

**BY ORDER OF THE COMMANDER
HILL AIR FORCE BASE**

**HILL AIR FORCE BASE INSTRUCTION
91-212**



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Safety

**HILL AIR FORCE BASE
BIRD/WILDLIFE AIRCRAFT STRIKE
HAZARD (BASH) PROGRAM**

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This instruction implements Department of the Air Force Instruction (DAFI) 91-202, *U.S. Air Force Mishap Prevention Program*, DAFI 91-204, *Safety Investigations and Reports*, and DAFI 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Management Program*. This instruction provides a base program to minimize aircraft exposure to potentially hazardous bird strikes and applies to all host, associate, and temporary duty organizations on Hill Air Force Base (AFB), including Air National Guard and US Air Force Reserve members and units. The 75th Air Base Wing Commander (75 ABW/CC) is responsible for the implementation of this instruction. Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and are disposed of in accordance with (IAW) the Air Force (AF) Records Disposition Schedule which is located in the AF Records Information Management System. Refer all recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Department of the Air Force Form (DAF) Form 847, *Recommendation for Change of Publication*; route DAF Forms 847 from the field through the appropriate functional chain of command. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force. This publication may not be supplemented or further implemented/extended.

SUMMARY OF CHANGES

This interim change revises HILLAFBI 91-212 by adding **paragraph 2.2.8** which includes requirements and procedures for maintaining wildlife records. A margin bar (|) indicates newly revised material.

Submit requests for waivers through the chain of command to the appropriate tier waiver approval authority, or alternately, to the publication OPR for non-tiered requirements in this publication.

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Chapter 1

INTRODUCTION

1.1. Purpose. The purpose of this publication is to provide a coordinated installation program to minimize aircraft exposure to bird and wildlife hazards at Hill AFB and the surrounding areas. Implementation of specific portions of this program is continuous, while other portions are driven by the season and accompanying bird and wildlife activity such as deer, fox, and skunks.

1.2. Background. Wildlife strikes have plagued aviation for nearly 100 years. In the early days of aviation, wildlife strikes posed a moderate risk to aircraft. However, as aircraft speeds increased, so did the risk of wildlife strikes and the potential for serious and possibly fatal outcomes. Each year wildlife strikes cost military and civilian aviation hundreds of millions of dollars. Although a wildlife strike does not always result in a crash, it can often cause significant structural and mechanical damage.

1.2.1. The U.S. Fish and Wildlife Service (USFWS) is aware of wildlife strike risk and strives to reduce bird and animal hazards to aviation. Much of the wildlife is protected by state, federal, or international law. Additionally, all migratory birds are protected under the Migratory Bird Treaty Act of 1918 (Title 16 United States Code (U.S.C.) Sections (§§) 702-711). Federal law prohibits “taking” (a “take” includes killing, harassing and several other activities impacting protected wildlife), possessing, or selling migratory birds except as permitted by Secretary of the Interior regulations. In the past, migratory bird take military permits were issued for control purposes only, and only when birds caused a serious threat to public health and safety. However, on March 30, 2007, rules published in the Federal Register (Vol. 72, No. 39, pages 8931-8950) concerning bird “take” incidental to military readiness activities went into effect. This rule allows the military and civil service to use lethal and other “incidental take” means without a permit to control birds when they threaten military readiness activities. However incidental take for most foreseen issues is covered in the Federal Permit issued to Hill AFB annually.

1.2.2. Hill AFB policy is to exhaust non-lethal methods of control such as trapping, relocating, and habitat modification to the maximum extent possible. Bird control in the airfield and around the base requires a Federal Permit from the USFWS and Certificate of Registration (COR) from the State of Utah.

Table 1.1. Hill AFB Acreage.

Hill AFB is composed of 6,689 acres divided into the following areas:	
Improved Land	1,236 acres
Semi-Improved Land	1,752 acres
Unimproved Land	2,652 acres
Land Under Facilities	1,049 acres
Total:	6,049 acres (Airfield Environment 2,300 acres)

1.2.3. Hill AFB is located on an alluvial fan of the ancient Lake Bonneville. This lake receded over time into what is now the Great Salt Lake located eight miles west of the base. The lake and adjoining marshes as a part of the Inter-Mountain West Migratory Flyway are major nesting areas for waterfowl and shore birds. Thousands of local and migratory birds nest on the islands and shores of the Great Salt Lake. There are also numerous rivers and streams from nearby canyons which provide natural flyways for birds going to/from mountain lakes, reservoirs, and other water impoundments. One major watershed, the Weber River and associated drainage, is located one mile north of the approach end to runway 14. The runway approach end in this area is approximately 400 feet above the river bottom making it the highest area between the Great Salt Lake and the mountains to the east. The openness of the overrun area makes it a natural resting place for birds traveling through the Weber River Basin flyway. The base golf course is another area of concern for wildlife. Located directly east of the runway, there are numerous trees and a few ponds. Additionally, there is a large drainage collection pond located west of the approach end to runway 32. The pond collects water run-off during certain times of the year but remains empty the majority of the time.

1.2.4. Other local areas of concern include the Willard Bay Reservoir (14 miles north of Hill AFB) and three reservoirs located on the east side of the Wasatch Mountain Range: Echo, Pineview, and East Canyon. These reservoirs attract local, as well as migratory birds. Additionally, Davis County operates a landfill one mile east of the runway. This landfill occasionally attracts gulls; however, Davis County has an aggressive bird dispersion program that has nearly eliminated gull threats in this area. There is also a large private landfill near Promontory Point (just Northwest of Fremont Island) attracting large numbers of waterfowl aligned with Hill AFB aircraft recoveries.

1.2.5. Any area free from human disturbance can provide a suitable foraging, roosting, or bedding site. Perching birds are attracted to tall weed patches, shrubs, trees, the airfield fence, and adjacent buildings for eating and roosting. Pigeons can be found roosting in or on hangars, warehouses, and munitions storage buildings. The base and surrounding areas are monitored for wildlife populations and aircraft strike risk. The mission is to involve flying units and flight support organizations to eliminate or mitigate possible bird and wildlife strike conditions. Bird hazards, inherent to ground and flying operations, are so varied that no single solution to the problem exists. The most effective way of minimizing these hazards and overcoming the numerous problems is through the combined efforts of concerned parties. Hill AFB has an interagency agreement with United States Department of Agriculture – Wildlife Services (USDA-WS) who provide two employees to aid in BASH program execution.

Chapter 2

ROLES AND RESPONSIBILITIES

2.1. 75th Air Base Wing Vice Commander (75 ABW/CV) or designated representative:

2.1.1. Chairs the Bird/Wildlife Hazard Working Group (BHWG) and is the approval authority for meeting recommendations.

2.2. 75th Air Base Wing Flight Safety Office (75 ABW/SEF):

2.2.1. Is the office of primary responsibility (OPR); manages, implements, and executes the BASH program and ensures this instruction is reviewed and/or revised annually.

2.2.2. Ensures BHWG meetings are conducted at least semi-annually (Spring/Fall), prepares the meeting agenda, and publishes minutes on the 75 ABW/SEF SharePoint site.

2.2.3. Monitors BASH activities of applicable organizations for compliance with this instruction.

2.2.4. Maintains a list of reported bird strikes and disseminates strike information to installation flight safety offices or other applicable agencies as required.

2.2.5. Informs public affairs of events that may create media interest such as damaging bird strikes, wildlife reduction/relocation efforts, or wildlife takes on or around the airfield.

2.2.6. Supplements USDA-WS efforts as necessary or when USDA-WS is unavailable.

2.2.7. Conducts monthly inspections of the airfield environment and resolve deficiencies as required with applicable organizations.

2.2.8. Ensure requirements and procedures for maintaining wildlife management records with Natural Resources or Environmental personnel, consistent with DAFMAN32-7003.

2.3. United States Department of Agriculture – Wildlife Services (USDA-WS):

2.3.1. Perform duties outlined in the USDA-WS/Hill AFB Interagency Agreement.

2.4. 75th Civil Engineering Group Environmental Branch (75 CEG/CEIE):

2.4.1. Is the office of coordinating responsibility (OCR) for this instruction.

2.4.2. Serves as Subject Matter Expert to BHWG on activities and environmental modifications or changes necessary to reduce potential bird or wildlife hazards in vicinity of active operational airfield and/or airspace. Monitors deer and other wildlife populations.

2.4.3. Obtains appropriate permits from the USFWS and other appropriate state and federal wildlife conservation agencies. Disseminates copies of permits to 75 ABW/SEF, Airfield Management, USDA-WS, and 388th Fighter Wing Flight Safety (388 FW/SEF).

2.4.4. If shooting deer on the airfield becomes necessary, coordinates with 75th Operations Support Squadron (75 OSS) and notifies the Division of Wildlife Resources (DWR). 75 CEG/CEIE and DWR are the only organizations authorized to take or give authorization for taking protected wildlife on Hill AFB. USDA-WS must obtain permission from 75 CEG/CEIE to take a deer.

2.4.5. Provides training on wildlife identification, proper harassment techniques, and policies and procedures associated with actual taking of wildlife to appropriate personnel.

2.4.6. Controls bird habitat in buildings and structures outside the airfield by eliminating perching and nesting areas, insects, and other food sources and shelter.

2.4.7. Provides ecological study of airfield and surrounding areas. Provides recommendations and support for airfield vegetation modification projects.

2.5. 75th Civil Engineering Squadron Pest Management (75 CES/CEOIE):

2.5.1. Provides operational equipment to control vegetation growth on the airfield to make it unattractive for wildlife habitation.

2.5.2. Provides seasonal airfield spraying with approved pesticides and procedures to reduce insect populations.

2.5.3. Conducts airfield rodent elimination programs.

2.5.4. Controls wildlife habitat in airfield buildings and structures by eliminating perching and nesting areas, insects, and other food sources and shelter.

2.6. 75th Operations Support Squadron Airfield Management (75 OSS/OSAA):

2.6.1. Is the focal point for reported wildlife activity and dispersal efforts on the airfield. Receives information on wildlife activity from all sources and records the date, time, location, species, and quantity of wildlife if known.

2.6.2. Disseminates the aerodrome Bird Watch Condition (BWC) advisory to local and transient aircrews and other applicable agencies through appropriate channels.

2.6.3. Informs USDA-WS personnel of bird activity on the airfield that may require dispersal or control action.

2.6.4. Relays bird activity observation information and bird strike reports to USDA-WS and 75 ABW/SEF within 24 hours of receipt, as required.

2.6.5. Is the focal point for collecting bird remains found on the airfield or transient aircraft and notifies 75 ABW/SEF.

2.6.6. Ensures all airfield management personnel receive initial and annual refresher training prior to using bird/wildlife harassment equipment, as required.

2.6.7. Assume responsibility for primary bird/wildlife harassment activities in the absence of USDA-WS personnel.

2.7. 75th Operations Support Squadron Control Tower (75 OSS/OSAT):

2.7.1. Maintains communication with USDA-WS or 75 ABW/SEF when they are performing active bird/wildlife control on the airfield.

2.7.2. Places BWC advisories on the Automated Terminal Information Service (ATIS) and relay to aircrews IAW Federal Aviation Administration (FAA) Job Order (JO) 7110.65Z, DAFI 91-202, DAFI 91-212, and this instruction.

2.8. 75th Operations Support Squadron Weather (75 OSS/OSW):

2.8.1. Upon request, provides historical weather data to enable educated assessments on when weather conditions may attract birds to the airfield.

2.9. 75th Operations Support Squadron Transient Alert (75 OSS/OSCT):

2.9.1. Ensures discovered bird strikes are reported to 75 ABW/SEF within 24 hours or on the next duty day.

2.9.2. Preserves bird remains and delivers to 75 ABW/SEF. 75 ABW/SEF will send remains to Smithsonian Institute for identification.

2.10. 75th Security Forces Squadron Resource Protection (75 SFS/S5C):

2.10.1. Provides technical expertise on physical security of weapons and munitions used for bird and wildlife dispersal.

2.10.2. Coordinates on the annual renewal of firearms storage license required to store firearms used by the BASH program.

2.11. 75th Air Base Wing Staff Judge Advocate (75 ABW/JA):

2.11.1. Provides advice and support to BASH programs and legal actions involving on- and off-base properties.

2.11.2. Assists 75 CEG Asset Management, Real Property Office (75 CEG/CEIAP) in obtaining permission to access private property for bird and wildlife surveys, harassment, and control activities.

2.11.3. Assists 75 CEG/CEIE in obtaining take permits from appropriate agencies with oversight for migratory birds and protected wildlife, as required.

2.12. 75th Air Base Wing Public Affairs (75 ABW/PA):

2.12.1. Work with 75 ABW/SEF and USDA-WS, as required, to incorporate BASH public education activities across the installation and surrounding communities.

2.12.2. Provide photographic services to document wildlife strikes, sanctuaries, or rookeries, as required.

2.13. 388th/419th Fighter Wing Flying Units and 514th Flight Test Squadron (514 FLTS):

2.13.1. Aircrews will report bird strikes, concentrations, or unusual bird activity on the airfield and during takeoff or departure as soon as possible to Hill AFB Tower to prevent exposing other aircraft to unnecessary hazards.

2.13.2. Report bird activity information to Range Control, Clover Control, or Supervisor of Flying (SOF), as applicable, when operating on Instrument Flight Rules and Visual Flight Rules training routes, Military Operating Areas, Utah Test and Training Range (UTTR), and any other training areas.

2.13.3. Provide 388 FW/SEF and/or 75 ABW/SEF a copy of bird strike reports within 24 hours of receiving a report or on next duty day.

2.13.4. Ensures aircrews have access to bird strike report forms, AF Form 853, *Air Force Wildlife Strike Report*.

2.13.5. Ensures aircrews have access to Bird Avoidance Model (BAM) and Avian Hazard Advisory System (AHAS). BAM uses 30 years of historical data to model bird migratory patterns. AHAS provides users a near real-time (updated every 6 minutes) risk prediction of bird movement based partly on Next Generation Weather Radar data.

2.13.6. Reviews proposed low-level routes or changes to existing routes for BASH impact.

2.14. 309th Aircraft Maintenance Group (AMXG), 388th/419th Maintenance Group (MXG):

2.14.1. Ensures discovered bird strikes are reported to 388 FW/SEF or 75 ABW/SEF within 24 hours or on the next duty day.

2.14.2. Preserves bird remains and delivers to 388 FW/SEF or 75 ABW/SEF, as applicable. 388 FW/SEF or 75 ABW/SEF will send remains to Smithsonian Institute for identification.

Chapter 3

BASH PROGRAM EXECUTION

3.1. Bird/Wildlife Management.

3.1.1. The bird management program includes shotgun patrols utilizing bird shot, whistlers, bangers, M80 firecrackers, cracker shells, and other pyrotechnics to scare and harass birds IAW depredation or take permits. Permits for legally taking protected birds on Hill AFB are acquired and maintained from the USFWS and the Utah State DWR. 75 CEG/CEIE retains permit copies which must be carried while a take is in progress by any individual authorized on the permit to conduct protected wildlife depredation. Permits must be renewed annually along with a report of birds taken by 75 CEG/CEIE.

3.1.2. Habitat Modification. Long-term environmental modifications to the airfield and surrounding areas are necessary to make them less desirable to birds and other wildlife. Plant growth on the airfield is a bird attractant. Unmanaged plant growth provides habitat for birds and wildlife. A preferred vegetation height of 7 to 14 inches presents an undesirable nesting condition, interrupts the bird's line of sight, and reduces the security they feel in otherwise open areas. In addition, vegetation height below 14 inches aids in insecticide penetration, minimizing insect populations. Mowing decreases seed-head production on plants, which reduces available food sources for rodent populations. If the Airfield Manager or BHWG determines mowing vegetation lower than instructed by DAFI 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Management Program*, 75 ABW/SEF will submit a waiver to the Air Force Safety Center (AFSEC). Actual vegetation modification includes spraying broadleaf plants and reseeding desirable rhizomatous grass species. Spraying is accomplished by 75 CES/CEOIE, reseeding by 75 CEG/CEIE, and vegetation monitoring by the 75 OSS and 75 CEG/CEIE.

3.1.3. Food Control. Hill AFB is rich with natural food sources such as seeds, berry-producing plants, grasses, insects, grubs and earthworms. Small birds seek these seeds and berries. Gulls, starlings, robins, and ravens feed on earthworms. Geese and rodents eat grass. Predatory birds are attracted to airfields with abundant rodent populations. Occasionally, human activity like air shows, construction, and military exercises makes food more available to birds. Thorough clean-up during and after these activities minimizes potential bird attractants.

3.1.3.1. The most abundant bird food source on Hill AFB is grasshoppers. Insecticide spraying is critical to reduce the grasshopper population, and effective habitat control reduces seeds and rodent populations thereby mitigating bird/wildlife populations on the airfield.

3.1.4. Water Control. At certain times of the year, temporary rain puddles may exist on the airfield for extended periods of time. The 75 OSS, USDA-WS, 75 ABW/SEF, and 75 CEG/CEIE continually monitor these areas for birds and wildlife. The 75 CES/CEOIE surveys for insects on the airfield.

3.1.5. Deer Removal Protocol. Deer are common in areas north and east of the runway and in fields at the north end of Hill AFB outside airfield property. Deer are closely monitored by 75 CEG/CEIE to ensure they do not enter the runway or airfield environment. 75 OSS maintains responsibility to keep airfield gates closed to minimize deer entering these areas. If deer populations or individual animals pose a problem to air operations, 75 CEG/CEIE coordinates with DWR to remove the animals or reduce their numbers to a manageable level.

3.1.5.1. When deer enter the airfield environment, Airfield Management or the tower watch supervisors determine if runway operations must be suspended. A suspension is considered until the animals are controlled beyond 1,000 feet of the runway centerline to include the extended centerline. Preferred methods to move the animals off the airfield include opening selected gates and herding the animals out.

3.1.5.2. If any deer refuse to leave the area and continue to present a clear and present danger to air operations, as a last resort, the animal(s) will be removed by force, provided non-lethal steps have been attempted and the following requirements have been accomplished:

3.1.5.2.1. Efforts to drive the animals from the area have been exhausted.

3.1.5.2.2. Airfield Management, USDA-WS, or 75 ABW/SEF must contact 75 CEG/CEIE before taking any animals. 75 CEG/CEIE notifies DWR for approval to forcefully remove the identified animals.

3.1.5.2.3. Airfield Management, USDA-WS, 75 CEG/CEIE, 75 ABW/SEF, or other authorized parties must contact the 75 SFS Base Defense Operations Center (BDOC).

3.1.5.2.4. Precautions must be taken to prevent ammunition from hitting airfield assets, aircraft, or endangering personnel. Cordons may be necessary to prevent collateral equipment damage or injury to personnel. On-duty SFS patrols will be utilized to establish cordons when necessary.

3.1.5.2.5. USDA-WS or 75 CEG/CEIE will deliver the animal carcasses to DWR or as directed for disposal.

3.1.6. Domestic Animal Removal. When the need arises for the removal of a stray animal, USDA-WS coordinates with 75 OSS and Davis County for removal. If the stray animal enters the airfield environment, the Airfield Manager (or designated representative) or the tower watch supervisor will determine if runway operations must be suspended. A suspension is considered until the animal is controlled beyond 1,000 feet of the runway centerline to include the extended centerline. Preferred methods to move the animals off the airfield include opening selected gates and herding the animals out. Lethal removal will be utilized as a last resort.

3.1.7. Harassment and Depredation. USDA-WS is the primary source for bird harassment and depredation on Hill AFB. In the event USDA-WS are unavailable due to other commitments, 75 ABW/SEF, Airfield Management, and/or 75 CEG/CEIE, as applicable, will assume responsibility to ensure the safety of airfield assets as described in this plan. These agencies are responsible for real-time protection of taxiing and flying aircraft within the airport perimeter. As primary, USDA-WS is tasked with immediate response to calls from Airfield Management or 75 ABW/SEF for wildlife dispersal. USDA-WS, or in conjunction with Airfield Management and 75 ABW/SEF, uses all means available to harass wildlife into leaving the airfield environment. USDA-WS and 75 ABW/SEF is on-call all year, but must be readily available each spring before the heavy bird season (March-September).

3.1.7.1. Effective equipment for bird and wildlife control includes, but is not limited to, wheeled vehicles, liquid propane gas scare cannons, paint ball guns, pellet guns, starter pistols, shotguns with live ammunition, and pyrotechnic scare devices. Other means of control includes decoy traps, funnel traps, pigeon traps, bow net, control of raptors through Bal-Chatri traps (live traps), as well as live and lethal traps for small mammals.

3.1.7.2. Birds react automatically to unfamiliar sights and sounds, they but learn to ignore them if proven harmless. Birds cannot be allowed to acclimate to harassment devices by repeated exposure to devices not producing adverse effects. For example, a frightening event such as a flock member's death (permitted species only) should occur simultaneously with scare devices often enough to maintain fear. Harassment devices attempt to fool birds into believing something bad is going to happen if they do not leave the area. Shell crackers, noise bombs, and other devices lose effectiveness with overuse, but alternating devices helps maintain effectiveness. In cases where all harassment devices have become ineffective, it becomes necessary to execute a depredation.

3.1.7.3. When operating in the airfield environment, individuals must have an airfield driver's license, maintain constant communication with the control tower when performing active bird/wildlife control, and operate IAW flight-line and airfield directives. Before taking any wildlife with a shotgun, USDA-WS notifies Airfield Management and the tower to de-conflict with flight operations. Lethal means are at the discretion of USDA-WS and may be required as the last resort. If protected birds are taken by lethal means, they are identified and reported to 75 CEG/CEIE on a monthly basis with dates of takes. 75 CEG/CEIE sends a report to the appropriate state and federal agencies as required by the depredation or take permits.

3.1.7.4. Individuals performing active bird/wildlife harassment and/or depredation with the above-mentioned equipment will be properly trained prior to use, but are exempt from tactical weapons training IAW AFI 31-117, *Arming and Use of Force by Air Force Personnel*.

3.1.8. Handling of Firearms. USDA-WS is responsible for their own firearms as well as the storage, transportation, and documentation while on Hill AFB IAW the Interagency Agreement. 75 ABW/SEF provides assistance as necessary.

3.1.8.1. USDA-WS, 75 ABW/SEF, Airfield Management, and 75 CEG/CEIE receive on-the-job training for animal identification and habits from the natural resource manager or delegated representative, if applicable. Members are briefed on firearms safety procedures, safe handling of firearms, firearm movement, loading and unloading, cleaning, storage, airdrome safety with weapons, and radio communications procedures, as applicable. If shotgun qualified, weapons training is provided to required personnel by 75 SFS Combat Arms. 75 SFS has primary responsibility for the BASH firearms training program with 75 CEG/CEIE and 75th Air Base Wing Safety (75 ABW/SE) assisting.

3.2. Bird Watch Condition (BWC).

3.2.1. Flying organizations from three Major Commands comprise most of the flying at Hill AFB. The base also hosts large numbers of transient aircraft using the Utah Test and Training Range. To avoid confusion, only one BWC advisory is given for Hill AFB. Bird Watch Conditions are based on visual observations of local airfield wildlife activity, and they are independent of BAM or AHAS data. To ensure each aircrew is aware of local bird hazards, the Airfield Manager or designated representative will establish BWC advisories that Tower will broadcast over ATIS frequency. Time permitting, the location, species, and quantity are transmitted via radio with the BWC advisory. The following table defines BWC based on the number of birds present. BWC changes will be made IAW the table and/or the definition below at the discretion of Airfield Management personnel. For example, if one or two raptors persistently loiter on short final centerline and present an increased risk of strike, the BWC can be raised even though there are not five large birds.

Table 3.1. Bird Watch Condition Guide.

Bird Watch Condition Guide	
Low	<5 large or <15 small birds
Moderate	5-15 large or 15-30 small birds
Severe	>15 large or >30 small birds
<p>Bird Watch Condition LOW: Wildlife activity on and around the airfield represents low potential for strikes.</p> <p>Bird Watch Condition MODERATE: Wildlife activity near the active runway or other specific location representing increased potential for strikes. Bird Watch Condition MODERATE requires increased vigilance by agencies and supervisors and caution by aircrews.</p> <p>Bird Watch Condition SEVERE: Wildlife activity on or immediately above the active runway or other specific location representing high potential for strikes. Supervision and aircrews must thoroughly evaluate mission need before conducting operations in areas under condition SEVERE.</p>	

3.2.2. Bird Watch Condition Changes. The following agencies are designated by the Airfield Manager to raise the BWC: 75 ABW/SEF, 388 FW/SEF, 75 OSS/OSAT, 75 OSS/OSAA, and SOF as applicable. However, the Airfield Manager (or designated representative) is solely responsible for lowering the BWC and notifying aircrews of changes. The following procedures are used for disseminating the BWC to aircrews:

3.2.2.1. Inside Airfield Property. When bird activity raises the risk to aircrew or aircraft, the 75 ABW/SEF, 388 FW/SEF, 75 OSS/OSAT, 75 OSS/OSAA, and SOF can change the bird watch condition status by notifying Tower for dissemination to aircrews via radio call. Those raising the BWC will also contact Airfield Management, who in-turn will notify USDA-WS for dispersal and/or depredation. If USDA-WS is unavailable, Airfield Management will attempt to disperse the birds, and may notify 75 ABW/SEF or 75 CEG/CEIE for assistance, as applicable. After dispersal, Airfield Management re-evaluates the airfield and raises or lowers the BWC. Each flying unit is contacted with the new bird watch condition. ATIS is used to disseminate the BWC to airborne aircrews if dispersal is expected to take an extended period of time.

3.2.2.2. Outside Airfield Property. Bird hazards are possible on any downwind pattern, east or west of the airfield. Pilots should notify Tower of any large bird concentrations in order to advise follow-on aircrews IAW FAA Order JO 7110.65Z and the SOF. Unit SOFs determine the need for flying unit aircrews to continue flying in the affected area. The tower watch supervisor may request an aircrew perform a pattern check at a later time to re-evaluate the bird hazards in the reported area.

3.2.2.3. Arrivals and Departures. Unless dealing with a more urgent situation, e.g. In-flight Emergency, airborne aircrews will immediately notify Tower of any bird concentrations presenting a hazard to other aircraft and provide their approximate location when possible. Tower controllers will relay this information to all airborne aircrews IAW FAA Order JO 7110.65Z and the SOF. Decisions to restrict continued flight will be made by the pilot and/or the unit SOF as per published unit restrictions.

3.2.3. Bird Watch Condition Restrictions.

3.2.3.1. LOW. No restrictions.

3.2.3.2. MODERATE. Low approaches or chase must be flown at 300 feet AGL or higher. No formation takeoffs or formation landings.

3.2.3.2.1. 388/419 FW, 86th Fighter Weapons Squadron (86 FWS), and 514 FLTS. Takeoff and full-stop landings are authorized if the departure and arrival routes are clear. Traffic pattern activity is prohibited.

3.2.3.3. SEVERE. Straight-in full-stop landings only. No chase, formation takeoffs, or formation landings. Supervisors and aircrews must thoroughly evaluate mission need before conducting operations under condition SEVERE. It is recommended no takeoffs be accomplished, but final decision rests with wing and group supervision.

3.2.3.3.1. 388/419 FW. Takeoffs and landings are prohibited.

3.2.3.4. Operations Group Commander (or higher) is authorized to deviate from the guidelines based on mission priority and risk assessment.

3.2.4. Aircrews can request a BWC check in-flight by contacting Airfield Management Operations (AMOPS) on frequency 372.2.

3.2.5. Hill AFB Phase I/II Designations. There are two phases of bird activity based on historical seasonal wildlife activity, current trend information, and local conditions. Phase I represents a time in which bird activity is low. Phase II represents heavy bird activity, normally associated with the migratory season.

3.2.5.1. Phase I: 1 October to end of February.

3.2.5.2. Phase II: 1 March to 30 September.

3.2.5.3. Unless mission essential, flying units should avoid scheduling takeoff and land times +/- 1 hour of sunrise/sunset to reduce potential hazards, especially during Phase II. A risk analysis shall be completed to determine the potential risk to operations during these periods. Missions scheduled +/- 1 hour of sunrise/sunset should be included in pre-mission risk management and analysis worksheets. Appropriate measures to mitigate the risk should be taken, if required.

3.3. Bird/Wildlife Hazard Working Group (BHWG).

3.3.1. The BHWG is a team of installation organizations involved in airfield bird/wildlife control. The BHWG is chaired by the Installation Vice Wing Commander, or designated representative, and meets at least twice a year (typically in the Fall and Spring).

3.3.2. At a minimum, BHWG consists of representatives from 75 ABW/SEF, USDA-WS, 75 OSS/OSAA, 75 CEG/CEIE, 75 CES/CEOIE, and tenant flying organizations. Other tasked organizations attend as requested by the Chair, including those organizations involved in airfield bird control, habitat management, operations, and safety.

3.3.3. BHWG meeting topics will include but are not limited to:

3.3.3.1. Bird/wildlife strike data with damage costs, as applicable.

3.3.3.2. Local bird/wildlife habitat management/modifications.

3.3.3.3. Review and/or propose changes to operational BASH procedures.

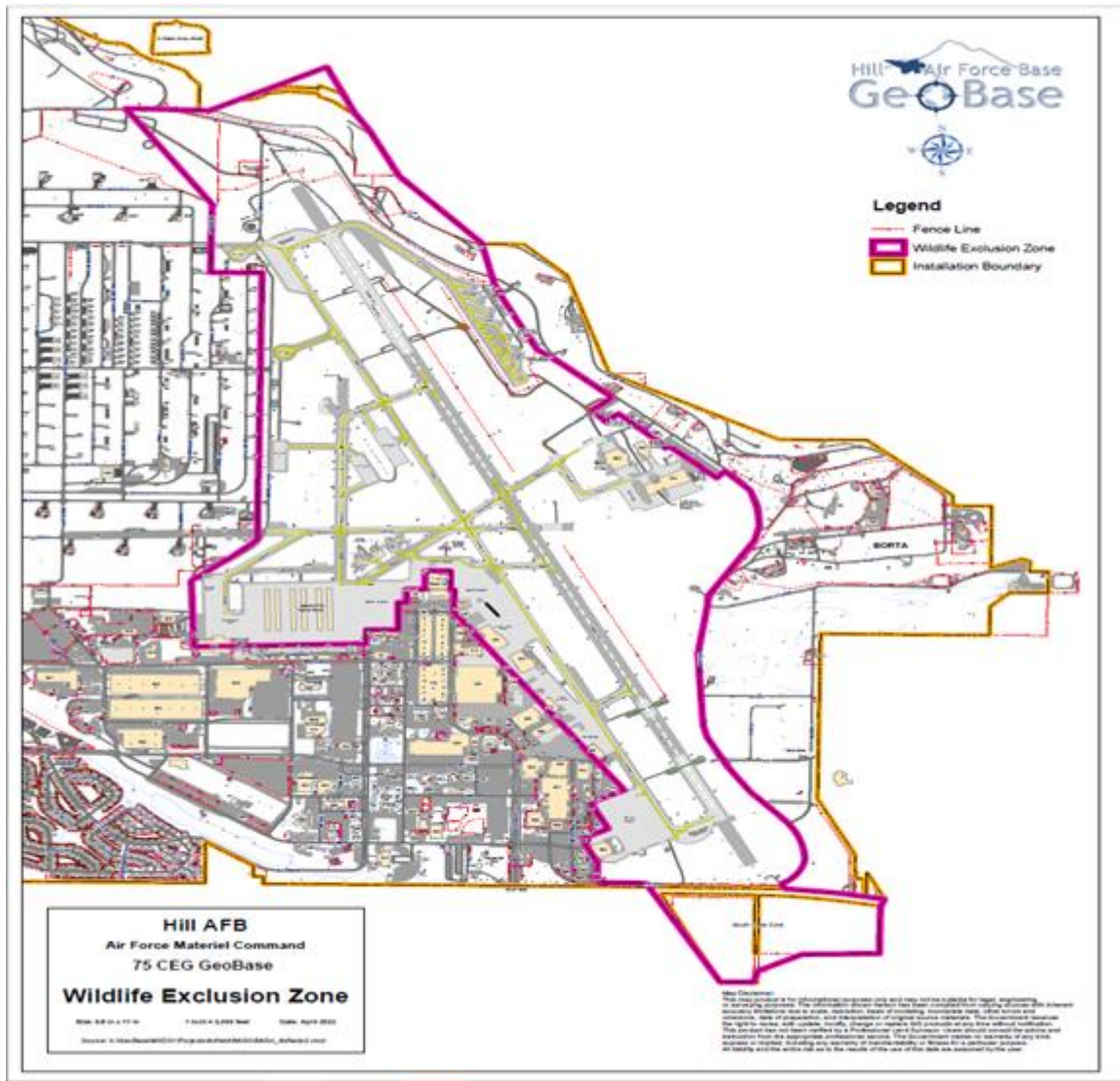
3.3.3.4. Harassment/dispersal efforts during the reporting period.

3.3.3.5. Entomology/insecticide use during the reporting period.

3.3.3.6. Status/use of BASH equipment for bird/wildlife control, as required.

3.3.4. Appropriate BHWG organizations shall define a Wildlife Exclusion Zone (WEZ), or other relevant mitigation zones specific to the airfield, installation, and flying mission. A WEZ is a locally defined, airfield specific, area of zero tolerance for wildlife, encompassing the aircraft movement area, clear zones, and any additional habitat attractants in proximity to the airfield. The following areas have been designated as the Hill AFB WEZ:

Figure 3.1. Hill AFB Wildlife Exclusion Zone.



Chapter 4

HILL AFB AIRFIELD WILDLIFE

4.1. Common Bird/Wildlife Species On/Near Airfield Environment:

4.1.1. California Gulls (*Larus californicus*) are common from early March to September. Gulls nest in large colonies on islands and marshes along the shores of the Great Salt Lake. Adults have a medium gray mantle, black wing tips with white spots, and greenish legs. The California Gull is the Utah State bird and protection has allowed the population to grow unchecked. Gulls are commonly found in city parks, school grounds, and farm fields during cultivation and landfills. The greatest strike potential occurs during July when the younger birds fledge and begin to fly.

4.1.2. Franklin Gulls (*Larus pipixcan*) have similar nesting habits to California Gulls, except they arrive later from their wintering areas on the gulf coast and South America (usually late April or May). They are smaller, have a gray backside with white under parts, and a black head. In flight, the gray wings show a distinct white bar separating the black wing tips, and they have red bills and feet. They feed mainly on crop-damaging insects. They do not adapt well to humans and are usually found in large, open fielded areas. During July and August, Franklin Gulls occasionally increase the bird watch condition to severe.

4.1.3. Ring-Billed Gulls (*Larus delawarensis*) typically replace the California and Franklin gulls as they migrate out of the area. Their numbers are significantly lower than the California or Franklin gulls. During the months of September to February, Ring-Billed Gulls are the largest part of the gull population. The majority of Ring-Billed Gulls vacate Hill AFB by the end of February. In general, Gulls feel at ease on and around an airfield environment, most likely due to the unobstructed view of the surrounding area and potential predators. When left undisturbed, gulls loiter for hours between flights to and from feeding areas. Gulls adapt quickly to normal aircraft activity, moving only a short distance when disturbed. This creates the hazard of birds retreating from taxiing aircraft to fly across the runway into the path of other aircraft. Gulls are fond of grasshoppers and will homestead if insects are abundant on the airfield. When gulls are present, dispersal methods are aggressively used to prevent them from circling and landing on other portions of the airfield.

4.1.4. Horned Larks (*Eremophila alpestris*) historically cause the most bird strikes at Hill AFB. The males conduct courtship flights typically up to 800 feet circling, singing at the top, and then dive down quietly. They form large flocks during migration and in the winter. They feed on the ground, eating weed seeds and grain, insects, and spiders. Keeping grasses cut before bearing seeds and spraying for insects deters them from staying on the airfield.

4.1.5. Barn Swallows (*Hirundo rustica*) build nests usually in the morning and make many trips to collect mud. They eat insects and feed in pairs while egg-laying, and in loose flocks at other times. They feed in-flight and can skim over water to pick up floating insects. Controlling insect populations and eliminating standing water around the airfield deters them from nesting in the area.

4.1.6. European Starlings (*Sturnus vulgaris*) are imports to the United States and are also known as Common Starlings. They feed on the ground for insects, spiders, earthworms, garbage, salamanders, snails, weed seeds, and berries. They nest in cavities from 2 to 60 feet above the ground. Juveniles are commonly seen in large flocks during summer, are uniformly grayish brown, and have dark bills. In the winter, they have a white and gold-speckled black body and a black bill. Limiting food sources keeps them out of the area.

4.1.7. Pigeons are abundant at Hill AFB. They present a threat to aircraft, but are mainly a nuisance, especially inside hangars. Pigeons are not a protected species. Pigeon populations are controlled with traps, pellet rifles, avicides, and habitat modification.

4.1.8. American Kestrels are small falcons and feed primarily on insects and rodents. They hunt individually, hovering above a section of ground from 20 to 70 feet AGL and dive down to attack prey. They have been observed in all areas of the airfield, though particular hot spots are behind Hot Pad 7 in the Missile and Munitions Storage area H, near Taxiway Bravo on the north end, and east of the runway on the south end. Trapping, tagging, and relocating these birds outside of 60 miles is the preferred method of dispersal.

4.1.9. Redtail Hawks are moderately large predators that roost in the golf course or Russian Olive trees on the Air Force-owned property across Highway 193. This hawk hunts small mammals and insects. Though not as common as many other species, due to their large size and propensity to hunt in the open spaces of the airfield, they are a significant threat to a damaging bird strike. Trapping, tagging, and relocating outside of 60 miles is the preferred method of dispersal.

4.1.10. Cliff Swallows (*Petrochelidon pyrrhonota*) traditionally built their nests on vertical cliff faces. With the expansion of road infrastructure, they have adopted many bridges, overpasses, and culverts as their colonial nesting sites. They feed in areas near and over water, frequently mixing with other species of swallows.

4.1.11. Common large animals in the airfield environment include deer, fox, skunk, and Canadian geese. Deer graze in the area past the north end of the runway, the Prime Beef area east of the runway, and fields at the base north end. Deer herds are normally seasonal and monitored to ensure they do not enter the runway environment. Foxes live in culverts around Taxiway Bravo, southwest of runway 32, south of Taxiway Delta east, and behind the dirt-berm on Hot Pad 3. Foxes do most of their hunting during low periods of activity, usually at night and try to avoid human contact. These animals are removed from the airfield immediately, by all the methods outlined in this instruction.

DANIEL L. CORNELIUS, Colonel, USAF
Commander, 75th Air Base Wing

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 31-117, *Arming and Use of Force by Air Force Personnel*, 05 Aug 2020
AFI 33-322, *Records Management and Information Governance Program*, 23 Mar 2020
DAFI 91-202, *The US Air Force Mishap Prevention Program*, 11 Mar 2020
DAFI 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Management Program*, 12 Apr 2023
DAFI 91-204, *Safety Investigations and Reports*, 09 Mar 2021
FAA Order JO 7110.65Z, *Air Traffic Control*, 5 May 21
Federal Register (*Vol.72, No. 39, pages 8931-8950*), 28 Feb 07
Migratory Bird Treaty Act, *as amended (16 U.S.C. 703 et. seq.)* 1918
USDA-WS *Interagency Agreement*,

Prescribed Forms

None

Adopted Forms

DAF Form 847, *Recommendation for Change of Publication*
AF Form 853, *Air Force Wildlife Strike Report*

Abbreviations and Acronyms

ABW—Air Base Wing
AF—Air Force
AFB—Air Force Base
AFI—Air Force Instruction
AFSEC—Air Force Safety Center
AGL—Above Ground Level
AHAS—Avian Hazard Advisory System
AMOPS—Airfield Management Operations
AMXG—Aircraft Maintenance Group
ATIS—Automated Terminal Information Service
BAM—Bird Avoidance Model
BASH—Bird/Wildlife Aircraft Strike Hazard
BDOC—Base Defense Operations Center

BHWG—Bird/Wildlife Hazard Working Group
BWC—Bird Watch Condition
CC—Commander
CEIE—Civil Engineering Environmental Branch
CEOIE—Civil Engineering Pest Management
COR—Certificate of Registration
CEG—Civil Engineering Group
CES—Civil Engineering Squadron
CV—Vice Commander
DAF—Department of the Air Force
DAFI—Department of the Air Force Instruction
DAFMAN—Department of the Air Force Manual
DWR—Division of Wildlife Resources
FAA—Federal Aviation Administration
FLTS—Flight Test Squadron
FW—Fighter Wing
IAW—In Accordance With
JA—Staff Judge Advocate
JO—Job Order
MXG—Maintenance Group
OCR—Office of Coordinating Responsibility
OG—Operations Group
OPR—Office of Primary Responsibility
OSAA—Airfield Management
OSAT—Control Tower
OSCT—Transient Alert
OSS—Operations Support Squadron
OSW—Weather
PA—Public Affairs
SEF—Flight Safety
SFS—Security Forces Squadron
SOF—Supervisor of Flying

USDA-WS—United States Department of Agriculture - Wildlife Services

USFWS—United States Fish and Wildlife Services

UTTR—Utah Test and Training Range

WEZ—Wildlife Exclusion Zone

Office Symbols

75 ABW/CC—75th Air Base Wing Commander

75 ABW/CV—75th Air Base Wing Vice Commander

75 ABW/JA—75th Air Base Wing Staff Judge Advocate

75 ABW/PA—75th Air Base Wing Public Affairs

75 ABW/SEF—75th Air Base Wing Flight Safety Office

75 CEG/CEIE—75th Civil Engineering Group Environmental Branch

75 CEG/CEIAP—75th Civil Engineering Asset Management, Real Property Office

75 CES/CEOIE—75th Civil Engineering Squadron Pest Management

75 OSS—75th Operations Support Squadron

75 OSS/OSAA—75th Operations Support Squadron Airfield Management

75 OSS/OSAT—75th Operations Support Squadron Control Tower

75 OSS/OSCT—75th Operations Support Squadron Transient Alert

75 OSS/OSW—75th Operations Support Squadron Weather

75 SFS/S5C—75th Security Forces Squadron Resource Protection

86 FWS—86th Fighter Weapons Squadron

309 AMXG—309th Aircraft Maintenance Group

388 FW—388th Fighter Wing

388 FW/SEF—388th Fighter Wing Flight Safety

388 MXG—388th Maintenance Group

419 FW—419th Fighter Wing

419 MXG—419th Maintenance Group

514 FLTS—514th Flight Test Squadron