



Professional Design Services for the JIA Airfield Wetland Mitigation

RFQ No. 19-18-42001

**Addendum No. 2
February 28, 2019**

- Q1. What is the Conservation Easement acreage currently within the Conservation Area?
- R1. This information will be reviewed as part of the design and permitting phase for the proposed project.**
- Q2. What is the existing acreage of mitigation areas within the Conservation Area?
- R2. This information will be reviewed as part of the design and permitting phase for the proposed project.**
- Q3. Can a copy of the Wildlife Hazard Management Plan be provided?
- R3. A copy has been provided as part of this addendum. Please see Page 3 – 23.**
- Q4. What is the annual maintenance cost for the Conservation Area (please include silviculture)?
- R4. This information is not available.**
- Q5. Is a USACE coordination / permit anticipated?
- R5. This will be determined as part of the design and permitting phase for the proposed project.**
- Q6. Is there any FAA coordination needed?
- R6. This project anticipates FAA funding, the extent of their involvement will be determined as part of the design and permitting phase for the proposed project.**
- Q7. Is the latest JIA Master Plan dated 2010? If not, can the latest plan be provided?
- Q7. Yes**

Q8. Other than the proposed 41.52-acre wetland impacts shown in the RFQ, where are the created wetlands within the AOA?

R8. There has been approximately 5 acres of wetland creation within the Conservation Easement.

Q9. Have the 41.52 acres been verified by SJRWMD?

R9. The wetlands have not been field verified by SJRWMD. The locations were based on aerial photography.

Q10. How is the mitigation compensation calculated?

R10. The mitigation compensation will be in accordance with the Conceptual Permit.

Q11. Is secondary impacts anticipated?

R11. This will be determined as part of the design and permitting phase for the proposed project.

Q12. It was stated during the pre-proposal meeting that reference letters could be received by JAA after the deadline of March 5. What is this process?

R12. References are not held to the 2:00 pm deadline, but they still need to be received in a timely manner or they will risk not being included in the evaluation.

Q13. Do references need to be only with the Prime?

R13. Yes

Q14. Can ongoing projects be used as a reference?

R14. References from “ongoing projects” are permissible to the extent the scopes of services for said projects are sufficiently complete in order to afford project owners the ability to make substantive evaluations.

**The question and answer period is closed.
Qualification Due Date is February 19, 2019 at 2:00 PM (local time).**



JAX

**Jacksonville
International
Airport**

**WILDLIFE HAZARD MANAGEMENT PLAN
JACKSONVILLE INTERNATIONAL AIRPORT
DUVAL COUNTY, FLORIDA
ERS JOB No. 11009**

APPENDIX-B OF THE JIA CERTIFICATION MANUAL

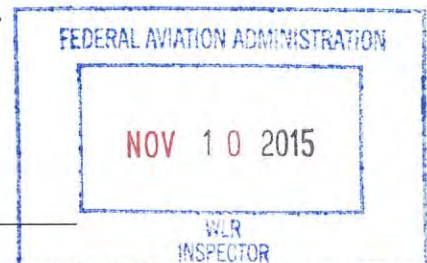
DEVELOPED BY:

**AIRPORT OPERATIONS DEPARTMENT
JACKSONVILLE INTERNATIONAL AIRPORT
2400 YANKEE CLIPPER DRIVE
JACKSONVILLE, FLORIDA 32218**

SUBMITTED BY:

**TERRENCE W. DLUGOS
DIRECTOR, JIA OPERATIONS
JACKSONVILLE INTERNATIONAL AIRPORT
JACKSONVILLE AVIATION AUTHORITY**

Signed



IN COOPERATION WITH:

OCTOBER 2015



ENVIRONMENTAL RESOURCE SOLUTIONS, INC.
1597 THE GREENS WAY, SUITE 200
JACKSONVILLE BEACH, FLORIDA 32250

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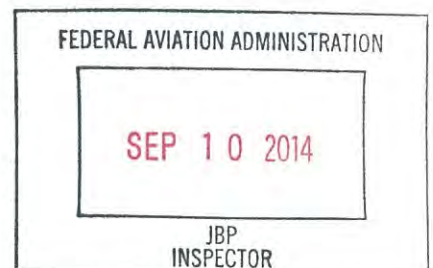


TABLE OF REVISIONS

This Wildlife Hazard Management Plan (WHMP) is incorporated into the Jacksonville International Airport’s (JAX) Airport Certification Manual (ACM). The plan will be evaluated annually. Any necessary revisions to this plan will be recorded on this page in the table below. Upon completion of each revision change, immediately enter the revision number, date of revision, date revision was entered, and your initials as responsible custodian.

Revision Number	Date of Revision	Page(s)	Date Entered	Entered By
1	28 Aug 2014	Entire Manual	Sept 2014	C. Styles
2	30 Oct 2015	Cover Page, i	Nov 2015	T. Dlugos
3	May 2016	Replace i, 3-2, 3-3 5-1 Add 3-4		T. Dlugos

FEDERAL AVIATION ADMINISTRATION
JUN 23 2016
WLR
INSPECTOR

1.0 INTRODUCTION

The U.S. Department of Agriculture Animal and Plant Health Inspection Service Wildlife Services (USDA APHIS WS) conducted a Wildlife Hazard Assessment (WHA) at JAX from July 2001 through August 2002. During the WHA, 47 bird species were observed. The most numerous species observed were mixed blackbird flocks, European starlings, American crows, black-bellied plovers, and killdeer. The most frequently observed species were killdeer, American crows, mourning doves, European starlings, black-bellied plovers, mixed blackbird flocks, barn swallows, red-winged blackbirds, vultures, and common grackles. These 10 bird groups accounted for more than 87% of all bird observations at JAX during the WHA. The following six mammal species were observed during the WHA: armadillo, white - tailed deer, raccoon, red fox, striped skunk, and coyote. It was noted that all deer were observed outside the perimeter fence.

Environmental Resource Solutions, Inc. (ERS) has supplemented and updated the JAX WHA with additional survey efforts since 2005. Beginning in 2005, ERS conducted intensive wildlife monitoring at the airport. Follow-up surveys were conducted annually thereafter, including just prior to the composition of this WHMP. In March 2011, dawn, midday, dusk, and spotlight surveys were conducted over a period of three weeks. The purpose of the continued monitoring was to determine what wildlife hazards persist at JAX, identify measures to eliminate any existing hazards, and to prevent future hazards. ERS provided JAX with specific recommendations for habitat management and wildlife control, and determined if these measures were consistently undertaken by JAX. The continued monitoring indicates that the species originally identified by the USDA APHIS WS biologists continue to pose potential safety hazards. In addition, Canada geese have also become a growing concern. This information has been incorporated into the JAX wildlife hazard management program that is reviewed and approved annually by the Federal Aviation Administration (FAA). Since 2006, ERS conducts an annual audit of the existing wildlife program. ERS evaluates the effectiveness of the program as it relates to specific wildlife hazards known to exist on, or near, JAX and makes recommendations for program improvements if necessary.

Per the existing wildlife program, ERS has administered annual wildlife hazard management training to JAX personnel involved in wildlife management since 2006. The trainees include, but are not limited to, airport operations and maintenance staff, airport managers, and Jacksonville Aviation Authority (JAA) police officers. Per AC 150/5200-36, the course includes sections on basic bird identification, passive and active wildlife management techniques, identification of wildlife attractants, bird strike remains collection and reporting, agency involvement and required permits, and a quiz. The training material is updated with the results of the annual audits.

ERS has a qualified airport wildlife biologist on staff that is responsible for conducting surveys, evaluating the wildlife program, and leading the annual wildlife training. Per A/C 150/5200-36, the ERS biologist is fully qualified based on (1) certified an Associate Wildlife Biologist by The Wildlife Society; (2) attended qualified airport wildlife biologist training at Embry-Riddle Aeronautical University (2009); (3) conducted a WHA under the direct supervision of a qualified airport wildlife biologist, and; (4) attended a Bird Strike Committee meeting (2010).

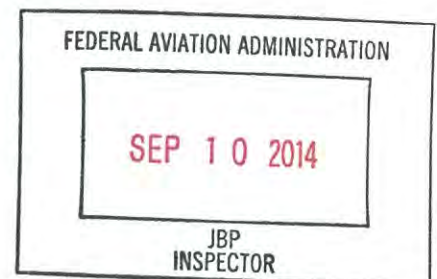


JAX is bordered on all sides by suitable wildlife habitat, e.g. forested uplands and wetlands. It is also approximately five miles from the St. Johns River, a major attract for wading birds, osprey, bald eagles, and various other wildlife. In addition, JAX is less than 15 miles west of the Atlantic Ocean, which provides habitat for a variety of species, especially gulls. This coastal area serves as a migration route for many east coast migratory birds (Atlantic Flyway). Resident coastal species also move inland towards the airport during times of severe weather. This abundance of available water attracts wildlife throughout the year. The main habitat management priorities for wildlife mitigation within the JAX Air Operations Area (AOA) are stormwater drainage maintenance (e.g. ponds and ditches) and grass height management. Burying the perimeter fence would eliminate most of the mammal species found at JAX.

The purpose of this document is to establish a WHMP for JAX, owned and operated by JAA, which can be incorporated into JAX's ACM. JAA management has directed and fully supports the development and implementation of a WHMP for JAX. The mission statement for the JAX WHMP is:

“To ensure aviation safety for airport operations and flight crews by reducing the potential risk to aircraft and operations caused by wildlife on and in the vicinity of Jacksonville International Airport”

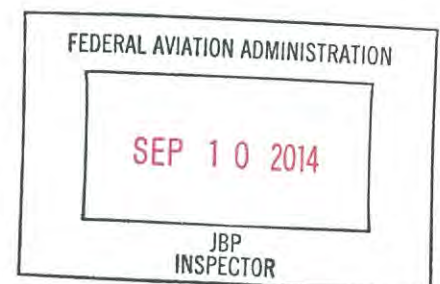
14 CFR Part 139.337 highlights the need for a flexible plan adapted to changing circumstances. Immediate actions may be necessary that are not addressed in this plan to ensure the safety of the travelling public. This WHMP provides JAX with the discretion and capability to respond to these situations. The WHMP will comply with the ACM and will be reviewed at least annually.



2.0 OUTLINE

The JAX WHMP addresses the responsibilities, policies and procedures necessary to reduce wildlife hazards in relation to aircraft and human lives. 14 CFR Part 139.337, *Wildlife Hazard Management*, prescribes the specific issues that a WHMP must address for FAA approval and inclusion in the ACM:

1. A list of individuals having authority and responsibility for implementing each aspect of the plan.
2. A list prioritizing the following actions identified in an ecological study and target dates for their initiation and completion:
 - a. Wildlife Population Management
 - b. Habitat Modification
 - c. Land Use Changes
3. Requirements for and, where applicable, copies of local, state, and federal wildlife control permits.
4. Identification of resources that the certificate holder will provide to implement the plan.
5. Procedures to be followed during air carrier operations that at a minimum includes:
 - a. Designation of personnel responsible 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 hazard control measures; and
 - d. Ways to communicate effectively between personnel conducting wildlife control or observing wildlife hazards and the air traffic control tower.
6. Procedures to review and evaluate the WHMP annually or following an event described in CFR Part 139.337(b) including:
 - a. The plans effectiveness in dealing with known wildlife hazards on and in the airport's vicinity, and
 - b. Aspects of the wildlife hazards previously described in an ecological study, that should be reevaluated.
7. A training program conducted by a qualified airport wildlife biologist to provide airport personnel with the knowledge and skills needed to successfully carry out the WHMP.



3.0 AUTHORITIES AND RESPONSIBILITIES

3.1 Overview

The Director, JAX Operations, has the authority and responsibility of designating a Wildlife Coordinator to implement the WHMP. The WHMP outlines specific departments with responsibilities that will incorporate them into the wildlife program. However, the Director, Aviation Management will ensure the WHMP and amendments comply with Federal, State, and Local laws and regulations.

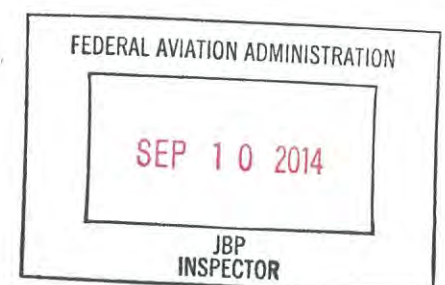
3.2 A list of the individuals having authority and responsibility for implementing each aspect of the plan

3.2.1 Wildlife Coordinator

- Establish Wildlife Hazard Working Group (WHWG) for JAX.
- Chair the WHWG, conduct WHWG meetings once per quarter, and update and revise the WHMP in conjunction with the wildlife biologist as necessary.
- Distribute information and assignments through the WHWG.
- Provide public relations support for wildlife control activities as needed.
- Supervise, coordinate, and monitor wildlife control activities as outlined in the WHMP.
- Oversee coordination and communication with off-airport entities if wildlife hazards are identified and need addressed.
- Maintain the Wildlife Management Log and records.
- Maintain necessary permits for wildlife control.

3.2.2 Airport Operations Duty Officer

- Inspect runways and taxiways for wildlife activity and strikes.
- Submit all know wildlife strikes to the FAA (at wildlife.faa.gov or via FAA Form 5200-7) and send copies of the forms to the Wildlife Coordinator.
- Collect bird and other animal remains found during airfield inspections for identification by the duty officer, the wildlife biologist, or the Smithsonian Bird Identification Lab, and properly dispose of remains (bury) once correctly identified.
- Assist in the harassment of wildlife inside the perimeter fence and/or critical areas when necessary.
- Alleviate all attractants deemed an imminent hazard and coordinate action to rectify wildlife hazards long-term when appropriate.
- Advise the Air Traffic Control personnel, Wildlife Coordinator, and/or pilots of any wildlife-related emergencies.
- Record all wildlife control activities in the Wildlife Management Log.
- Communicate with tenants about maintaining facilities to minimize wildlife attractants.
- Attend WHWG meetings if requested.



3.2.3 Airport Facilities & Maintenance Personnel

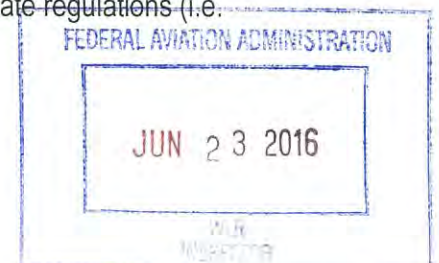
- Notify the Wildlife Coordinator of wildlife hazards that have been detected.
- Eliminate low areas of standing water on the airfield.
- Maintain the perimeter fence line to exclude large and small mammals and tortoises.
- Assist with (or contract) habitat modifications addressed in the WHA, such as vegetation maintenance along ditches and wetlands, grass height maintenance, brush and tree removal from the AOA, landscaping modifications, and tree pruning.
- Conduct mowing schedules throughout the AOA in accordance with WHA vegetation recommendations.
- Coordinate landscaping changes with the Wildlife Coordinator to ensure attractive wildlife habitat is minimized.
- Assist with wildlife control activities when necessary (e.g. filling burrows, burying carcasses, etc.).
- Attend WHWG meetings if requested.

3.2.4 USDA/WS Wildlife Technician and/or Biologist

- Assist airport wildlife biologist in implementing the WHMP when practical and feasible
- Monitor and control wildlife activity and attractants on and near the airport
- Provide operational and technical support to manage wildlife hazards, including lethal control as needed
- Dispose of all carcasses properly and in accordance with federal and state regulations (i.e. carcasses can be burned, buried, or donated to charity).
- Provide monthly reports summarizing wildlife observations and offering actions that may be taken to mitigate any identified issues
- Conduct and record daily control activities on airfield and airport property
- Offer recommendations and assist in the implementation of management practices to alleviate or eliminate current, potential, and future wildlife hazards
- Ensure compliance with all applicable federal, state, and local environmental regulations regarding wildlife
- Attend Wildlife Hazard Management Group meetings, and other trainings, conferences, and discussions regarding wildlife hazard management, as necessary
- Facilitate the application of unique expertise and resources available through other USDA/WS staff and management

3.2.5 Airport Police Department

- Assist the USDA/WS technician with lethal control measures, if necessary
- Inspect critical areas for wildlife activity and report applicable information to the Wildlife Coordinator.
- Dispose of all carcasses properly and in accordance with federal and state regulations (i.e. carcasses can be burned, buried, or donated to charity).
- Attend WHWG meetings if requested.



3.2.6 Airport Planning Department

- Ensure that the design of future structures at JAX mitigates roosting or nesting habitat for wildlife.
- Review the design layout of new facilities with the Wildlife Coordinator and wildlife biologist during the planning stages for input on designs that are unattractive to wildlife.
- Ensure that the design and construction of new drainage or detention ponds comply with FAA A/C 5200-33B *Hazardous Wildlife Attractants On or Near Airports*, detailing allowable retention time.
- Ensure all wetland mitigation associated with construction projects is located off of the AOA either within the JAX Conservation Area or at an approved wetland mitigation bank.
- Involve the Wildlife Coordinator with land use planning and mitigation efforts.
- Attend WHWG meetings if requested.

3.2.7 FAA – Air Traffic Control Tower

- Advise pilots of observed or reported wildlife hazards by broadcasting hazards over the ATIS.
- Contact the Wildlife Coordinator and/or Airport Operations if wildlife is found, observed and/or reported from a pilot on the AOA.
- Report all known wildlife strikes to airport operations staff.
- Attend WHWG meetings if requested.

3.2.8 Qualified Airport Wildlife Biologist

- Assist JAX personnel in monitoring the airport environment for wildlife hazards and attractants.
- Assist Wildlife Coordinator with WHWG meetings.
- Inform and advise the Wildlife Coordinator of wildlife management activities, habitat modification needs, and imminent wildlife hazards.
- Support the Wildlife Coordinator in obtaining necessary wildlife control permits.
- Train airport personnel in the knowledge and skills necessary to carry out the WHMP.
- Assist JAX staff in reviewing proposed land use changes, construction plans, landscape plans, and mitigation projects that may pose a potential wildlife hazard.
- Conduct annual surveys for wildlife attractants and monitor wildlife populations in and around JAX.
- Provide recommendations for inclusion in the annual update to the WHMP.

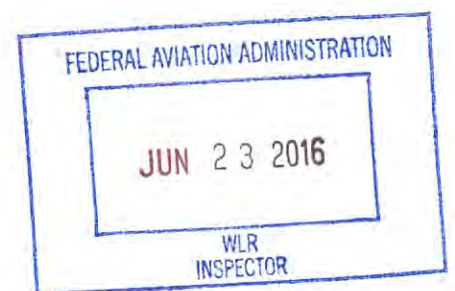


3.3 Wildlife Hazard Working Group (WHWG)

The WHWG will meet once per quarter. The WHWG is responsible for reviewing wildlife strike records and significant wildlife activity from the previous month and/or year. The WHWG will evaluate the impact of future on and off site projects that may affect wildlife use patterns around JAX. If necessary, the WHWG will review the WHMP, as it relates to each member's respective responsibilities and make changes as needed. In addition, the group will monitor status of projects and resource needs and make recommendations to the Wildlife Coordinator.

The Wildlife Coordinator will invite representatives from the following departments/organizations to participate in the WHWG:

- Wildlife Coordinator
- Qualified Airport Wildlife Biologist
- Airport Operations Department
- Facilities Department (Maintenance)
- JAA Police Department
- JAA Planning Department
- Risk Management Department
- Florida Air National Guard (FANG)
- FAA – Air Traffic Control
- Additional JAA General Aviation Airport Representatives (Jacksonville Executive Airport at Craig, Cecil Airport, and Herlong Recreational Airport)
- USDA APHIS WS Biologist/Technician



4.0 HABITAT MANAGEMENT

4.1 Overview

Habitat management is the most effective long-term strategy for alleviating wildlife populations on or near an airport. Habitat management involves the physical removal, manipulation or alteration of vegetation, substrate, and/or water within a designated area. The desired outcome of habitat management is the reduced appeal of an area to the wildlife that typically utilize it for food, cover, water, reproduction, etc. However, when an area is managed to reduce a certain group of wildlife species it has the potential of increasing its attractiveness to another species/group. Therefore, it is of utmost importance that an airport is monitored for developing hazards because of human activities or those that develop from natural conditions.

4.2 A list prioritizing the following actions identified in an ecological study and target dates for their initiation and completion (a) wildlife population management; (b) habitat modification; and (c) land use changes.

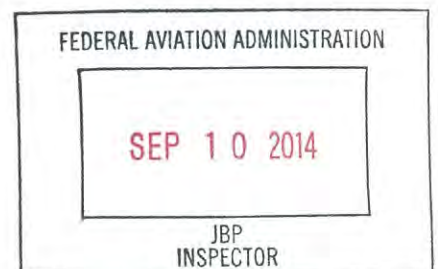
(a) Wildlife Population Management	Target Date	Frequency
Continue to manage wildlife hazards: Manage wildlife hazards within the AOA through daily wildlife sweeps and runway checks.	Continuous	Daily
Continue to maintain USFWS Migratory Bird Depredation Permit	March	Annually
Continue to conduct Canada goose roundups on and off airport property	June/July	As needed
Any habitat observed being used for bird nesting will be removed or altered: Any roof being used by birds for nesting will be altered or covered with a net/grid system or perching deterrents to prevent bird access. Any vegetation being used by birds for nesting will be removed or thinned. Destroy any nests observed.	March – June (nesting season)	Annually
Continue to properly dispose of all wildlife carcasses	Continuous	Ongoing
Continue the use of vulture effigies to deter soaring on the AOA or within approach and departure corridors.	Continuous	Ongoing
Relocate gopher tortoises: gopher tortoises observed creating a wildlife hazard within the safety areas will be relocated. A relocation permit must be obtained from the Florida Fish and Wildlife Conservation Commission prior to relocation efforts.	April – October (desirable temperatures)	As needed
Control insect populations: insecticide(s) may be applied over the AOA annually. Insect abundance is cyclic and is dependent on environmental conditions. Insect populations will be monitored to determine the most effective season for application.	Spring/Summer 2016	Annually
Work with tenants and FANG to manage wildlife hazards: airport employees are prohibited from feeding birds or other wildlife on airport property. When necessary, handouts will be distributed to inform and educate the public on the potential hazards of feeding wildlife at JAX. In addition, refuse containers must be sealed. No open dumpsters will be permitted on the AOA.	Continuous	Ongoing
Monitor earthworm populations: earthworm abundance increases during periods of heavy rain and over-saturated soils. If they appear to be a major wildlife attractant, the appropriate pest control may be applied.	Continuous	When needed
Monitor rodent populations: it is important that rodent populations are monitored and kept at low densities. The airport will conduct a control program if rodent abundance increases to a level where wildlife is attracted.	Continuous	When needed
Continue use of electronic record keeping system for wildlife strikes and harassing efforts	Continuous	Ongoing

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(b) Habitat Modification	Target Date	Frequency
Continue the grass management policy throughout the airfield: Grass stands will be maintained as monocultures and minimized of weeds. Grass height throughout the entire AOA will be maintained between 6" -12".	Continuous	Ongoing
Manage ditches and culverts throughout airfield to maintain proper drainage: All aquatic vegetation within the ditches on the AOA will be maintained. Both the bank and the waterway itself will be maintained to allow proper drainage. Maintaining the vegetation will increase drainage and reduce the temporary standing water in grassy areas throughout the AOA.	Continuous	Ongoing
Apply herbicide to ditches: an herbicide/growth retardant will be applied to ditch banks as required to help limit ditch vegetation growth.	Spring & Fall	As needed
Modify and maintain wildlife fencing around the airfield to exclude large and small mammals: to exclude coyotes, hogs, deer, skunks, beavers, tortoises, etc. for the long-term, the wildlife fence will be buried 8"-24" below ground to prevent wildlife from digging underneath the fence. Gaps between and under gates will be kept to 6" or less.	Summer 2015	When funds are available
Created wetlands within the AOA will be mitigated and removed: The created wetlands on the AOA will be filled. Permits are required from the St. Johns River Water Management District and the U.S. Army Corp of Engineers to fill and mitigate these wetlands.	Fall 2016	When funds are available
Removal, thinning, and/or exclusion of woodlands, regenerating areas, etc. within the AOA that are determined to be wildlife attractants: hazardous trees, brush, and shrubs that are attracting wildlife will be removed from inside the perimeter fence.	Continuous	Ongoing
Continue to remove beaver dams from the ditches. Any beaver activity on airport property will be reported to the Wildlife Coordinator and all beaver(s)/beaver dam(s) found will be removed.	Continuous	Ongoing
Retention ponds on airport property will be addressed for wildlife hazards and drainage efficiency: When possible, new stormwater management facilities will be designed to drain within 48 hours. When design of "dry" ponds is not feasible, strict adherence to A/C 150-5200-33B <i>Hazardous Wildlife Attractants On or Near Airports</i> will be followed. Measures such as steep side slopes and use of riprap or grass sod to the water line will be taken to minimize the attractiveness of stormwater ponds to wildlife.	Continuous	When funds are available
Exclusionary devices (e.g. bird spikes, bird spiders, etc.) may be installed on any structure within the airfield identified as an active perching platform. If the structure is unnecessary for aviation operation, it may be removed. This can include machinery, light poles, abandoned buildings, sign posts, etc.	Continuous	Ongoing



(c) Land Use Changes	Target Date	Frequency
Removal of abandoned structures deemed no longer necessary: abandoned structures (no longer in use) will be removed from the AOA.	Fall 2016	When funds are available
Participate in the initial phase of building projects: Involve the Wildlife Coordinator and the Qualified Airport Wildlife Biologist in future planning for new construction projects (on or off site) which could inherently increase wildlife hazards. Every effort will be made to minimize or eliminate designs known to attract wildlife.	Continuous	Ongoing
Strongly discourage proposed projects likely to increase bird numbers within five miles of JAX. Incompatible land uses include: landfills, dumps, transfer stations, water reservoirs, sewage ponds, parks with created water bodies, sludge disposal sites, feedlots, slaughter houses, wildlife refuges, sanctuaries, production areas, etc.	Continuous	Ongoing

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5.0 PERMITS AND REGULATIONS

5.1 Requirements for and, where applicable, copies of local, state, and federal wildlife control permits.

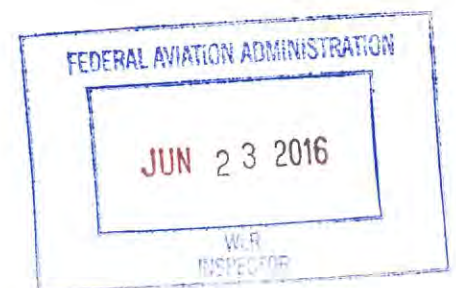
This table shows whether JAX has current Federal or State permits for each category. It should be noted that Florida Laws grant taking of wildlife (with exception of gopher tortoises and federally protected species) by airport employees without state permits, if the wildlife are posing a threat to human life (State Rule 68A-9.012 *Take of Wildlife on Airport Property*). Permits to take wildlife in Florida are issued by the United States Fish and Wildlife Service (USFWS) and the Florida Fish and Wildlife Conservation Commission (FWC). JAX's Wildlife Coordinator is responsible for obtaining and maintaining appropriate wildlife permits, and may be assisted in this process by the wildlife biologist. Copies of the permit(s) can be found in the Wildlife Coordinators office.

Wildlife control authorizations possessed by JAX:

United States Fish and Wildlife Service

Migratory Bird Depredation permit (MB051757-0): "[JAX staff] is authorized to take, temporarily possess, and transport [migratory birds] to relieve or prevent injurious situations impacting public safety. All take must be done as part of an integrated wildlife damage management program that emphasizes nonlethal management techniques."

Eagle Depredation permit (MB53246B-0): "[JAX staff] are authorized to use non-lethal scare devices, scare tactics or frightening devices to move or disperse bald eagles endangering human safety due to a high risk of a serious bird strike to landing and departing aircraft. [JAX staff] are authorized to use airhorns, pyrotechnics, and drive vehicles with horns as necessary to scare eagles. Pyrotechnics must not be shot directly at the eagles." This permit does not authorize the killing, injury or capture of any eagle or the destruction of any young or nests. This permit also does not authorize the disturbance of adult eagles at active nest sites that contain eggs or young or nests.

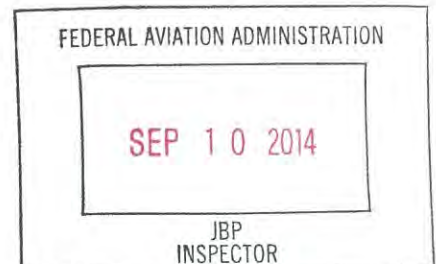


CATEGORY	SPECIES	STATE PERMIT REQUIRED	STATE PERMIT OBTAINED	FEDERAL PERMIT REQUIRED	FEDERAL PERMIT OBTAINED
Resident Game Birds	Quail, Grouse, and Turkey	No	N/A	No	N/A
Resident Nongame Birds	Starlings, House Sparrows, and Pigeons	No	N/A	No	N/A
Migratory Game Birds	Ducks, Geese, Coots, Moorhens, Rails, Gallinules, Snipe, and Mourning Doves	No	N/A	Yes	Yes
Migratory Nongame Birds	All species except game birds, resident nongame birds, and domestic and exotic birds (includes gulls, vultures, cattle egrets, blackbirds)	No	N/A	Yes	Yes
Depredation Order Birds*	Crows, Blackbirds, Grackles, and Cowbirds	No	N/A	No	N/A
Domestic Birds	Rock Doves (feral pigeons), Domestic Ducks, Domestic Poultry, and Geese	No	N/A	No	N/A
Game Mammals	White-tailed Deer, Fox, Raccoon, Squirrel, Black Bear, and Rabbits	No**	N/A	No	N/A
Furbearers	Fox, Raccoon, Beaver, Otter, Opossum, Bobcat, and Skunk	No	N/A	No	N/A
Reptiles***	Alligator and Gopher Tortoise	Yes	No	No	N/A
Nuisance Species	Coyote, Hog, European Starling, Pigeon, and Armadillo	No	N/A	No	N/A
Feral Domestic Mammals	Dogs, Cats, and Livestock	No – contact local animal control	N/A	No	N/A
Bald Eagle Harassment	Bald Eagle	No	N/A	Yes	No
Bald Eagle Nest Removal	Bald Eagle	No	N/A	Yes	No
Osprey Nest Removal	Osprey	Yes	No	No	N/A
State Protected Species	All FWC listed Endangered and Threatened species and Species of Special Concern (except gopher tortoises)	No**	N/A	No	N/A
Federally Protected Species	All USFWS listed Endangered and Threatened species and Species of Special Concern (e.g. wood storks)	No	N/A	Yes	No

*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)

**In accordance with FWC Rule 68A-9.012 *Take of Wildlife on Airport Property*

***Report nuisance alligators to FWC and contact a local trapper to remove the alligator; gopher tortoises may not be taken, they can be relocated with FWC permits



6.0 RESOURCES

6.1 Identification of resources to be provided by the certificate holder for implementation of the plan.

6.1.1 Airport Personnel

Airport Operations Duty Officers and Airport Police Officers are on duty 24 hours a day, 7 days a week to respond to any wildlife related issues.

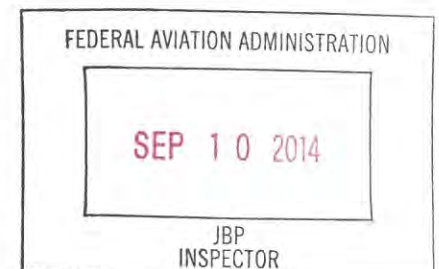
6.1.2 Airport Equipment and Supplies

Equipment and supplies that will be kept stocked for wildlife hazard control at JAX include, but are not limited to:

- 15 mm pistol launchers
- Pyrotechnics including bangers, screamers, whistlers, etc. (for pistol launchers)
- Shotgun
- Shotgun ammo
- Gas cartridges (aka smoke bombs)
- 2-way radio and/or cellular phone
- VHF Air Band Transceiver
- Beacon light for airport operation
- Flagging tape/pin flags
- Shovel and bucket
- Hearing protection device
- Pair of gloves
- Garbage bags
- Binoculars
- Field identification guide for local wildlife
- Data sheets (FAA Form 5200-7 & Wildlife Management Log)
- Wildlife Activity Zones map

6.1.3 Wildlife Patrol

Wildlife patrol personnel will be equipped with vehicles capable of operating on runways, taxiways, and off-road, and contain necessary supplies. They will be required to respond to wildlife emergency calls from the ATCT, or other sources, to disperse wildlife from the runways, taxiways, etc. All operations conducted on the AOA will be carried out in accordance with FAA regulations.



7.0 WILDLIFE HAZARD MANAGEMENT PROCEDURES

7.1 Procedures to be followed during air carrier operations that at a minimum includes:

7.1.1 Designation of personnel responsible for implementing the procedures;

JAX Wildlife Coordinator, Airport Operations Duty Officer, Airport Police Officers, and/or the wildlife biologist are responsible for implementing wildlife management procedures. At least one Airport Operations Duty Officer is at JAX during each shift within a 24-hour period. Responsibilities are further described in Section 3.0 Authorities and Responsibilities.

7.1.2 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;

AOA inspections are conducted by Airport Operations Duty Officers at least once per day and logged in the Daily Inspections report. They will document all wildlife hazards in the Daily Inspection report and the wildlife management log. Deceased wildlife found within 200' of the centerline of a taxiway or runway will be considered a wildlife strike unless the death was obviously due to some other cause. Any wildlife remains that are found and unidentified will be bagged and sent to the Smithsonian Bird Identification Lab or photographed and identified by the wildlife biologist. If the wildlife biologist needs to operate on the movement area, they will be escorted by an Airport Operations Duty Officer or Airport Police Officer. All strikes will be reported to the FAA Wildlife Strike Database.

7.1.3 Wildlife hazard control measures;

The Wildlife Coordinator, Airport Operations personnel, and wildlife biologist will determine a practical solution and analyze each wildlife hazard that develops. Each hazard is unique, however, the initial response for most species will be to harass/disperse the wildlife with pyrotechnics, followed by lethal control when necessary. Persistence and innovation by JAX personnel are fundamental to a successful wildlife management program.

Active management techniques used to control wildlife at JAX include, but are not limited to:

Non-lethal Techniques	Species Affected:
Pyrotechnics	All species
Vehicle Harassment	All species
Lethal Techniques	Species Affected:
Shooting	Canada geese, feral hogs, coyote, white-tailed deer, gulls, vultures, beaver, and other species as needed
Trapping	Skunks, armadillos, beaver, alligator, and other species as needed
Gassing (in burrows)	Skunks, armadillos, opossums, rabbits and other burrowing species as needed (except gopher tortoises)
Roundups	Canada geese

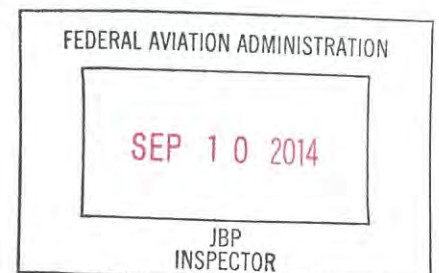
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7.1.4 Ways to communicate effectively between personnel conducting wildlife control or observing wildlife hazards and the air traffic control tower.

Communication between the Wildlife Coordinator, Airport Operations Duty Officer, or Airport Police Officer and FAA ATCT is conducted through phone lines, mobile phones, and/or two-way radio communication. If an immediate hazard exists that might compromise the safety of air traffic at JAX, the Wildlife Coordinator and/or Operations personnel will coordinate with ATC to modify air traffic until the hazard is eliminated. Although ATC personnel can not be expected to monitor all wildlife hazards on the airfield, tower personnel will be asked to notify Operations personnel immediately if pilots report on or off airport wildlife hazards or any such hazards are observed from the tower.



8.0 EVALUATION

8.1 Procedures to review and evaluate the WHMP annually or following an event described in CFR Part 139.337(b) including: (a) the plans effectiveness in dealing with known wildlife hazards on and in the airport's vicinity and (b) aspects of the wildlife hazards described in the wildlife hazard assessment that should be reevaluated.

The WHMP will be evaluated every 12 consecutive months and following a triggering event. The purpose of the WHMP audit is to evaluate the effectiveness of the WHMP as it relates to specific wildlife hazards known to exist on, or near, JAX. The WHMP review will contain the following (per Certalert SO-12-03 *Documenting the Review of your Wildlife Hazard Management Plan*):

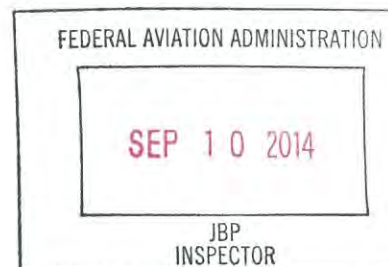
For annual review

- Name of review coordinator & participating airport personnel and representatives of other organizations
- Summary of results of annual data analysis
- Summary of progress and challenges in management of the most significant wildlife attractants and/or habitats on or near the airport
- Summary of progress and challenges in direct wildlife hazard management on the airfield
- Changes to management strategies identified
- Changes to documentation identified
- Changes to Wildlife Hazard Working Group membership or objectives identified
- Changes to airport training program identified
- Changes/updates to Wildlife Hazard Management Plan identified

A triggering event is defined in CFR Part 139.337(b) as (1) an air carrier aircraft experiences a multiple wildlife strike, (2) an air carrier aircraft experiences substantial damage from striking wildlife, (3) an air carrier aircraft experiences an engine ingestion of wildlife; or (4) wildlife of a size, or in numbers, capable of causing an event described in (1), (2), or (3) of this paragraph is observed to have access to any airport flight pattern or aircraft movement area.

For review following a triggering event

- Description of the triggering event
- Name of review coordinator & participating airport personnel and representatives of other organizations
- The plan's effectiveness in dealing with known wildlife hazards on and in the airport's vicinity
- Aspects of the wildlife hazards described in the wildlife hazard assessment that should be reevaluated
- Summary of progress and challenges in direct wildlife hazard management on the airfield
- Changes to management strategies identified
- Changes to airport training program identified
- Changes/updates to Wildlife Hazard Management Plan identified



9.0 TRAINING

9.1 A training program conducted by a qualified wildlife damage management biologist to provide airport personnel with the knowledge and skills needed to successfully carry out the WHMP required by 14 CFR Part 139.337 (d).

The Wildlife Coordinator will offer training to all personnel that may be responsible for wildlife control or encounter wildlife while at JAX. Training will ensure personnel are trained in the proper selection and application of control methods as well as wildlife species identification. Wildlife control personnel will receive training in identifying and mitigating wildlife hazards at airports, including wildlife identification and dispersal techniques, effective habitat modification, firearms safety, and regulatory agencies associated with wildlife control. Training includes all of the FAA training requirements, in accordance with FAA Advisory Circular 150/5200-36 (current edition) "Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments and Training Curriculums for Airport Personnel Involved in Controlling Wildlife Hazards at Airports", and as such, a quiz is given to each attendee at the conclusion of the training session. Training will emphasize the prevention of wildlife strikes by informing airport personnel on how to effectively prevent a strike before it occurs. The Wildlife Coordinator will maintain a record of training attendance. Training will be conducted every 12 consecutive months.

