

# ROSECRANS MEMORIAL AIRPORT

## Wildlife Hazard Management Plan

*Developed by:*

**City of Saint Joseph, MO  
Public Works Dept., Aviation Division  
100B NW Rosecrans Rd  
Saint Joseph, MO 64503**

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Airport General Manager

In Cooperation with:

U.S. Department of Agriculture  
Animal and Plant Health Inspection Service  
Wildlife Service

**FAA Approved**

**M. Cozad**

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**Date:** 9/1/20

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**Record of Revisions**

<u>ISSUE</u>	<u>REMOVE</u>		<u>INSERT</u>	
<u>DATE</u>	<u>Page/Exhibit #</u>	<u>FAA Approval Date</u>	<u>Page/Exhibit #</u>	<u>FAA Approval Date</u>
			<u>All Pages</u>	
2/19/2020			10/ (Completed) to fence project	
2/19/2020			11/ paragraph about perimeter fence	
2/19/2020			13/adding STJ Staff to lethal removal list	
2/19/2020			23/ added shotgun/shells to list	
4/7/2020			Submitted Electronically	
8/24/2020			27/ Insert: consecutive calendar	

## WILDLIFE HAZARD MANAGEMENT PLAN DISTRIBUTION LIST

The official file copy of the Wildlife Hazard Management Plan is maintained in the Airport Manager's Office.

Copies of the Wildlife Hazard Management Plan, including all revisions and amendments, are distributed to the following:

### Complete WHMP

1. Director of Public Works & Transportation
2. Airport Operations and Maintenance Supervisor
3. STJ139<sup>th</sup> Airlift Wing Plans Office
4. USDA-APHIS-Wildlife Services Biologist
5. Missouri Dept. of Conservation

## SECTION A - INTRODUCTION

According to Federal Aviation Regulations (FAR) 139.337, Section (b):

“In a manner authorized by the Administrator, each certificate holder must ensure that a wildlife hazard assessment is conducted when any of the following events occurs on or near the airport:

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

FAR 139.337 Section (e) states:

“When the Administrator determines that a wildlife hazard management plan is needed, the certificate holder shall formulate and implement a plan using the wildlife hazard assessment as a basis.”

Rosecrans Memorial Airport (STJ) is a municipal airport owned by The City of St. Joseph, located in Buchanan County, Missouri, 5 miles northwest of downtown Saint Joseph. The Missouri river runs 3 miles to the east, and Browning Lake, an oxbow lake, comprises the southern and western borders of airport property. Arthur Dupree Memorial Conservation Area is 2 miles east, and Elwood Bottoms Wildlife Area is less than 5 miles south. The airport is surrounded by large expanses of agricultural ground used to grow primarily grain crops (corn, soybeans, and wheat). The surrounding habitats create increased potential for wildlife hazards, especially waterfowl.

Although Rosecrans Memorial Airport (STJ) does not serve scheduled air carriers, wildlife still exists in numbers that could cause a threat to air traffic operating at or in the vicinity of the airport. The wildlife threat is exacerbated by the environment surrounding STJ which includes the Missouri River on the North and East sides of the airport and an oxbow surrounding the South and West. Wildlife around the airport range from a variety of ground animals including but not limited to coyote, deer, turkey, fox, skunks, possums, rabbits, raccoons, and beavers. The primary threats to aircraft at STJ are birds that congregate on the airfield perimeter, primarily near the waterways. These birds include raptors such as the red-tailed hawk, migratory waterfowl such as geese, gulls, shorebirds such as killdeer, and starlings and dove.

Rosecrans Memorial Airport is the proud host of the MO Air National Guard, 139th Airlift Wing and the Advanced Airlift Tactics Training Center. Their military flight profiles fall outside normal civilian operations of takeoffs, approaches and landings particularly in the surface to 2000 feet above surface levels. The training requires aircraft operating for extended periods and distances at extremely low levels and high airspeeds. The unit also leases airport property for airdrop operations; again a unique operation that increases exposure to potential for bird strikes. The flight operations routinely require extended flight times, formation integrity discipline and attack profiles that limit maneuverability while 300 feet to above 2000 feet above surface at airspeeds ranging from 120 knots to 250 knots.

STJ combined with the local ANG safety office have actively implemented wildlife mitigation measures for many years. An ongoing agreement between ANG and Wildlife Services began in January 2009. This agreement provides STJ with a full-time USDA-APHIS wildlife specialist. As a proactive measure, STJ airport management requested USDA staff perform a Wildlife Hazard Assessment (WHA) (Appendix A). The WHA was based on surveys and records of direct control conducted from January 2009 to January 2010.

STJ airport management does not agree with the 2010 WHA in its entirety and finds some assumptions based on insufficient data. For example the aircraft strike and damage reported in the WHA, Section 3.4 page 10 indicates a C-130 with significant damage due to a strike at STJ. This incident occurred approximately 10 miles or more from the STJ airport on a night military training route at low level and high speed. The FAA National Wildlife Strike Database report dated September 2009 states:

72% of strikes occurred at or below 500 feet AGL  
92% of strikes occurred at or below 3,000 feet AGL

A majority of the local military training operations fall within these altitudes. Military operations by nature associate with increased risk levels that are evaluated prior to each sortie.

Another example of ambiguity is in numerous areas the recommendation is shorter or taller grass heights. STJ currently maintains grass heights of 6 to 12 inches to meet FAA requirements.

Irrespective of the ambiguities noted, the results and recommendations of the WHA led airport management to develop and implement this formal Wildlife Hazard Management Plan (WHMP) to effectively continue combating the dangers posed to STJ air traffic by wildlife.

## SECTION B - AUTHORITY

### Director of Public Works & Transportation

- Primary authority over the WHMP
- Provides resources need to support the provisions of the WHMP

### Airport General Manager

- The Airport Manager assumes full responsibility and is given authority in directing the formulation of the WHMP, and implementation and compliance with the WHMP.
- Provide support to ensure the contract between the ANG and the USDA-APHIS-Wildlife Services is renewed and maintained annually.
- Maintain a supply of harassing agents and wildlife collection materials. Review reports submitted by agencies involved and take appropriate action.
- Provide assistance to the City Communications office with subject matter content for public relations and media interviews concerning wildlife issues.
- Ensure that the WHMP is reviewed and updated annually per FAR Part 139.337(f)(6).
- Submit the Annual Report Form/Depredation Permit with the United States Dept. of the Interior-U.S. Fish and Wildlife Service.
- Review land use planning and mitigation issues proposed by Commercial Development and Engineering.

### Airport Operations Manager

- Maintain daily operational control and implementation of the WHMP.
- Coordinate with USDA-APHIS-Wildlife Services biologist on status of wildlife at STJ, proper solutions to wildlife problems and mitigation of any other wildlife related issues.
- Coordinate annual training by a qualified wildlife damage management biologist to all airport operations and maintenance personnel in regards to wildlife hazard management per FAR Part 139.337(f) (7).
- Maintain records of all known wildlife strikes with aircraft.
- Maintain a Wildlife Observation Log for wildlife seen on or in airport vicinity.
- File and submit an FAA approved Wildlife Strike Report (Form 5200-7) for any wildlife strike that occurs during shift, or for any wildlife that is found on the airfield that is believed to have been struck by an aircraft. In the event that identification of the species is not feasible, the remains will be sent for proper identification by the Smithsonian Museum Feather Lab Office.



- Take necessary steps to harass wildlife seen on or in vicinity of the airport after confirmation the wildlife is not protected, threatened or endangered and is listed on our Federal Fish and Wildlife Permit. Respond to strikes and remove any wildlife remains (FOD) from AOA.
- Immediately report to ATCT any sightings of wildlife on or in the vicinity of the airfield that may pose a danger to aircraft operating in the area.
- Prepare an annual report for the Airport Manager that includes:
  - Wildlife strikes involving known and unknown aircraft
  - Current inventory of harassing agents and wildlife collection materials utilized in coordination with the WHMP
  - Analysis of Wildlife Observation Logs
  - Summary of USDA wildlife control quarterly activity
- Address all wildlife issues that fall within the scope of Airfield Maintenance work (fence repair, mowing grass, etc.).
- Issue advisory to pilots operating on STJ or transitioning through STJ airspace of significant wildlife activity observed or reported on CTAF when ATCT is not operational.
- Provide drawings to the USDA-APHIS-Wildlife Services biologist for opinion on proposed structure designs on the Airport to verify they are unattractive to wildlife.

### **Maintenance Specialists Staff**

- Harass wildlife on or in vicinity of the airport after confirmation the wildlife is not protected, threatened or endangered and is listed on our Federal Fish and Wildlife Permit
- Respond to ATCT reports of wildlife strikes to ensure timely remove any wildlife remains (FOD) from AOA.
- Provide information to supervisor to allow for filing of FAA Wildlife Strike Report (Form 5200-7) for any wildlife strike that occurs during shift, or for any wildlife that is found on the airfield that is believed to have been struck by an aircraft. In the event that identification of the species is not feasible, the remains will be sent for proper identification by the Smithsonian Museum Feather Lab Office.
- Report any unusual or pertinent wildlife activity to the Airport Operations & Maintenance Supervisor and/or USDA-APHIS-Wildlife Biologist, as applicable.
- Maintain a Wildlife Observation Log for any wildlife seen on or in airport vicinity, and provide completed log to supervisor.
- Ensure Operations Vehicles are properly stocked with harassing and wildlife collection materials at the beginning of each shift.
- Immediately report to ATCT any sightings of wildlife on or in the vicinity of the airfield that may pose a danger to aircraft operating in the area.
- Utilize the work order system to address all wildlife issues that fall within the scope of Airfield Maintenance work (fence repair, mowing grass, etc.).
- Issue advisory to pilots operating on STJ or transitioning through STJ airspace of significant wildlife activity observed or reported on CTAF when ATCT is not

operational. Perform work on the airfield fencing, drainage, etc. to mitigate wildlife concerns as directed by work orders in a timely manner.

- Immediately report to ATCT and/or supervisor any sightings of wildlife on or in the vicinity of the airfield that may pose a danger to aircraft operating in the area.
- Assist in clearing wildlife from both the airside and landside facilities and properties of the airport.
- Remove trash and other wildlife attractants from airport grounds

**ATCT**

- Relay information regarding wildlife sightings or reports to the pilots of all aircraft operating on or near the airport vicinity.
- Notify a member of airport staff of any wildlife sighting believed to be a threat to aircraft operations and of any wildlife strike by an aircraft.
- Complete an FAA Form 5200-7 Wildlife Strike Form as required by the ATCT Manager.

## SECTION C – HABITAT & POPULATION MANAGEMENT

### Habitat Management

Habitat management is key to controlling and mitigating wildlife problems on an airport. Unfortunately, STJ faces a difficult situation due to the fact that much of the habitat surrounding the airport cannot be changed or altered. The Missouri River and Browning Lake offer many wildlife attractants and are permanent in nature, leaving few options for the airport to consider. In spite of the obstacles, STJ is proactively seeking solutions to create a habitat that discourages wildlife and is better suited for an airport environment. These actions include, but are not limited to:

- Researching alternative income producing options for converting crop lands
- Eliminating ponding areas on the airfield where possible
- Removing cattails in Browning Lake to reduce waterfowl habitat
- Actively pursuing funding options for installation of approximately 5 miles of suitable wildlife perimeter fencing (Completed)
- Cooperative efforts with local ANG, USDA, farmers and other tenants
- Increased vigilance and patrol frequency to wildlife on airfield inspections
- Consideration and evaluation of wildlife impacts to future expansion efforts
- Monitoring of surrounding area wetland construction attempts

### ***Conversion of Croplands:***

STJ currently has control of approximately 1200 acres of which approximately 563 acres are suitable for planting crops or other vegetation. Historically, STJ has leased this ground to a farmer for the cultivation of soybeans and corn. While these crops potentially provide food and cover for various forms of wildlife, it generates substantial revenue that the airport must have to operate. The Airport has no financial alternative to agricultural crops to produce income necessary to maintain the viability of the airport. The Airport shall not permit agricultural crops within the runway and taxiway Object Free Areas.

### ***Elimination of Ponding Areas:***

Changes in draining patterns and erosion require constant vigilance in the elimination of ponding and/or pooling of water on or near the airfield. STJ airport management will investigate the feasibility of fill in these areas but the majority are Corps of Engineer delineated existing and/or potential wetlands.

### ***Cattail Removal***

Prior to spraying in the fall of 2009, cattails engulfed almost three-fourths of Browning Lake. Many species of waterfowl used the vegetation for cover. The open water created after the removal of the vegetation reduced Browning Lake's attractiveness to waterfowl. The airport is currently monitoring the Lake for any needed vegetation removal projects.

***Introduction of Wildlife Perimeter Fencing:***

The spring of 2019 marked the completion of a perimeter fence around STJ. Building the fence was a joint effort between the City of St. Joseph, the 139<sup>th</sup> Airlift Wing, MODOT, and the FAA. Approximately 25,000 linear feet of fence was installed encompassing the entire airfield. Most of the fence is 8 feet tall with 3 strand of barb wire above. The fence is also buried into the ground 5 feet to prevent wildlife from burrowing underneath. However, around the south perimeter road there is a section of fence made of wood and plastic (approximately 1700 feet, in order to not cause magnetic interference with the ILS).

***Cooperative Efforts:***

STJ airport management continues daily interaction with the local ANG safety, USDA staff and surrounding area farmers. Routine measures include communicating who is actively on the airfield and working wildlife issues, so a consistent harassment is prevalent. Another small example of the team effort is the loaning of our airport boat to USDA, and using their outboard motor on our boat to patrol Browning Lake.

***Airport Inspections:***

Daily inspections made by STJ airport employees help to eliminate attractants on and around the airport. Wildlife remains noticed during these inspections are removed immediately and completely. This quick response removes a food source for several animals, including raptors, foxes, and other carnivores.

***Future Building Plans:***

STJ is currently involved in a number of building projects. As part of the planning process, STJ management is actively engaging the Engineering firms during design to better adapt the plans for use in the airport environment. Part of this process is to review the potential for wildlife attractants during construction and final build out. STJ management plans to provide detailed comments as to how these plans can be altered so the resulting actions will not attract more wildlife. This both mitigates the current wildlife hazard, as well as eliminates future problems before they develop.

***Wetlands near the Airfield:***

In early 2008, STJ airport management learned of a US Army Corp of Engineers project developing a wetland/hunting area within 10,000 feet of the Rosecrans Airport. STJ notified other agencies such as ANG, USDA, and FAA to involve and voice concerns. Despite a multi-agency Memorandum of Understanding restricting such development, this project proceeded. Airport Management collaborated with the FAA Central Region Airports Division Wildlife Specialist to oppose the development. After several months of discussions the Corps did alter the development to a much more suitable plan with restrictions on hunting which was presented to the FAA Central Region Wildlife Specialist who had no objections to the proposal.

Population Management is a tool available when habitat management alone is not sufficient. STJ prefers to mitigate wildlife preemptively by habitat management, but in some cases wildlife physical removal from the area using lethal and non-lethal means is required. Removal is almost exclusively accomplished by USDA staff using the following methods:

- Harassment
- Trapping and relocating
- Egg/Nest Removal
- Lethal Removal
- Managed Hunting
- STJ staff assist efforts
- Habitat/Tree Removal

***Harassment:***

This method utilizes non-lethal tactics in attempts to scare wildlife away from the airport, and to create a non-welcoming atmosphere that deters wildlife from approaching the airfield. The harassing of wildlife involves many methods and is accomplished by STJ airport, ANG and USDA Wildlife Services staff. Three frequently employed harassment methods are; pyrotechnics which utilize loud noises to scare wildlife, vehicular harassment utilizing lights, horns, and movements from automobiles, and also the use of automatic timed propane canons to frighten animals. Harassment is a favored approach to deterrence due to the non-lethal status, availability of resources, and the immediate hazard mitigation.

***Trapping and relocating:***

Wildlife on airport property are captured, transported to a distant location and released safely. This non-lethal method is utilized routinely at STJ. The cons to this method are animal stress, the action is sometimes fatal, and does not guarantee that the animal will not return to the original point of capture. Wildlife Services have utilized this tactic at STJ for the capture and relocation of primarily raptors and dove. They quickly adapt to the new habitat with good results and are often desired by landowners to reduce rodent populations as well as state Conservation areas. Plans for relocation continue to be explored and evaluated by the Airport management, USDA-APHIS-Wildlife Services, and the Missouri Department of Conservation.

For the 2008, 2009 season of increased dove activity USDA trapped and relocated literally hundreds of doves. Additionally USDA has numerous traps for larger animals placed in the airport boundaries.

***Egg/Nest Removal:***

This technique consists of removing the nests and/or the eggs of birds nesting in the airport vicinity and destroying them. This eliminates the possibility of new birds being introduced into the environment. This method has marginal success due to

some birds simply rebuilding a nest and continuing to lay eggs. An example of nest removal involves swallow nests built on the ANG administration building. These nests are removed daily for several weeks to discourage nesting. STJ utilizes egg/nest removal of birds such as Mallard Ducks, Killdeers, Canada Geese, Feral Pigeons, and European Starlings.

***Lethal Removal:***

STJ utilizes this method as a last resort when a wildlife population has not been abated by other non-lethal tactics and poses an imminent danger to aviation safety. Currently, the lethal taking of animals by firearms is normally conducted by ANG and USDA Wildlife Services. STJ reserves the use of lethal tactics for virtually all wildlife threats on and in the vicinity of the airport, but focuses primarily on waterfowl, turkey, coyotes, and deer. STJ staff is trained and authorized for the use of firearms on the AOA and its vicinity per city ordinance and firearm policy.

***Deer Removal:***

STJ management recently contacted the Missouri Department of Conservation to explore the feasibility of a managed deer and/or turkey archery hunt on the western most portion of airport property. The area with suitable cover is a relatively small area and the Conservation agent suspected only marginal results at best. This combined with the fact that historically these type airport hunts have produced only marginal results, have placed this option on hold until conditions might change to produce more positive results.

In the meantime, WS and City staff opportunistically removes deer that are on the AOA and hence an immediate threat to aircraft. WS also conducts nighttime shoots to reduce the population and to limit the opportunities for AOA incursions.

***Habitat/Tree Removal:***

In coordination with the Corp of Engineers, STJ management approves ANG requests to remove trees. This will remove shelter and food source for wildlife, especially deer and raptors.

## SECTION D – WILDLIFE CONTROL PERMITS

### Overview

Federal, state, and local governments administer laws and regulations that protect wildlife and their habitat. A number of laws affect the wildlife control at airports and wildlife control personnel at STJ will adhere to these. Most agencies issue permits to harass and/or take wildlife species. These permits are needed to run a successful control program and will be obtained on a routine basis by the Wildlife Coordinator.

### Missouri Regulations

The Missouri Department of Conservation will issue permissions and permits as needed for the reduction of the wildlife population on airport property.

### Federal Regulations

The U.S. Government has passed several Acts for the protections of wildlife, including the Migratory Bird Treaty Act, the Lacey Act, the Endangered Species Act, the Eagle Protections Act, the national environmental Policy Act, and the federal Insecticide, Fungicide, and Rodenticide Act. These are the basis of most wildlife regulations that have been issued in the **Codes of Federal Regulations (CFR)**. Several agencies are responsible for implementing these regulations and many affect wildlife control at airports. Federal wildlife laws are mostly administered by the U.S. Fish and Wildlife Service (USFWS) and involve primarily migratory birds and threatened and endangered species.

### Wildlife Categories

CFR Title 50 defines the categories of wildlife and regulations for them. For the purposes of this document, feral and free roaming dogs, cats, and other domestic animals are considered “wildlife”, but they are mostly regulated under other Codes. Wildlife categories include resident game birds; resident nongame birds; migratory game birds; migratory nongame birds; crows; blackbirds and magpies; game mammals; furbearers; nongame mammals; feral domestic mammals; reptiles & amphibians; and threatened & endangered wildlife (Table 1). Wildlife control personnel will know the category for the species they are controlling, so that they can determine the relevant laws and necessary permits.

### Reports to USFWS

To fulfill the requirements of this section, STJ will submit a report of the migratory birds taken each calendar year to the USFWS.

**Table 1: Wildlife categories in Missouri and permits for lethal control.**

Category	Species	State Permit <sup>1</sup>	Federal Permit
Resident Game Birds	Ring-necked Pheasant, Northern Bobwhite Quail, Wild Turkey	Yes	No
Resident Nongame Birds	European Starlings, House Sparrows, Pigeons	No	No
Migratory Game Birds	Waterfowl, Raptors, Mourning Doves, Shorebirds, Gulls, Swallows	No	Yes
Migratory Nongame Birds	All other species except resident & migratory game birds, resident nongame birds, and domestic birds	No	Yes
Federal Depredation Order	Blackbirds, Cowbirds, Crows, Magpies	No	No <sup>2</sup>
Game Mammals	White-tailed Deer	Yes	No
Furbearers	Badger, Beaver, Coyote, Raccoon	Yes <sup>3</sup>	No
Nongame Mammals	All species, except game mammals, furbearers, feral domestic mammals and fully protected wildlife	No	No
Feral Domestic Mammals	Dogs, cats, livestock	No	No
Reptiles and Amphibians	All species of reptiles and amphibians, except threatened & endangered species	No	No
Threatened and Endangered Wildlife	Eagles, threatened & endangered species	Yes	Yes

<sup>1</sup>Control actions requiring a state permit should be coordinated through Wildlife Services or one of the Wildlife Damage Biologists with the Missouri Department of Conservation

<sup>2</sup>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)

<sup>3</sup>Control actions can be taken without a state permit if wildlife is causing damage to property or is a threat to public safety (3 CSR 10-4.130 of Wildlife Code of Missouri)



**Residents Game Birds**

Resident game birds are those birds that do not truly migrate, are managed for recreational hunting by the State and are members of the gallinaceous family including turkey, quail, and pheasant. These species are not given any Federal protection but are managed by the State.

**Resident Nongame Birds**

The only birds classified in Missouri as resident nongame birds are the starling, pigeon, and house sparrow. These three species are not afforded any protection and do not require Federal or State permits to harass or take. All other nongame birds are migratory.

**Migratory Birds (Game and Nongame)**

Migratory birds are regulated under Federal Laws and governed by USFWS. They allow hazing of migratory birds when damaging property, but require a permit for take; exceptions are eagles, and threatened and endangered species which require separate permits for take and harassment. States can further regulate migratory birds, but cannot make regulations less restrictive.

***Federal Migratory Bird Permit CFR 50, Part 13***

A depredations permit to take federally protected migratory birds can be obtained by completing a Federal Fish and Wildlife License/Permit Application and submitting it to the U.S. Fish and Wildlife Service, Migratory Bird Permits Office, P.O. Box 25486, DFC, (60130), Denver, CO 80225-4086. The USFWS also requires the permit to be accompanied by a migratory bird Damage Project Report completed by APHIS Wildlife Services (WS). WS will provide a Migratory Bird Damage Project Report to STJ upon request. This Part states that “a fee will not be charged to any...local government...for the proposed activity.” The permit expires annually and a report of the species and number taken must be submitted within 10 days of the expiration. Details for the permit uses are given below.

***CFR 50 Part 21.41 Control of Depredating Birds – Depredation Permits***

- a) *Permit requirement.* Except as provided in 21.42 through 21.46, a depredation permit is required before any person may take, possess, or transport migratory birds for depredation control purposes. No permit is required merely to scare or herd depredating migratory birds other than endangered or threatened species or bald or golden eagles.
- b) *Application procedures.* Submit application for depredation permits to the appropriate Regional Director (Attention: Migratory bird permit office). You can find addresses for the Regional Directors in 50 CFR 2.2. Each application must contain the general information and certification required in §13.12(a) of this subchapter, and the following additional information:
  - 1) A description of the area where depredations are occurring;

- 2) The nature of the crops or other interests being injured;
  - 3) The extent of such injury; and
  - 4) The particular species of migratory birds committing the injury.
- c) *Additional permit conditions.* In addition to the general conditions set forth in part 13 of this subchapter B, depredation permits shall be subject to requires, in this section:
- 1) Permittees may not kill migratory birds unless specifically authorized on the permit.
  - 2) Unless otherwise specifically authorized, when permittees are authorized to kill migratory birds they may do so only with a shotgun not larger than No. 10 gauge fired from the shoulder, and only on or over the threatened area or area described on the permit.
  - 3) Permittees may not use blinds, pits, or other means of concealment, decoys, duck calls, or other devices to lure or entice birds within gun range.
  - 4) All migratory birds killed shall be retrieved by the permittee and turned over to a Bureau representative or his designee for disposition to charitable or other worthy institutions for use as food, or otherwise disposed of as provided by law.
  - 5) Only persons named on the permit are authorized to act as agents of the permittee under authority of the permit.
- d) Tenure of permits. The tenure of depredation permits shall be limited to the dates which appear on its face, but in no case shall be longer than one year.

### **Migratory Bird Permits**

STJ currently has a Federal permit (Appendix A) to take migratory birds. These permits must be renewed annually.

### **Blackbirds & Crows**

Both the USFWS and MDC allow for some common migratory bird species, under certain circumstances, to be controlled without the requirements of a Federal or State permit. Specifically, this includes magpies and all species of blackbirds, grackles, and cowbirds. These species can be controlled, without permit when concentrated in such numbers as to constitute a health hazard or other nuisance. Crows can also be controlled in these circumstances without a federal permit but may require a state permit.

#### ***CFR 50 Part 21.43 Depredation order for blackbirds, cowbirds, grackles, crows and magpies.***

A Federal permit shall not be required to control yellow-headed red-winged, rusty, and Brewer's blackbirds, cowbirds, all grackles, crows, and magpies, when found committing or about to commit depredations upon ornamental or shade trees, agricultural crops, livestock, or wildlife, or when concentrated in such numbers and manner as to constitute a health hazard or other nuisance: *Provided:*

- a) That none of the birds killed pursuant to this section, nor their plumage, shall be sold or offered for sale, but may be possessed, transported, and otherwise disposed of or utilized.
- b) That any person exercising any of the privileges granted by this section shall permit at all reasonable times including during actual operations, any Federal or State game or deputy game agent, warden, protector, or other game law enforcement officer free and unrestricted access over the premises on which such operations have been or are being conducted; and shall furnish promptly to such officer whatever information he may require, concerning said operations.
- c) That nothing in this section shall be construed to authorize the killing of such birds contrary to any State laws or regulations; and that none of the privileges granted under this section shall be exercised unless the person possesses whatever permit as may be required for such activities by the State concerned.

### **Game Mammals**

Game mammals are primarily those mammal species that are hunted (i.e. deer, antelope, and tree squirrels). Currently the STJ area has a large deer population. Deer occasionally gain access to the airfield and need to be excluded with perimeter fencing. Deer or other game mammals that find their way onto the airfield are harassed or lethally removed.

### **Furbearers**

Furbearers periodically need to be controlled, especially raccoons found in structures or when furbearers are found getting on or near runways. A state permit is required to take these animals. Some of these species can be taken by licensed hunters or trappers during designated seasons while other species are protected and do not have open seasons. A Federal USFWS permit is only required when it involves a threatened or endangered species.

### **Nongame Mammals**

Nongame mammals are all mammals other than game mammals, furbearers and feral domestic mammals. State permits are not required to take these species when they could damage or could damage property. Nongame mammals include: skunks, gophers, chipmunks, cottontails, marmots, porcupines, prairie dogs, and field rodents. Although these species pose only a small risk to aircraft, the predator species (i.e. hawks, coyotes, etc.) they attract is a major concern.

### **Feral Domestic Mammals**

The only species of concern in this category is feral dogs, cats, and domestic waterfowl. Currently State and Federal laws do not recognize these species in their laws and a permit is not required to take them. Escaped livestock may also be an occasional

hazard. These species are usually handled by the local Animal Control agency or county sheriff.

### **Reptiles & Amphibians**

Reptiles and amphibians can be attractants to predator species. These species can be taken non-commercially without a permit provided they are not used for human consumption or scientific purposes.

### **Threatened and Endangered Wildlife**

The Endangered Species Act of the U.S. (1966 and amendments, monitored by the USFWS) protects species potentially threatened with extinction. Specifically, this Act list animals and plants as endangered (any 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, these species cannot be taken or harassed without a special permit. If a significant hazard exists with a listed species that is jeopardizing air safety, USFWS and MDC will be contacted for assistance. Only personnel from these agencies or their agents (e.g., WS) can get a permit to alleviate a problem.

### ***Eagle Permits***

Eagles are protected under the Eagle Protections Act and require that their own permit, and are therefore, not included under the Migratory Bird Permit. If a significant hazard exists with a listed species that is jeopardizing air safety, USFWS and MDC will be contacted for assistance. USDA WS personnel have a permit (Appendix A) to harass eagles at STJ.

#### ***CFR 50 Part 22.23 Eagle Permits – Permits to take depredating eagles***

- a) *How do I apply for a permit?* You must submit applications for permits to take depredating bald or golden eagles to the appropriate Regional Director—Attention: Migratory Bird Permit Office. You can find addresses for the appropriate Regional Directors in 50 CFR 2.2. Your application must contain the information and certification required by §13.12(a) of this subchapter, and the following additional information:
- 1) Species and number of eagles proposed to be taken;
  - 2) Location and description of property where taking is proposed;
  - 3) Inclusive dates for which permit is requested;
  - 4) Method of taking proposed;
  - 5) Kind and number of livestock or domestic animals owned by applicant;
  - 6) Kind and amount of alleged damaged; and
  - 7) Name, address, age, and business relationship with applicant of any person the applicant proposes to act for him as his agent in the taking of such eagles.

- b) *What are the permit conditions?* In addition to the general conditions set forth in part 13 of this subchapter B, permits to take depredating bald or golden eagles shall be subject to the following conditions:
- 1) Bald or golden eagles may be taken under permit by firearms, traps, or other suitable means except by poison or from aircraft;
  - 2) The taking of eagles under permit may be done only by the permittee or his agents named in the permit;
  - 3) Any eagle taken under authority of such permit will be promptly turned over to a Service agent or other game law enforcement officer designated in the permit; and
  - 4) In addition to any reporting requirement on a permit, you must submit a report of activities conducted under the permit to the appropriate Regional Director—Attention: Migratory Bird Permit Office within 10 days following completion of the taking operations or the expiration of the permit, whichever occurs first.
- c) *Issuance criteria.* The Director shall conduct an investigation and not issue a permit to take depredating bald or golden eagles unless he has determined that such taking is compatible with the preservation of the bald or golden eagle. In making such determination the Director shall consider the following:
- 1) The direct or indirect effect which issuing such permit would be likely to have upon the wild population of bald or golden eagles;
  - 2) Whether there is evidence to show that bald or golden eagles have in fact become seriously injurious to wildlife or to agriculture or other interests in the particular locality to be covered by the permit, and the injury complained of is substantial; and
  - 3) Whether the only way to abate the damage caused by the bald or golden eagle is to take some or all of the offending birds.
- d) *Tenure of permits.* The tenure of any permit to take bald or golden eagles for depredation control purposes shall be that shown on the face thereof, and shall in no case be longer than 90 days from date of issue.

### **Habitat conservation**

USFWS and MDC are responsible for species conservation and recovery plans. This includes the identifications of critical habitat when it is associated with the decline of a species. Habitat alterations and developments can be banned in areas where critical habitat has been designated or where such changes could conceivably result in the inadvertent take of an endangered species. Airport projects, however, may be completed with the appropriate mitigations measures. Consultation with the USFWS or MDC biologists will determine this.

**Wetlands Mitigation**

Wetland modification may require permits from various agencies such as the USFWS, U.S. Army Corps of Engineers (USCOE), MDC, and/or Missouri Department of Health, any of which may require mitigation before proceeding. In accordance with 40 CFR 1505.3, the FAA has outlined a series of procedures for mitigating major impacts resulting from project development.

**Endangered Species List**

The USFWS keeps a current listing of federally endangered, threatened and sensitive species that can be found on the internet at <http://www.fws.gov/endangered>. Wildlife control personnel at STJ need to be familiar with these species and their potential occurrence at the airport (Appendix). Some of these species, particularly bald eagles may present hazards to air traffic, and permits are required to harass them. In most cases, permits will not be given to lethally remove threatened and endangered species. STJ wildlife control personnel will be able to identify these species and will have the appropriate permits to haze them when necessary. Habitat critical to these species is also regulated by the USFWS and can have an effect on habitat modification plans to reduce wildlife hazards.

## SECTION E – IDENTIFICATION OF RESOURCES

### Personnel

#### ***Operations Department:***

The first line of defense against wildlife hazards at STJ will be the Airport Maintenance Specialists. These personnel are managed by the Airport Operations Manager. These individuals are primary in handling most wildlife situations that arise at the airport. The Operations and Maintenance staff participates in an annual training course by the USDA Wildlife Service that covers wildlife species, dangers, and control techniques. At times of full staffing, Operations Personnel are in the field 7 days a week from 0700-1530 local time. The Operations staff is on call and will respond to the airport if a wildlife situation required.

#### ***USDA-APHIS-Wildlife Services:***

STJ currently enjoys via an ANG grant, an annual service contract with an on airfield staff member of USDA-APHIS-Wildlife Services. The services provided greatly contribute to the effectiveness of the WHMP. These services include but are not limited to:

- The removal of wildlife by lethal means, when necessary.
- The trapping and relocating of animals as determined necessary.
- Providing advice as to which course of action should be taken to mitigate a known wildlife hazard.
- Providing necessary training to airport employees regarding the issue of wildlife identification and hazard management.

#### ***City of St. Joseph Animal Control:***

The City Animal Control division will be utilized by STJ to provide assistance in the removal of certain animals, both wild and domestic, that fall outside the scope of Wildlife Services or in the event Wildlife Services cannot respond.

### Inspections

As described in the Airport Certification Manual, STJ conducts an airport safety self-inspection daily, seven days a week. During these inspections, the Operations Staff gives close attention to any wildlife problem observed on or near the airfield and takes appropriate action as necessary.

Operations personnel will respond to the airfield immediately to mitigate any wildlife hazards that arise and are observed by others such as pilots, ATCT, ANG, etc.

## Equipment

All of the personnel listed above, with the exception of Animal Control have access to special purpose vehicles which have equipped with two way radios, lights, and capabilities to operate on the airfield. All personnel have the training required to operate these vehicles on the airfield. If Animal Control is required on the field, they shall be escorted by STJ staff qualified to operate on the airfield movement areas. USDA has their own vehicle, equipment, two way radios and are movement area trained.

## Supplies

The airport has purchased and maintains an inventory of supplies that may be utilized by the personnel who respond to wildlife situations.

These supplies include:

- Pistol launchers
- Propane Cannons
- Bird Bombers/Bangers
- Bird Whistlers/Screamers
- 12-gauge Shotgun
- Assorted Shotgun Shells
- Binoculars
- Field Guides - Birds of Eastern and Central North America
- Latex Gloves
- Bird Strike Kit and Forms
- Shovels
- Recognition Aides of any federally listed or proposed threatened or endangered species to provide description and aid in recognition and avoidance of any harassment and/or removal.



## SECTION F – AIR CARRIER OPERATIONS

### Airport Certification

Rosecrans Memorial Airport is a Class IV Airport as determined by Code of Federal Regulation 14, Part 139. Category IV airports serve Unscheduled Large Air Carriers which limits air carrier operations on the airfield. A 24 hour prior permission is required (PPR) for all air carrier operations in excess of 30 seats that wish to operate to/from STJ. STJ currently averages less than 15 air carrier operations per year.

Regardless of the passengers or nature of the flight, air carrier operations are typically scheduled days in advance and receive special attention when they arrive. A sweep of the runways, including all runway safety areas, is conducted by Airport Operations. During these inspections, the inspector is very conscious and wary of potential dangers, including any wildlife threats. If a wildlife hazard is noticed on or near the airport prior to or during an air carrier operation, Airport Operations will immediately notify the Control Tower via Ground Radio Frequency or telephone while simultaneously taking action to deter and mitigate the wildlife threat.

## SECTION G – WILDLIFE ACTIVITY REPORTING

### Wildlife Reports

Realizing the need for a constant, day-to-day reporting system, STJ has utilized a simple reporting system utilized by all Operations Staff. The General Wildlife Observation Form for recording and reporting all observed wildlife activity that occurs in the vicinity of the airport. This form is in a table format allowing the person reporting to document certain details of each observed wildlife event at STJ including:

- Observer's initials
- Date
- Time
- Location
- Wildlife species
- Number of wildlife observed
- Weather conditions
- Harassment methods and results
- Whether or not the observed event was on the Airport Operations Area (AOA).

A copy of a completed form is submitted to the USDA-APHIS-Wildlife Service biologist for review and utilized to determine priorities and resource allocation. The events are logged on the General Wildlife Observation Form are either observed by the Operations and Maintenance Personnel firsthand, or entered by the Operations Manager as reported by another entity. In this manner, valuable feedback is obtained by Airport Management and all other parties as to the effectiveness of the WHMP, or as to any new threats and wildlife behavior patterns that have arisen that may necessitate further action.

## SECTION H – WILDLIFE TRAINING PROGRAM

### Annual Training

Annual wildlife training is administered by a USDA-APHIS-Wildlife Services Biologist at the STJ facility. Personnel trained include STJ management and Operations and Maintenance employees.

In accordance with FAA Advisory Circular 150/5200-36, current edition a curriculum will be followed that includes the following subjects:

- General Survey of Wildlife Hazards to Aviation
- Review of Wildlife Strikes, Control Actions, and Observations at airport over the previous 12 months.
- Review of the Wildlife Hazard Assessment
- Wildlife Identification (Bird and Mammal)
- Pyrotechnic Training
- Training with emphasis on recognition and identification of any/all wildlife listed Federally as endangered, threatened and/or protected.
- Any other training required by local, state, or federal regulations.

The Airport Manager will be responsible for coordinating USDA-APHIS-Wildlife Service's Training to provide initial training to new employees. Subsequent annual training will be conducted by the USDA Biologist as required by the FAA.

## SECTION I – WHMP ANNUAL REVIEW

The WHMP will be reviewed and evaluated every 12 consecutive calendar months during the annual training conducted by a qualified wildlife damage management biologist. In addition, a review of the WHMP will be conducted following an event described in Part 139.337(b)(1), (b)(2) or (b)(3), which includes:

- 1) An air carrier aircraft experiences multiple wildlife strikes.
- 2) An air carrier aircraft experiences substantial damage from striking wildlife.
- 3) An air carrier aircraft experiences an engine ingestion of wildlife.

The review and evaluation of the WHMP will include the following:

- 1) The WHMP's effectiveness in dealing with known wildlife hazards on the airport and in the airport's vicinity.
- 2) Aspects of the wildlife hazards described in the Wildlife Hazard Assessment that should be reevaluated.

**APPENDIX A – PERMITS**

## APPENDIX B – ENDANGERED AND THREATENED SPECIES

### Whooping Crane

The whooping crane is the tallest North American bird. Males, which may approach 1.5 meters in height, are larger than females. Adults are snowy white except for black primary feathers on the wings and a bare red face and crown. The bill is a dark olive-gray, which becomes lighter during the breeding season. The eyes are yellow and the legs and feet are gray-black. Immature cranes are a reddish cinnamon color that results in a mottled appearance as the white feather bases extend. The juvenile plumage is gradually replaced through the winter months and becomes predominantly white by the following spring as the dark red crown and face appear. Yearlings achieve the typical adult appearance by late in their second summer or fall. The life span is estimated to be 22 to 24 years in the wild. Whooping cranes are omnivorous feeders. They feed on insects, frogs, rodents, small birds, minnows, and berries in the summer. In the winter, they focus on predominantly animal foods, especially blue crabs and clams. They also, forage for acorns, snails, crayfish and insects in upland area



**Piping Plover**

Piping plovers (*Charadrius melodus*) are small shorebirds approximately seven inches long with sand-colored plumage on their backs and crown and white underparts. Breeding birds have a single black breastband, a black bar across the forehead, bright orange legs and bill, and a black tip on the bill. During winter, the birds lose the black bands, the legs fade to pale yellow, and the bill becomes mostly black.



**Least Tern**

This 8 to 9 inch birds have a black "crown" on their head, a snowy whiter underside and forehead, grayish back and wings, orange legs, and a yellow bill with a black tip. From late April to August, terns use barren to sparsely vegetated sandbars along rivers, sand and gravel pits, or lake and reservoir shorelines. The terns nest in a shallow hole scraped in an open sandy area, gravelly patch, or exposed flat. They nest in small colonies. The chicks leave the nest only a few days after hatching, but the adults continue to care for them, leading them to shelter in nearby grasses and bringing them food. The terns hover over and dive into standing or flowing water to catch small fish.





**Bald Eagles**

A large raptor (bird of prey), the bald eagle has a wingspread of 5½ to 8 feet. Adults have a dark brown body and wings, white head and tail, and a yellow beak. In flight, the bald eagle often soars or glides with the wings held at a right angle to the body. Juvenile bald eagles have mottled brown and white plumage, gradually acquiring their dark brown body and distinctive white head and tail as they mature. Bald eagles generally attain adult plumage by 5 years of age. Adults weigh 8 to 14 pounds, occasionally reaching 16 pounds in Alaska. Those in the northern range grow larger than those in the south, and females are somewhat larger than males.

