Fort Sill Regulation 385-15

Aviation

United States Army Garrison Fort Sill Wildlife Aircraft Strike Hazard (WASH) Plan

Department of the Army
Headquarters, U.S Army Garrison
462 Hamilton Road, Suite 120
Fort Sill, OK 73503
22 July 2024

UNCLASSIFIED

Department of the Army
Headquarters, U.S. Army Garrison
462 Hamilton Road, Suite 120
Fort Sill, OK 73503
22 July 2024

Fort Sill Regulation 385-15

Effective 22 July 2024

Aviation

United States Army Garrison Fort Sill Wildlife Aircraft Strike Hazard (WASH) Plan

History. This regulation is new and is required by the Installation Management Command.

Summary. This regulation establishes procedures, guidelines and responsibilities as described for safety operations in compliance with all applicable Army Regulations and manuals.

This regulation is distributed and published solely through the Department of Human Resources, Administrative Services Division Homepage at: https://sill-www.army.mil/USAG/publications.html

Supplementation. The proponent of this regulation is the Henry Post Army Airfield (HPAAF) Safety Officer, Building 4907, Fort Sill, OK 73503. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to HPAAF, Safety Officer, Building 4907, Fort Sill, OK 73503.

Suggested Improvements. The proponent of this regulation is the DPTMS. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to the DPTMS.

Applicability. This regulation is applicable to all personnel assigned to USAG-Sill.

BAIRD.DEREK.R OSS.1046194086 Digitally signed by BAIRD.DEREK.ROSS.1046194086 Date: 2024.08.19 15:04:33 -05'00'

DEREK R. BAIRD
Colonel, FA
Commanding

HQ USAG FORT SILL, OK OFFICIAL

HELLER.MICHAEL.LORENZO.1099016031 Digitally signed by HELLER.MICHAEL.LORENZO.1099016031 Date: 2024.08.26 13:39:02 -05'00'

M. LORENZO HELLER
Director,
Human Resources

DISTRIBUTION:
Fort Sill Intranet
HQ USA Intranet
DES
DHR
DPTMS
DPW
DFMWR
PAIO
RMO
Safety Office
Welcome Center

Table of Contents

Chapter 1
1-1. General.

a. **Purpose.** This plan is designed to minimize the potential risk of a wildlife strike to fixed and rotary winged aircraft, or human health posed by populations of hazardous wildlife on and around the airfield. Since no single solution can accomplish this goal, an integrated approach of techniques, tactics, and entities is needed in the overall WASH program. The WASH plan is designed to:

b. Establish a Wildlife Hazard Working Group (WHWG) and designate responsibilities to its members. The group's meetings may be combined with airfield operations board or airfield safety council.

c. Establish procedures for reporting hazardous wildlife activity and altering or discontinuing flying operations. Reporting should be a collective effort between all air and ground personnel operating in the airfield environment.

d. Establish procedures to identify hazardous situations and to aid supervisors and aircrews in disseminating information, issuing alerts, and altering or discontinuing flying operations when required.

e. Establish active/passive techniques to disperse wildlife from the airfield and decrease airfield attractiveness to wildlife.

f. Establish procedures to identify, provide information, and eliminate or reduce environmental conditions that attract wildlife to the airfield.

g. Identify organizations with authority to initiate or terminate Wildlife Watch Conditions (WWC).

1-2. References. Required and related publications as well as prescribed and referenced forms are listed in appendix A.

1-3. Explanation of Abbreviations and Terms. Abbreviations and special terms used in this publication are explained in section 1.

1-4. Background. Data clearly shows birds are not the only wildlife that can pose a threat to aviation safety. Mammals and large reptiles can pose a serious threat. Also, invertebrate species (such as insects and worms) can pose an indirect threat by attracting other species of wildlife that pose a direct threat.

a. No airfield or aircraft type is immune from the hazards of wildlife-aircraft strikes. Both birds and mammals have been involved in damaging aircraft strikes; this document will concentrate on airfield wildlife hazards and their management.

b. It is impossible to avoid all wildlife strikes, but actions can be taken to minimize the potential of a strike. First, by examining leading indicators that are correlated with mishap risk potential (e.g., wildlife populations, near-misses, engine damage and reported strikes) unsafe situations can be identified and avoided. Second, passive, and

active wildlife management techniques can be implemented to directly affect wildlife in and around the airfield.

1-5. Conditions of Execution. This plan is based on hazards posed by both resident and seasonal wildlife populations. Portions of this plan must be implemented on a continuous basis, while others will only require implementation in the event of increased wildlife activity. Increased wildlife activity is usually associated with the arrival of migratory species.

Chapter 2
2-1. Organizational Tasks and Responsibilities

General. The installation is responsible for ensuring that airfield vegetation, fencing, and drainage are managed to minimize wildlife attractants. An excellent cooperative relationship must exist between all installation agencies to ensure the proper environment exists around the airfield.

2-2. Garrison Commander (GC) or Deputy (DGC).

a. Use methods, procedures, and responsibilities as outlined in this plan.

b. Chair the Wildlife Hazard Working Group (WHWG) meetings.

c. Approve/Disapprove recommendations of the WHWG.

d. Appoint the Wildlife Detection and Dispersal Team (WDDT).

2-3. Director Public Works Operations and Maintenance Division.

a. Advises WHWG of physical modifications to the airfield and surrounding environment.

b. Corrects or coordinates the corrections of all physical conditions that increase WASH potential.

c. Maintains physical conditions based on the recommendations of the WHWG.

2-4. Director Public Works Fish & Wildlife Administrator.

a. Advise Airfield Manager or WHWG on wildlife biology and behavior, habitat requirements or modifications, or management schemes to make informed decisions and minimize aircraft-wildlife strikes.

b. Conduct lethal control and advise WDDT on all lethal taking of wildlife pursuant to WASH activities. Help acquire all necessary state/federal permits for harassment/depredation of nuisance wildlife and maintains permits as required for Fish & Wildlife control efforts.

c. Help identify wildlife remains after a strike if needed.

2-5. Public Affairs Office. Upon request will provide a public information program designed to inform garrison personnel, dependents, and the public on the hazards and cost of uncontrolled wildlife activity, including feral animals, and the measures being taken to minimize them.

2-6. Directorate of Plans Training, Mobilization and Security (DPTMS). The DPTMS should support and promote the implementation of the airfield WASH plan.

a. Airfield Division Chief/Manager. The airfield division chief/manager oversees the operation and execution of the WASH plan on the airfield. He or she is also an integral part of the WHWG to ensure effectiveness of the WASH plan. The Airfield Manager should conduct the following:

b. Declares a wildlife watch condition (WWC) based on WWC criteria IAW this plan and recommendations from airfield operations or air traffic control (ATC).
Note: If the Airfield Manager is absent, the designated representatives will declare an appropriate WWC.

c. Disseminate wildlife hazard warnings on the airfield IAW this plan.

d. Provide guidance to airfield personnel on the reporting of WWC and wildlife strikes to aircraft.

e. Issue specific guidance to airfield operations personnel on procedures to be followed under each WWC.

f. Determines when and where WDDT members can respond.

g. Coordinates with DPW Pest Control and Fish & Wildlife on actions to modify habitat and trap/remove wildlife.

h. Coordinates with DPW Fish & Wildlife for lethal taking of wildlife.

i. As funding permit, work with USDA Wildlife Services to manage nuisance birds on HPAAF.

Chapter 3
3-1. WASH Operations

3-1. General. The WASH program management is an ongoing process, which includes both information dissemination and active/passive wildlife control techniques and tactics.

3-2. Wildlife Hazard Assessment (WHA). Controlling the airfield attractiveness to wildlife is fundamental to good wildlife control. It is more important than wildlife population management for controlling the overall risk. If an airfield provides easily accessible resources to wildlife such as food, water, shelter, or breeding sites, the wildlife will continue trying to return despite any strategies used to discourage them. The control program will fail unless the airfield is made as unattractive to wildlife as possible.

a. Habitat management to deter wildlife involves two steps: identifying the attractive features, and imposing changes to either remove the attraction or to deny wildlife access to it.

b. There are many actions that can be taken to decrease wildlife hazards. These are determined by the time of year, the species involved and their attraction to the airfield, habitat characteristics on and around the airfield, and a host of other variables. It is necessary to have a comprehensive understanding of a particular animal's biology and its relationship to specific environmental characteristics before initiating a wildlife control program.

c. A WHA provides the foundation from which a more complete and site-specific understanding of potential wildlife hazards on an airfield is developed. The Wildlife Hazard Assessment (WHA) should be conducted by a qualified wildlife damage management biologist in accordance with 14 CFR Part 139. The plan, developed in compliance with 14 CFR Part 139, must also adhere to the Migratory Bird Treaty Act. Any "taking of protected migratory bird species" requires a valid incidental take permit under the Migratory Bird Treaty Act. The WHA should identify the wildlife species observed and their numbers, locations, movements, daily and seasonal occurrences. A WHA generally take up to one year to complete. This is because wildlife populations, especially migratory birds, exhibit seasonal fluctuations in behavior and abundance. The installation Fish & Wildlife office may be able to help reduce the time to complete based on a historical data of the wildlife. Upon completion of the study, recommendations are developed which are designed to reduce wildlife hazards. A WHA should not limit wildlife hazard assessments and wildlife management programs to the airfield property. It should also identify features near the airfield that attract wildlife. The WHA needs to be conducted by a qualified wildlife damage management biologist or by someone having experience in wildlife hazard management.

3-3. HPAAF Description.

a. Airfield Turf. Mowing the vegetation short or allowing it to reach heights where it goes to seed and becomes uneven encourages the growth of broad-leafed weedy vegetation. Such vegetation destroys grass and provides feeding and covers for birds and rodents which increases bird hazards and other wildlife at the airfield. Mowing

vegetation, especially if mown short, stimulates production and encourages weedy vegetation to invade grass stands. Allowing grasses to grow to recommended heights will reduce necessary mowing frequency and costs. HPAAF turf is maintained in the following manner:

(1) The areas immediately adjacent to the runway, taxiways and parking aprons is mowed on a regular basis and kept to a height of 2 to 6 inches to prevent grass height from interfering with the airfield lighting.

(2) The areas immediately adjacent to the airfield fence is mowed on a regular basis and kept to a height of 2 to 6 inches for security purposes.

(3) The area of the airfield around the runway is mowed 3 times a year by an Agriculture (AG) lessee.

(4) The eastern portion surrounding the Indian Agency Cemetery is cut once per year.

b. Drainage. Established ditches at HPAAF should be properly maintained with steep sides and trimmed vegetation. Occasionally, it is necessary to remove vegetation to prevent standing water on or near the airfield. Wetland vegetation should be routinely removed from these areas, ensuring the flow of drainage water is maintained to prevent the recurrence of aquatic vegetation. Whenever wetland vegetation develops, it should be removed using gang or boom mowers to reduce its attractiveness to birds and to prevent heavy vegetative growth that could complicate maintenance. Any alterations to potential wetland habitats must comply with federal and state regulations.

(1) Should HPAAF determine that a wetland habitat or floodplain needs to be modified, they must coordinate with Fort Sill's Environmental Quality Division (EQD) to receive findings of No Practical Alternative (FONPA) in accordance with EO 11990 (Protection of Wetlands) or EO 11988 (Floodplain Management).

(2) HPAAF has a drainage ditch running west to east along the southern portion of the airfield, with drains scattered around the infield that direct water to the southwest and northeast of the runway. Additionally, there are drains on the aircraft parking ramps and along the edges of the ramps that drain into a drainage ditch along Post Road.

c. Security Fencing. HPAAF fencing consists of a six-foot chain-link fence topped with three strands of barb wire. The fence line is checked regularly for breeches by wildlife, to ensure all gates are closed and to keep vegetation from developing on or near the fence for security reasons.

d. Perch and Nest Sites: Sites within the active movement area pose a significant risk to life and safety. Locations such as airfield structures, runway markers, poles, equipment, and similar areas should be monitored for birds using them as perches to prevent potential nesting. Non-frangible surfaces are not allowed in the clearance zones. Several species of birds, such as red-tailed hawks, American kestrels, turkey vultures, and songbirds, frequently use these sites. Where practical, these structures should be

removed or configured to limit suitable perching sites, as observed in some areas of the airfield.

(1) DPW fish and wildlife will be consulted when any modification could impact the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-12).

(2) HPAAF perch and nest sites include a pond on the northwest end of the airfield, where geese are sometimes seen, and the aircraft hangars. Language acknowledging this requirement must be included in any plans for modifying these or similar sites.

e. Waste Management. All organic wastes should be stored in enclosed containers until collected and removed. Construction containers as well as public trash containers should be covered to limit access by birds and other wildlife.

f. Wildlife Attractants. HPAAF has a drainage ditch that runs across the southern portion of the airfield and a pond to the northwest. Coyotes are attracted by small mammals (mice, rabbits, etc.) on the airfield.

g. Airfield Physical Description.

(1) Name of airfield: Henry Post Army Airfield

(2) Name of Army Installation: Fort Sill

(3) Name of runways: 18/36

(4) Location. Comanche county, OK

(5) Airfield/heliport size: Approximately 500 acres

(6) Airfield/heliport elevation: 1189

(7) General topography: The airfield is located physically in the Osage Plains section of the Central Lowland Province within the Interior Plains. The surface soils in the area are residual clays from limestone and sandstone. The topography of the immediate area is rolling, and thus affords good natural drainage.

h. Significant terrain features: None

i. Water areas: Pond on northwest side of airfield, drainage ditch runs across south end of airfield.

j. Developed areas: HPAAF is in a developed area, there is housing/barracks to the south, east and west. A state highway is just south of the airfield off the installation and an interstate is just east of the airfield off the installation. Additional roadways are on all sides of the airfield.

(1) Species mix on undeveloped land: Rodents and small mammals.

(2) Vegetative types: Bermuda and native grasses

(3) Landfill locations: None

(4) Sewage ponds: None

(5) Golf course: One to two miles north of airfield

(6) Other wildlife attractions: None

3-4. WASH Plan Execution. Once the wildlife hazard assessment has been completed, the plan should be put into action. The following sections ensure plan execution: identify attractants; habitat modification; wildlife watch warning system; wildlife watch conditions reporting; WWC modifications by others; wildlife hazard communication; and downgrading WWC.

a. Identify attractants. Most wildlife aircraft strikes occur on the airfield, so the logical place to begin looking for wildlife attractants, and setting up control programs, is on the airfield. Available food (invertebrates, small mammals, seeds, fruits, nuts, or plants), water (ponds, ditches, or puddles on the airfield), shelter (nesting sites, trees, bushes, or buildings) or the security offered by large open spaces will attract wildlife to an airfield. Sometimes it might be obvious what is attracting the wildlife. In other cases, it might not be obvious. The attraction will vary from one species to another.

b. Habitat modification. Habitat modification means changing the environment to make it less attractive or accessible to the problem wildlife. After identifying hazardous wildlife attractants on or near the airfield, develop a management plan to remove, reduce in quantity or deny wildlife access to them, depending on the circumstances at the airfield. Typical examples include manipulating the species and/or height of the airfield's ground cover, removing trees and bushes, eliminating or netting/bird balls over water bodies, excluding wildlife from buildings by netting or other means and selecting non-attractive planting around terminals.

3-5. Wildlife Watch Warning System. The Wildlife Watch Warning System is one of the most critical WASH procedures as it is an immediate exchange of information between ground agencies and aircrews concerning the existence and location of wildlife that pose a hazard to flight safety. The Airfield Manager or his designative representative(s) has the authority to declare a wildlife watch condition during normal flight operations. These personnel can declare conditions based on ground observations, pilot reports, radar observations, etc.

a. WILDLIFE WATCH CONDITIONS (WWC): The following WWC's will be used to warn aircrew and support personnel of the current wildlife threat to operations. These codes are identical to those used by the USAF. Wildlife locations should be given with the condition code. The Airfield Manager or designated representative(s) will make the final determination for declaring WWCs and increasing/decreasing WWC's.

b. WWC SEVERE. Generally defined as a heavy concentration of birds and wildlife on or immediately adjacent to the active runway or other specific locations that present an immediate hazard to flying operations. Aircrews must thoroughly evaluate mission need before operating in areas under condition SEVERE.

c. WARNING: Landing or departing in condition SEVERE may result in aircraft damage from a bird/wildlife strike.

d. SEVERE may also be declared when birds/wildlife of any size or quantity present an immediate hazard.

e. WWC MODERATE. Wildlife activity near the active runway or other specific locations representing increased potential for strikes. WWC moderate requires increased vigilance by all agencies and supervisors, and caution by aircrews.

f. WWC LOW. Wildlife activity on and around the airfield representing low potential for strikes. Note: The airfield manager or his designated representative may lower the WWC for the runway while keeping the higher WWC for the other area.

3-6. WWC Reporting. Declaration of a WWC will be made by the Airfield Manager or designated representative(s) based on the following:

a. Visual observation of wildlife activity on or near the airfield by any airfield personnel.

b. Information relayed by ATC radar, airborne and taxiing aircraft.

c. Observations relayed to ATC.

d. Observed NEXRAD Radar movements.

3-7. Wildlife Hazard Communication. Disseminating WWC is critical to WASH effectiveness. ATC will disseminate WWC by the following means:

a. Include WWC on ATIS Broadcasts.

b. Notify inbound/departing aircraft of WWC if aircraft has received ATIS and BWC has changes.

c. Provide additional wildlife advisories.

d. Airfield Management or ATC will direct the WDDT to the location where the wildlife is posing a problem.

e. Pass WWC to Airfield operations if notified by some other entity.

f. For rapidly changing WWC place a statement on ATIS advising aircrew to contact Airfield operations, Air Traffic Control, or Approach Control for the latest WWC.

g. Under wildlife watch condition SEVERE, ATC should ensure that the pilot understands the condition and is provided the option to delay, divert, or continue the proposed operation into the hazardous area.

3-8. Downgrading WWC. When a WWC has been declared MODERATE or SEVERE, once the hazard no longer exists or has been lowered the WWC shall be downgraded commensurate with updated information. The Airfield Manager or designated representative(s) will make the final determination on WWC's.

Chapter 4
4-1. Wildlife Detection and Dispersal Team (WDDT).

a. The WDDT is selected by the GC or DGC and includes personnel authorized to employ non-lethal control techniques and lethal control measures when necessary and in accordance with federal and state depredation permits. All members of WDDT will have documented training on the following initial and recurring annual training:

(1) Species identification

(2) Wildlife exclusion

(3) Horns, launcher, pyrotechnics, and other dispersal equipment

(4) WWC reporting and downgrading

(5) Safe handling and disposal of wildlife

4-2. General Dispersal Guidelines.

a. Prior to initiation of dispersal actions, the WDDT team leader will coordinate the location and methods with airfield management and ATC and ensure the appropriate wildlife watch condition has been declared prior to dispersal activities on the active runway.

b. Vehicle horns and sirens can be used to initially harass birds/wildlife; however, this method is the least effective method of moving the birds/wildlife off the airfield. Normally, once the birds are airborne or wildlife is running from the sound of the horn, the use of pyrotechnics will move the birds/wildlife a further/safer distance from the airfield.

c. Horns and sirens should be used before pyrotechnics are used.

d. Pyrotechnics can be used in conjunction with vehicle harassment. These consist of screamer, whistler, and banger.

e. If portable propane sound cannons are used on the airfield, they should be relocated periodically to prevent habituation.

f. All non-lethal deterrents must be attempted first before lethal methods can be

employed. If, however, the methods above do not work or the wildlife become accustomed to the hazing, it shall become necessary to remove wildlife via lethal methods to reinforce the dispersal methods. Lethal taking of wildlife will be carried out by authorized personnel and will occur only after coordination with DPW Fish & Wildlife. Personnel conducting lethal control will collect all wildlife for identification, disposal, and reporting requirements.

g. When the target flock or problem birds are dispersed, Base Operations shall be notified so the WWC can be lowered.

4-3. Approval Authority for the Use of Weapons. The garrison commander is the approval authority for the use of lethal methods to remove wildlife from the airfield. Lethal methods for depredation should be carried our IAW local, state, and federal laws. The WDDT will be activated when wildlife on the airfield creates hazardous conditions. WDDT personnel must have immediate access to binoculars and wildlife dispersal equipment.

4-4. PROCEDURES FOR THE USE OF PYROTECHNICS and LAUNCHERS:

a. The launcher/pyrotechnics may only be used by those individuals who have been trained and authorized by the Airfield Manager or designated representative.
Note: Southwest Oklahoma has periods of very dry weather with associated high fire danger risk. The fire danger risk will be checked before using pyrotechnics. Pyrotechnics will not be used if the fire danger risk is high or extremely high. The fire department will be notified before discharging pyrotechnics.

b. Contact ATC to receive clearance and coordinate location prior to discharging pyrotechnics. If aircraft operations are imminent, ensure the WWC is raised prior to initiating dispersal operations.

c. Inform ASPM prior to discharging pyrotechnics on the flight line.

d. Use ear and eye protection, and gloves.

e. The launcher can only be transported empty.

f. **Do not load the launcher in the vehicle or fire launcher while in vehicle.** Step outside the vehicle, cock the launcher, load the cap, and then load the explosive in the launcher.

g. Point the launcher at 45 degrees or higher into the air, preferably toward the flock of birds. Face AWAY from the launcher and pull the trigger.

h. A log will be kept, detailing the number and location of shots fired. See Appendix H for a sample.

i. Any mishap involving the launcher and/or the pyrotechnics cartridge shall be reported immediately.

Chapter 5
5-1. Reporting of Wildlife Aircraft Strikes

a. The pilot should inform the HPAAF ATC of any wildlife strike and, if airborne, land to assess the damage. If the strike occurs on the ground, the pilot should stop the aircraft to assess the damage.

Note: Report known or suspected strikes even if no wildlife remains are found on the aircraft. Base Operations personnel may be able to retrieve the wildlife on the airfield.

b. After assessing the aircraft for damage, preserve ALL wildlife remains (including feather, hair, tissue, and/or blood) and notify base operations. Personnel collecting the remains should receive instruction on procedures to safely collect remains.

c. Report the strike by filling out FAA Form 5200-7, Bird/Wildlife Strike Report (Appendix K) which is available at Airfield operations. After filling out the form give it to the ASPM (Airfield Safety Program Manager) or airfield operations specialist.

d. If an aircraft is damaged, the unit aviation safety officer will be informed, and an accident investigation will be performed IAW DA Pam 385-40.

Chapter 6
6-1. Recordkeeping.

a. DPW will maintain their records of depredation of any birds or animals. Dead birds/wildlife will be picked up and disposed by WDDT personnel during depredation efforts or by any airfield personnel if discovered outside this timeframe.

b. Airfield operations should maintain a daily activity log to include wildlife sightings and WDDT activities to include filling out the pyrotechnic log as required. These logs should document all wildlife dispersal operations to include species, location, methods used, and number of birds dispersed.

c. Airfield safety program manager should summarize quarterly the data collected by the WHWG, FOD and safety council meetings.

Appendix A
References

AR 95-2
Airspace, Airfields/Heliports, Flight Activities, Air Traffic Control, and Navigational Aids

AR 385-10
The Army Safety Program

AR 200-1
Environmental Protection and Enhancement

DA Pam 385-40
Army Accident Investigations and Reporting

DA Pam 385-90
Army Aviation Accident Prevention Program

UFC 3-260-01
Airfield and Heliport Planning and Design

AC 150/5200-36
Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments and Training Curriculums for Airport Personnel Involved in Controlling Wildlife Hazard on Airports.

AC 150/5200 33B
FAA Advisory Circulars Hazard Wildlife Attractants on or near Airports

AFP 91-212
WASH Management Techniques

DoDI 4715.03
Natural Resources Conservation Program

DoDI 4150.07
DoD Pest Management Program

Exec Order 13514
Federal Leadership in Environmental, Energy, and Economic Performance

ATP 5-19
Risk Management

14 CFR Part 139
Certification of Airports

Appendix B
Wildlife Management Techniques and Recommendations.

B-1. TECHNIQUES AND RECOMMENDATIONS. Bird dispersal should primarily be accomplished by airfield operations personnel. However, a variety of dispersal and control measures should also be available to DPW Fish & Wildlife personnel to use on an as-needed basis. These measures should be readily available at any time when birds or other wildlife threaten airfield operations. Pyrotechnic equipment should be properly stored in Base Operations for immediate access.

B-2. ACTIVE HARASSMENT.

a. The airfield should have enough harassment tools to effectively control and harass wildlife on the airfield. Many airfield personnel only use their vehicle horn/siren to harass birds. This is not considered an effective WASH program. While a vehicle horn/siren may work temporarily to get the birds to fly or move, it normally does not scare the birds enough to deter their return to the same location when the vehicle is gone. Active harassment requires adequate tools (pyrotechnics/bioacoustics/propane cannons) to effectively deter birds from the airfield.

b. In most situations, the combination of human presence and pyrotechnic will be enough to prevent birds from landing and feeding. These two methods should form the foundation of the bird harassment program. However, judicious, and varied use of several different types of harassment tools is preferred, to prevent acclimation. A combination of frightening devices should be available for use whenever birds are present on the airfield or in surrounding areas. Primary among those are pyrotechnic devices that can be fired from 15mm "starter" pistols or modified flare pistols. Pyrotechnics are listed in the Air Force Table of Allowances, no such Army equivalent exists for airfield use, though explosive procurement and storage requirements for other such materials can be followed. Airfield bird control devices may also be ordered through local purchase mechanisms, however prior coordination with munitions experts and safety personnel must be accomplished. Such devices project pyrotechnics many meters over flocks of birds that present hazards. Skillful use of the devices can disperse birds from the field in desired directions. They produce a variety of loud sounds and explosions, bright flashes of light, and/or trailing smoke. Training for safely using the devices and coordination with airborne aircraft through direct communications is imperative to avoid scaring birds into active flight paths. Pyrotechnic devices can be extremely effective in dispersing waterfowl, gulls, crows, shorebirds, starlings, and flocks of blackbirds. Gulls, starlings, crows, and blackbirds may also be dispersed using a combination of pyrotechnics and bioacoustics.

c. Bioacoustics is the recorded distress and alarm calls of species to be dispersed. Ensure species-specific calls are used. They are projected over a speaker system that may be mounted on the roof or through the window of a vehicle. Birds will sometimes disperse upon hearing species-specific calls but may come to investigate the source of the sound and can then be encouraged to leave using pyrotechnic devices. These active harassment techniques should be used on the airfield and in all hazardous surrounding areas. These techniques may also be used in coordination with local property owners, to

disperse any known bird roosts from dense trees such as found in nearby parks, golf courses, ponds, and other structures.

d. Additional harassment techniques such as networks of remotely triggered gas cannons, radio-controlled model aircraft, or others can be considered as effective supplements to other dispersal techniques. Creativity and intensity of such programs will make the overall effort much more successful and delay habituation to the combination of techniques.

B-3. Rodent Control. Rodents such as moles (*Microtus spp.*), mice (*Peromyscus spp.*), and ground squirrels (*Spermophilus spp.*) are abundant throughout most regions and have established populations in the immediate surrounding areas and on the airfield itself. Rodents attract a variety of raptors such as Red-tailed Hawks and Kestrels that feed on them. Rodents may also damage wiring and undermine the integrity of pavements and overruns. Removal by trapping or poisoning in accordance with federal/state law may be conducted by DPW through service orders or in house with self-help supplies.

B-4. Invertebrate Control. Various invertebrates including insects and earthworms may attract a wide variety of birds including blackbirds, starlings, crows, gulls, and raptors. Insecticides can be applied on a limited basis as necessary and in compliance with state and federal law by DPW through service orders.

B-5. Waterfowl Control on Ponds and Surrounding Properties.

a. There are a variety of waterfowl species that may pose very significant and potential hazards to aircraft operating from IMCOM AAFs and surrounding areas. Canada Geese, and particularly resident populations, may be most significant. In fact, these may be the most significant hazard to aviation noted at airfields. These birds are attracted to open-water ponds and associated managed grassy areas such as by lakes and other such areas. Warm-water discharge ponds from power plants, rivers and associated wetlands also attract large numbers of resident and migratory geese and other waterfowl. They will also visit surrounding agricultural fields as grains mature or are left exposed after harvest operations are complete. Some of these hazards are not possible to control as birds may merely be migrating through the region during spring and fall or exhibiting local movement patterns between features in the vicinity of the installation. However, local non-migratory resident Canada Geese pose the most significant problems and will attract many of these migratory birds to areas where they feel secure in areas occupied by resident birds. It is imperative to control resident goose populations if hazards are to be avoided. It must also be emphasized that there are potentially significant health risks associated with large goose populations in heavily used areas of the installation in addition to the aviation hazard. There are several mitigating measures that may be employed.

b. Resident Canada Goose population control should be exercised especially on IMCOM AAF property, but also in the surrounding community wherever potentially hazardous concentrations are noted. DPW Fish & Wildlife is permitted and conducts specific resident goose control efforts in the cantonment area.

B-6. Depredation and Controlled Hunting. In addition to the geese detailed above, removal of nuisance birds and other wildlife in the vicinity of the airfield may be conducted with appropriate Federal and State permits by DPW Pest control or Fish & Wildlife personnel or under contract through the USDA Wildlife Services. Trapping or poisoning of individual or flocks of birds, such as starlings, pigeons, house sparrows, blackbirds and gulls, or other wildlife, such as coyotes, deer, or prairie dogs, may be required on a periodic basis. Depredation is a last resort measure that may reinforce other habitat management or active control efforts and is recommended when a severe hazard persists for several days. Such an effort must be carefully controlled and conducted in full compliance with conditions of state and federal permits. Dead animals must not be placed near the operating surfaces as they may attract scavengers and increase the hazard.

Appendix C
HPAAF AIRPORT LAYOUT

Appendix D
Local Wildlife Species

D-1. The following is a summary of wildlife commonly found within the airfield environment. Associated with each is a brief description of how they can be controlled or avoided. Each control measure will require action by one or more tasked organizations as described in Section 2. It is very important to know which wildlife species or airfield attractants are present before control techniques can be effectively applied. As such, all WDDT personnel must be trained in wildlife identification. Depredation (lethal harassment) of migratory birds (as defined by the Migratory Bird Treaty Act) requires a permit from the Regional US Fish & Wildlife Service Regional Bird Permit Office.

D-2. BIRDS

a. Gulls: These birds represent the most significant hazard to aircraft at airports worldwide. Due to their omnivorous feeding habits and preference for flat, open areas to rest, they are commonly found on airfields/heliports. Gulls are most active just after sunrise and before sunset as they move to and from feeding areas. Maintenance of grass height between 6 and 12 inches is critical in reducing gull numbers. Even with this in effect, gulls may inhabit the airfield, particularly during inclement weather. Persistent harassment using pyrotechnics and bioacoustics is necessary to discourage these birds. Other techniques such as gas cannons, model gulls, radio-controlled model aircraft and even falconry should be considered if available and cost-effective.

b. Raptors (Hawks, Falcons, Eagles, Vultures): These birds can be particularly hazardous to aircraft because of their size and widespread distribution over bases and low-level areas. Raptors (particularly vultures) use thermals to their advantage to search for prey. These birds become active during mid-morning and remain aloft until late afternoon. Removal of dead animals and removal of dead trees and other perching sites on the airfield can control these birds. Pyrotechnics may be used to frighten raptors from the airfield.

c. Waterfowl (ducks, geese, swans): Resident waterfowl nesting in the area during the summer tend to be attracted to ponds, lakes, and the like. Nest control by DPW Fish & Wildlife is conducted in the cantonment area as needed. Low flying helicopters in the training area are at greater risk striking waterfowl than aircraft at AAFs. Migrating waterfowl during spring and fall can potentially be dangerous to flight safety due to the large numbers of birds traveling between their breeding and wintering grounds. Migrating birds are most active from sunset through midnight, with numbers decreasing in the early morning hours. Avoidance of flying during the evening hours is generally safest. If migrating waterfowl land at the airfield, pyrotechnics, gas cannons, and effigies are all excellent control techniques.

d. Sandpipers/Shorebirds: The most significant hazard from these birds occurs when large numbers flock in tight groups, particularly during migration. To control these birds, proper grass height management must be observed. Water in puddles should be eliminated and ditch banks steepened to limit access to these birds. Other species such as Killdeer are quite adept at avoiding aircraft. Pyrotechnics and bioacoustics can be used for all species.

e. Owls: Most owls are nocturnal and attracted to rodents as a food source. Rodent control through habitat manipulation may be necessary on the airfield to control owls. Limit the number of perch sites by removing perch sites such as unnecessary fence posts and dead trees. Avoid over-flying landfills at night to reduce hazards from owls.

f. Nighthawks, Whippoorwills: These birds are nocturnal and particularly active at sunset and moonlit nights. Little can be done to limit their number other than insect control. Avoiding night flights is also not feasible however these birds tend to pose little risk to aircraft.

g. Flycatchers: These birds are present on airfields/heliports to feed on insects. Strikes are infrequent but should not be overlooked. Control is best accomplished by limiting the abundance of insects and removal of perch sites such as fence posts, tree limbs, bushes, high spots on the field, etc.

h. Swallows and Swifts: These birds eat insects in flight and are commonly found above airfields/heliports. Insect control will reduce Swallow numbers and discouragement of nesting will further decrease numbers. Remove mud nest from hangars, etc., with a hose as the birds begin construction of nest and when nesting and fledging is complete. No nest destruction is allowed when eggs or birds are present in the nest. Nesting in hangars can be discouraged by harassing the birds as they work on building. If Swallows are noted resting on runways or taxiways, use pyrotechnics to disperse them. Nest removal (an action requiring permits) from hangars shall be coordinated with the DPW Fish & Wildlife.

i. Crows, Ravens, Blackbirds, Grackles, Cowbirds, and Starlings: These birds can be particularly hazardous because they frequently occur in large flocks particularly at sunset as they return to roost sites. These birds are generally attracted to flat, open areas to feed, rest, or stage/pre-roost; they are also attracted to dumpsters and garbage bins. Maintenance of grass height between 6 and 12 inches is the best control method. Remove any known roost sites or thin individual roost trees. Bioacoustics, pyrotechnics, and depredation can be used to frighten and remove these birds. Starlings are not federally protected and may be removed without permits. Permits are required for other species. If these birds occur in hangars, removal or modification of the perches is recommended to eliminate the problem; toxic bird perches could be used in some circumstances. Avoid flying near known roosts, especially at sunrise and sunset and during spring and fall migration.

j. Meadowlarks: These birds occur on many airfields/heliports and are attracted to grasslands and low weeds. Eliminate broadleaf weeds and maintain grass height at 6 to 12 inches. Elimination of suitable perching sites, such as fence posts and brush will also aid in reduction. Pyrotechnics can be used, but Meadowlarks usually only fly a short distance before setting down again. Persistence is the key to success.

k. House Sparrows: These birds are not commonly struck by aircraft but are common pests around structures. House Sparrows often nest in hangars and dense shrubs and trees. These birds are not protected by law and may be destroyed without a permit. If these birds occur in hangars, removal or modification of the perches or nesting areas is recommended to eliminate the problem. Toxic bird perches may also be used. Frightening techniques are usually ineffective against these birds.

D-3. MAMMALS. While concern is mostly centered on birds, several mammalian species also pose threats to flight operations and must be considered. As for all wildlife, close coordination with the installation's Fish and Wildlife Management Program is necessary to reduce hazards.

a. Deer: Deer pose the greatest threat to aircraft due to their size and preferred nocturnal activities. Control techniques include modifying and maintaining existing perimeter fences and gates to make them less likely to allow access by deer. This includes continual monitoring of gates any time they must be open for access for any reason. Deer that do enter airfields/heliports perimeters can possibly be driven out using nets as funnels, and personnel and vehicles to push the deer out one of the gates. Selective shooting of deer posing a safety treat inside the airfield boundaries shall be used as a last resort and only by DPW Fish and Wildlife. State permits may be required.

b. Coyotes and foxes: These animals are attracted to airfields/heliports by rodents, rabbits, and other food sources. Dens may be found in banks, culverts, or other suitable areas. Rodent control through habitat modification will reduce the likelihood these animals will enter airfield/heliport areas; pyrotechnics can also be used to frighten these animals. Trapping of individual animals can be conducted by DPW through a service order or Fish and Wildlife in specific circumstances. State permits are required. Coyotes/foxes should be discouraged from using the airfield with dispersal techniques and exclusion fencing.

c. Rabbits and rodents: These animals often attract raptors, coyotes, and foxes. Proper grass management will reduce the numbers of these animals on airfields. State permits may be required. DPW can control a specific problem through a service order.

Appendix E
USAF Low-Level Bird Avoidance Model (BAM).

E-1. The BAM is a predictive model using Geographic Information System (GIS) technology as a key tool for analysis and correlation of bird habitat, migration, and breeding characteristics, combined with key environmental and man-made geospatial data. The value for each cell (or pixel) of the model is equivalent to the sum of the mean bird mass (in ounces), for all bird species present during a particular daily time period, for 1 of 26 two-week periods in a year. The BAM is internet accessible at the following web site http://www.usahas.com.

a. The bird species data set was derived from discrete geographic information for observations of 60 key WASH bird species, over a 30-year period. The species data was acquired from several key datasets, including the Audubon Societies' Christmas Bird Count (CBC), the US Biologic Survey's Breeding Bird Survey (BBS), bird refuge arrival and departure data for the conterminous U.S., and many additional data specific to a particular bird species.

b. The risk levels describe three predicted risk classes - Low, Moderate, and Severe, which are based upon the bird mass in ounces per square kilometer. In other words, the risk levels represent the number of birds (bird mass) in a kilometer squared spatial area. The "Moderate Zone" indicates a risk ratio that is 57-708 times the risk of the "Low Zone", while the "Severe Zone" indicates a risk ratio that is 2,503-38,647 times the risk of the "Low Zone".

c. The model uses the best available data for historical modeling of bird migratory patterns to provide the user with an effective decision-making tool. Because birds are dynamic creatures whose migratory behavior is initiated by weather events in any given year, the model cannot be said to predict the exact movement of bird species through space and time beyond the biweekly timeframe. Spatial zones indicating a severe risk according to the model should not be ignored and should be avoided. It is not suggested that pilots fly within the "Severe Zone" unless it is absolutely mission essential.

Appendix F
Active WASH Dispersal/Depredation Methods and Equipment

F-1. GENERAL. There are a variety of methods for dispersing birds using static, pyrotechnic, bioacoustics, and depredation equipment. Any or all of these may be used at IMCOM AAF to control birds. The WDDT must be trained in the use of Bird Dispersal Equipment used at IMCOM Army airfields/heliports annually. Due to the Army not having a list of WASH equipment, use AF Template (AFPAM) 91-212, Attachment 5, to obtain a list of WASH equipment normally used by the DoD.

F-2. STATIC DETERRENT DEVICES: Static deterrents include, but are not limited to; propane cannons, scarecrows, silhouettes, and effigies. They are often very effective in bird deterrence. Static devices are designed to augment the activities of the bird dispersal teams. At no time should static deterrents be considered a replacement for dispersal teams. Static devices are very labor intensive and should be moved 50-100 feet from their existing locations at least once daily. This activity will inhibit the decline in their deterrent effect that can occur as wildlife begins to become accustomed to the device.

F-3. PROPANE CANNONS: These devices produce loud explosions at regular, pre-set intervals. They can be useful in combination with other methods. The WDDT will position and operate propane cannons based on the active runway, bird locations, and air traffic density. Change the locations daily/weekly to avoid habituation by the birds. At a minimum, one cannon each should be placed at the approach end, midfield, and departure end.

F-4. BIOACOUSTICS: Bioacoustics are audio-taped distress or predator calls of actual birds. Special care must be taken to play the tape in short intervals to prevent habituation by the birds. Play the tape 20-30 seconds, then pause briefly. Repeat as required. Birds should respond by taking flight or becoming alert. These calls are effective for waterfowl, gulls, songbirds, and shorebirds. Pyrotechnics should be used in conjunction with bioacoustics to enhance complete dispersal. Bioacoustics should be the first option employed to control airfield/heliport bird habitation.

F-5. PYROTECHNICS: Pyrotechnics are effective for dispersing most bird species and should also be used for coyotes, deer, and other animals. Pyrotechnics are fired from modified pistols and 12-gauge shotguns. Pyrotechnics may include a variety of devices like commercial fireworks, including bangers, whistlers, and screamers. Screamers and bangers are smaller diameter projectiles which are fired from commercially available 15mm launchers. These small but very loud firecrackers are shot from the launcher into flocks or near individual animals to frighten them away when they are discharged. Judicious and varied use of several different kinds of pyrotechnics is important, to prevent acclimation.

F-6. LETHAL CONTROL (DEPREDATION): Occasional depredation of birds reinforces the other methods. Shooting one or two from a flock, then following with a volley of pyrotechnics is generally a very effective strategy for deterrence. Domestic pigeons, European starlings, and house sparrows may be removed without permit. All migratory birds (as defined by the Migratory Bird Treaty Act) require a permit prior to removal. DPW Fish & Wildlife or Pest control will conduct lethal control and will collect depredated wildlife. Starlings, pigeons, and house sparrows may be lethally controlled through a service order or by contract through USDA Wildlife Services.

Appendix G
Passive WASH Control Methods

G-1. MANAGING GRASS HEIGHT. There is no grass height management standard that fits all situations. Different species of grasses, weeds, etc. all grow at various rates, produce seeds and fruits as varying heights, and attract different species of wildlife. The Wildlife Hazard Assessment will help determine the most appropriate grass height and management scheme.

G-2. CONTROLLING BROAD-LEAFED WEEDS. Keep broad-leafed weeds to a minimum on the airfield/heliport. Apply herbicides as necessary for control. Broad-leafed weeds attract a variety of birds and wildlife, may produce seeds or berries, and may limit grass growth. Obtain assistance in herbicide selection for weed control, appropriate grass seed selection and erosion control vegetation from WHWG recommendations, DPW Fish & Wildlife, U.S. Soil Conservation Service, or the Agricultural Extension Service.

G-3. PLANTING BARE OR ERODABLE AREAS.

a. Eliminate bare areas on the airfield/heliport. Where re-vegetation hasn't worked or can't work, soil cementing may be the answer. Soil cementing is the process of adding materials to the existing soil. Once the soil is hardened, it becomes like concrete; however, water runoff is accelerated.

b. A grass mixture/blend that is designed for areas that receive little or no supplemental fertilization or irrigation should be used. Avoid using invasive species and minimize the use of pesticides. IAW 4715.03, restore and rehabilitate altered or degraded landscapes and associated habitats to promote native ecosystems and land sustainability when such action is practicable and does not conflict with the military mission or capabilities consistent with EO13514. Seed mixtures should not contain millet or any other large seed producing grass.

G-4. REMOVING HABITAT DIVERSITY/EDGE EFFECT. The greatest numbers of species are found where vegetation types change from forests to brush, or brush to grass (edge effects). To reduce wildlife problems, keep edge effects to a minimum, or as far from the active runway as possible. If an airfield/heliport has clumps of brush and shrubs around the grass, more diverse habitat is available. Remove brush and weeds to maintain the airfield/heliport in the most uniform condition possible. This eliminates the cover many birds and rodents require. Single trees or snags on an airfield/heliport may provide perches for hawks, owls, or other bird species. Biodiversity practices should not be implemented on airfields/heliports.

G-5. LEVELING OF AIRFIELD/HELIPORT. Level or fill high or low spots to reduce attractiveness to birds and prevent standing water.

G-6. REMOVING ANIMAL CARCASSES FROM THE AIRFIELD/HELIPORT. This is to avoid attracting scavengers that may feed on them. Forward all remains from aircraft strikes, depredation activities, or found dead to the DPW Fish & Wildlife personnel for identification and collection.

G-7. REMOVING DEAD VEGETATION. As soon as possible, remove dead vegetation such as brush piles, grass clippings, etc., and the cover it affords.

G-8. PEST CONTROL. Invertebrates and rodents are food sources for many birds. Periodically survey and reduce these pests when required. Pesticides and traps can sometimes reduce pest populations. Only pesticides that are Environmental Protection Agency (EPA) registered and Command Pest Management Consultant approved are authorized, and they must be used strictly according to label instructions. Additionally, if the pesticides are purchased with non-governmental funds, they must also be State registered. Inspection and control should begin early in the spring after coordination is made with DPW Fish & Wildlife and DPW-Operations and Maintenance (Pest Control).

G-9. MAINTAINING DRAINAGE DITCHES. Fresh water is one of the most important airfield/heliport wildlife attractants, especially in arid regions and near the seacoast. Standing water creates a source of drinking water and a breeding place for insects, amphibians, and other food sources for birds. Regularly inspect ditches to keep them clear. Maintain ditch sides as steeply as possible (minimum slope ratio of five to one) to discourage wading birds and emergent vegetation. Improve drainage as necessary to inhibit even temporary ponds or puddles. When able, cover ditches with netting/plastic fencing. Working in and around wetlands (e.g. ditches and creeks) must be done in coordination with DPW-Environmental (Wetlands).

G-10. ELIMINATE ROOSTING SITES. Control roosts by vegetation management of roost sites where possible. Prune or cut down trees to reduce the number of perches if necessary.

G-11. BIRD PROOF BUILDINGS AND HANGARS. Often, bird proofing of buildings and hangars is required to exclude pigeons, sparrows, and swallows. Excluding birds from a structure they currently utilize will often displace them to an adjacent structure. Lethal control of birds in buildings must be done in accordance with state and federal permits. Denying access by screening windows, closing doors, and blocking entry holes is most effective. When necessary, consider:

a. Pellet Guns. This weapon is a short-term bird eradication solution only. Proper safety equipment and skilled personnel are required. This will be used on pigeons, house sparrows and starlings.

b. Netting. Though expensive, provides an excellent long-term defense against birds returning to hangars. Install under superstructure to exclude birds from roosting areas while allowing the doors to be open during hangar operations.

c. Avitrol. DPW-Operations and Maintenance (Pest Control) should place in or near hangar to remove birds or create a distressed response that scares other birds.

d. Trapping and Removal. All trapping will be conducted by DPW through service order or in specific circumstances by DPW Fish and Wildlife personnel or USDA wildlife services.

e. Design Features. If designing a new hangar, consider locating supports on the exterior.

f. Sharp Projections. Use in limited areas such as ledges and overhangs, or small places where birds cannot be allowed.

g. Perimeter fence and gates. Maintain perimeter fence and gates around the boundaries of AAFs/AHPs to exclude large mammals (e.g., deer).

Appendix H
WASH Pyrotechnic Log Form

CAPA	Date/Time Out	Date/Time In	Number of Rounds Fired	Location(s)	Depredation (Y-N)	DPW En. Notified	Miscellaneous	Shooter's Signature
Example: Banger	3 Mar 00/1000	3 Mar00/1030	2	see map	N	N/A	Moved flock of crows	*Joe White*

Appendix I
FAA Form 5200-7, Bird/Other Wildlife Strike Report

Form Approved OMB NO. 2120-0018

U.S. Department of Transportation
Federal Aviation Administration

BIRD/OTHER WILDLIFE STRIKE REPORT

1. Name of Operator	2. Aircraft Make/Model	3. Engine Make/Model

4. Aircraft Registration	5. Date of Incident ___/___/___ Month Day Year	6. Local Time of Incident ☐ Dawn ☐ Dusk — HR — MIN ☐ Day ☐ Night ☐ AM ☐ PM

7. Airport Name	8. Runway Used	9. Location if En Route *(Nearest Town/Reference & State)*

10. Height *(AGL)*	11. Speed *(IAS)*

12. Phase of Flight

- ☐ A. Parked
- ☐ B. Taxi
- ☐ C. Take-off Run
- ☐ D. Climb
- ☐ E. En Route
- ☐ F. Descent
- ☐ G. Approach
- ☐ H. Landing Roll

13. Part(s) of Aircraft Struck or Damaged

	Struck	Damaged		Struck	Damaged
A. Radome	☐	☐	H. Propeller	☐	☐
B. Windshield	☐	☐	I. Wing/Rotor	☐	☐
C. Nose	☐	☐	J. Fuselage	☐	☐
D. Engine No. 1	☐	☐	K. Landing Gear	☐	☐
E. Engine No. 2	☐	☐	L. Tail	☐	☐
F. Engine No. 3	☐	☐	M. Lights	☐	☐
G. Engine No. 4	☐	☐	N. Other:	☐	☐

(Specify, if "N. Other" is checked)

14. Effect on Flight

- ☐ None
- ☐ Aborted Take-Off
- ☐ Precautionary Landing
- ☐ Engines Shut Down
- ☐ Other: *(Specify)*

15. Sky Condition

- ☐ No Cloud
- ☐ Some Cloud
- ☐ Overcast

16. Precipitation

- ☐ Fog
- ☐ Rain
- ☐ Snow
- ☐ None

17. Bird/Other Wildlife Species

18. Number of birds seen and/or struck

Number of Birds	Seen	Struck
1	☐	☐
2-10	☐	☐
11-100	☐	☐
more than 100	☐	☐

19. Size of Bird(s)

- ☐ Small
- ☐ Medium
- ☐ Large

20. Pilot Warned of Birds ☐ Yes ☐ No

21. Remarks *(Describe damage, injuries and other pertinent information)*

DAMAGE / COST INFORMATION

22. Aircraft time out of service:	23. Estimated cost of repairs or replacement *(U.S. $)*:	24. Estimated other cost *(U.S. $) (e.g. loss of revenue, fuel, hotels)*:
_____ hours	$	$

Reported by *(Optional)*	Title	Date

Paperwork Reduction Act Statement: The information collected on this form is necessary to allow the Federal Aviation Administration to assess the magnitude and severity of the wildlife-aircraft strike problem in the U.S. The information is used in determining the best management practices for reducing the hazard to aviation safety caused by wildlife-aircraft strikes. We estimate that it will take approximately 5 minutes to complete the form. If you wish to make any comments concerning the accuracy of this burden estimate and any suggestions for reducing this burden, send those comments to the Federal Aviation Administration, Management Staff, ARP-10, 800 Independence Avenue, SW, Washington, DC 20591. The information collected is voluntary. Please note that an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection is 2120-0045.

FAA Form 5200-7 (3-97) Supersedes Previous Edition ☆ U.S. GPO: 1997-418-084/64203 NSN:0052-00-651-9005

Section I
Acronyms, Abbreviations and References

AAF	Army Airfield
AFM	Air Force Manual
AFPAM	Air Force Pamphlet
ASPM	Airfield Safety Program Manager
ASO	Aviation Safety Officer
AGL	Above Ground Level
AHAS	Avian Hazard Advisory System
AHP	Army Heliport
AOB	Airfield Operations Board
ATC	Air Traffic Control
ATIS	Automatic Terminal Information Service
AWOS	Automated Weather Observing System
BAM	Bird Avoidance Model
CCTV	Closed Circuit Television
DOD	Department of Defense
DPTMS	Directorate of Plans, Training, Mobilization and Security
DPW	Directorate of Public Works
DSN	Defense Switch Network
FAA	Federal Aviation Administration
FAAO	Federal Aviation Administration Order
FOD	Foreign Object Damage
ICAO	International Civil Aviation Organization
ILS	Instrument Landing System
IMCOM	Installation Management Command
INRPM	Integrated Natural Resources Management Plan
IPM	Integrated Pest Management
NEPA	National Environmental Policy Act
NOTAM	Notice to Airmen
MOA	Military Operations Area
MSL	Mean Sea Level
OPR	Office of Primary Responsibility
PA	Public Affairs
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
WASH	Wildlife Aircraft Strike Hazard
WDDT	Wildlife Detection and Dispersal Team
WHA	Wildlife Hazard Assessment
WHWG	Wildlife Hazard Working Group
WHMP	Wildlife Hazard Management Plans
WWC	Wildlife Watch Condition

Section II
Terms

Active Bird Dispersal. Harassment techniques employed to disperse birds or mammals from airfield and surrounding areas. Methods may include chase, pyrotechnics, bioacoustics, and depredation.

Wildlife Aircraft Strike Hazard (WASH). General term to describe wildlife hazards and wildlife hazard prevention programs.

Wildlife Hazard Working Group (WHWG). Local committee concerned with the control of wildlife hazards to aviation. Executes and makes recommendations to the WASH Program.

Wildlife Watch Condition (WWC). A bird hazard alert condition used to warn aircrew of bird activity.

WWC LOW. A Bird Watch Condition which indicates sparse bird activity on the airfield and a low probability of hazard.

WWC MODERATE. A WWC which indicates that moderate concentrations of birds are in a location that represent a probable hazard to flight operations.

WWC SEVERE. A WWC indicating heavy concentrations of birds on or immediately adjacent to the runway which presents an immediate hazard to flight operations; or any concentration of birds that presents a danger to aircraft.

Bioacoustics. Recorded tapes of bird distress and predator call used by WDDT to disperse birds off runways and airfield/heliport areas.

Wildlife Strike. Any contact between wildlife and an aircraft, whether damage occurred.

Depredation. Technique used to remove problem wildlife permanently from the airfield/heliport and hangars when other scare tactics are ineffective. Depredation permits are required for most species. DPW will conduct all depredation operations involving any species other than pigeon, starling, or house sparrow. These three species can be controlled without special permits and licensing.

Falconry. Active dispersal of problem birds using trained falcons. Models/decoys. Various static devices used to disperse birds from airfield/heliport areas. Many include scarecrows, decoys, Mylar tape, and eye spots.

Propane Cannons. Stationary non-projectile sound producing device used to disperse birds from airfield/heliport areas.

Pyrotechnics. Noise producing devices fired from pistol or shotgun. Used by the WDDT

to scare wildlife away from runways and airfield/heliport areas. Pyrotechnics are Class 1.4 explosives.

Wildlife Detection and Dispersal Team (WDDT). A roving airfield/heliport patrol, which reports WWCs disperses problem wildlife via chase, pyrotechnic and bioacoustics.