

Huron Regional Airport Environmental Assessment

Wildlife Hazard Mitigation Plan

Appendix D

Huron Regional Airport

WILDLIFE HAZARD MANAGEMENT PLAN

Developed by:

**Huron Regional Airport
470th 15th Street NW
Huron, ND 58350**

In Cooperation with:



**U.S. Department of Agriculture
Animal and Plant Health Inspection Service
Wildlife Services
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The following Wildlife Hazard Management Plan for Huron Regional Airport (HON) was written to fulfill the requirements of 14 CFR Part 139.337 (e). This manual is intended specifically to reduce wildlife hazards at HON.

The plan has been reviewed and accepted and will become effective with the following signatures.

Larry Cooper
Airport Manager
Huron Regional Airport

Date

Carlton Lambiasi
Airport Safety/Certification Inspector
FAA Airports

Date

Timothy Pugh
Wildlife Biologist
USDA-APHIS-WS

Date

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DISTRIBUTION OF WILDLIFE HAZARD MANAGEMENT PLAN

POSITION / PHONE	AGENCY / ADDRESS
AGL – 621 (847) 294-7509 (Airport Certification Safety Inspector)	Federal Aviation Administration Airport Division 2300 East Devon Street Des Plaines, IL 60018
Airport Manager (605) 353-8516 Airport Maintenance Worker (605) 353-8516	City of Huron Huron Regional Airport 470 15 th St. NW Huron, SD 57350
Timothy Pugh (605) 224-8692 Airport Biologist	USDA-APHIS-WS 420 South Garfield Avenue, Suite 300 Pierre, SD 57501

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This Wildlife Hazard Management Plan has been incorporated into the Airport Certification Manual for the Huron Regional Airport. The bottom of each page contains a date in the footer, which is the date that the particular section, chapter or page was written or revised. In all cases the latest dated section, chapter or page will be the most current for the policy. The master document and an electronic copy are contained in the office of the Airport Manager. Revisions to this plan will be recorded on the revisions page.

TABLE OF REVISIONS

DATE	PAGE	REVISION

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1 – INTRODUCTION

OVERVIEW	<p>Wildlife hazard management plans (WHMP) address the responsibilities, policies, and procedures necessary to reduce wildlife hazards at airports. The Federal Aviation Administration (FAA) recognizes the potential hazards wildlife pose and requires airports that incur bird-aircraft strikes to implement a WHMP according to CFR 14 - Part 139.337 (see pg. 2).</p>
BACKGROUND	<p>Wildlife creates a variety of problems at airports that can compromise safe aircraft operations. The most significant are the thousands of collisions that occur annually between wildlife and aircraft. Wildlife strikes result in millions of dollars in direct and indirect damages. Fortunately, wildlife strikes usually do not result in catastrophic accidents involving the loss of human lives, but the potential is real nonetheless and has occurred a number of times in the past. Wildlife has other adverse impacts at airports such as rodents chewing on electric cables powering runway lights, birds nesting in hangars and aircraft, birds roosting and damaging equipment with their corrosive droppings and vectoring transmissible airborne diseases.</p>
PROBLEM SPECIES	<p>The species generally considered the greatest threat to aviation are birds with flocking tendencies or of relatively large size, such as gulls, waterfowl, blackbirds, and hawks. At the Huron Regional Airport, hereafter referred to by the FAA identifier code HON, Ducks probably present the greatest avian threat to airport/aircraft safety due to their large size, abundant numbers, flocking behavior and their tendency to fly, feed and loaf on or near active runways. Hawks are also a concern for many of the same reasons, i.e. large size and activity on the airfield in Summer and Fall. Blackbirds are also of concern because of their large numbers and flocking behavior. Rock doves, or pigeons, are a significant hazard at HON due to their abundant numbers locally and tendency to nest and roost on structures near the airfield. Other migratory species also pose high risks for aviation because of their general unfamiliarity with the airport environment. Larger mammals, primarily deer, and to some extent fox, coyotes and jackrabbits, also present hazards to aircraft safety at HON.</p>

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PURPOSE

Enhancing safe air carrier operations is a primary objective of the Huron Regional Airport (HON). This entails all aspects from arrival to departure of aircraft in the vicinity of HON, and includes wildlife hazards on and around the airport. HON will implement and maintain a WHMP for the airport according to CFR 14- Part 139.337(f).

SCOPE

This WHMP addresses the wildlife hazards at and around HON with recommended actions for reducing such hazards. The contents of this document are intended to compliment the Wildlife Hazard Assessment (Appendix A) completed in 2009 by the U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services (WS) under a cooperative agreement with Huron Regional Airport. The Wildlife Hazard Assessment fulfilled the requirements of subsections (b) and (c) of 14 CFR 139.337, whereas this plan fulfills requirements listed under subsection (f) of the same regulation.

EVALUATION OF THE PLAN

Wildlife hazards at HON will be monitored regularly as part of the ongoing wildlife control program and the WHMP will be reviewed at least annually and updated as necessary (see Chapter 8).

CFR 14 – PART 139.337

**CODES OF FEDERAL REGULATIONS - AVIATION
Wildlife hazard management.**

(a) In accordance with its Airport Certification Manual and the requirements of this section, each certificate holder must take immediate action to alleviate wildlife hazards whenever they are detected.

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

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

(c) The wildlife hazard assessment required in paragraph (b) of this section must be conducted by a wildlife damage management biologist who has professional training and/or experience in wildlife hazard management at airports or an individual working under direct supervision of such an individual. The wildlife hazard assessment must contain at least the following:

- (1) An analysis of the events or circumstances that prompted the assessment.
- (2) Identification of the wildlife species observed and their numbers, locations, local movements, and daily and seasonal occurrences.

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- (3) Identification and location of features on and near the airport that attract wildlife.
 - (4) A description of the wildlife hazards to air carrier operations.
 - (5) Recommended actions for reducing identified wildlife hazards to air carrier operations.
- (d) The wildlife hazard assessment required under paragraph (b) of this section must be submitted to the Administrator for approval and determination of the need for a wildlife hazard management plan. In reaching this determination, the Administrator will consider-
- (1) The wildlife hazard assessment;
 - (2) Actions recommended in the wildlife hazard assessment to reduce wildlife hazards;
 - (3) The aeronautical activity at the airport, including the frequency and size of air carrier aircraft;
 - (4) The views of the certificate holder;
 - (5) The views of the airport users; and
 - (6) Any other known factors relating to the wildlife hazard of which the Administrator is aware.
- (e) When the Administrator determines that a wildlife hazard management plan is needed, the certificate holder must formulate and implement a plan using the wildlife hazard assessment as a basis. The plan must-
- (1) Provide measures to alleviate or eliminate wildlife hazards to air carrier operations;
 - (2) Be submitted to, and approved by, the Administrator prior to implementation; and
 - (3) As authorized by the Administrator, become a part of the Airport Certification Manual.
- (f) The plan must include at least the following:
- (1) A list of the individuals having authority and responsibility for implementing each aspect of the plan..
 - (2) A list prioritizing the following actions identified in the wildlife hazard assessment and target dates for their initiation and completion:
 - (i) Wildlife population management;
 - (ii) Habitat modification; and
 - (iii) Land use changes.
 - (3) 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-
 - (i) Designation of personnel responsible for implementing the procedures;
 - (ii) Provisions to conduct physical inspections of the aircraft movement areas and other areas critical to successfully manage known wildlife hazards before air carrier operations begin;
 - (iii) Wildlife control measures; and
 - (iv) 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 wildlife hazard management plan annually or following an event described in paragraphs (b,1), (b,2) and (b,3) of this section, including:
 - (i) The plan's effectiveness in dealing with known wildlife hazards on and in the airport's vicinity and
 - (ii) Aspects of the wildlife hazards described in the wildlife hazard assessment that should be reevaluated.
 - (7) A training program conducted by a qualified wildlife damage management

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biologist to provide airport personnel with the knowledge and skills needed to successfully carry out the wildlife hazard management plan required by paragraph (d) of this section.

(g) FAA Advisory Circulars contain methods and procedures for wildlife hazard management at airports that are acceptable to the Administrator

DEFINITIONS

Airport Manager – City of Huron, Director of Airports
Airport Duty Managers- Airport Operations staff trained and equipped to respond to wildlife hazards on the airfield
Critical Zone - the area within a 2-mile radius of a runway centerline
Edge - an area where two habitat types adjoin, often highly attractive to wildlife
Feral Animal - domestic animal reverted to living in the wild, also will include strays
General Zone - the area within a 5-mile radius of a runway centerline
Habitat - the environment where an animal lives
Migratory Birds - bird species wherein at least part of their population migrates between breeding and wintering grounds
Wildlife Control Personnel – airport personnel trained and equipped to respond to wildlife hazards on the airfield (*Airport Duty Managers and Airport Maintenance employees*)
Wildlife Coordinator - the person(s) responsible for overseeing review and implementation of the Wildlife Hazard Management Plan. Currently the HON Airport Manager.
Wildlife Hazard Working Group (WHWG) - a committee formed to monitor and implement the Wildlife Hazard Management Plan
Wildlife Hazard Management Plan (WHMP)- a document that gives guidance to airport personnel on how to reduce wildlife hazards to aircraft on the airfield
Wildlife Strike - an incident that involves an airplane colliding with an animal

ACRONYMS

HON- Huron Regional Airport
AGL - Above Ground Level
AC - FAA Advisory Circular (guidelines established by the FAA)
AOA - Air Operations Area
BIS-ADO - FAA Bismarck Airports District Office
CFR - Codes of Federal Regulations
EPA - U.S. Environmental Protection Agency
FAA - U.S. Department of Transportation, Federal Aviation Administration
FOD - Foreign Object Debris/damage
NOTAM - Notice to Airmen
SDCL – South Dakota Codified Law
SDGFP – South Dakota Game Fish and Parks Department
USFWS - U.S. Department of Interior, Fish and Wildlife Service
WHA - Wildlife Hazard Assessment
WHWG - Wildlife Hazard Working Group
WHMP - Wildlife Hazard Management Plan
WS - U. S. Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services program - North Dakota/South Dakota

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2 – AUTHORITY

OVERVIEW	<p>The Airport Manager or his designee has the authority and responsibility of designating a Wildlife Coordinator to implement the Wildlife Hazard Management Plan (WHMP). Each department having responsibilities outlined in the WHMP will incorporate them into their programs. The Airport Manager or his designee will ensure that the WHMP and amendments adhere to Federal, State, and local laws and regulations. The Airport Manager or his designee will ensure that the WHMP is approved by the FAA.</p>
WILDLIFE COORDINATOR	<ul style="list-style-type: none"> • Establish and chair Wildlife Hazard Working Group (WHWG) • Supervise, coordinate, conduct, and monitor wildlife activities in accordance with the WHMP • Update the WHMP as necessary • Disseminate information and assignments through the WHWG • Provide for the proper training of wildlife control personnel in the safe handling and proper use of wildlife dispersal methods and equipment, including the safe use of firearms and pyrotechnics • Issue NOTAM’s if necessary to warn pilots of wildlife hazards • Provide public relations support for wildlife control activities as necessary • Monitor facilities and tenant concerns for wildlife problems • Maintain a log of all wildlife strikes and control actions and forward reports to FAA as necessary • Make wildlife strike report forms, FAA 5200-7 (Appendix B), readily available to airfield operations and pilots, and encourage them to be submitted • Review with a wildlife damage biologist, all land-use projects on & off the airport to discourage projects or designs that could potentially increase wildlife hazards at HON

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AIRPORT DUTY MANAGERS

- Purchase and stock the necessary supplies to conduct wildlife control (Chapter 5)
- Obtain the appropriate permits for wildlife control (See Appendix D and E)
- Conduct routine runways sweeps for dead birds and hazardous wildlife at least 2 times per day and record all findings
- Haze wildlife from runways when appropriate (Chapter 6)
- Record all wildlife activity or animals dispersed or shot in the “Wildlife Activity Log” (Appendix C), and report to the Wildlife Coordinator at the end of the month
- Log all known wildlife strikes on form FAA 5200-7 (Appendix B) and forward them to the Wildlife Coordinator (all known wildlife strikes or wildlife found within 200 feet of a runway centerline and likely involved in a strike will be reported)
- Warn pilots of wildlife hazards and close runways via NOTAM’s if necessary

AIRPORT MAINTENANCE

- Assist with habitat modifications addressed in the Wildlife Hazard Assessment and WHMP such as vegetation maintenance, brush and tree removal (Chapter 3)
- Mow grass to the recommended heights (Chapter 3)
- Maintain perimeter wildlife fence to exclude large mammals such as deer
- Maintain ditches and fill low spots to avoid pooling water
- Coordinate landscape changes with the Wildlife Coordinator to ensure that wildlife habitat is minimized
- Assist as necessary with wildlife control activities involving field rodents, rabbits, bird abatement, and other programs
- Inform Wildlife Coordinator of birds, rodents and other wildlife found in and around buildings
- Bird-proof hangars and other airport buildings

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**WILDLIFE
HAZARD
WORKING
GROUP
(WHWG)**

The WHWG will monitor and implement the Wildlife Hazard Management Plan. The WHWG will include:

- Wildlife Coordinator
- Airport Duty Managers
- Airport Maintenance Managers

**WHMP
REVIEW**

WHWG is responsible for reviewing the WHMP as it relates to each member’s respective departmental duties on a quarterly basis and to report activities, status, and recommendations to the Wildlife Coordinator, who will in-turn review and grant approval if satisfied with the progress of the WHMP.

**FAA ADVISORY
CIRCULAR NO.
150/5200-32A**

Subject: Reporting Wildlife Strikes. 12/22/2004 (A copy of the form is contained in Appendix B and can also be downloaded or submitted via the internet at: http://wildlife-mitigation.tc.faa.gov/public_html/index.html.)

1. PURPOSE. This advisory circular (AC) explains the nature of the importance of reporting collisions between aircraft and wildlife, more commonly referred to as wildlife strikes. It also examines recent improvements in the Federal Aviation Administration’s (FAA) Bird/Other Wildlife Strike Reporting system; how to report a wildlife strike; what happens to the wildlife strike report data; how to access the FAA National Wildlife Aircraft Strike Database; and the FAA’s Feather Identification program.

2. BACKGROUND.
The FAA has long recognized the threat to aviation safety posed by wildlife strikes. Worldwide, wildlife strikes cost civil aviation an estimated \$1.2 billion annually. Each year in the U.S., wildlife strikes to U.S. civil aircraft cause about \$500 million in damage to aircraft and about 500,000 hours of civil aircraft down time. For the period 1990—2004, over 63,000 wildlife strikes were reported to the FAA. About 97 percent of all wildlife strikes reported to the FAA involve birds, almost 3 percent involve mammals and less than 1 percent involved reptiles. Waterfowl (ducks and geese), gulls, and raptors (mainly hawks and vultures) are the bird species that cause the most damage to civil aircraft in the United States. Vultures and waterfowl cause the most losses to U.S. military aircraft. The FAA has initiated several programs to address this important safety issue, including the collection, analysis, and dissemination of wildlife strike data. The FAA actively encourages the voluntary reporting of wildlife strikes.

3. HOW TO REPORT A WILDLIFE STRIKE: Wildlife strikes may be reported to the FAA using the paper FAA Form 5200-7 Bird/Other Wildlife Strike Report, or electronically at the *Airport Wildlife Hazard Mitigation* web site: <http://wildlife-mitigation.tc.faa.gov>. The FAA’s Bird/Other Wildlife Strike Report Form can be downloaded or printed from the same web site. Paper copies of Form 5200-7 may also be obtained from the appropriate Airports District Offices (ADO), Flight Standards District Offices (FSDO), and Flight Service Stations (FSS). Copies of the Bird/Other Wildlife

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Strike Report form are also found in the Airman’s Information Manual (AIM). Paper forms are pre-addressed to the FAA. No postage is needed if the form is mailed in the United States. It is important to include as much information as possible on the strike report.

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3 – HABITAT MANAGEMENT

OVERVIEW	<p>Habitat management is the most effective long-term remedial measure for reducing wildlife hazards on, or near, airports. Habitat management includes the physical removal, exclusion, or manipulation of areas that are attractive to wildlife. The ultimate goal is to make the environment fairly uniform and unattractive to the species considered the greatest hazard to aviation. Habitat modifications will be monitored carefully to ensure that they reduce wildlife hazards and do not create new problems.</p>
ATTRACTANTS	<p>Wildlife is attracted to airports because of the availability of one or more of their basic needs - water, food, and cover. Water sources can be lakes, streams, ditches, and temporary pools formed from rains, sprinkler systems, and outdoor water fountains. Food sources might be rodents, insects, earthworms, other invertebrates, reptiles, amphibians, seeds, fruits, nuts, refuse, and handouts. Wildlife will find cover in trees, weedy fields, crops, tall grass, streamside vegetation, burrows, buildings, and structures like culverts and abandoned machinery. Reduction of these will inherently reduce the species of wildlife and their populations that use an area.</p>
GENERAL ZONE	<p>The General Zone for an airport is the area within a five-mile radius of the runway centerline. Wildlife attractants in this area are considered to have an impact on air traffic, particularly those that lie within the approach and departure patterns. The long-range goal for this plan is to actively reduce, to the extent economically practicable, attractive wildlife habitat on property under the control of the Huron Regional Airport.</p>
CRITICAL ZONE	<p>The area within a 10,000-foot radius of the runway centerline is delineated as the Critical Zone. Control efforts will be concentrated primarily within this area because approximately 75% of all civil bird-aircraft strikes occur within 10,000 feet of the airfield from which they depart or land, because aircraft are typically under 500 feet AGL.</p>

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**EDGE
REMOVAL**

Edge or ecotone zones, the place where different habitats meet, are often most attractive to wildlife because their biological needs can be met in a relatively small space. Much of the “edge” near the runways has been minimized by HON maintenance through mowing and vegetation management.

**AIRPORT
BUILDING
PROJECTS**

The Wildlife Coordinator will participate in the initial phases of all airport building projects to avoid an increase in wildlife hazards resulting from the architectural or landscape changes. Every effort will be made to minimize or eliminate designs that may attract wildlife.

**NON-AIRPORT
LAND-USE
PROJECTS**

Whenever possible, the Wildlife Coordinator will actively participate in land-use decisions and landscape changes that may inadvertently result in wildlife hazards to aircraft, provided they have the authority to do so. The Bismarck Airports District Office (BIS-ADO) and the Safety and Standards Branch of the FAA Great Lakes Region will provide technical guidance to airport operators in addressing land use compatibility issues. Proposed projects that will likely increase bird numbers within flight zones will be discouraged when the authority to do so is available. Incompatible land uses are described in FAA Advisory Circular No. 150/5200-33B (Appendix F), and include putrescible waste landfills (and in some instances, transfer stations and other solid waste disposal facilities); water reservoirs, sewage ponds, parks with artificial ponds, and sludge disposal sites; feed lots and slaughter houses; and wildlife refuges, sanctuaries, and production areas. These types of land-use changes will be monitored by working with the local planning authorities.

PART A

WATER MANAGEMENT

OVERVIEW

The general and critical zones around HON contain a complexity of temporary, seasonal, semi-permanent and permanent wetlands such as ponds, streams, rivers, marshes, lakes and drainage areas that provide water, food and cover for many wildlife species. The airfield has a large cattail wetland that remains wet through most of the year. Additionally there are several low areas and slow draining ditches that hold water temporarily for long periods. A nearby creek flows under the airfield creating ponds on the private land and golf courses adjacent to the airport. These bodies of water along with other wetlands in the area contribute to the incidence of hazardous birds at HON, primarily ducks.

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WETLANDS

Some areas on the airfield may remain seasonally wet or will temporarily hold standing water. These areas should be filled, graded or modified such that water consistently drains into ditches or away from the airfield. Any future wetland mitigation resulting from airport construction projects will be implemented as far away from the airfield as possible and will comply with criteria described in AC 150/5200-33B (Appendix F). HON management should take advantage of any opportunities to reduce or eliminate wetlands from the adjacent golf courses or nearby properties.

TEMPORARY POOLS

Where pooling conditions are found, the land should be filled or graded such that water consistently drains into ditches. Ditches should be appropriately sloped so that water does not pool and will leave the airfield in an appropriate amount of time.

RUNWAYS, TAXIWAYS & APRONS

Ensure the airport runways, taxiways, and aprons have enough camber so that water does not pool. Pools that persistently remain after rains will be removed with squeegees or other method until the areas where water pools can be corrected structurally.

PART B

VEGETATION MANAGEMENT

OVERVIEW

HON has a diversity of vegetation types, some being highly attractive to wildlife. The most effective approach to reducing this attraction in the critical zone is to eliminate all agricultural crops, alfalfa, trees, shrubs, weeds and plants, and establish a grass hay crop involving warm season grasses and a mowing regime that minimizes seed production, bird nesting and bird activity.

GRASS MANAGEMENT

Other than paved areas, grass will be the primary cover inside the perimeter wildlife fence. FAA Certalert No. 98-05 (Appendix H) advises that “airport operators should ensure that grass species and other varieties of plants attractive to hazardous wildlife are not used on the airport”. In addition, grasses that produce large seeds and are known to be attractive to wildlife will be avoided when planting new areas. All non-grass species (alfalfa, sweet clover, thistle etc) will be controlled with a broadleaf herbicide or other appropriate methods.

Grass type

The type of grass used within the wildlife fence should produce small or no seeds, but still able to generate new growth or reseed itself to provide

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a thick, monotypic stand and prevent erosion. It needs to withstand drought, flooding, and other normal climatic conditions, and be somewhat unpalatable to grazers such as geese and deer.

In general, cool season grasses such as brome and blue grasses are not usually recommended as they typically have two growing seasons that vary considerably from year to year. If conditions are not just right, these areas often become weedy and can produce a lot of seed. However, if fertilized sufficiently to produce a dense stand, and mowed regularly to maintain proper height and prevent seed formation, these grass types can be managed to minimize their attraction to wildlife.

Warm season grasses (i.e. buffalo, bluestem and fescues) have only one growing season which is more predictable. Western wheat grass, (although technically a cool season grass) grows similar to warm season grasses. It greens up late in the spring and typically does not grow after mid summer. Western wheat grass is highly recommended by NRCS plant materials specialist for airports in the Dakotas. When sparse, it can produce a lot of seed. However, once established, seed is rarely produced. Western wheat grass is broadly adapted to a variety of environments and conditions and makes a good hay crop. Intermediate wheat grass has similar characteristics to western wheat grass but will produce seeds in a moist year. Fescues may be a good mix with western wheat grass however it does produce seeds and should be mowed regularly to prevent seed formation. Buffalo and gramma grasses are native low growing grasses that are well suited to the Huron climate. NRCS plant materials specialists will be consulted before planting any new grasses on the HON airfield.

Grass height

Grass height on the airfield within 600 feet of the runways will be maintained between 6 and 10 inches, except for those areas within the runway/taxiway safety areas where grass height will be maintained between 3 and 4 inches for purposes of visibility. Grass height may exceed 10 inches temporarily during the brief period prior to hay cutting. Areas beyond 600 feet of the runways will be maintained at a height of 6 – 20 inches.

Mowing

The first mowing/haying of the year should be done prior to seed production. When possible, grass will be mowed during the middle of the day when birds are the most inactive. Mowing is quite attractive to several species of birds and mammals because it exposes food such as rodents, insects and seeds. If cutting is being conducted during the day and birds are attracted to the activity, then mowing will be conducted at night. Mowing activities will be coordinated with the wildlife control

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team. Any areas inside the wildlife fence that are not hayed (i.e. marsh areas, steeply sloped areas or areas missed during haying) will be mowed with whatever means necessary (hand mower, weed wacker etc.) to maintain the proper grass height of 6 – 10 inches. Hay will be removed from the airfield shortly after baling and will not be stored on HON property.

TREES AND SHRUBS

Trees and shrubs are utilized by a variety of avian and mammalian wildlife for a variety of reasons. All woody vegetation will be removed from the airfield as soon as it appears. HON management will take advantage of any opportunities to reduce or eliminate trees from nearby properties and the adjacent golf courses.

AGRICULTURE

Agriculture is not permitted on airport property within the security fenced area. According to FAA regulations, agricultural practices can only be conducted on airport property where they do not conflict with air safety. Except for haying purposes, there are no active lease agreements within the HON perimeter fence. However, adjacent cropland northwest of the airfield, along with the temporary standing water it often contains, does attract several bird species, especially ducks.

WETLAND VEGETATION

Cattails, willows, weeds, trees, shrubs and other vegetation growing in wet areas provide excellent wildlife habitat. The vegetation that grows alongside ditches or runoff areas should be removed and maintained at low levels so that habitat is not provided for waterfowl, pheasants, rabbits, blackbirds and others. Crushed rock can be used to replace undesirable plants and conceal wet areas.

RIVER ROCK AND GRAVEL

River rock or gravel (larger than 2" in diameter) is an excellent ground cover because it does not provide wildlife habitat as long as weeds are not allowed to grow, debris is not allowed to build up, and the area is monitored for burrows. It is more aesthetic than bare ground and can be used in place of grass, especially around some of the landscaping such as low-growing bushes and trees. River rock and gravel can be expensive, and up-front costs may not appear economical for use in large areas in a single installation. But, in new construction and as long-term, phased-in, or replacement measure, the long-term benefits will offset the initial investment. However, river rock and gravel may not be appropriate for locations immediately adjacent to runways due to compaction standards set forth by the FAA.

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LANDSCAPING

Landscaping at an airport can affect tourism, business, and the overall impression of the area to visitors, therefore, landscaping needs to be aesthetically pleasing. It must, however, coincide with the airports greater responsibility of air safety. At HON, trees and bushes offer hunting perches, roosting and loafing sites, nesting cover, and food for birds and other wildlife. Ornamental trees and bushes used to enhance airport aesthetics will be kept to a minimum, and varieties not considered attractive to wildlife will be selected.

**FAA ADVISORY
CIRCULAR NO:
150/5320-14**

Subject: Airport Landscaping for Noise Control Purposes. 1/31/78.
This circular (See also Appendix G) provides guidance to airport planners and operators in the use of tree and vegetation screens around airports and aircraft operating areas for noise control purposes. The circular discusses the advantages and disadvantages of the use of screens and does address bird hazard potentials and states:

Prior to any decision to utilize tree or vegetation screens for noise control, their potential for creating a bird hazard to aircraft must be carefully weighed against the anticipated noise benefits. Wooded areas and vegetation often attract birds by providing feeding, nesting and/or roosting areas. This is particularly true at junctions of wooded areas and grasslands and where two distinctly different vegetative communities join. Hedgerows are also highly attractive as shelters for birds and small mammals and should be avoided. For the same reason, the planting of trees and shrubs is not recommended closer than 600 feet (180 m) to the centerline of active runways and taxiways. In considering the use of tree and vegetation belts as noise screens, the following factors should be considered: the type, size, feeding, and migratory habits of the area bird population; the geometric relationship and proximity between local feeding and nesting grounds, the proposed noise screen, and aircraft operating areas; and the affinity of the trees and vegetation to attract birds.

PART C

STRUCTURE MANAGEMENT

OVERVIEW

Structures provide cover and hunting perches for wildlife. If wildlife is considered when a building is being designed, costly control measures can be avoided. Buildings should not provide potential nesting, perching, or roosting sites for birds and not allow access to mammals such as rodents and skunks.

**AIRFIELD
STRUCTURES**

Airfield structures such as runway lights, ramp and taxiway signs, and light poles are used as hunting and loafing perches for birds such as hawks and gulls. Lights at night attract insects and in turn bats and nighthawks. These structures should all be fitted with barrier products such as tension wires, electrified wires, spikes, coils, or porcupine wire where they routinely attract birds.

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BIRD CONTROL FOR AIRPORT BUILDINGS

Airport buildings such as the terminal, hangars, maintenance buildings, etc. often attract roosting, nesting and loafing birds. When able, birds often attempt to nest inside aircraft engines and landing gear as well as other areas of buildings such as ventilation ducts and electrical fixtures. The droppings from birds that nest or roost in ceilings and rafters not only cause damage and create a nuisance, but are also a health concern due to the many human diseases associated with bird feces. Birds will be excluded from entering buildings by eliminating access. All holes as large as a golf ball will be filled or covered with screen. Perching sites on ledges, under eaves or above doors will be eliminated either by enclosing the area to prevent access or installing anti perching devices.

COMMENSAL RODENT CONTROL FOR BUILDINGS

While generally not a direct threat to aircraft safety, commensal rodents can be a problem for airport tenants. They chew through wires on computers, vehicles, and building installations. All buildings should be rodent-proofed. Openings larger than the size of a quarter should be covered with 1/4" wire mesh and new building plans should incorporate rodent-proof construction. Airport operations personnel should conduct periodic inspections of airport-related structures to determine if infestations are present, and if so, they will conduct the necessary control procedures (e.g. trapping, apply toxicants). The Airport Manager will determine whether it is the tenant's or airport's responsibility to control rodents in leased buildings and will ensure any toxicants used by airport personnel are applied according to the label and the applicator is certified by the South Dakota Department of Agriculture (SDDA) when using restricted use pesticides.

ABANDONED STRUCTURES

Structures, not pertinent to air operations and no longer in use, will be removed. This includes abandoned vehicles, buildings, sheds, machinery, light poles, runways and taxiways. These are attractive to rodents, small birds and rabbits, and in turn attract hawks, owls, and other predators that can become a significant air hazard.

PART D

FOOD/PREY - BASE MANAGEMENT

OVERVIEW

Rodents, rabbits, insects, earthworms, and other invertebrates are highly attractive to many species of birds and mammals and need to be controlled where feasible. Handouts, trash, and scattered debris also provide food for wildlife. The elimination of habitats, especially trees and alfalfa will help considerably in this effort.

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RODENTS & RABBITS

Mice, ground squirrels and rabbits at HON appear to be the primary attractants of fox, coyote and hawks, but will occasionally attract other predators. Proper vegetation management will likely keep most rodent populations low. HON will monitor rodents and will conduct rodent control programs whenever their abundance begins to attract hazardous wildlife. Ground squirrel colonies will be controlled whenever they are found on the airfield. Jackrabbits will be monitored through periodic spotlighting at night and controlled when their populations become abundant. Jackrabbits will be best controlled by shooting at night.

EARTHWORMS

Earthworms are brought to the surface following heavy rains, where they pose an attraction to many species of birds, particularly gulls. Earthworm numbers should be monitored and, if they appear to be a major attraction to problem species, the appropriate measures should be taken to minimize this attraction (sweeping, molluscicides or other measures).

INSECTS

Insects attract many species of wildlife at HON, particularly swallows, nighthawks, and killdeer. Insect populations should be monitored periodically by Airport Maintenance to determine if they are present in sufficient numbers to warrant a control action. The County Extension agent can help select the best pesticide or control method.

OTHER PREY

Many other prey species are found at HON. Amphibians, invertebrates and rodents are common prey for hawks, coyotes, fox, and insectivorous birds. Habitat management will keep much of the prey population in check, but the airport will continue to monitor these populations.

TRASH AND DEBRIS

Trash and debris are often responsible for attracting species such as pigeons and crows. Airport Maintenance will continue to conduct trash and FOD (foreign object debris/damage) collection sweeps on the airfield, especially after high winds.

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4 – PERMITS AND REGULATIONS

OVERVIEW	Federal, state and local governments administer laws and regulations that protect wildlife and their habitat. A number of laws affect wildlife control at airports and wildlife control personnel at HON 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.
SOUTH DAKOTA WILDLIFE REGULATIONS	Several South Dakota State government agencies have regulations that affect wildlife control at airports. Pertinent regulations can be found in the South Dakota Codified Law (SDCL) Title 41 . Beadle County and municipality regulations can also affect airports. State wildlife laws are mostly administered by the South Dakota Department of Game, Fish and Parks (SDGFP) and involve resident birds, mammals, reptiles, and amphibians, as well as state threatened and endangered species.
FEDERAL REGULATIONS	The U.S. Government has passed several Acts for the protection of wildlife, including the Migratory Bird Treaty Act, the Lacey Act, the Endangered Species Act, the Eagle Protection 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, and SDCL Title 41 define 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 migratory and resident, game and nongame, furbearers and predator/varmints, and threatened and endangered (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.

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Table 1. Wildlife Categories in Beadle County and permits necessary for lethal control.

CATEGORY	SPECIES	STATE PERMIT ¹	FEDERAL PERMIT
RESIDENT GAME BIRDS	Pheasant, grouse, quail, partridge and turkey	Yes	No
RESIDENT NONGAME BIRDS	Starlings, house sparrow, rock dove (feral pigeon)	No ²	No
MIGRATORY GAME BIRDS	Ducks, geese, swans, coots, snipe, sandhill crane, woodcock, crows and mourning doves	Yes ³	Yes ³
MIGRATORY NONGAME BIRDS	All species except game birds, resident nongame birds, and feral, domestic and exotic birds	Yes ³	Yes ³
DEPREDATION ORDER BIRDS	Crows, grackles, blackbirds, and cowbirds	No ⁴	No ⁴
GAME MAMMALS	Deer, elk, antelope, bighorn sheep, mountain goat, mountain lion, moose, tree squirrels, cottontail rabbit	Yes	No
PREDATORS/VARMINTS	Coyote, red fox, gray fox, skunks, gophers, ground squirrels, chipmunks, jackrabbits, marmots, porcupine, prairie dog	No ^{2,5}	No
FURBEARERS	Raccoon, beaver, badger, muskrat, bobcat, weasel, mink, opossum	Yes ⁵	No
PROTECTED FURBEARERS	Lynx, wolf, swift fox, black bear, pine marten, fisher, river otter and black-footed ferret	Yes ³	No ³
NONGAME MAMMALS	All species of mammals, except game mammals, predator/varmints, furbearers, protected furbearers, and domestic mammals	No	No
FERAL DOMESTIC MAMMALS	Dogs, cats, livestock (Call local Animal Control)	No	No
REPTILES AND AMPHIBIANS	All reptiles and amphibians (threatened or endangered species require a separate permit)	Yes ³	No ³
FULLY PROTECTED WILDLIFE	Eagles and Threatened and Endangered species listed in Table 2	Yes	Yes

¹ Control actions requiring a state permit should be coordinated through the Animal Damage Control Office with the South Dakota Department of Game, Fish and Parks.

² No State permit is required if control is conducted by resident airport personnel on airport property.

³ Eagles, and threatened and endangered species have additional requirements.

⁴ May be taken without permits “when concentrated in such numbers and manner as to constitute a health hazard or other nuisance” (50 CFR §21.43) and (SDCL 41-11-10).

⁵ Raccoons, skunks, red fox, gray fox, badgers may be killed without a permit when doing damage around buildings.

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GENERAL REGULATIONS FOR WILDLIFE CONTROL

Several regulations and permits apply to controlling various categories of wildlife in Beadle County. Many of the general laws relate to safety and methods. Special considerations or restrictions are usually specified on the depredation permits.

REPORTS TO USFWS AND SDGFP

To fulfill the requirements of this section, HON will submit a report of the migratory birds taken each calendar year to the USFWS. In addition to the Federal permit requirements, an annual report of all migratory birds, game birds and other wildlife taken under State permits will be submitted to SDGFP.

RESIDENT 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 grouse, turkey, quail, partridge, and pheasant. These species are not given any Federal protection but are managed by the State. A permit from SDGFP is required to take these species unless they are taken during regular hunting seasons with legal methods. These permits must be renewed annually.

RESIDENT NONGAME BIRDS

The only birds classified in South Dakota 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. South Dakota State laws pertaining to migratory birds are administered through SDGFP. In addition to a Federal permit, a State permit to take migratory birds will also be required.

Federal Migratory Bird Permit CFR 50, Part 13

A depredation 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 80225-0486. The USFWS also requires the permit to be accompanied by a Migratory Bird Damage Project Report (Appendix D) completed by APHIS Wildlife Services (WS). WS will provide a Migratory Bird Damage Project Report to HON upon request. In Beadle County, **migratory birds** include all birds except house sparrows,

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starlings, rock doves (feral pigeons), pheasant, grouse, quail, partridge, turkey and domestic ducks, geese and other exotic birds. 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. For Beadle County, federally threatened and endangered migratory birds include interior least tern, piping plover, Eskimo curlew and whooping crane (*see Table 2 of this chapter*).

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.** Applications for depredation permits shall be submitted to the appropriate Special Agent in Charge (see 13.11 (b) of this Subchapter). Each such application must contain the general information and certification by 13.12 (a) of this Subchapter plus the following additional information:

- (1) A description of the area 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 the following conditions:

- (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 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.

State Permits

A depredation permit to take State protected migratory birds can be obtained by submitting a written request to Art Smith, SDGFP Animal Damage Management Administrator, 523 Capitol Avenue, Pierre, SD 57501. It is recommended that the State permit is applied for **after** receiving the Federal permit. Send a copy of the Federal permit along with the written request to the State.

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**SDCL 41-6-29
State Depredation
Permits**

**Permit to kill animal or bird doing damage -- Animal or bird as property of state -- Disposition
Violation a misdemeanor.**

If any game animals, game birds, black bears, mountain lions, or wolves are a threat to the public's health, safety, and welfare, or are doing damage to property, the secretary of game, fish and parks may by a written permit authorize a conservation officer, a municipality, or county and their designees, a designee of the department, or the person whose property is being damaged to take or kill any such animals or birds by any methods that may otherwise be prohibited or under any restrictions as the secretary may prescribe in the permit. Any animals or birds so taken or killed are the property of the state and shall be disposed of as provided for in the permit. Any person who violates the conditions of the permit is guilty of a Class 1 misdemeanor.

**Migratory Bird
Permits For HON**

Although HON has had Federal permits (Appendix D) in the past to take gulls, they have not been renewed. Any inactive permits that are renewed, or any new Federal permits that are aquired to take migratory birds at HON must be renewed annually.

**DEPREDATION
ORDER BIRDS

(BLACKBIRDS &
CROWS)**

Both the USFWS and SDGFP allow for some common migratory bird species, under certain circumstances, to be controlled without the requirement of a Federal or State permit. Specifically, this includes crows, 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.

**Depredation Order
for Blackbirds
(Federal)**

Depredation order for blackbirds, cowbirds, grackles, crows and magpies.

CFR 50 Part 21.43

A Federal permit shall not be required to control yellow-headed, red-winged, ... and Brewer's blackbirds, cowbirds, ... crows, and magpies, ... 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 permits as may be required for such activities by the State concerned.

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**Depredation Order
for Blackbirds
(State)**

SDCL 41-11-10

Birds not protected or conditionally protected by chapter.

The English or European house sparrow, unbanded undomesticated pigeon (rock dove), and European starling are not included among the birds protected by this chapter. Purple grackle, crow, magpie, bro headed cow bird, red-winged blackbird, Brewers blackbird, rusty blackbird, and the bronzed grackle may be taken when committing or about to commit depredation 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.

**GAME
MAMMALS**

Game mammals are primarily those mammal species that are hunted (i.e. deer, tree squirrels and cottontails). Currently, the HON area has a large deer population. Deer consistently gain access to the airfield. Once the planned 10 foot perimeter fence is in place, deer on the airfield should be rare. When individual deer or other game mammals habitually find their way onto the airfield, they must be lethally removed. A State permit from SDGFP is required to take these species unless they are taken during regular hunting seasons with legal methods. This permit must be renewed annually.

**PREDATORS/
VARMINTS**

SDGFP classify several species as predator/varmints. Although many of these species are classified in other categories, the predator/varmint distinction allows property owners to control identified species on their own property without a State permit. **SDGFP recognizes that airport personnel, with respect to the predator/varmint classification, can control those species on airport property without a State Permit.** The predator/varmint category includes: coyote, gray fox, red fox, skunk, gopher, ground squirrel, chipmunk, jackrabbit, marmot, porcupine, prairie dog, crow, pigeon, house sparrow and starling.

FURBEARERS

Except for those species also classified as predator/varmints by SDGFP, a State permit is required to take these animals. These species include opossum, muskrat, beaver, mink, marten, black-footed ferrets, raccoon, badger, swift fox, bobcat, lynx, weasel, gray wolf, fisher, and black bear. 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. South Dakota law allows that raccoons and badgers can be taken at anytime without a permit or license when doing damage around airport buildings. A Federal USFWS permit is only required when it involves a threatened or endangered species such as a black-footed ferret or wolf.

**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 damage or could damage property. Nongame mammals include: skunks, gophers, ground squirrels, chipmunks, jackrabbits, 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.

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Several species of nongame mammals are present at HON and could need to be controlled. Permits are not required to take these species when they damage or could damage property. The nongame mammals that could present problems at HON would be bats, field rodents (i.e. voles, deer mice, etc.) and commensal rodents (house mice and Norway rats).

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. Contact either for assistance with these animals should they be found at HON.

REPTILES & AMPHIBIANS

Reptiles and amphibians can be attractants to predator species. If any of these species need to be controlled a State permit from SDGFP is required.

FULLY PROTECTED WILDLIFE

Federal and State Threatened, Endangered and Protected Species. The Endangered Species Act of the U.S. (1966 and amendments, monitored by the USFWS) and SDCL Title 34A (as monitored by SDGFP) protects species potentially threatened with extinction. Specifically, these Acts list animals and plants as **endangered** (any species or subspecies which is in danger of extinction throughout all or a significant portion of its range) or **threatened** (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. Eagles are also afforded protection under the U.S. Eagle Protection Act. In South Dakota, several additional species are given special protection by being designated as State endangered or threatened. If a **significant** hazard exists with a listed species that is jeopardizing air safety, USFWS or SDGFP, depending on the species involved, will be contacted for assistance. Only personnel from these agencies or their agents (e.g., WS) can get a permit to alleviate a problem. Table 2 lists the species for Pennington County that are in this category.

EAGLE PERMITS

Eagles are protected under the Eagle Protection Act and require their own permit, and are therefore, not included under the Migratory Bird Permit. South Dakota has designated bald and golden eagles as fully protected in South Dakota. If a **significant** hazard exists with a listed species that is jeopardizing air safety, USFWS and SDGFP will be contacted for assistance.

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**CFR 50
PART 22.23**

EAGLE PERMITS - Permits to take depredating eagles.

The Director may, upon receipt of an application and in accordance with the issuance criteria of this section, issue a permit authorizing the taking of depredating bald or golden eagles.

(a) **Application procedure.** Applications for permits to take depredating bald or golden eagles shall be submitted to the appropriate Special Agent in Charge (See: Part 13). Each application must contain the general information and certification required by Part 13.12(a) plus 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 the 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) **Additional permit conditions.** In addition to the general permits set forth in Part 13, permits to take depredating bald and golden eagles shall be subject to the following conditions:

- (1) Bald and 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 set forth in the permit, the permittee shall submit a report of activities conducted under the permit to the Special Agent in Charge within 10 days following the 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 SDGFP are responsible for species conservation and recovery plans. This includes the identification 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 mitigation measures. Consultation with USFWS or SDGFP biologists will determine this.

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**WETLANDS
MITIGATION**

Wetland modifications may require permits from various agencies such as the USFWS, U.S. Army Corps of Engineers (USCOE), SDGFP, and/or South Dakota Department of Environment and Natural Resources (DENR), 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**

USFWS and SDGFP keep updated lists of endangered and threatened species. SDGFP keeps a current listing of State and Federally endangered, threatened and sensitive species that can be found on the internet at <http://www.sdgfp.info/Wildlife/Diversity/TES.htm>. Wildlife control personnel at HON need to be familiar with these species and their potential occurrence at the airport (Table 2). Some of these species may present hazards to air traffic at HON, and permits are required to harass them. In most cases, permits will not be given to lethally remove threatened and endangered species. HON 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 or SDGFP and can have an affect on habitat modification plans to reduce wildlife hazards, but HON is unlikely to be adversely affected by these regulations due to the species involved.

Table 2. Endangered, Threatened and Protected Species in South Dakota. There are many species of animals in South Dakota that are listed as Threatened, Endangered, Candidate, or Sensitive by the Federal and/or State Government. Below is a list of each of these species (plants excluded), their status as of (9/2/2008), and potential occurrence in Beadle County. This list is dynamic with new species being added or removed periodically, therefore, it should be reviewed and updated at least once per year to ensure compliance with Federal and State wildlife regulations.

COMMON NAME	SCIENTIFIC NAME	STATE STATUS	FEDERAL STATUS	HON
BIRDS				
American dipper	<i>Cinclus mexicanus</i>	T		
Bald eagle	<i>Haliaeetus leucocephalus</i>	T		H
Golden eagle	<i>Aquila chrysaetos</i>	Protected		H
Eskimo curlew	<i>Numenius borealis</i>	E	E	H
Interior least tern	<i>Sterna antillarum</i>	E	E	H
Piping plover	<i>Charadrius melodus</i>	T	T	H
Peregrine falcon	<i>Falco peregrinus</i>	E		H
Osprey	<i>Pandion haliaetus</i>	T		H
Whooping crane	<i>Grus americana</i>	E	E	H
MAMMALS				
Gray wolf	<i>Canis Lupus</i>		E	H
Black bear	<i>Ursus americanus</i>	T		
Mountain lion	<i>Felis concolor</i>	T		H
River otter	<i>Lutra canadensis</i>	T		H

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COMMON NAME	SCIENTIFIC NAME	STATE STATUS	FEDERAL STATUS	HON
Swift fox	<i>Vulpes velox</i>	T		
Black-footed ferret	<i>Mustela nigripes</i>	E	E	
Gray Wolf	<i>Canis lupus</i>		E	H
REPTILES AND AMPHIBIANS				
Lined snake	<i>Tropidoclonion lineatum</i>	E		
Eastern hognosed snake	<i>Heterodon platirhinus</i>	T		
False map turtle	<i>Graptemys pseudogeographica</i>	T		
FISH				
Pallid sturgeon	<i>Scaphirhynchus albus</i>	E	E	
Banded killifish	<i>Fundulus diaphanus</i>	E		
Finescale dace	<i>Phoxinus neogaeus</i>	E		
Blacknose shiner	<i>Notropis heterolepis</i>	E		
Topeka shiner	<i>Notropis topeka</i>		E	H
Sturgeon chub	<i>Hybopsis gelida</i>	T		
Sicklefin chub	<i>Macrhpobsis meeki</i>	E		
Northern redbelly dace	<i>Phoxinus eos</i>	T		
Longnose sucker	<i>Catostomus catostomus</i>	T		
Pearl dace	<i>Semotilus margarita</i>	T		
INVERTEBRATES				
American burying beetle	<i>Nicrophorus americanus</i>		E	H
Scaleshell	<i>Leptodea leptodon</i>		E	
Higgins Eye	<i>Lampsilis higginsii</i>		E	
Dakota skipper	<i>Hesperia dacotae</i>		C	

E - Endangered **PE** - Proposed Endangered **H** - May occur in Beadle County
T - Threatened **PT** - Proposed Threatened **C** - Candidate

**PESTICIDE
 APPLICATOR
 LICENSE**

Certified Pesticide Operators are the only personnel that will be allowed to use **restricted-use** pesticides for the removal of blackbirds, starlings, rodents, rabbits, insects, earthworms, and weeds. To obtain the necessary license for pesticide application, a person must pass an exam administered by the SDDA. All personnel that use restricted-use chemicals will obtain a pesticide applicator's license or be under the direct supervision of an applicator. All HON personnel using pesticides will strictly adhere to the pesticide label and will follow U.S. EPA, SDDA, and Beadle County guidelines.

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5 – RESOURCES

OVERVIEW	Habitat Management and wildlife control supplies can be purchased from several companies that are listed in Appendix K. Some supplies will be on hand at HON for use by trained personnel.
AIRPORT SUPPLIES	<p>Supplies that will be kept stocked as needed at HON include:</p> <ol style="list-style-type: none"> 1. 15mm pistol launchers 2. Bird bangers 3. Screamers 4. Shell crackers 5. 12 gauge shotgun and ammunition 6. Applicable field guide for bird identification 7. Professional quality binoculars 8. Catch pole (airfield only) 9. Dog live traps (airfield only) 10. Raccoon live traps 11. Rat/mouse snap traps 12. Latex gloves 13. Garbage bags
WILDLIFE CONTROL PERSONNEL	Wildlife control personnel (Airport Duty Managers and Airport Maintenance personnel) will be equipped with a truck capable of operating on the airfield and will be stocked with the necessary supplies to allow an immediate response to wildlife hazards. They will operate within the AOA movement areas in accordance with FAA regulations.
PESTICIDES	The maximum amount of pesticides kept on hand will be determined by the shelf-life and reordered as needed. Stored supplies should be kept at a minimum to meet current needs. Wildlife and rodent control on HON may be contracted out if the problem becomes too severe for the airport to handle.
USDA-WS ASSISTANCE	Some supplies such as starling traps, vertebrate pesticides and chemical capturing agents may be available through WS for conducting control operations. Some control methods such as alpha chloralose are restricted to certified WS personnel.

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6 – WILDLIFE CONTROL PROCEDURES

OVERVIEW	<p>Wildlife that is identified as hazardous during and after the completion of the recommended habitat modifications will be controlled with direct control techniques that are effective, feasible, and legal. Following are wildlife control procedures most commonly used to control wildlife species at HON. While this section provides a general summary of available techniques, it is by no means a comprehensive listing of all methods. Situations surrounding wildlife hazards at airports are extremely variable, therefore, it is essential to adopt a flexible, innovative, and adaptive approach to managing wildlife hazards. Wildlife identification guides and handbooks will be available for use by wildlife control personnel at HON.</p>
BIRD CONTROL	<p>Several species of birds are present at HON and represent the most significant strike hazard. Although waterfowl and hawks are of primary concern, other migratory species and juvenile birds may also constitute unusual wildlife hazards because of their general unfamiliarity with the airport environment. Much of this chapter is devoted to methods that may be used to haze birds from the airport, but as previously stated, dispersal methods are not limited only to methods discussed herein. If properly applied, however, these techniques will reduce most hazards involving species of concern at the airport.</p> <p>HON has a “no tolerance” policy for ducks, geese, hawks and gulls. These species will be hazed whenever they are seen on or approaching the airfield. Other birds will be hazed from the airfield whenever they are present in areas or in numbers as to create a hazard. Lethal techniques will be used to reinforce hazing when necessary.</p>
MAMMAL CONTROL	<p>Hazards involving the majority of mammalian species at HON can be reduced by applying habitat modifications and exclusionary devices. With the possible exception of coyotes and fox, larger mammals such as deer will be precluded from using the airfield by fencing, but smaller mammals exist on the airfield in moderate to high densities, providing an attraction to larger predators and hawks.</p> <p>HON will monitor the 10 foot perimeter fence (when installed) seasonally, or more often if necessary. Any holes, burrows or damage will be filled or repaired as necessary to exclude wildlife. A 2 foot apron will be attached to the bottom of the fence, where necessary, to prevent deer and medium sized mammals from crawling or digging under the fence. Deer that do gain access to the airfield will be herded</p>

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out through an open gate or shot, as soon as logistically possible.

Spotlighting at night for deer, jackrabbits, skunk, badger, raccoon and other medium sized mammals will be done on a regular basis. Any animal observed will be shot or removed from the airfield by appropriate methods.

**WILDLIFE
CONTROL
PERSONNEL**

Wildlife control personnel at HON consist of Airport Duty Managers with supplemental support provided as needed by Airport Maintenance personnel. These control personnel will monitor and respond to wildlife hazards on the airfield and coordinate their activities through the Wildlife Coordinator. They will be trained in wildlife identification, proper control techniques, and safe operations as outlined in Chapter 7. The crew will have a radio-equipped vehicle and adequate wildlife control materials. When conducting wildlife control activities in the AOA, HON personnel will operate in accordance with FAA regulations. They will also be responsible for conducting routine runway sweeps at least 2 times per day, recording any dead animals found from strikes on Form 5200-7 (Appendix B) or other wildlife-related activities (e.g., notable hazards, animals killed or dispersed, unusual wildlife behavior, etc.) on the **Wildlife Activity Log** (Appendix C). Completed forms will be forwarded to the Wildlife Coordinator for review.

**WILDLIFE
CONTROL**

Each wildlife hazard that develops will be analyzed by wildlife control personnel to determine a practical solution. The initial response for most species will be hazing (frightening devices), followed by population control methods when necessary. A primary key to successful wildlife control is persistence and innovation on the part of the employees involved. Personnel will need to select techniques according to their biological, sociological, economical, and political effectiveness. Most control techniques retain their effectiveness if they are used infrequently and in conjunction with other methods. Some methods such as pesticides or leg-hold traps are only effective and legal for specific species and situations. Other techniques are much more readily available and easy to use. The method(s) chosen will depend largely on the situation and the species involved. Personnel involved in direct control should be aware of potential diseases wildlife can carry and take appropriate precautions.

**USDA-WS
ASSISTANCE**

The Airport will consult with WS to assist as needed with wildlife-related activities at HON.

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**ANIMAL
CONTROL
ASSISTANCE**

Huron's Animal Control can assist HON with free-roaming dogs and cats. If a dog is seen on the airfield, they should be contacted for assistance. If the animal poses an immediate threat to aviation, wildlife control personnel should attempt to catch, disperse or shoot it.

PART A

AUDITORY FRIGHTENING TECHNIQUES

OVERVIEW

Frightening or harassment techniques - **hazing** - can quickly repel birds and mammals from problem areas for short term relief. These techniques will only be used as needed so they retain their effectiveness.

PYROTECHNICS

Pyrotechnics are non-lethal, fast burning or explosive devices such as bird bangers and screamers, cracker shells, rockets, and flares used to deter wildlife. These will only be used by personnel trained and certified in their use (Chapter 7).

**15mm Launcher
& Cartridges**

Bird banger, screamer, and screamer-banger rocket cartridges are shot from a launcher similar to a starter pistol. Bangers travel about 40 yards and blow up. Screamers travel up to 100 yards, making noise the entire time. Screamer-banger rockets travel about 300 yards, make noise and blow up. These cartridges are generally effective for controlling wildlife and can be launched using a 15mm pistol launcher, the easiest of all pyrotechnics to use. All trained wildlife control personnel at HON will have 15mm pistols, and banger/screamer cartridges available to anybody who may be responsible for dispersing wildlife.

Cracker Shells

Cracker shells are shot from a 12-gauge shotgun, travel about 100 yards, and blow up. The barrel needs to be checked for obstructions after each firing because the wad can get stuck and cause the next shell to blow up in the barrel. Cracker shells are not recommended for general use in each vehicle because of the problems they can present, but the principle dispersal personnel may find cracker shells useful because of their increased range.

Safety

When using pyrotechnics, safety glasses and gloves are recommended because blasting caps and other debris are sometimes ejected back at the shooter. Caution must be exercised during dry times of the year because cartridge debris is capable of starting fires. If a pyrotechnic cartridge doesn't fire, a dud, the area it traveled to should be monitored for fires and after a short time retrieved if possible. Pyrotechnics should be

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stored in a dry location, and whenever possible, the batch should be used within a year of its date of acquisition. Do not use pyrotechnics within 300 yards of the fuel tanks. Never point the firing devices at anything that you do not want to shoot! Treat them the same as any other firearm. Do not mix cracker shells with live ammunition. It is best not to shoot pyrotechnics over runways, but if it is necessary, the casing should be recovered to avoid a FOD hazard. And finally, examine the barrel for obstructions after firing a 12-gauge cracker shell because wads can get stuck, causing the next shell to blow-up in the barrel.

Shooting Pyrotechnics

Pyrotechnics are easy to use, but they involve the use of firearms and must be treated as such (know the ten commandments of safety described in the shooting section). To shoot pyrotechnics, point the pistol or shotgun in the desired direction at a 30-45 degree angle above the ground. Pistols should be shot with an outstretched arm and shotguns the same as if you were shooting a regular shell. Be sure of your backstop, pull the trigger (pyrotechnics do not have a recoil), follow through (don't pull away while shooting), and watch to see where the projectile goes. Wind direction and velocity will affect the range of pyrotechnics. Any ejected firing caps or spent cartridges should be picked up where possible.

Method for Frightening Birds

The Wildlife Coordinator and Airport Duty Managers must determine the most effective methods to disperse different species. Reactions may vary depending on a number of factors such as species, time of year, value of resource to wildlife (motivation), and number of animals present. Generally, the best technique to disperse wildlife is to get positioned between the animal(s) and the active runway and stay upwind so they are more likely to fly away from you when dispersed (birds normally take off into the wind, turn, and then fly with the wind when being harassed). Shooters should face away from the runway and shoot at about a 45-degree angle away from the target on the opposite side of the desired escape route. The shooter should get as close to the birds as possible to expedite their departure. In some situations, birds may only circle and move to another part of the airport or return to the same spot without abandoning the site altogether. This is especially true of shorebirds or birds that have been hazed frequently. During these situations an additional shooter may provide assistance. If the birds are close to or fly toward an active runway, aircraft may be advised to hold on the runway/taxiway until the area can be cleared of birds. All debris from pyrotechnics will be retrieved when possible, especially from the runway and taxiways where they can become a FOD hazard.

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BIOACOUSTICS

Bioacoustics are amplified distress/alarm calls from relevant bird species and loud irritating sounds such as dogs barking, gun shots, and people talking. Distress calls are generally species specific, and consist of a recording of the sound they make when they are injured or have been captured by a predator. Responses to distress calls vary among species, with some birds dispersing from the sound, while others are attracted to the source to investigate. Because gulls and crows will often investigate the source of the call, it should not be used when aircraft are on approach or about to depart, especially if they will be drawn across the runway. Other sounds such as dogs barking can be used to disperse some species such as deer and birds that do not have specific distress calls that repel them.

Equipment

Bird distress or alarm calls and other irritating sounds are recorded on tape cassettes are available commercially. The playback equipment consists of:

- (1) **Cassette Player** – An auto cassette player with a top-end frequency of 20,000 Hz.
- (2) **Amplifiers** – Speakers that produce loud sound with good fidelity and an output capability of 30-50 watts each without distortion and 90 to 110 decibels in front.
- (3) **Speakers** – Directional, low impedance, waterproof speakers are recommended.

The cassette player is usually mounted in the wildlife patrol vehicle with one or two loudspeakers mounted on top. Some portable players are available but need a plug-in for the cigarette lighter or alligator clips for the battery.

Operation

When operating distress calls, experience will be the best teacher. Generally, the patrol vehicle should be stationary, situated about 100 yards upwind from the birds. Calls should not be activated from across a runway or active taxiway because sometimes distress calls attract birds. Play the distress call for 10-20 seconds and then shut it off. If the birds are not frightened, play it again in 15-30 seconds for another 10-20 seconds. The longer the tape is played, the more curious the birds may be and will investigate the source. When the birds become frightened by the distress calls, reinforce their dispersal by firing a few pyrotechnics. Bioacoustics usually requires more time to frighten birds, but are a valuable tool. The calls can be effective if used with discretion and if the distress tapes are recorded specifically for the species being hazed.

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**PROPANE
EXPLODERS**

Propane exploders or gas cannons are static devices operated by propane or other gas. These devices produce a noise louder than a shotgun blast. Exploders can be set up and left to operate continuously for a period of time. As with other frightening methods, however, it is best to use them sparingly so birds do not habituate to them. The exploders should be hidden or camouflaged, moved frequently, and have the interval between blasts varied. The interval between blasts depends upon the species of bird being repelled. For waterfowl, the blast should be as long an interval as possible, about 1 blast/15 minutes. Blackbirds require a more frequent interval at 1 blast/1-5 minutes. For normal programs, the cannon should be operated for 3-5 days and then left off for a few days. These can be used at night for waterfowl if they become a frequent problem at HON, however, many of the strikes involving waterfowl at night occur away from the airport will not be abated with cannons. Because birds exhibit very little night activity on the airfield, cannons should be shut down during periods of darkness to avoid habituation.

**BIRD
REACTIONS**

Each species reacts differently to auditory stimuli and the different techniques. Waterfowl normally will leave the area immediately, whereas blackbirds and starlings will often form tight flocks and fly away from the noise, but may circle and return to the source of the sound. Gulls generally habituate rapidly to most auditory stimuli, and will circle and return to their original location unless they are periodically reinforced by shooting or some other form of simultaneous lethal control. Crows and ravens are usually attracted to the source of the sound before abandoning the area, but they become accustomed to pyrotechnics rather quickly and may return soon after the patrol leaves. Hawks are often indifferent to blasts, but usually move away from noises in a slow soaring pattern, whereas pigeons often scatter in all directions. Herons and egrets often rise and fly only a short distance and may need several successive auditory stimuli to leave the airport. Unfortunately, most scare devices are not effective at night and auditory devices are limited to propane cannons.

PART B**VISUAL FRIGHTENING DEVICES****OVERVIEW**

Visual frightening devices supplement other techniques in reducing wildlife numbers, but are usually not effective by themselves. Several are effective for short- term control of problem situations.

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SCARECROWS

Scarecrows have long been used for bird control and do provide some relief, especially when used in conjunction with other techniques. These include human and coyote effigies, hawk silhouettes, and dead bird carcasses. The human effigy is most effective if it is moved often, and has eyes on the front and back of the head and clothes with arms and legs that sway in the wind. Coyote effigies are very effective if they are taxidermy type mounts (even poor quality). Imitation dead-bird carcasses, particularly gulls and crows, have been successful in repelling birds. Stuffed birds in abnormal positions and realistic plastic models have been successful with some species of gulls, and have an effective radius of about 150 feet. The effect is usually only short lived, 2-3 days, unless they are used infrequently and moved. Owl decoys should be avoided since their effectiveness is short lived for most species and they may even attract birds such as crows and blackbirds.

**BALLOONS,
HAWK KITES &
MODEL PLANES**

Helium filled balloons with eyes on all sides and hawk kites combine shape and movement to frighten birds, and can be effective for short-term control. They are especially effective for roost control. They can also be used in fields to deter flocks of small birds from feeding, but the effective radius is generally relatively small. Use of balloons or kites should be sporadic so that birds do not become accustomed to them. The condition of balloons and kites should be monitored to ensure they don't break free and create a FOD hazard to aircraft. Another airborne frightening device is a radio-controlled model aircraft shaped and painted to look like hawks. These have proved very effective, but a skilled operator is necessary.

MYLAR TAPE

Mylar tape (1/2 -1 inch) can effectively keep birds away from small areas, but it requires constant repair and replacement, especially during periods of high wind. It produces fright by sight and sound when properly installed. Tape should be tautly stretched between two posts or stakes. Stakes should be 25 to 100 feet apart, with a 10-50 foot spacing between rows, depending on the situation. When Mylar is stretched, it should be twisted several times so that it will seesaw back and forth in the wind. When the wind picks up, the tape will also make a low irritating hum. This can be quite effective for gulls, blackbirds and waterfowl.

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PART C**POPULATION REDUCTION METHODS****OVERVIEW**

Wildlife can become accustomed to frightening techniques or may not be deterred by nonlethal dispersal methods at all. This is especially true when only one device is consistently used to frighten wildlife, and for animals whose territory resides on the airport property, especially mammals. It may become necessary to shoot a few offending individuals to reinforce frightening methods or use population reduction methods to remove a significant number of a resident population such as deer mice, ground squirrels, or voles. A permit is required to take most species of wildlife unless they are specifically exempt. These techniques should be used with discretion and should be conducted in a professional, humane manner. When implementing lethal control measures, the wildlife control personnel must be sensitive to concerns that some members of the general public may have regarding lethal control.

SHOOTING

Shooting is a very effective technique for reducing wildlife hazards at an airport. It can be used to remove problem individuals or add to the effectiveness of a hazing program. Shooting live ammunition requires a person that is safety-minded. The shooter must fully be aware of the backstop, direction of the shot, and species being taken. The shooter must also have in his possession a valid depredation permit for the species being taken, except for starlings, pigeons, house sparrows, depredation order birds and other species identified in Table 2 (Chapter 4). Several species at HON are protected as threatened or endangered and should not be shot under any circumstances because of their rarity and legal status hence, the shooter must be able to identify different species.

Equipment

Shooters will need a shotgun to carry out duties at the airport associated with wildlife control. An air rifle/pellet gun is also ideal for many situations. On rare occasions, a higher-powered rifle may have to be used. Extreme caution must be exercised when using a rifle or any firearm, and shooters must be reliable and trained in firearm safety. A 12-gauge shotgun is the recommended all-purpose firearm for the airport, and is desirable for most species of birds that represent the greatest hazards to aircraft. Because of environmental concerns, steel shot will be used. Other firearms (e.g., air-rifle), are optional and will only be purchased if deemed necessary.

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**Firearm
Safety**

Safety is the greatest concern when firing live ammunition at an airport. All personnel involved with shooting at the airport will be required to attend firearm safety training (Chapter 7) and airport orientation that familiarizes shooters with sensitive and off-limit areas such as the fuel area.

**Shooting
Safety**

The "**Ten Commandments of Shooting Safety**" provide the basic guidelines for shooting safety, and if followed, will prevent accidents from happening. These are:

1. Treat every firearm with the same respect you would show a loaded gun. Every time you pick up a firearm, the first thing you should do is check to see if it is loaded. Check to see that the chamber and magazine are empty and that the action is open until it is ready to be fired. If you do not understand how to determine if it is loaded, be sure not to accept the firearm from someone until they safely show you that it is unloaded. Also have them show you how the action works. For new firearms, read the instruction manual carefully before you handle it.

2. Always point the muzzle in a safe direction. Do not point a firearm at anything you do not intend to shoot. Control the direction of the muzzle at all times. Never rest a muzzle on your toe or foot. Keep your finger out of the trigger guard until the instant you are ready to fire. Protect the trigger guard from branches or other objects by keeping your finger along the side (**not inside**). Always keep the safety on until you are ready to fire; the safety, though, is not a substitute for safe firearm handling as they can malfunction.

3. Be sure of your target and what is in front of and beyond it. Before you pull the trigger, you must identify your target properly and know what is in front and behind it. Don't take shots where you are unsure of what's beyond, ie. on top of a ridge. Never shoot at hard flat surfaces such as water or pavement; ricochets are dangerous from these surfaces since you cannot determine where they will go. During target practice, make sure you have a proper backstop. Know the maximum and effective range for your ammunition.

4. Unload firearms when not in use. Leave actions open, and store firearms in cases when traveling to and from shooting areas. Know how your firearm operates. Store them under lock and key in a cool dry place. Ammunition should be stored in a separate place. Trigger guards or locks are a good idea for the home.

5. Handle firearms and ammunition carefully. Avoid all horseplay with firearms. Do not cross fences or difficult terrain, climb trees or ladders, or jump creeks with a loaded weapon. Learn the proper carries for a gun in the field; try to use a two-handed carry whenever possible because you'll have better control of the muzzle direction. Never look down a barrel to check for obstructions; open the action and look from the breech end - carry a field cleaning kit.

6. Know your safe zone-of-fire and stick to it. Your safe zone of fire is that area or direction where you can safely fire a shot - know where any companions are, buildings, property, the fuel farm, and other obstructions.

7. Control your emotions when it comes to safety. When you lose control of your emotions, you may get careless. Wildlife control at airports is a job and not a sport. Safety comes first, pass up shots if they are unsafe.

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8. Wear hearing and eye protection. While in the air operating area, it is a good idea to wear both hearing and eye protection. Shooting, airplanes and pyrotechnics are loud and have decibels that can damage hearing. Debris, especially from pyrotechnics, can be ejected back into your eyes, damaging them.

9. Don't drink alcohol or take drugs before or while handling firearms. Alcohol and drugs can impair physical and mental functions making it easy to lose control. This is true of several over the counter and prescribed medications, so talk with your physician or check the label.

10. Be aware of additional circumstances which require added cautions or safety awareness. Just because something hasn't been listed thus far, doesn't mean there are not additional dangers. Handling firearms requires a great deal of common sense, respect, and good judgment. Accidents can happen to anyone, even people that have handled firearms for years. Review firearm safety periodically to refresh your memory to ensure that accidents don't happen.

TRAPS

Several different styles of traps are available to control wildlife including cage traps, decoy traps, foothold traps, and snares. Traps are primarily effective in removing problem individuals such as a skunk or raccoon in a building, a fox in the AOA, or nesting starlings. Trapping is generally not an effective control mechanism for removing large numbers of prey-based animals such as voles, mice, ground squirrels or rabbits. HON will have on hand a supply of traps for different types of wildlife that might be expected on the airfield at some point throughout the year. Traps will be checked at least every 48 hours in accordance with South Dakota wildlife regulations.

PESTICIDES

Several pesticides are available for population reduction. These are especially useful for reducing rodent populations. WS will assist in determining the most appropriate pesticides that can be used to control specific types of wildlife at HON.

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7 – TRAINING

OVERVIEW

Training is essential for those personnel involved in the WHMP. The Wildlife Coordinator will ensure that personnel are trained.

STANDARD TRAINING

Wildlife control personnel will receive 8 hours of annual training in wildlife hazards, animal identification, wildlife laws, wildlife control, dispersal techniques and safety, as required in FAA Advisory Circular 150/5200-36 (Appendix L.).

USDA-WS INSTRUCTORS

WS personnel are qualified and available to teach the eight hour course for wildlife patrol personnel as outlined in AC 150/5200-36. Statewide trainings are typically scheduled once or twice per year.

HON PERSONNEL CERTIFIED

The following HON personnel have attended the 8 hour wildlife control training as required by AC 150/5200-36:

Name:

Date:

_____	_____
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**HON
PERSONNEL
CERTIFIED
Continued...**

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8 – EVALUATION

OVERVIEW	The WHMP will be evaluated at least annually. The Wildlife Hazard Working Group will determine the effectiveness of the WHMP at reducing wildlife strikes at HON and monitor the status of hazard reduction projects, including their completion dates.
MEETINGS	The Wildlife Hazard Working Group will meet at least once per year, but the group may convene more regularly if situations arise as determined by the Wildlife Coordinator.
WILDLIFE STRIKE DATABASE	The Wildlife Coordinator will keep a database of wildlife strikes and populations on the airfield and surrounding areas. Information from this database will be used to identify trends and monitor increases in wildlife hazards on the airfield. If unacceptable increases are noticed, the cause will be determined and the WHMP will be modified to reflect new directions to resolve the problems.
AIRPORT EXPANSION	Any airport expansion plans or additions to the airport will be reviewed by the Wildlife Coordinator to ensure that new developments will not inadvertently result in increased wildlife hazards to aircraft operations.
FAA INVOLVEMENT	FAA Regional Coordinators will be invited to make comments on the WHMP and to attend annual meetings for their input and concurrence.
PROJECTED TIME TABLE	The following projects will be assigned by the WHWG, and target dates for completion will be delineated (Other projects may be assigned by the WHWG).

Original Date: _____
 Revision Date: _____

FAA Approval

HON WILDLIFE HAZARD MANAGEMENT PROJECT	TARGET DATE	DATE COMPLETED
Form a Wildlife Hazard Working Group (WHWG), including representatives from management, operations, maintenance and security, to monitor and implement the Wildlife Hazard Management Plan (WHMP)		
Appoint a Wildlife Coordinator responsible for overseeing the implementation of the WHMP		
Designate Wildlife Duty Manager(s) that can immediately respond to wildlife hazards on the airfield, document all dead wildlife potentially involved with airstrikes, document wildlife activity in the area, and conduct habitat modification projects as directed.		
Provide 8 hours of wildlife hazard training to all Wildlife Duty Managers, as outlined in FAA AC 150/5200-36.		
Obtain wildlife identification guides for HON personnel involved in wildlife hazard management		
Eliminate all alfalfa and non grass vegetation from within 600 feet of all runways, and replace with warm season grass as needed.		
Remove the row of tall and short trees from southeast side of airfield (along old barbed wire fence).		
Remove all trees and stumps from the northeast side of the airfield near the new building.		
Remove willows that lie to the west of the south end of Runway 35		
Remove all individual trees and shrubs located around the airfield.		
Remove rubble, debris and storage piles from airfield		
Remove old barbed wire fence from southeast side of the airfield (along row of tall trees).		
Control all of the ground squirrel colonies on the HON airfield		
Modify the creek on the south side of HON so that the water does not create a pond attractive to duck and heron species.		

Original Date: _____
 Revision Date: _____

FAA Approval

HON WILDLIFE HAZARD MANAGEMENT PROJECT	TARGET DATE	DATE COMPLETED
Install a deer proof wildlife fence around the airfield perimeter. Fence will be a minimum of 10 feet in height. An apron will be attached to the bottom of the fence wherever deer are able to crawl under.		
Remove the gravel area on the south side of RWY 12-30 and replaced with grass.		
Remove large cattail wetland(s) on the south side of the HON airfield .		
Eliminate the low area near the east end of Runway 12-30 so it does not remain wet or accumulate temporary standing water		
Eliminate the low areas in the cropland northwest of Runway 12 so they will not hold standing water temporarily.		

Original Date: _____
 Revision Date: _____

FAA Approval



Appendix A

WILDLIFE HAZARD ASSESSMENT



Appendix B

FAA Form 5200-7
(Bird Strike Incident Report)

Appendix C
Wildlife Activity Log

Appendix D

USFWS Depredation Permit And Annual Report

Appendix E

SDGFP Permits and Annual Report

Appendix F

Advisory Circular 150/5200-33b

**Hazardous Wildlife Attractants
On or Near Airports**

Appendix G

Advisory Circular No. 150/5320-14

Airport Landscaping for Noise Control

Appendix H

Cert Alert No. 98-05

Grasses Attractive to Hazardous Wildlife

Appendix I

Cert Alert No. 97-09

Wildlife Hazard Management Plan Outline

Appendix J

Cert Alert No. 01-01

Deer Aircraft Hazard

&

Cert Alert No. 02-09

Alternative Deer Fencing

Appendix K

Sources of Wildlife Control Supplies

Appendix L

Advisory Circular No. 150/5200-36

Airport Training Requirements
