

# ADDENDUM

## Wildlife Hazard Management Plan

Project Name: Central Texas Airport

SWF Permit No.: SWF-2010-506

Project Location: 1906 FM 969, Elgin, Bastrop County, Texas

Date May 15, 2013

### 1.0 INTRODUCTION

Recognizing the potential hazards wildlife pose to aircraft and human lives, the Federal Aviation Administration (FAA) requires, in the Title 14 Code of Federal Regulations (CFR) Part 139.33 that airport certificate holders conduct a Wildlife Hazard Assessment if certain specified trigger events occur involving wildlife. A list of triggering events can be found at 14 CFR 139.337(b)(1-4) and include multiple wildlife strikes, substantial damage from striking wildlife, engine ingestion of wildlife, and the observation of wildlife of size and numbers capable of creating a wildlife strike with access to the aircraft movement area or flight patterns. A Wildlife Hazard Management Plan (WHMP) addresses the responsibilities, policies, and procedures necessary to reduce wildlife hazards at airports.

#### 1.1 Overview

Central Texas Airport (CTA) will be a private general aviation airport designed, constructed and operated so as to not be required to obtain an Airport Operating Certificate under 14 CFR, Part 139 and is not subject to these provisions. However, the main objective of CTA and its owners and operators is to ensure that its facilities provide for the safe and expeditious conduct of all aircraft operations. Left uncontrolled, wildlife at an airport can jeopardize the safe operation of any aircraft. Wildlife species of concern and their various management/control options will be addressed in general terms, allowing for CTA personnel to make informed decisions on courses of action to alleviate specific wildlife threats identified at the airport. A Wildlife Biologist may provide more detailed recommendations if wildlife problems are identified on the airfield.

#### 1.2 Environmental Site Conditions and Potential Problem Species

The nature and magnitude of a wildlife strike problem at any airport depends on a multitude of factors, including air traffic type and volume, local and migratory wildlife populations, and local wildlife habitat conditions. Wildlife are attracted to an airport because desirable food, water, or habitat is present. Operational activities may also result in creating an attractant, such as uncovered dumpsters, irregular maintenance, and even mowing. If any of these land-use practices or operational activities are utilized on or near an airport, or these features are present, then there is a potential issue or concern.

Birds pose the greatest potential to aviation safety at CTA as they do at Austin Bergstrom International Airport and many other airports in the central Texas region. Based upon national records, 97% of all aircraft strikes involve birds while 2% involve mammals and 1% reptiles. Understandably, the primary focus at CTA is the management of potential risks associated with birds. Small mammals

and rodents are a food source for both birds of prey and larger mammals that represent the potential threat to aircraft so management of these species is also essential to a successful WHMP.

There are many types of birds that frequent the area surrounding CTA with the most common species being: doves, hawks, bats, grackles, and turkey vultures. Occasional sightings of migratory birds occur and they are predominantly seasonal in nature. The area surrounding and inclusive of the CTA site encompasses thousands of acres of open, cleared pastureland. More than five decades of intensive cattle ranching operations and years of exceptional to severe drought has severely degraded the native grasses and killed off much of the native tree stock that are predominantly located along existing fence lines and the Colorado River. A low threshold threat for the attraction of birds exists in these degraded open pastureland conditions with limited vegetative cover and trees.

The Colorado River that runs along the southern boundary of the CTA site is a natural attractant for numerous wildlife species. The section of the river in the area near CTA typically has moderately fast moving, deeper, water that is a lower threshold threat for attraction of larger waterfowl or migratory species.

Large mammals such as deer, fox, bobcat, wild hogs and coyotes are much less frequently observed at the CTA site due to open areas and limited vegetation or food sources. Smaller mammalian species such as armadillo, jackrabbit, opossum, skunk, raccoon, and squirrel frequent the area and are attracted to the river area where food sources can be found. Most of the mammals present or observed at the site are nocturnal and rarely observed during the day. Although it is possible that a fox, bobcat or coyote could present an issue for aircraft if they were struck while crossing the runway they are not generally considered species of concern. To the contrary, they may present a benefit rather than a threat by aiding in keeping the populations of mice and other rodents at low levels, which decrease the food sources for raptors and other species of birds and mammals. These species and others also feed on waterfowl and their eggs and their presence may discourage waterfowl near the airport.

## 2.0 AUTHORITY

Although CTA will be a privately owned and operated airport and business operation, the airport operations will be managed in a manner similar to larger municipal general aviation airports. The Chief Operating Officer (COO) will ensure that the CTA's privately directed WHMP remains consistent with the intent of FAA recommendations and guidelines and complies with Federal, State, and local laws and regulations.

### 2.1 Persons Responsible for Implementing the Wildlife Hazard Management Plan

The Airport Manager will have the ultimate responsibility for the implementation and administration of the WHMP at the airport. Responsibilities for activities contained in the WHMP may be delegated to various departments, individuals or Wildlife Officer/s within the airport management and operations team; or to third party service providers. The Manager may call upon the U. S. Department of Agriculture (USDA)-Wildlife Services or a Wildlife Biologist for additional resources or recommendations should potential adverse wildlife sightings or events present concerns.

## 2.2 Administration of the Wildlife Plan

One of the most important aspects of a wildlife program is administration. The most important aspect of program administration is record keeping. The records are the basis for developing baseline information on wildlife populations, movements, and strikes. This information is also an essential tool in tracking and proving the effectiveness of wildlife programs. Types of records that will be kept at CTA include wildlife observations (species type, numbers, locations, local weather conditions, type of activity, and time of day), dispersal or harassment actions taken by wildlife personnel, reported bird strikes (FAA Form 5700), and wildlife remains found on the airfield (deceased wildlife found on paved surfaces but not reported as a strike).

This record keeping will allow CTA to compile accurate and detailed statistics. For example, we can look at bird strike data from the month of March over the last three years and tell if there has been an increase or decrease in reported strikes. This capability, in conjunction with observation records, may help explain changes in wildlife strike numbers. CTA will compile records both monthly and at the end of each year to generate reports that reflect trends in wildlife strikes to self-evaluate the program and assess the effectiveness of dispersal techniques. Accurate and detailed record keeping is an indispensable part of any wildlife program.

## 2.3 Permits and Licenses

Federal, State, and local governments have laws that protect wildlife and their habitats. These laws affect how wildlife control is performed at all airfields. Because the application and approval process takes time, CTA will apply in advance for a depredation permit with the U.S. Fish and Wildlife Service (USFWS) to address the potential need to harass certain protected species (e.g., those protected by the Migratory Bird Treaty Act). CTA will also apply for any required permit or license that will allow airfield wildlife control personnel to utilize the administration of tranquilizer darts to wildlife. The COO and Airport Manager will ensure that CTA obtains and maintains the effective status of any permits and follows all reporting requirements imposed by the regulatory agency.

## 2.4 Airport Design, Planning, Engineering and Operations

Private ownership and operation of CTA and the surrounding commercial business campus provides the opportunity to extend broad authority including declarations, covenants and restrictions over the development, construction, operational standards and requirements within the operational areas of the secured airport perimeter and extending these control to the boundaries of the surrounding commercial development. Expert airport planners, designers, consultants and engineers have been engaged in all aspects of the plans for CTA. They are also responsible for incorporating reduction of wildlife attractants within the boundaries of the overall project development.

The landscape design is directed to reducing the number of trees and amounts of vegetation planted, where they are planted, and selecting species least desirable to wildlife. Engineering and building designs and operating practices incorporate other features to manage and control wildlife.

The design of and engineering for the stormwater drainage, filtration, detention and associated infrastructure was specifically focused on efficiently draining the master project site including the airport and business campus without pooling of stormwater from the airport and the surrounding roadways and commercial business campus sites. The existing stormwater drainage ways and man-made stock tank will be replaced with a Federal Emergency Management Agency (FEMA) approved stormwater management and floodplain mitigation plan. The existing open drainageways near the aircraft operational areas (AOA) will be replaced with underground culverts and piping will that be maintained and secured to minimize access or habitation by undesirable wildlife.

A new stormwater filtration and detention pond and improved drainageways will be constructed on the easternmost boundary of the adjoining commercial business park. The pond embankments are designed with steep slopes, with specific limited vegetative cover and planned maintenance designed as a deterrent to attraction by waterfowl and shorebirds. These improvements will be separated from the AOA by extensive concrete paved airport taxiway and parking aprons, aviation business operations, hangars, parking areas, roadways, then commercial and industrial business uses. This concentration of development, traffic, and uses collectively presents a significant barrier between aircraft operations and the detention pond and any potential wildlife that might be attracted to them.

CTA plans to implement sustainable water sourcing, resourcing, use, and management practices as part of its design and operations of the airport and extended to the surrounding commercial business campus. Plans are in place to provide rainwater harvesting and reuse technologies and to self-manage essential irrigation, graywater, and firefighting water supplies for CTA's needs and that of the surrounding commercial campus and community. The capture, use, and reuse of these water resources help lessen the available water supplies that otherwise could result in standing water and unwanted irrigation of managed grassed or landscaped areas which can help reduce insect and rodent populations and the associated attraction of undesirable wildlife. The planned stormwater pond will provide a vitally important water source for pump trucks and helicopter firefighting equipment based at CTA, but will be designed and managed in a manner that reduces the attraction for wildlife.

A major source of attraction for many species of birds, particularly the larger raptors, are overhead power or communication lines, poles and other structures that provide prime perches for birds to observe the airport operations areas and surrounding business campus. CTA was specifically designed for all underground power and communications infrastructure; in part for wildlife management and control. Poles and other structures will be capped with sheet metal cones, porcupine wire or other deterrents that repel birds.

Future aviation improvement expansions, building additions, infrastructures, business operations or uses at CTA and the surrounding campus will be reviewed for design controls to minimize the attraction of or use by wildlife. CTA will require the incorporation of responsible and compatible land planning, architectural and engineering designs, such as the installation of netting and other equipment, devices, and technologies that help manage undesirable wildlife.

## 2.5 Routine Airport Patrol Inspections

In addition to habitat management and active harassment, wildlife officers should be responsible for routine inspections and recording of all observations in a Patrol Log.

- Perimeter Wildlife Inspections: This inspection should be done on a daily basis - once in the morning at sunrise and again at sunset. The purpose of this inspection is for the observation of wildlife activity on and around the airport, roosting activity, etc. These inspections should be documented on the daily Patrol Log.
- Perimeter Fence Inspection: The wildlife officer should perform a perimeter fence inspection on a weekly basis. The purpose of this inspection is to find and document any areas that may allow wildlife easy access onto the AOA, such as holes under the fence or gates that do not close tightly enough. All discrepancies should be documented in the fence inspection report and a copy forwarded to maintenance for repair action.
- Facility Inspections: Once a month, the wildlife officer should inspect facilities around the airfield for any areas or situations that may contribute to the wildlife hazard situation. Any deficiency should be documented in the monthly report and a copy sent to the responsible party for action.
- Agricultural Area Inspections: At least once daily during the daily patrol, the wildlife officer should inspect agricultural areas for possible wildlife attractants or for bird movement and take appropriate action. This inspection should be documented in the daily Patrol Log.
- Construction Site Inspections: Wildlife control personnel should also patrol construction sites on the airfield and maintain an immediate response capability to birds, mammals, or rodents attracted to construction sites.

## 3.0 HABITAT AND WILDLIFE MANAGEMENT

It is the goal of CTA to minimize the development of new wildlife habitat and eliminate existing habitat and land uses, which attract birds and other wildlife. Habitat management includes the physical removal, exclusion, or manipulation of areas that are attractive to wildlife. The ultimate goal is to make the environment unattractive to the species that are considered the greatest threats to aircraft or aviation. To the extent reasonably possible, the following actions and efforts will be taken to eliminate habitat and land uses identified as contributing to wildlife hazards.

- AOA including runway protection zones will be security fenced to maintain access detection and control over the airport security perimeter. Field lighting and communications capabilities will be provided and operations will be maintained in a manner that will not constitute an attraction to the undesirable or threatening wildlife;
- Trees, brush, or vegetation that are found to provide food, shelter, or roosting sources for wildlife will be cleared, mowed, or maintained in a manner most beneficial to the removal of the highest value targets for wildlife control and aviation safety;
- Stormwater drainage areas, infrastructures, basins, and ponds that are determined to be strong wildlife attractants will be drained, covered or netted, or other devices or management methods installed or implemented to discourage wildlife use;

- Agricultural practices and livestock grazing will not be allowed on the airport that may attract wildlife and affect aircraft operations. Agricultural uses on airport or other property away from the airfield may be allowed unless wildlife problems occur;
- Buildings will be constructed, modified, or made as uninhabitable as reasonably possible for nesting, perches, or roosting sites;
- Waste receptacles or areas containing food or other materials that may attract wildlife will be eliminated or rendered inaccessible to wildlife of all types and pest, rodent, and varmint controls will be required;
- Construction debris or activities that may attract wildlife or provide cover for small mammals and perching sites for birds will be removed or maintained so that they will not become a wildlife attractant;
- Airport management will monitor small mammal, insect, and pest populations and direct appropriate control and elimination procedures, as necessary;
- CTA may enter into leases, options, or agreements with Bastrop County, and/or other area landowners to allow CTA personnel to assist them with compatible land uses and wildlife management.

### 3.1 Wildlife Control Plan and Procedures

The core of every wildlife management program is the wildlife control procedures. CTA will refine and further develop these procedures as the airport is developed, operations commence, and observation of potential wildlife species can be identified and targeted. The Airport COO or Manager will outline methods for: (1) dispersal and/or removal of nuisance wildlife from critical areas such as runways or approach and departure paths, (2) methods to use for different species identified as nuisance wildlife, (3) inspections and reporting criteria, and (4) other pertinent information required in the day-to-day operation of the wildlife management program.

The Airport COO or Manager will ensure that wildlife control efforts meet acceptable standards with respect to liability, and that the methods being implemented are proven effective as demonstrated at other airports or airfields. Outside contractors are useful in this respect, and in many cases, will provide recommendations for modifications to existing practices that will strengthen the wildlife program. The procedures are the "operator's manual" for wildlife programs, so they should be specific in the areas of duties, responsibilities, authority, and organization.

### 3.2 Wildlife Management Techniques and Actions

#### 3.2.1 Birds

Several regulations and permits may apply to wildlife management activities at Texas airports, including CTA. Many of these regulations relate to safety, methods, and special considerations or restrictions, which are usually specified on depredation permits. There are three categories of birds that may be encountered; resident nongame birds, resident game birds, and migratory birds. All Federal and State regulations will be followed at CTA relative to the management, control, and/or lethal

elimination of birds to ensure the safety of aircraft operations. Birds that are determined to pose a threat to safe aircraft operations at CTA may be managed by any of the following actions:

- Hazing - The following techniques may be utilized to assist in hazing birds from the airfield: vehicles, horns, sirens, propane cannons, trained dogs, 12-gauge shotguns utilizing pyrotechnic cracker shells, and paint ball guns are all non-lethal deterrent options depending upon the types and numbers of birds.
- If conditions warrant, pesticide and herbicide spray applications may be utilized for insect control and to eliminate undesirable biodiversity of vegetation. Licensed personnel or personnel referred by the USDA Wildlife Services will be utilized.
- Water cannons may be utilized to disburse birds and remove empty nests that are free of eggs. This action would be conducted by the on-airport Aircraft Rescue and Fire Fighting personnel, if warranted.
- Lethal Control – Lethal control may be utilized as a last resort, if non-lethal means have proven ineffective to haze birds from the area. This action would be conducted under the terms and conditions listed in the USFWS depredation permit.

### 3.2.2 Mammals and Rodents

Small mammals and rodents are common year round and can cause damage to aircraft. They also can become a major nuisance if not mitigated properly because they are potential food sources for larger birds and mammals. Habitat management and maintenance is the primary solution to long-term control. Airport perimeter fencing of 8-10 feet above ground and 2-4 feet buried will help keep all types and sizes of medium to large mammals off the airport; however, some could still gain access by digging, climbing, jumping, or finding a hole in the fence. Regular inspections of perimeter fences for any damage or dig sites to eliminate access to the AOA will be conducted.

Small mammals including rodents present a different challenge and control of rodent populations is an important element in wildlife hazard management. A change in land management practices will result in a change in rodent populations. Their burrowing activities can damage underground wiring and leave holes and mounds of earth hazardous to aircraft leaving the tarmac, and to maintenance workers and equipment. However, the primary concern with rodents is their attractiveness as a food source for raptors and carnivorous mammals that could pose a threat to aircraft.

Smaller to medium sized mammals such as armadillo, opossum, raccoon, skunks, and rabbits present minimal airport impacts and are not protected species. The practical solutions for elimination of these mammals from the AOA can be accomplished by cage trapping, leg-hold traps (only effective for some species), poison baits or other lethal means.

Larger mammals native to the area that are of greatest concern for airport safety are coyotes, feral hogs, bobcats, and deer. Deer are protected in all states. For purposes of maintaining safety for airport operations, deer are the only protected species.

#### 4.0 EQUIPMENT AND RESOURCES FOR WILDLIFE MANAGEMENT

Wildlife personnel must always have sufficient equipment and supplies to disperse, depredate, or capture nuisance wildlife that pose a hazard to air operations. These requirements will vary; however, there are basic items that are essential in virtually every wildlife control program:

- Truck or ATV for transporting bulky equipment
- Propane cannons and remote control equipment
- 6mm pistols/blanks
- 12 gauge shotguns
- 15mm shells - banger and screamers
- 12 gauge shot shells - #6, slugs, steel
- 12 gauge cracker and screamer shells
- Snare pole
- Live traps/transportation cages
- Wildlife distress call equipment/CDs
- Air horns and sirens
- Spot lights/multicolored emergency lights/laser lights
- Wildlife identification manuals
- Maintain current logs of rules, regulations, updates notices, or Advisory Circulars pertaining to WHMP, from the FAA, USFWS, U.S. Army Corps of Engineers (USACE), USDA Wildlife Services, and Texas Parks and Wildlife Department (TPWD)
- High-power binoculars and spotting scope
- Laptop computer with vehicle adapter, wildlife management and patrol log software programs