduct physical inspections of the aircraft movement areas and other areas critical to successfully manage known wildlife hazards before air carrier operations begin;
  - C. Wildlife control measures; and
  - D. Communication between the wildlife control personnel and local air traffic.
6. Procedures for periodic evaluation and review of the wildlife hazard management plan (Chapter 7, Evaluation), which include:
  - A. Effectiveness in dealing with the wildlife hazard; and
  - B. Aspects of the wildlife hazards described in the wildlife hazard assessment that should be reevaluated.
7. A training program to provide airport personnel with the knowledge and skills needed to carry out the wildlife hazard management plan required by CFR Title 14 §139.337 (Chapter 8, Training).

In addition to the requirements stated above, CFR Title 14 §139.337(f) outlines procedures and personnel responsibilities for notification regarding new or immediate hazards, and describes the rapid response procedures for addressing new or immediate wildlife hazards. Section (f) allows the WHMP to be promptly modified and updated to address new situations or changing circumstances. To augment compliance with CFR Title 14 §139.337, the FAA issued a Certalert 97-09 (Appendix A), to provide guidance to airports in developing their plans. This Certalert contains a sample outline that was followed in the development of this plan.

## 1.2 PROBLEM SPECIES

The wildlife species generally considered to present the greatest threats to aviation are birds with flocking tendencies or of relatively large size, such as waterfowl, gulls, pigeons, starlings, and raptors. Juvenile animals and migratory species may also pose higher risks to aviation because of their general unfamiliarity with the airport environment. As described in the Wildlife Hazard Assessment (WHA) completed for YIA in 2015 (Appendix C), the groups of birds which posed the greatest potential safety hazards at YIA at that time were egrets, birds of prey, vultures, pigeons, and doves.

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### 1.2.1 Wildlife Strike Analysis – YIA

To develop an understanding of the history of wildlife strikes at YIA and relate those data to the wildlife survey data obtained during the WHA, we searched the National Wildlife Strike Database maintained by the FAA for the period of 1990 through 2014 (Table 1). AWC queried the Database and found 14 strikes reported at YIA between 1990- 2012. Wildlife Survey data documents the presence of hazardous bird species at YIA including doves, vultures, hawks, and egrets. These data show that an FAA defined triggering event has occurred at YIA.

Table 1. Summary of Bird Strikes at YIA from 1990-2013.

Incident Year	Operator	Bird Species	Aircraft Damage
2013	US CUSTOMS AND BORDER PROTECTION	Unknown bird - small	N
2013	US CUSTOMS AND BORDER PROTECTION	Unknown bird	N
2012	PHI INC	Doves	N
2012	MILITARY	Mourning dove	N
2012	US CUSTOMS AND BORDER PROTECTION	Doves	N
2011	MESA AIRLINES	Unknown bird - medium	N
2011	MILITARY		N
2010	US CUSTOMS AND BORDER PROTECTION	Unknown bird	N
2009	MESA AIRLINES	Unknown bird - small	N
2009	US CUSTOMS AND BORDER PROTECTION	Unknown bird	N
2008	MESA AIRLINES	Unknown bird - medium	N
2008	MESA AIRLINES	Unknown bird - medium	N
2007	MESA AIRLINES	Unknown bird - small	N
1998	AMERICA WEST AIRLINES	Unknown bird - small	N

### 1.3 PURPOSE AND SCOPE

The goal of the YIA WHMP is to minimize the risk to aviation safety, airport structures or equipment, or human health posed by populations of hazardous wildlife on and around the airport. Accomplishing this objective entails careful monitoring of all aspects of arriving and departing aircraft in the vicinity of YIA, including potential wildlife hazards on and around the airport.

As part of its safety efforts, YIA will continue to implement and maintain a WHMP according to CFR Title 14 § 139.337(e) to address potential wildlife hazards at YIA. In addition to addressing general wildlife hazards, this plan will present specific protocols for monitoring and responding to unforeseen wildlife hazards that may arise.

It is important to note that Part 139.337(f) underscores the need for a flexible plan that can be quickly adapted to changing circumstances. However, in some cases immediate actions may be necessary that are not addressed in this plan to ensure the safety of airport passengers. This plan provides YIA with the discretion and capability to respond to these situations, while providing guidance for compliance with applicable Federal, state, and municipal laws and regulations. The latitude afforded YIA management when administering this plan is discussed in CFR 14 § 139.113, which states that:

*“In emergency conditions requiring immediate action for the protection of life or property, involving the transportation of persons by air carriers, the certificate holder may deviate from any requirement of Subpart D of this part to the extent required to meet that emergency. Each certificate holder who deviates from a requirement under this paragraph shall, as soon as practicable, but no later than 14 days after the*

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## 2 – AUTHORITIES AND RESPONSIBILITIES

**14 CFR § 139.337(f)(1)**      *A list of the individuals having authority and responsibility for implementing each aspect of the plan.*

### 2.1 OVERVIEW

The YIA Airport Manager has the authority and responsibility of designating a Wildlife Coordinator to implement the WHMP. Clear communication among airport personnel is essential for the WHMP to succeed. Personnel working at the airport will communicate resource needs, recommendations, and progress to the designated Wildlife Coordinator. The YIA Wildlife Coordinator will obtain approval of the WHMP from the FAA and will review the WHMP every 12 consecutive months and for compliance with Federal, State and local laws and regulations.

### 2.2 PERSONS WITH AUTHORITY AND RESPONSIBILITY FOR PLAN IMPLEMENTATION

#### 2.2.1 AIRPORT MANAGER.

**The Airport Manager will:**

- Designate a Wildlife Coordinator to monitor all wildlife-related activities and implement all management activities that occur at YIA as described in the WHMP

#### 2.2.2 WILDLIFE COORDINATOR (OPERATIONS MANAGER)

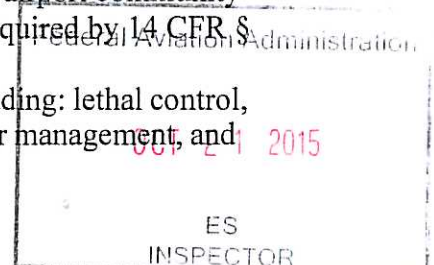
The Wildlife Coordinator will be responsible for the Wildlife Hazard Management Program at YIA. The duties and responsibilities of the Wildlife Coordinator include, but are not limited to the following:

- Provide Supervisory Oversight and Project Management for all aspects of the YIA Wildlife Management Program
- Coordinate all wildlife control activities
- Obtain approval from the FAA for this WHMP
- Review and revise, if needed, the WHMP every 12 consecutive
- Obtain Federal and State permits that authorize control of wildlife pursuant to this WHMP
- Maintain records of animals taken pursuant to Federal and State of Arizona permits, and include this information in annual permit renewals. Ensure the availability of supplies necessary for conducting wildlife control activities

#### 2.2.3 AIRPORT OPERATIONS STAFF

The Airport Operations Staff will:

- Work closely with the wildlife coordinator to mitigate wildlife hazards at YIA
- Notify the Wildlife Coordinator of the existence of vegetation and weeds in the infields and assist with the removal as requested
- Inspect airport property for wildlife attractants associated with garbage and refuse, communicate YIA rules for mitigating wildlife attractants with the airport community
- Inspect runways and taxiways for wildlife activity and strikes as required by 14 CFR § 139
- Implement aspects of the YIA Wildlife Management Program including: lethal control, nonlethal control, exclusion, repellants, habitat modifications, water management, and structure management.



### 3- HABITAT MANAGEMENT

- 14 CFR § 139.337(f)(2)** *A list prioritizing the following actions identified in the wildlife hazard assessment and target dates for their initiation and completion:*
- i) Wildlife population management;*
  - ii) Habitat modification; and*
  - (iii) Land use changes.*

#### 3.1 OVERVIEW

Habitat management provides the most effective long-term remedial measure for reducing wildlife hazards on, or near, airports. Habitat provides the three basic requirements for wildlife survival, food, water, and shelter. Habitat modifications remove the food, water, and shelter thereby preventing wildlife populations from becoming established. Habitat management includes the physical removal, exclusion, or manipulation of areas that are attractive to wildlife. The ultimate goal is to make the environment fairly uniform and unattractive to the species that are considered the greatest hazard to aviation. Habitat modifications will be monitored carefully to reduce wildlife hazards and avoid new attractions for different wildlife species. This WHMP was developed consistent with current version of FAA Advisory Circular (AC) No. 150/5200-33, "Hazardous Wildlife Attractants on or Near Airports."

#### 3.2 WILDLIFE ATTRACTANTS AND THE AIRPORT ENVIRONMENT

The area within a 10,000-foot radius of all aircraft movement areas at YIA is delineated as the Critical Zone. Control efforts will be primarily concentrated within this area because this is the area where arriving and departing aircraft are typically operating at or below 800 feet above ground level (AGL), an altitude that also corresponds with the most bird activity.

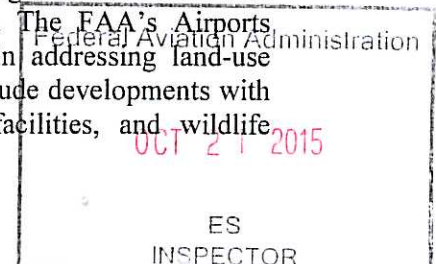
YIA concentrates its control efforts along the flight path of aircraft arriving and departing the airport in the Expanded Critical Zone (area within five miles along the approach/departure corridors). Specific activities to reduce the strike hazards at YIA are outlined in Table 2. The objective of this WHMP is to actively reduce attractive wildlife habitat on property under the control of YIA while working cooperatively with adjacent property owners to discourage land-use practices that might increase wildlife hazards.

##### 3.2.1 Airport Land-use Projects

The Wildlife Coordinator participates in all land use planning and mitigation efforts sited for YIA property. Involvement includes the initial phases of airport building projects, such as new structures or landscaping changes. The goal of this involvement is to identify wildlife attractants in any design or plan and recommend designs and plans that discourage use by wildlife whenever possible.

##### 3.2.2 Non-Airport/Adjacent Land-use Projects

Yuma County Planning Department identifies and reviews proposed projects that will likely increase wildlife numbers within flight zones on adjacent property. YIA monitors any existing project that may attract hazardous species of wildlife. Wildlife hazards created by land use changes are discussed with local planning authorities for collaboration with wildlife control activities. The FAA's Airports Division in Western Pacific Region provides technical guidance to YIA in addressing land-use compatibility issues upon request. Incompatible land uses near the airport include developments with water reservoirs, parks with artificial ponds, wetlands, waste handling facilities, and wildlife refuges/sanctuaries.





### 3.2.3 Airport Wildlife Hazards

#### 3.2.3a *Hawks and Vultures in the AOA*

- Hawks were observed roosting on airport towers and soaring in the AOA looking for food.
- Vultures were observed soaring in the AOA.
- YIA Operations staff should begin installation of bird spikes on towers commonly used by hawks as perching sites. YIA Operations staff should acquire a supply of pyrotechnics and begin hazing hawks and vultures from the AOA.
- YIA should also refer to the manual entitled "Prevention and Control of Wildlife Damage" published by the University of Nebraska for additional species specific recommendations for mitigations (Hyngstrom et.al.).

#### 3.2.3b *Pigeons and Doves in the AOA*

- Both species of doves are quite common in and near the AOA.
- A flightline of doves exists that intersects the aircraft approach and departure corridors.
- Marine Corp Air Station Yuma Range Management Department implements an active dove hunting program on the agricultural fields under its ownership south and east of the runway. YIA should support sport hunting of doves in the area surrounding YIA. The YIA Airport Director should meet at least annually with the county planning and zoning department to advocate intensified residential and commercial developments in the area east and south of the airport in order to remove dove roosting habitat.
- YIA should also refer to the manual entitled "Prevention and Control of Wildlife Damage" published by the University of Nebraska for additional species specific recommendations for mitigations (Hyngstrom et.al.).

#### 3.2.3c *Mammals in the AOA*

- Jackrabbits are routinely observed during nighttime patrols in the AOA.
- Marine Corp Air Station Yuma Range Management Department Range Wardens have conducted jackrabbit population reductions in years past.
- The YIA Airport Manager is encouraged to continue working with the MCAS-Yuma personnel and participate in the wildlife hazard working group to monitor the jackrabbit population and determine future mitigations.

### 3.2.4 Off Airport Wildlife Hazards

#### 3.2.4a Allied Waste Transfer Station

- Several species of egrets were observed feeding at the open air putrescible waste Transfer Station owned and operated by Allied Waste.
- This facility is located approximately one half mile off the end of Runway 3.
- Egrets utilizing this facility used a flightline to and from roosting sites that intersected aircraft approach and departure corridors.
- Although there are no documented collisions between egrets and airplanes at YIA and egrets have a relatively low hazard ranking, this study concludes that egrets do present a threat to aircraft operations at YIA.
- Enlist assistance from the FAA to coordinate with Allied Waste Corporate Office to develop a plan to enclose the Transfer Station. The FAA has successfully conducted similar projects with Waste Management. Non-lethal controls will have limited effectiveness due to the difficulty in chasing birds away from a high quality food source such as the one that exists at the Transfer Station. Lethal control is not practical in this highly urbanized area. Therefore conversion to a fully enclosed facility is, in reality, the only practical solution for mitigation of this wildlife hazard.

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### 3.3 WATER MANAGEMENT



Several areas in and around YIA contain water for wildlife. Water sources on YIA property include retention basins. Water is extremely attractive to a wide variety of wildlife, especially in the desert ecosystem. Pools of water that develop after periods of precipitation are dispersed whenever practicable, and chronic problem areas are identified and addressed by grading or draining, as appropriate.

### 3.4 VEGETATION MANAGEMENT

The Wildlife Coordinator reviews all plans and comments on all new plantings on YIA property to reduce or eliminate any species that produce edible fruits, seeds, nuts, or berries if these plants create an attraction to hazardous wildlife. New plantings and current vegetation are managed or eliminated if they create roosting habitat for starlings, blackbirds, and other birds. Trees such as palms, which produce dense roosting cover, are eliminated or replaced with an alternative species in the landscaping plans whenever possible. The Wildlife Coordinator participates in the initial and early phases of all airport building projects to avoid any inadvertent increase in wildlife hazards resulting from landscape changes. The FAA's Airports District Office (ADO) reviews proposed construction activities for potential wildlife attractions when the FAA Form 7460-1 application is submitted.

#### 3.4.1 Ornamental Landscaping

Landscaping at the airport entrance may enhance tourism, business, and aesthetics of the YIA vicinity to visitors, but it does not compromise the airport's central mission of public safety. Ornamental trees and bushes used to enhance airport aesthetics are kept to a minimum, and varieties that are unattractive to wildlife are selected whenever possible. Species which produce edible fruits, seeds, nuts, or berries are not used on YIA property if they might attract hazardous wildlife, and are replaced whenever possible. The Wildlife Coordinator monitors ornamental trees to identify roosting by starlings, blackbirds, and other birds, and the trees are thinned, topped, or removed if necessary.

New landscaping projects on airport property are reviewed by the Wildlife Coordinator to minimize the use of new ornamental landscaping that may be attractive to hazardous wildlife. Efforts are made to ensure that all landscaping is native to southwestern deserts and provides a simple, uncluttered appearance. Trees are selected and trimmed to be open and fairly transparent to minimize roosting potential for doves and blackbirds.

Conversion of the airport environment to desert xeriscape whenever possible helps reduce the potential for attracting wildlife considered hazardous to aviation operations. Although desert xeriscaping is the best option for airports located in arid environments, it is monitored for seed or bean pods which may attract birds or mammals for feeding opportunities. Seed and bean pods are removed after they have dropped from the plant. Proper maintenance of the landscaped area reduces wildlife foraging.

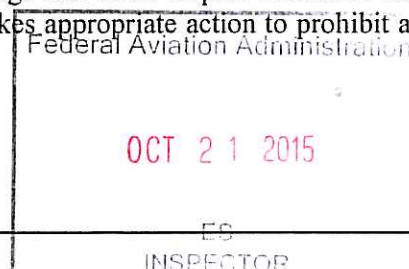
#### 3.4.2 Weed Control

YIA recognizes that weeds often grow on the airfield and around the perimeter fence. Bird and rodent species are attracted to the seeds they produce or the cover provided. Although small birds and mammals are not considered a direct threat to aviation, they do attract larger predators such as coyotes and hawks. Weeds, especially those that produce seed or provide cover, are controlled using appropriate herbicides. YIA supports a zero tolerance policy for invasive species.

### 3.5 STRUCTURE MANAGEMENT

Structures that provide cover and hunting perches for wildlife are monitored and new buildings are reviewed to minimize cover. YIA recognizes that buildings and other airport structures should not provide nesting, perching, or roosting sites for birds and takes appropriate action to prohibit access by mammals such as rodents and cats whenever feasible.

#### 3.5.1 Airfield Structures



sweeps are done to collect debris.

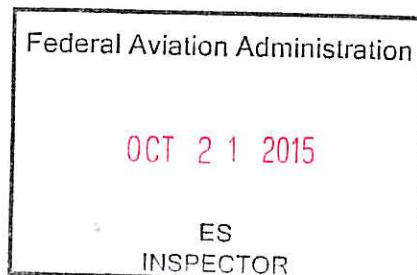
### 3.6.6 Animal Carcasses

Carcasses of animals on airport property, such as those that were involved in collisions with vehicles or aircraft or that were taken pursuant to permits, are collected and disposed of by YIA personnel on the airport. This is important not only to properly record wildlife strikes and to remove FOD, but also to reduce the extent to which scavenging birds are attracted to the airport by the presence of carrion. Dead animals are removed by airport staff during routine runway and taxiway inspections.

All carcasses removed from the Aircraft Operations Area are saved and given to the Wildlife Coordinator for identification. Necessary information pertaining to where and how the carcass was found is reported on FAA form 5200-7 "Bird/Other Wildlife Strike Report." Wildlife Strike Reports can be filed electronically at the FAA website: <http://wildlife.faa.gov/strikenew.aspx>.

Table 2: Habitat management projects to reduce wildlife hazards on YIA property.

WILDLIFE HAZARD	MITIGATION STRATEGY	RESPONSIBILITY ASSIGNED TO:	TARGET COMPLETION DATE
<i><b>Vegetation Management</b></i>			
Land use changes on YIA and in the critical areas could increase wildlife hazards	Review and modify landscaping, construction, and other land management plans to reduce wildlife attractants	Wildlife Coordinator	Ongoing
Ornamental Landscaping provides wildlife habitat	Replace with native xeriscape and native plant species	Wildlife Coordinator; Maintenance Staff	On-going
Trees provide roosting and nesting habitat	Habitat Modifications	Wildlife Coordinator; Maintenance Staff	On-going
<i><b>Structure Management</b></i>			
Pigeons and hawks roosting on hangars and poles	Install bird spikes and initiate trapping	Wildlife Coordinator Maintenance and Operations Staff	On-going
<i><b>Food and Prey Base Management</b></i>			
Wildlife in the AOA	Implement management actions such as nest removal, exclusion, habitat modifications and trapping	Wildlife Coordinator	On-going





## 4 – PERMITS AND REGULATIONS

**14 CFR § 139.337(f)(3)**      *Requirements for and, where applicable, copies of local, State, and Federal wildlife control permits.*

### 4.1 OVERVIEW

Most forms of wildlife and their habitat are protected by one or more Federal, State and/or Municipal laws. Prior to implementing control actions involving wildlife, the legal status and permit requirements of the target species will be determined by the Wildlife Coordinator. YIA will adhere to the current regulations regarding wildlife management and will obtain the appropriate permits to take wildlife. YIA's Wildlife Coordinator is responsible for obtaining and maintaining appropriate wildlife permits. Permits to take wildlife in Arizona are issued by the USFWS (Federal agency) and the Arizona Game and Fish Department (State agency).

### 4.2 ARIZONA WILDLIFE REGULATIONS

Several Arizona State government agencies have regulations that affect wildlife management at airports. Pertinent regulations can be found in the Arizona Revised Statutes (ARS) and Arizona Administrative Codes (AAC). Arizona wildlife laws involving birds, mammals, reptiles, and amphibians, as well as State threatened and endangered species are administered by the Arizona Game and Fish Department (AGFD) and are available in a booklet entitled "Arizona Game and Fish Laws and Rules." Yuma County and municipality firearms regulations may also affect YIA wildlife management operations. YIA personnel will check with City and County officials prior to conducting operational control measures. The use of pesticides in Arizona is conducted pursuant to the State of Arizona Office of Pest Management and the Arizona Department of Agriculture regulations and guidelines and any use of pesticides will be done in compliance with these regulations and guidelines.

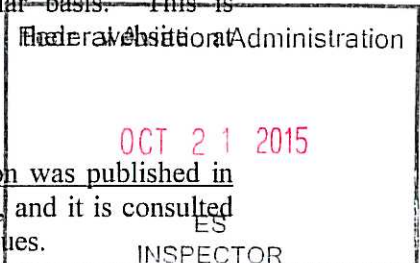
### 4.3 FEDERAL REGULATIONS

Several Federal regulations, including the Migratory Bird Treaty Act (MBTA), the Lacey Act, the Endangered Species Act, Bald and Golden Eagle Protection Act, the National Environmental Policy Act, the Clean Water Act, and the Federal Insecticide, Fungicide, and Rodenticide Act regulate various aspects of YIA's wildlife management activities. Additional regulations that may affect wildlife control activities at YIA are found in the Code of Federal Regulations (CFR). Several Federal agencies are responsible for the implementation of these Acts and the corresponding regulations. Federal wildlife laws and regulations are typically administered by the USFWS and involve primarily migratory birds and T&E species. Permits from the USFWS must be updated annually, unless otherwise stated on the permit.

#### 4.3.1 FAA REGULATIONS, ADVISORY CIRCULARS, AND CERTALERTS

The FAA is the Federal agency responsible for developing and enforcing air transportation safety regulations. Many of these regulations are codified in the CFRs. The FAA also publishes a series of guidelines for airport operators to follow called Advisory Circulars (ACs). ACs in the 150 series deal with airport safety issues, including wildlife hazards. In addition to CFRs and ACs, the FAA periodically issues Certalerts for internal distribution and to provide recommendations on specific issues for inspectors and airport personnel. All of the above-mentioned regulations, ACs, and Certalerts are frequently changed or updated, and their current status is verified on a regular basis. This is accomplished by contacting the FAA directly (Chapter 9) or by visiting [http://www.faa.gov/airports/resources/advisory\\_circulars](http://www.faa.gov/airports/resources/advisory_circulars) [http://www.faa.gov/airports/airport\\_safety/certalerts](http://www.faa.gov/airports/airport_safety/certalerts)

The FAA manual entitled Wildlife Hazard Management at Airports, Second Edition was published in July 2005. It contains important information on airport wildlife hazard management, and it is consulted by YIA personnel regarding control actions and other wildlife hazard management issues.





### 4.3.2 National Environmental Policy Act

The National Environmental Policy Act (NEPA) of 1969 requires Federal agencies to analyze the impacts of their project-related actions to the environment. Completion of an environmental assessment and finding of no significant impact will usually suffice; however, if the project contains significant negative environmental impacts, completion of an environmental impact statement is necessary.

### 4.4 WILDLIFE CATEGORIES

Federal (CFR Title 50), and Arizona (ARS Title 17 and AAC Title 12) laws define the categories of wildlife and regulations related to their management. Feral and free-ranging dogs, cats and other domestic animals are included in this Plan because of the hazards they may pose to aircraft, but they are regulated under municipal laws. Wildlife hazard management personnel will be trained to recognize the category for the species that they intend to control, so that they can determine the relevant laws and necessary permits (Table 3).

Table 3. Wildlife categories in Arizona, and permits necessary for lethal control as required by Federal and state wildlife agencies.

CATEGORY	SPECIES	STATE PERMIT <sup>1</sup>	FEDERAL PERMIT
THREATENED OR ENDANGERED SPECIES	See Table 3	Yes (take <sub>2</sub> )	Yes (take <sub>2</sub> )
DEPREDAATION ORDER BIRDS <sup>4</sup>	Blackbirds, cowbirds, grackles, crows, and magpies	Yes <sup>3</sup>	No
FERAL DOMESTIC BIRDS <sup>5</sup>	Rock doves (feral pigeons), domestic waterfowl, poultry, exotic pet birds	No	No
RESIDENT NONGAME BIRDS	European starlings, house sparrows, greater roadrunner	Yes (class F, G, or H)	No
MIGRATORY NONGAME BIRDS	All species of birds except upland game birds, migratory game birds, feral domestic birds, and resident birds	Yes	Yes (take)
MIGRATORY GAME BIRDS	Wild waterfowl, including ducks, geese, and swans; sand hill cranes; all coots; all gallinules; common snipe; wild doves; and band-tailed pigeons	Yes (take <sub>3</sub> )	Yes (take)
UPLAND (RESIDENT) GAME BIRDS	Quail, partridge, grouse, pheasants	Yes (take <sub>3</sub> )	No
FERAL DOMESTIC MAMMALS	Domestic dogs and cats, livestock	No	No
PREDATORY ANIMALS	Foxes, skunks, coyotes, and bobcats	Yes (take <sub>3</sub> )	No
NONGAME MAMMALS	All species of wild mammals except game, fur-bearing and predatory mammals, such as Prairie dogs, jackrabbits, and porcupines	Yes (take <sub>3</sub> )	No
FUR-BEARING MAMMALS	Badger, beaver, muskrat, otter, raccoon, ringtail, and weasel	Yes (take <sub>3</sub> )	No
SMALL GAME	Band-tailed pigeons, blue grouse, cottontail rabbit, mourning dove, pheasant, quail, tree squirrel, and white-winged dove	Yes (take <sub>3</sub> )	No
BIG GAME	Antelope, black bear, buffalo, desert bighorn sheep, elk, javelina, turkey, mountain lion, mule deer, and white-tailed deer	Yes (take <sub>3</sub> )	No
REPTILES AND AMPHIBIANS	All reptiles and amphibians except those listed as threatened or endangered in Table 3	Yes for some (take <sub>3</sub> )	No

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**Notes:** 1 Management actions requiring a state permit other than a hunting or fishing license should be coordinated through the Arizona Game and Fish Department (scientific collecting or wildlife service permit). 2 "Take" under the ESA means "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." 3 "Take" under MBTA means "pursuing, shooting, hunting, fishing, trapping, killing, capturing, snaring, or netting wildlife or the placing or using of any net or other device or trap in a manner that may result in the capturing or killing of wildlife." 4 May be taken without permits "...when concentrated in such numbers and manner as to constitute a health hazard or other nuisance..." (50 CFR -21.43).

## 4.5 GENERAL REGULATIONS FOR WILDLIFE CONTROL

As outlined below, several regulations and permits apply to wildlife management activities at airports in Arizona. Many of these regulations relate to safety, methods, and special considerations or restrictions which are usually specified on the depredation permits.

## 4.6 BIRDS

### 4.6.1 Resident Game Birds

Resident game birds, such as quail and pheasant, are non-migratory. Although they are not regulated by the MBTA and no Federal permit is required for take, they are protected by State law and a State depredation permit is required before take. Permits to take resident game birds at airports in Arizona are obtained from the AGFD. The AGFD requires a State Scientific Collecting Permit for the take of these species or a valid license for hunting resident game birds. A Wildlife Service's License may also be obtained from AGFD for the capture and relocation of resident game birds.

### 4.6.2 Migratory Game Birds

Migratory game birds (ducks, geese) are regulated by the USFWS pursuant to the MBTA and State laws. These regulations allow harassment of migratory birds when they are damaging property or human health and safety, but a permit is required for take and for the removal of nests/eggs. Migratory bird permits are not issued for eagles or T&E species (these species require separate permits for harassment and/or take).

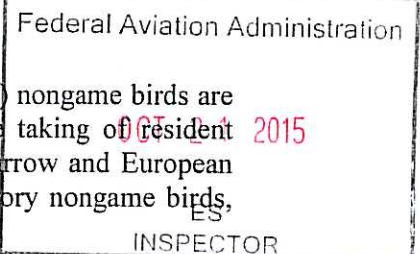
At least two separate permits are required for take of migratory game birds: the Federal depredation permit and appropriate State permits. Identification of open hunting seasons and the wildlife involved may be necessary before employing certain wildlife management measures. If hunting is used as a management method for migratory game birds, individuals must possess a valid hunting license and harvest information program stamp. A State waterfowl stamp and Federal migratory bird hunting stamp are also required for waterfowl, although there are limitations to where the stamps can be used.

#### 4.6.2.1 Migratory Bird Depredation Permit (CFR 50, Part 13)

A depredation permit to take federally-protected migratory birds can be obtained by contacting the local USDA Wildlife Services office and requesting a Wildlife Depredation Permit Application. USDA Wildlife Services will fill-out the necessary recommendation form (Form 37) which must be submitted along with the completed permit application to the USFWS. The Wildlife Coordinator is responsible for obtaining and maintaining a migratory bird depredation permit from the USFWS.

### 4.6.3 Nongame Birds

Under Arizona State law, both migratory nongame birds and non-migratory (resident) nongame birds are classified together, although they require different permits for their control. The taking of resident nongame birds, a category including the Eurasian collared dove, English house sparrow and European starling, requires a valid Class F, G, or H license from the AGFD. Taking migratory nongame birds, however, requires a Federal depredation permit from the USFWS.



### 4.6.4 Depredation Order for Blackbirds, Cowbirds, Grackles, Crows, and Magpies

A Depredation Order is a Federal regulation which authorizes the take of certain bird species involved in damage situations, without a Federal permit. Under CFR 50 § 21.43, "Depredation Order for Blackbirds, Cowbirds, Grackles, Crows, and Magpies," these species may be taken without a Federal permit when they are concentrated in such numbers and manner as to constitute a health hazard or other



nuisance. A State permit such as Scientific Collecting Permit or a valid Class F, G, or H license is required by the AGFD for lethal control of these species. Proper licenses and permits for firearms and toxicants must be acquired and maintained.

#### **4.6.5 Birds That Are Exempt from Federal/AZ Protection**

Starlings, pigeons, house sparrows, Eurasian collared doves, and various “pet” birds such as monk parakeets are exotic (non-native) bird species that are not afforded Federal protection. However, State Permits or Licenses are required to take these birds, or their nests, eggs, or young.

### **4.7 MAMMALS**

#### **4.7.1 Game Mammals**

In Arizona, game mammals are those species that are hunted for sport, recreation, or meat. Mammals are primarily regulated only by State law (except for T&E species which are regulated by both Federal and State laws). The taking of game mammals requires a State Scientific Collecting Permit, Wildlife Service’s License, or a valid hunting license issued by the AGFD. Cottontail rabbits, tree squirrels, antelope, black bear, buffalo, desert bighorn sheep, elk, javelina, mountain lion, mule deer and white-tailed deer are game mammals. Jackrabbits, Porcupines, and Prairie dogs are nongame mammals requiring a hunting license, scientific collecting permit, or wildlife service’s license.

#### **4.7.2 Furbearers**

In Arizona, furbearers are those mammal species which are managed by the AGFD through trapping programs, and include such species as badger, beaver, and raccoon. Badgers, beavers, otters, ringtails, and weasels are not likely to be found in the vicinity of YIA. Therefore, it is likely raccoon will be the only furbearer that will need to be managed at YIA. A permit or trapping license from the AGFD is required for their management.

#### **4.7.3 Predatory and Non-game Mammals**

Predatory mammals as defined by ARS 17-101 are coyotes, bobcats, foxes, and skunks. The season for coyotes and skunks is yearlong, but a valid hunting or trapping license issued by AGFD is necessary for their management. Coyotes have been observed on and near YIA.

All mammals not classified as game mammals, predatory animals, or furbearers are considered “nongame mammals.” These include jackrabbits, opossums, coatis, Gunnison's prairie dogs, and porcupines. Of these, only Gunnison's prairie dogs and coatis may be taken during an open season, with the bag limit on coatis being one per calendar year. No nongame mammals have been observed at YIA.

#### **4.7.4 Feral Domestic Mammals**

In Arizona, take of feral mammals such as dogs and cats does not require a Federal or State permit, although the method of take is regulated by State law. Stray dogs are captured by Yuma County Animal Control officers and delivered to local animal shelters for adoption.

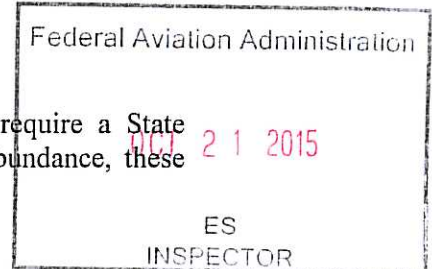
### **4.8 REPTILES & AMPHIBIANS**

In Arizona, all reptiles and amphibians are protected, and their take would require a State Scientific Collecting Permit or Wildlife Service’s License. At their current abundance, these species do not present hazards at YIA.

### **4.9 WILDLIFE/HABITAT ISSUES OF SPECIAL CONCERN**

#### **4.9.1 Federal Threatened and Endangered (T&E) Species**

The Federal Endangered Species Act (Sec. 2 [16 U.S.C. 1531]) protects plants and animals which may be threatened with extinction. This act also protect critical wildlife habitat. An Endangered Species is defined as any species or subspecies which is in danger of extinction throughout all or a significant portion of its range. A Threatened Species is a species or subspecies which is in danger of becoming an





endangered species within the foreseeable future throughout or over a significant portion of its range. Once listed, a T&E species cannot be taken or harassed without a special permit. Eagles are also afforded protection under the Bald and Golden Eagle Protection Act. If a significant hazard exists with a listed species that jeopardizes air safety, the USFWS, the AGFD, or other federal agencies should be contacted for assistance.

Section 7 of the Endangered Species Act requires Federal agencies to consult with the USFWS to determine whether their activities will impact T&E species. Negative impacts can be mitigated with reasonable and prudent conservation measures, thereby allowing the project to go forward.

The USFWS maintains updated lists of T&E species. Wildlife control personnel at YIA will be trained and will familiarize themselves with listed bird and mammal species and their potential occurrence at the airport (Table 4). When these lists change, the current lists will be inserted into this document by the Wildlife Coordinator. Some of these species may present hazards to air traffic at YIA, and permits are required to harass them. In most cases, permits will not be granted to take T&E species. Habitat critical to listed species is regulated by the USFWS and AGFD, and these regulations should be reviewed to determine their potential effect on YIA's habitat modification plans to reduce wildlife hazards.

#### 4.9.2 Avoiding Impacts to Threatened and Endangered (T&E) Species

The WHMP identifies actions and procedures to detect and alleviate wildlife hazards that threaten human health and safety or aircraft operations. Management of wildlife hazards includes application of techniques to harass wildlife away from the airport, implementation of landscape/habitat management, and other activities, and the take of wildlife species. Management actions described in the WHMP include the most appropriate, effective, and biologically-sound wildlife control methods available. This approach is known as Integrated Wildlife Damage Management, and includes both habitat management and direct control. Wildlife control and dispersal procedures employed at YIA are discussed in Chapter 6 of the WHMP, and include, harassment with pyrotechnics, vehicular harassment, and nest removal. In compliance with Federal and State law, wildlife hazard management procedures would be conducted in such a manner as to not negatively affect T&E species. If T&E species pose safety hazards at YIA, Federal and State of Arizona agencies will be consulted, and necessary permits and procedures will be pursued to allow YIA to maintain public safety.

Collisions between birds and aircraft nearly always result in the death of the bird, in addition to threatening human safety. Consequently, potential nesting habitat on and around the airfield will be eliminated to the fullest extent possible, thus preventing T & E birds, as well as other birds, from being drawn to the area where they may be struck.

Table 4. Federally listed threatened and endangered animal species in Yuma County, Arizona

Common Name	Scientific Name	Critical Habitat	Federal Status	Occurrence at YIA
<b>BIRDS</b>				
Spragues Pipit	<i>Anthus spraguelyi</i>	NO	Endangered	NO
Yuma Clapper Rail	<i>Rallus longirostris</i>	YES	Endangered	NO
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	YES	Endangered	NO
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	NO	Candidate	NO
<b>FISH</b>				
Bony Tail Chub	<i>Gila elegans</i>	NO	Endangered	NO
Razonback Sucker	<i>Xyrauchen texanus</i>	NO	Endangered	NO
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<b>MAMMALS</b>				
Lesser Long Nosed Bat	<i>Leptonycteris curasoae yerbabuenae</i>	NO	Endangered	NO
Sonoran Pronghorn	<i>Antilocapra Americana sonoriensis</i>	NO	Endangered	NO
<b>REPTILES</b>				
Sonoran Desert Tortoise	<i>Gopherus morafkai</i>	NO	Candidate	NO

#### 4.9.3 Eagle Permits

Eagles are afforded Federal protection under the Bald and Golden Eagle Protection Act, which requires that a Federal permit be obtained in order to harass these birds. Both the Golden and Bald Eagle have been removed from the Federal Endangered Species List and the State of Arizona does not impose an additional status.

#### 4.9.4 Habitat Conservation

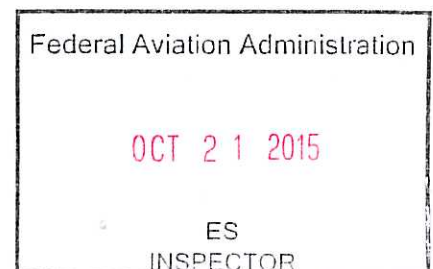
USFWS and the AGFD are responsible for species conservation and recovery plans for T&E species. These plans require the identification of critical habitat when it is associated with the decline of a species. Habitat alterations and developments may be prohibited in areas where critical habitat has been designated or where such changes could result in the inadvertent take of an endangered species. Consultation with USFWS or AGFD biologists will help determine on a case-by-case basis whether critical habitat is affected by airport projects, and if so, the necessary mitigation.

#### 4.9.5 Wetland Mitigation

Wetland modifications may require permits from various agencies, including the USFWS, ACOE, or County governments. Pre-development mitigation may be required for issuance of a permit. YIA will refer to Advisory Circular 150/5200-33B, Section 2-4 (Wetlands) if any Wetlands in the vicinity require mitigation.

#### 4.10 PESTICIDE APPLICATOR LICENSE

The use of restricted-use pesticides for the removal of hazardous wildlife (e.g., blackbirds, starlings) or prey species (e.g., rodents, rabbits, insects, earthworms, and weeds) can be conducted only by Certified Pesticide Applicators or persons under their direct supervision. To obtain the necessary license to apply restricted-use pesticides, a person must pass an exam administered by the Arizona Office of Pest Management. All YIA personnel that use restricted-use chemicals will first obtain a Qualified Applicator's license or be under the direct supervision of an applicator. Use of all pesticides will adhere to the product label and will follow Environmental Protection Agency (EPA), OPM, ADA, and other guidelines.



## 5 - RESOURCES

14 CFR § 139.337(f)(4)

*Identification of resources that the certificate holder will provide to implement the plan.*

### 5.1 OVERVIEW

Habitat management and wildlife control supplies and equipment are purchased from commercial sources. An adequate supply of equipment is maintained at YIA for use by trained personnel.

### 5.2 AIRPORT SUPPLIES

**Supplies that are normally available at the airport include, but are not limited to:**

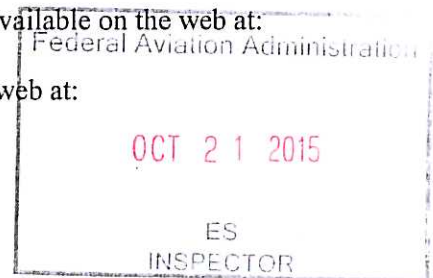
- 15 mm pyrotechnic pistol launchers (Bird bombs/bangers and screamers)
- Cleaning supplies for pyrotechnic launchers
- Catch poles
- Exclusion materials such as metal spikes and bird netting
- Cage trap for dogs (e.g., Tomahawk 110B)
- Cage trap for cats/raccoons (e.g., Tomahawk 108)
- Small cage or cloth bag for holding bats
- Binoculars
- Gloves – thin leather gloves to handle bats, latex gloves to handle birds or carcasses
- Garbage bags – various sizes
- Re-sealable bags – various sizes

**Additional supplies that may be obtained by YIA personnel as necessary:**

- Propane cannons/exploders
- Mylar tape
- Hawk kites, silhouettes
- Eye-spot balloons

**The following recommended resource documents may be maintained for use by the Wildlife Coordinator.**

- Field guides to wildlife identification
- Prevention and Control of Wildlife Damage (2-binder manual, on CD or available on the web at: <http://www.icwdm.org/handbook/index.asp> (Appendix B)
- FAA Wildlife Hazard Management at Airports manual – available on the web at: <http://wildlife-mitigation.tc.faa.gov/wildlife/default.aspx>
- ACRP Reports 20, 32, and 39
- YIA Wildlife Hazard Assessment
- YIA Wildlife Hazard Management Plan



### 5.3 AIRPORT VEHICLES

Airport Maintenance Division vehicles may contain the supplies listed below to facilitate response to wildlife hazards. Airport staff are responsible for responding to emergency calls to disperse animals from the runways. In the event of a potentially hazardous situation within the Aircraft Operations Area they maintain radio communication with the pilots flying in the area. Airport Maintenance staff also patrol the aircraft movement areas according to FAA guidelines. The vehicles may include the following supplies:

- 15 mm pyrotechnic pistol launchers
- 15 mm pyrotechnics (bangers, screamers, starter caps, etc.)
- Bird identification field guide
- Binoculars



## 6 - WILDLIFE HAZARD MANAGEMENT PROCEDURES

**14 CFR § 139.337(f)(5) Procedures to be followed during air carrier operations that at a minimum includes;**

- (i) Designation of personnel responsible for implementing the procedures;**
- (ii) Provisions to conduct physical inspections of the aircraft movement areas and other areas critical to successfully manage known wildlife hazards before air carrier operations begin;**
- (iii) Wildlife hazard control measures; and**
- (iv) Ways to communicate effectively between personnel conducting wildlife control or observing wildlife hazards and local air traffic.**

### 6.1 OVERVIEW

Wildlife observed on YIA that is determined to pose hazards to aviation are managed using safe, effective, legal, and environmentally responsible direct control techniques. Because wildlife hazards at airports are variable and complex, it is essential to adopt a flexible, innovative, and adaptive approach to managing such hazards. Wildlife identification guides and handbooks are available for use by wildlife control personnel at YIA. The manual entitled Prevention and Control of Wildlife Damage (two volume set) may be consulted by YIA Wildlife control personnel. It is available on-line at <http://www.icwdm.org/handbook/index.asp>. It details species-specific damage assessment and includes an in-depth discussion of methods of dispersal for each species.

These documents are consulted by YIA when special needs and/or emerging hazards are identified. As outlined in Chapter 8, Airport personnel will be trained to identify and manage hazardous wildlife at YIA, and will select and implement wildlife management methods that are appropriate to the type of animal causing the hazard.

### 6.2 WILDLIFE PATROL

YIA-Airport staff will conduct regular wildlife patrols at YIA. Airport Staff will monitor and respond to wildlife hazards on the airfield and will be trained in wildlife identification, wildlife management techniques. They will use airport radio-equipped vehicles and appropriate wildlife control supplies. Airport Staff will maintain clear communications with local air traffic, in accordance with FAA radio protocols, and will record all observations of wildlife-related activity (e.g., notable hazards, animals killed or dispersed, unusual wildlife behavior, etc.) in the airport wildlife log.

Routine Runway sweeps will be conducted and any dead animals found will be removed. Dead animals that were involved in strikes with aircraft will be recorded on FAA Form 5200-7. All dead birds or mammals found on runways and taxiways, or within 250 feet of the runway centerline will be considered the result of a strike unless the death was obviously due to some other cause. Wildlife observations and remains collected beyond 250 feet from centerline will be recorded on the Misc Wildlife Activity Report Form. Bird or mammal remains of unknown species will be placed in a zipped plastic bag with the FAA Form 5200-7 attached for later inspection and identification or shipment to the Federal Wildlife Laboratory at the Smithsonian Institution in Washington DC. In addition to carcasses found on the airport, Wildlife strikes will also include: (1) strikes reported by pilots, (2) evidence of wildlife strikes found and reported by aircraft maintenance personnel, and (3) direct observation of a strike by YIA personnel. All wildlife strike forms are voluntary and may be submitted to the Wildlife Coordinator for reporting to the FAA. Wildlife strike forms may be submitted electronically to the FAA at <http://www.wildlife-mitigation.tc.faa.gov>. Bird remains, feathers plucked not cut, downy feathers, beaks, talons and snags can be sent to the Smithsonian for identification free of charge.



### 6.3 GENERAL WILDLIFE HAZARD CONTROL MEASURES

Each wildlife hazard that develops will be analyzed by the Wildlife Coordinator to determine a practical solution. An integration of multiple methods will be employed for maximum effectiveness. Airport Maintenance Staff will work proactively to discourage bird use of the airport and surrounding areas by conducting habitat manipulation to make the areas less attractive for hazardous birds. The initial response for most species found using the area will be to harass them away from the airport with frightening devices, followed by lethal methods when necessary. A primary key to successful wildlife control is persistence and innovation. Techniques will be applied based on safety, effectiveness, practicality, and environmental considerations. Most control techniques retain their effectiveness when used judiciously and in conjunction with other methods. Therefore, the methods chosen will depend largely on the situation and the species involved. Finally, personnel involved in direct control will be aware of the potential diseases that wildlife can carry and will take appropriate precautions.

YIA's wildlife hazard management program will be guided by the following principles:

- a zero tolerance goal towards hazardous wildlife on the airport,
- wildlife will be appropriately harassed,
- wildlife reproduction on the airport will be discouraged, reduced, or eliminated,
- persistent hazardous wildlife will be removed, and
- YIA will adhere to all laws, regulations, policies, permits, and licenses related to wildlife control.

### 6.4 BIRD HAZARD MANAGEMENT

Several species of birds are present in the vicinity of YIA and represent the most significant potential for causing damaging strikes. The Prevention and Control of Wildlife Damage manual describes effective and practical methods that may be used to harass birds away from the airport. An electronic copy of this manual can be found on the following web site: <http://www.icwdm.org/handbook/index.asp>. An integration of multiple methods may be employed for maximum effectiveness. Properly applied, the techniques discussed in these documents should reduce most hazards involving species of concern at YIA.

The ACRP report published in May of 2011 listed all available nonlethal control methods for migratory birds and their probability of success. Table 5 is a summary of that report relevant to the hazardous species observed at YIA.

Table 5. List of Nonlethal mitigations available for migratory bird management and their probability of success.

Method	Blackbirds	Corvids	Dove/Pigeons	Vultures	Hawks	Gulls	Geese	Cranes
<b>Deterrents</b>								
Avitrol	G	Na	F	NA	NA	F	F	NA
Methyl-anthranilate	G	G	G	G	G	G	G	G
Antrhaquinone	G	G	G	G	G	G	G	G
Tactiles	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G
Effigies	G	G	G	G	G	G	G	G
Mylar Tape & Flags	P	P	P	P	P	F	F	F
Lights & Mirrors	F	F	F	F	F	F	F	F
Predator Models	F	F	F	F	F	F	F	F
<b>Harassment</b>								
Gas Exploders	F/G	F/G	F/G	F/G	F/G	F/G	F/G	F/G

Pyrotechnics	G	G	G	G	G	G	G	G
Biosonics	NA	NA	NA	NA	NA	F	G	NA
Ultrasonics	NR	NR	NR	NR	MR	NR	NR	NR
Lasers	P	P	P	P	P	P	P	P
Falconry	F	F	F	F	F	F	F	F
Dogs	G	G	G	G	G	G	G	G
<b>Exclusion</b>								
Overhead Wires	G	NA	G	NA	NA	F	G	F
Anti Perch Devices	G	G	G	G	G	G	G	G

Legend: G=good, F=fair, P=poor, NA=not available, NR=not recommended.

Source: ACRP 2011.

#### 6.4.1 Management of Hawks and Vultures at YIA

Hawk and Vulture management will consist of monitoring, habitat management, harassment, and population control applied in an integrated fashion, and according to permits and authorizations. Harassment of raptors with pyrotechnics may be employed to direct birds away from the airport, as deemed appropriate by airport staff. Unnecessary structures that are used as perch sites for raptors will be removed. Anti-perching devices may be installed to deter perching on essential structures (i.e., antennae, fences, etc.). Habitat management may include insect and rodent control measures developed in consultation with the contract pest control operator. If the abundance of raptors at YIA increases, YIA may consult with the USFWS, and/or the AGFD to determine if trapping and relocating raptors away from the airport should be implemented. Federal and State Permits are required to trap and relocate raptors and for lethal control.

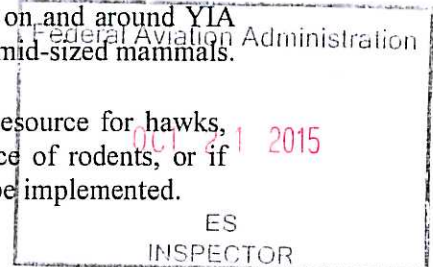
#### 6.4.2 Management of Pigeons and Doves at YIA

Because of the serious strike hazard these birds pose to aircraft, a zero tolerance policy will be in effect on airport property. Pigeons and Doves observed within the AOA should be dispersed from the area or removed to mitigate the strike risks. Harassment of pigeons and doves with pyrotechnics will be employed to direct birds away from the airport, as deemed appropriate by airport staff. If the abundance of pigeons and doves at YIA increases, YIA will consult with the USFWS, and/or the AGFD to determine if trapping should be implemented. Federal and State Permits are required to trap and relocate pigeons and doves and for lethal control.

### 6.5 MAMMAL HAZARD MANAGEMENT

Surveys and analysis conducted to complete YIA's WHA did not indicate significant safety hazards from mammals. Coyotes and black-tailed jackrabbit were the mammals observed on and around YIA during the WHA. Perimeter fence hardening will significantly reduce incursions by mid-sized mammals.

Small mammals exist on the airfield in low densities, and may serve as a food resource for hawks, owls, and other birds. If raptor numbers increase around YIA due to the presence of rodents, or if damage is noted from rodents on the airfield, a lethal rodent trapping program may be implemented.



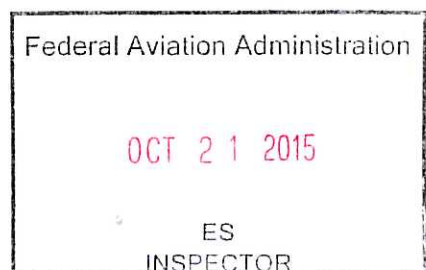
### 6.6 COMMUNICATION WITH AIR TRAFFIC CONTROL TOWER

YIA Operations Staff and vehicles are equipped with radios and have received proper training to utilize the radios. If an immediate wildlife hazard is detected that might compromise the safety of air traffic at YIA, Operations Staff will communicate with the Air Traffic Control Tower, to modify arriving or departing air traffic until the hazard is eliminated. Operations Staff will notify the Wildlife Coordinator immediately if pilots report on or off airport wildlife hazards and all available control actions will be implemented immediately.



Operations Staff conduct physical inspections of movement areas and other areas critical to wildlife hazard management as part of the daily protocol. All observed wildlife is documented and all data sheets are maintained in the Airport Wildlife Log. This Airport Wildlife Log is retained in the Airport Administrative Office. During periods of exceptionally heavy wildlife activity (e.g., migratory periods, outbreaks of insects etc.), Operations Staff consult with the Wildlife Coordinator and a NOTAM is issued, as appropriate.

All completed Wildlife Strike Report Forms, FAA 5200-7, are collected and submitted to the FAA. Any dead animal found within 250 feet of a runway centerline is considered a strike, and submitted to the FAA, unless another cause for its death is known.





## 7 – EVALUATION

***14 CFR § 139.337(f)(6) Procedures to review and evaluate the wildlife hazard management plan every 12 consecutive months or following an event described in (b)(1), (b)(2), and (b)(3) of this section, including:***  
***(i) The plan's effectiveness in dealing with known wildlife hazards on and in the airport's vicinity and***  
***(ii) Aspects of the wildlife hazards described in the wildlife hazard assessment that should be reevaluated.***

### 7.1 OVERVIEW

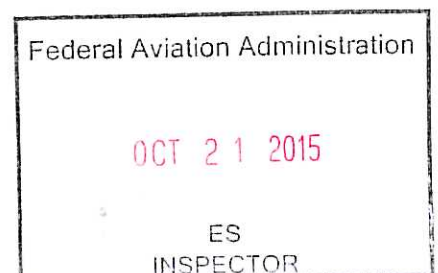
As noted above, the WHMP will be evaluated at least every 12 consecutive months. The WHMP will also be evaluated following multiple wildlife strikes by an air carrier aircraft; if an air carrier aircraft experiences substantial damage from striking wildlife or if an air carrier aircraft experiences an engine ingestion of wildlife on or near YIA. The Wildlife Coordinator will determine the effectiveness of the WHMP at reducing wildlife strikes at YIA and monitor the status of hazard reduction projects, including their completion dates.

### 7.2 WILDLIFE STRIKE DATABASE

YIA may document any wildlife strikes on or near YIA, but it is recognized that the primary responsibility for reporting in-flight strikes rests with the Pilot in Command. If reported, submittal of FAA Form 5200-7 is utilized, but this is a voluntary report. However, YIA recognizes the need to collect strike information which can be used to focus wildlife management efforts on hazardous species.

### 7.3 AIRPORT EXPANSION

Airport expansion plans will be reviewed by the Wildlife Coordinator or a designee to ensure that new developments will not inadvertently result in development of new wildlife hazards as defined in FAA AC 150/5200-33B. The Airport Manager will meet at least annually with the Director of the Yuma county Planning Department to educate staff on the FAA definition of a wildlife attractant and ensure new construction projects on adjacent property to not create new attractants.



## 8 - TRAINING

*14 CFR § 139.337(f)(7) A training program conducted by a qualified wildlife damage management biologists to provide airport personnel with the knowledge and skills needed to successfully carry out the wildlife hazard management plan required by paragraph (d) of this section.*

*FAA AC 5200-36A:§139.303(c) and (e) requires the holder of an Airport Operating Certificate issued under Part 139 to provide initial training and, every 12 months thereafter, recurrent training in wildlife hazard management to airport personnel actively involved in implementing FAA approved Wildlife Hazard Management Plans.*

### 8.1 OVERVIEW

Training is essential for personnel involved with the WHMP. The Wildlife Coordinator will establish training for all Airport Staff involved in wildlife management. The training will include the proper selection and application of control methods as well as wildlife species identification.

### 8.2 STANDARD TRAINING

Airport Staff will receive training, every 12 consecutive months, in identifying and mitigating wildlife hazards at airports, including an overview of laws associated with wildlife control, techniques used for prey-base reductions, effective use of firearms and pyrotechnics (including hands-on training), and wildlife identification and dispersal techniques. Airport communications and airfield drivers training will be provided to all employees involved in wildlife control operations to facilitate actions in the AOA. A record of any such training will be maintained by Airport Staff.

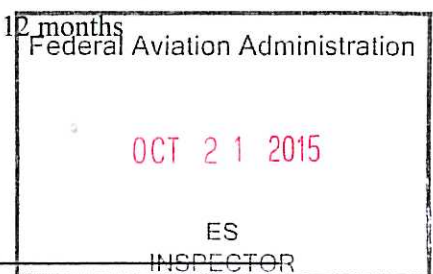
### 8.3 TRAINING BY A QUALIFIED WILDLIFE BIOLOGIST

14 CFR § 139.337(f) permits holders of Airport Operating Certificates to use a “train-the-trainer” approach when providing the requisite training, provided the trainers receive and successfully complete their initial and recurrent training from a qualified airport wildlife biologist. Trainers who are not qualified airport wildlife biologists are limited to providing training to their airport employees.

The purpose of the training will be to familiarize personnel involved with wildlife hazard management with basic wildlife identification and dispersal techniques. The training may include hands-on training using pyrotechnics, and other deterrent equipment, with an emphasis on safety and effectiveness. These training courses will be available to all personnel who have responsibility in dispersing wildlife at YIA. They will be offered at least annually, will be customized to fit the needs of individual recipients and situations, and will incorporate management issues relating directly to YIA wildlife strikes, populations, and physical environment. Instruction will be tailored to competence levels and areas of participating personnel.

According to requirements of FAA AC 150/5200-36A, at a minimum the initial and recurrent training must include:

- Summary of bird strike data from the National Wildlife Strike Database
- Review of wildlife strikes, control actions, and observations over the past 12 months
- Review of the airports Wildlife Hazard Assessment
- Review of the airports Wildlife Hazard Management Plan to include:
  - Wildlife attractants
  - Wildlife permits
  - Airport specific management actions and responsibilities





## 9 - AGENCY DIRECTORY

### REGULATORY AND ENFORCEMENT

#### ***U.S. Fish and Wildlife Service (Wildlife Permitting)***

Migratory Bird Permit Office

P.O. Box 709 Albuquerque, NM 87103, Phone 505-248-7882 website: <http://www.fws.gov>

#### ***U.S. Fish and Wildlife Service (T&E Species)***

2321 W. Royal Palm Rd., #103 Phoenix, AZ 85021, Phone 602-242-0210 website:

<http://ifw2es.fws.gov/EndangeredSpecies>

#### ***U.S. Fish and Wildlife Service***

Office of Law Enforcement 2450 W. Broadway Rd., Suite 113 Mesa, AZ 85202, Phone 480-967-7900 website:

<http://www.le.fws.gov>

#### ***Arizona Game and Fish Department***

9140 East 28<sup>th</sup> St., Yuma, AZ 85365 Phone 928-342-0091 website: <http://www.azgfd.com>

### TECHNICAL ASSISTANCE

#### ***Arizona Department of Environmental Quality Water Quality Division***

1110 West Washington, Phoenix, AZ 85007, Phone, 602-771-2303 website:

<http://www.adeq.state.az.us/envIRON/water/index.html>

#### ***Arizona Office of Pest Management***

1688 West Adams, Phoenix, AZ 85007 Phone: 602-255-3664

website: <http://www.sb.state.az.us/>

#### ***Federal Aviation Administration (FAA) Western Pacific Region***

15000 Aviation Blvd. Lawndale, CA 90261 website: <http://www.awp.faa.gov/>

#### ***Federal Aviation Administration (FAA) Staff Wildlife Biologist***

FAA Airport Safety and Compliance FAA-AA5-317 800 Independence Ave., SW Washington, DC 20591, Phone

202-267-3389 website: <http://www.faa.gov>

### OPERATIONAL and TECHNICAL ASSISTANCE

#### ***Airport Wildlife Consultants,***

4735 E Melanie Dr., Cave Creek, AZ 85331, Phone 480-993-9357

#### ***Yuma County Animal Control***

2200 West 28<sup>th</sup> St, Yuma, AZ 85364, Phone 928-341-8800

***Local pest control operators are available to assist with insect and rodent problems.***

