

**BY ORDER OF THE COMMANDER
GRAND FORKS AIR FORCE BASE
(AMC)**

**GRAND FORKS AIR FORCE BASE
INSTRUCTION**

91-212

1 JULY 2019

Safety



**BIRD/WILDLIFE AIRCRAFT STRIKE
HAZARD (BASH) PROGRAM**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Policy Directive (AFPD) 91-2, *Safety Programs*, and is used in conjunction with AFI 91-202, *U.S. Air Force Mishap Prevention Program*, AFI 91-204, *Safety Investigations and Reports*, and AFPAM 91-212, *Bird Aircraft Strike Hazard (BASH) Management Techniques*. This instruction provides a base program to minimize aircraft exposure to potentially hazardous bird/wildlife strikes and applies to all host, associate, and temporary duty (TDY) organizations on Grand Forks Air Force Base (GFAFB), including the Air National Guard and Air Force Reserve members and units. The 319 RW/CV is responsible for implementation of this instruction. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR), by using the Air Force (AF) Form 847, *Recommendation for Change of Publication* and route AF Form 847s from the field through the appropriate functional' s chain of command. This instruction requires collecting and maintaining information protected by the Privacy Act of 1974 (5 U.S.C. 552A) and AFI 33-332, *Privacy Act Program*. The use of the name or mark of any specific manufacturer, commercial product,

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SUMMARY OF CHANGES

This document has been substantially revised and needs to be completely reviewed. Major changes include: content related to ACC 319 OG tenant unit operations, USDA Wildlife Specialist, Grand Sky, Bird Watch Condition clarification, habitat modification, environment clarification, wildlife identification, and contact procedures for airfield wildlife concerns. In addition, this document was updated/corrected with current references to Air Force Publications, updated current links to external websites, and edited for grammatical errors.

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CHAPTER 1

INTRODUCTION

1. Introduction. A Bird/Wildlife Aircraft Strike Hazard (BASH) exists at Grand Forks AFB (GFAFB) and its vicinity due to resident and migratory bird/wildlife species. Daily and seasonal bird movements create various hazardous conditions. This plan establishes procedures to minimize the hazards at and around GFAFB. This plan updates existing documents and is based on the current Bird/Wildlife Aircraft Strike Hazard (BASH) program instruction, historical bird/wildlife strike records from GFAFB and surrounding operating areas, Staff Assistance Visit reports from the USAF Safety Center (AFSEC) BASH Team, and United States Department of Agriculture (USDA) Wildlife Management Reports. This plan establishes a hazard abatement program to minimize bird and terrestrial animal strikes. In addition, it establishes procedures and guidelines to decrease airfield attractiveness to birds and wildlife. Furthermore, it defines unit BASH responsibilities and outlines procedures for issuing bird conditions and reporting bird strikes.

1.1. General Responsibilities. 319th Reconnaissance Wing, Flight Safety (319 RW/SEF) shall manage the overall BASH program at Grand Forks AFB. The USDA Wildlife Services (USDA/WS) is 319 RW/SEF's primary BASH detection and dispersal agency. USDA/WS shall be the primary dispersal team for all of the wildlife on and around the airfield following Federal, Air Force, State and local guidance. USDA/WS contract liaison for the 319 RW is the Chief of Safety (319 RW/SE). 319 CES shall secure the proper federal depredation and state public safety permits for the 319 RW/CC as required for the program. 319 CES is required to verify individuals for subpermittee status with respective agencies and disseminate approved documents to individuals. Airfield Management Operations (AMOPS) shall implement dispersal efforts if USDA/WS is not immediately available and when assistance is requested from USDA/WS. 319th Civil Engineer Squadron (319 CES) shall be responsible for vegetation management within Grand Forks AFB property. 319 CES wildlife biologist shall serve as an additional advisor for the Grand Forks AFB BASH program.

1.2. Phases of Operation. This plan contains two phases of operation: PHASE I and PHASE II. PHASE I concentrates on wildlife control and habitat modification and is in effect year round. PHASE II concentrates on bird avoidance using operating restrictions and increased dispersal efforts. Grand Forks AFB is located near or within two primary migration routes; the Central Flyway and Mississippi Flyway and near a wildlife refuge called Kelly's Slough National Wildlife Refuge (NWR). Historical bird migratory patterns are used to determine PHASE II periods. PHASE II periods are typically March - May (spring migration) and September - December (fall migration). These periods are subject to change based on weather pattern variations. 319 RW/SEF, 319 CES Natural Resources Office (319 CES/CEIEC), and Airfield Manager (319 OSS/OSAA) shall coordinate to determine if PHASE II operations should begin or end on different dates. Once determined to change Phases, the 319 RW/SE shall request 319 RW/CV approval for change and notify agencies appropriately.

CHAPTER 2

RESPONSIBILITIES

2. Specific Responsibilities.

2.1. 319th Vice Wing Commander (319 RW/CV).

2.1.1. Chair Bird/Wildlife Hazards Working Group (BHWG) or designates a representative in writing.

2.1.2. Approve/disapprove recommendations of the BHWG.

2.2. 319th Operations Group Commander (319 OG/CC). This section is not used, but is reserved for future use.

2.3. 319th Maintenance Group Commander (319 MXG/CC). This section is not used, but is reserved for future use.

2.4. 319th Mission Support Group Commander (319 MSG/CC). 319 MSG/CC shall issue specific guidance to assigned personnel concerning implementation of this instruction.

2.5. 319th Reconnaissance Wing Flight Safety (319 RW/SEF).

2.5.1. Wing Flight Safety is comprised of a Flight Safety Officer (FSO), Flight Safety Non-commissioned Officer (FSNCO), and USDA Wildlife Specialist (USDA/WS).

2.5.2. 319 RW/SEF is the OPR for the content, execution, and compliance of this BASH Program.

2.5.3. Ensure base-wide compliance with AFI 91-202, *U.S. Air Force Mishap Prevention Program* and references guidance in AFPAM 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Management Techniques* to implement BASH measures for the base.

2.5.4. Coordinate with aircrews and maintenance personnel for the collection of bird remains following bird strikes. Sends non-fleshy bird remains from DoD and upon request from non-DoD for identification to the Smithsonian Institute IAW AFI 91-223, *Aviation Safety Investigations and Reports*. **Note:** All DoD tenants shall report bird/wildlife strikes to the 319 RW/SEF for BASH control and trending measures. Request all non-DoD report bird/wildlife strike information be reported to the 319 RW/SEF for BASH control and trending measures.

2.5.5. Ensure all Bird/Wildlife Aircraft Strikes and Hazards (BASH) occurring on base are reported in accordance with AFI 91-204, *Safety Investigations and Reports* and AFI 91-223, *Aviation Safety Investigations and Reports*. DoD Reports shall be entered into Air Force Safety Automation System (AFSAS), USDA database, and tracked locally. Non-DoD should be entered into the USDA database and tracked locally to observe BASH trends in the local area. Strikes occurring to DoD aircraft at BAFB, excluding 319 OG (reported by 319 RW/SE), shall be reported by 9 RW/SEF. Strikes occurring to non-DoD aircraft at GFAFB (including civilian, Grand Forks County [Grand Sky Mixed-Use Aviation Business Park], and CBP) shall be the responsibility of the owning organization to report the bird/wildlife strike. However, request all non-DoD report bird/wildlife strike information be to the 319 RW/SEF for BASH control and trending measures.

- 2.5.6. Ensure sufficient copies of the AF Form 853 (*Air Force Bird Strike Report*) are available at maintenance debrief, AMOPS, and all flying organizations.
- 2.5.7. Monitor bird/wildlife activity on the flightline and makes recommendations on the Bird Watch Condition (BWC).
- 2.5.8. Notify 319 SFS when significant bird scare activities shall be necessary on the airfield. Coordinate the use of pyrotechnics, firearms, or gas cannons with the 319 SFS Base Defense Operations Center (BDOC) (747-5351). No later than at least monthly, report number, location, species, and harassment techniques to 319 CES/CEIEC, as all harassment activities must be documented and reported.
- 2.5.9. Ensure that facility manager for buildings near the flightline (buildings West of Eielson Street) inspect facilities weekly between May and August for swallow nests. Only subpermittees listed on the U.S. Fish and Wildlife Services (USFWS) Migratory Bird Permit are authorized to remove active nests or those with eggs. Authorized subpermittees shall consist of personnel from: Wing Flight Safety (319 RW/SEF), Airfield Management Operations (319 OSS/OSAA) and CES Pest Management (319 CES/CEOIE).
- 2.5.10. Coordinate depredation program with the BASH team to include 319 CES, 319 OSS, USDA, SFS and Safety. Depredation activities shall be compliant with GFAFB issued state and federal permits and conducted by subpermittees only. All Subpermittees must comply with the 50 CFR 21.41, Standard Conditions for Migratory Bird Depredation Permits that are a continuation of the issued permit.
- 2.5.11. Conduct airfield surveys. Monitor bird/wildlife population, grass height, and standing water within the Airfield and report problems to AMOPS for tracking and coordination with appropriate OPR for modifying or eliminating the problem.
- 2.5.12. Conduct and document checks of airfield fence and gates for wildlife intrusions.
- 2.5.13. Remove, document, and dispose of bird and animal carcasses from the airfield as required and IAW AFI 91-223 and all permits issued to GFAFB. This is to avoid attracting scavengers to the airfield environment.
- 2.5.14. Shall coordinate for any Wing Safety personnel photography on the airfield, to include BASH program support. Memorandum shall be coordinated through 319 RW/PA for 319 OSS/CC's approval. The memorandum shall be maintained by the individual(s), whenever on the airfield taking BASH related photographs. A copy of the approval memorandum shall be provided to 319 SFS. *Note: Ensure all Personal Identification Information (PII) is removed/obliterated prior to carry of document on airfield to insure security.*
- 2.5.15. Serve as the BHWG Coordinator. Schedule meetings of the BHWG and publish meeting minutes. Maintain BHWG meeting minutes for at least 3 years.
- 2.5.16. Consider all sources for the improvement of this program. There are many national and international BASH conventions and committees that 319 RW/SEF should attend. Many of these opportunities are listed on the AFSEC BASH website.
- 2.5.17. Provide guidance, when requested, on the collection of bird/wildlife remains for identification. Reference the Air Force Safety Center BASH website for the latest collection methods: <http://www.safety.af.mil/Divisions/Aviation-Safety-Division/BASH>.

2.5.18. Seek and obligate funding for the BASH program.

2.5.19. Develop and review BASH areas of concerns during December for the next calendar year and provide copy to 319 CES and 319 OSS. These areas shall require more focus for the BASH team and BHWG personnel to be engaged in. If the areas of concern are off GFAFB proper, then Safety shall coordinate with all appropriate agencies and/or landowners and receive all necessary permits and approvals prior to any bird/wildlife harassment is conducted.

2.5.20. Complete and document an annual review of this instruction in January of each calendar year and forward to ACC/SEF electronically no later than 15 February. The BASH plan shall be published on the unit safety web page.

2.5.21. Complete and document the BASH Self-Inspection Checklist IAW AFPAM 91-212, [Attachment 2](#), annually in December of each calendar year. See [Attachment 12](#) of this instruction for a copy of checklist.

2.6. Command Post (319 RW/CP).

2.6.1. Shall notify inbound aircraft who contact Command Post of Bird Watch Condition (BWC) is MODERATE or SEVERE on initial UHF/VHF/SATCOM contact. Include location, movement, and other known data of the bird activity which is driving the BWC.

2.6.2. When an aircrew encounters or calls in bird activity, Command Post shall notify AMOPS and 319 RW/SEF.

2.6.3. Coordinate requests for training at GFAFB by transient crews with AMOPS during BWC MODERATE or SEVERE.

2.6.4. Coordinate requests for divert aircraft to GFAFB with AMOPS during BWC MODERATE or SEVERE.

2.7. Operations Support Squadron Commander (319 OSS/CC).

2.7.1. Issue specific guidance to Airfield Management Operations (AMOPS) and Air Traffic Control (ATC) concerning actions required to implement this program.

2.7.2. Wing Scheduling coordinates with tenant units to avoid planning takeoffs and landings within the 2 hour window at dawn and dusk (+/- 1 hour) as mission requirements allow.

2.7.3. Ensure bird hazard awareness information and the GFAFB BASH program is available to all TDY aircrews.

2.7.4. Ensure Wing Flying Schedule is provided to 319 RW/SEF. Send information to 319 RW/SEF organizational email box 319rw.sef@us.af.mil.

2.7.5. Ensure personnel are properly trained and equipped to use bird dispersal/depredation techniques and equipment.

2.7.6. Ensure all Airfield Operations Flight personnel review this instruction.

2.8. Airfield Management Operations (319 OSS/OSAA).

2.8.1. AMOPS (319 OSS/OSAA) has the responsibility to conduct daily airfield inspections, IAW AFI 13-204V3, *Airfield Operations Procedures and Programs*.

2.8.2. Inspect for any conditions on the airfield that may attract birds. (Grass height, standing water, dead animals, etc.) Particular attention should be given to possible roosting areas around

the airfield. Report deficiencies to 319 RW/SEF and the appropriate OPRs. Increase diligence with regards to the annual BASH areas of concerns as these areas shall require more focus for the BASH team and BHWG personnel to be engaged in.

2.8.3. Conduct daily airfield surveys per AFI 13-204V3. Monitor bird/wildlife population, grass height, and standing water within the Airfield and report problems to the appropriate OPRs for modifying or eliminating the problem.

2.8.4. Declare Bird Watch Condition (BWC) codes based on bird activity at the airfield. AMOPS, the Tower Watch Supervisor, and the Wing Flight Safety may raise the Bird Watch Condition on the airfield. AMOPS is the central authority in downgrading the bird watch condition.

2.8.5. Consider changing the BWC when there is a visual observation of bird activity on or near the airfield, when aircraft relay bird hazard information, or when any personnel or agency on or near the airfield relays observations.

2.8.5.1. Notify ATC of bird activity observed on or near the airfield or in the traffic pattern.

2.8.5.2. Declare a BWC commensurate with observed bird activity on or near the airfield, when aircraft relay bird hazard information, or when personnel or agencies on or near the flightline relay observations.

2.8.5.3. Notify the Command Post, ATC, 319 RW/SEF, and local flying units when the BWC has changed to MODERATE or SEVERE and when returned to LOW. *Note: Once BWC SEVERE has been declared, the BWC shall be updated as a minimum every 30 minutes, including upgrading the BWC commensurate with updated information. Under BWC MODERATE, the status shall be reconfirmed at least hourly.*

2.8.6. Notify Tower of hazardous wildlife activity on or around the airfield.

2.8.7. Advise 319 RW/SEF of new arrivals, departures, or changes in flight schedules to allow dispersal personnel to efficiently and effectively manage wildlife aircraft hazards.

2.8.8. AMOPS shall immediately respond to the airfield upon notification of bird movements that may affect aircraft operations.

2.8.9. Maintain an adequate supply of BASH equipment.

2.8.10. Airfield Management shall have immediate access to bioacoustics/pyrotechnic equipment for bird dispersal, and shall also have immediate access to shotgun equipment, when available, for bird depredation when mission is affected. BASH shotguns and shotgun ammunition are authorized to be stored at one of the following locations: Airfield Management (bldg. 528) in a GSA- approved Class 5 storage container (once approval is obtained), the 319th Security Forces Squadron Armory (bldg. 339), or the 319th Logistics Readiness Squadron Weapons Vault (bldg. 408). USDA firearms will be stored IAW with Federal and DoD regulations in an approved area of the Wing Safety Office. Depredation activities shall be compliant with GFAFB issued state and federal permits and conducted by subpermittees only. See section 5.6 for dispersal procedures.

2.8.11. Notify 319 SFS when significant bird scare activities shall be necessary on the airfield. Coordinate the use of pyrotechnics, firearms, or gas cannons with the BDOC (747-5351). No

later than at least monthly, report number, location, species, and harassment techniques to 319 CES/CEIEC, as all harassment activities must be documented and reported.

2.8.12. Coordinate with 319 RW/SEF or 319 CES/CEOIE to remove animal carcasses from the airfield. Removes bird carcasses from the airfield and forward remains, which may have been caused by collision with aircraft, to 319 RW/SEF for identification. This is to avoid attracting scavengers to the airfield environment.

2.8.13. Notify 319 RW/SEF or 319 CES/CEOIE for disposal of wounded animals.

2.8.14. Ensure airfield access gates are closed if not currently in use. Monitor airfield access gates to ensure no more than 5 inch gaps occur between the gate and ground and/or gate connections IAW AFI 31-101, *Integrated Defense*. Report any practice of “piggy-backing” access gates to 319 SFS immediately. Multiple vehicles entering and exiting at one time is only permitted if gate access is monitored to prevent wildlife from entering the flightline.

2.8.15. Ensure a Notice to Airman (NOTAM) is published announcing the start and end of PHASE II.

2.8.16. Develop and maintain an accurate Bird Log of Bird Watch Condition declaration times, reported in-flight bird strikes, BASH team actions, and reports of bird concentrations in the local flying area. Forward a copy of the log monthly to Wing Flight Safety (319rw.sef@us.af.mil) by the 5th of each month for consolidated data collection, assessments, and reporting.

2.8.17. Be the focal point for all airfield work orders (AF Form 332), excluding any facility work orders on the airfield as those are the responsibility of the respective facility manager. This eliminates multiple requests for same issues and ensures management of airfield concerns.

2.8.18. Ensure the flight planning room, located at Base Operations has a current BASH infographic that illustrates local BASH hazards to transient aircrews. Coordinate with 319 CES and the 319 RW/SEF for updates as required.

2.8.19. Engage in constant communication between the 319 RW/SEF and 319 CES to determine the best solution to any wildlife that may pose a threat to aircraft.

2.8.20. Ensure bird hazards are published in the Flight Information Publication (FLIP), General Planning (GP), and Instrument Flight Rules (IFR) Supplement, along with any operating hour restrictions and avoidance instructions as required.

2.8.21. Ensure all Airfield Management personnel review this instruction.

2.9. Control Tower and RAPCON (319 OSS/OSAB/D).

2.9.1. Red River Tower. Red River Tower is the USAF military Air Traffic Control Tower located on GFAFB. *Note: The Air Traffic Control Tower at Grand Forks International Airport is designated “Grand Forks Tower” and is operated by the Federal Aviation Administration (FAA).* All references to “Tower” in this instruction refer to Red River Tower.

2.9.2. Advise AMOPS of bird activity observed on or near the airfield or in the traffic pattern and adjust aircraft operations accordingly. Notify AMOPS, all aircraft and any BASH/dispersal personnel in radio contact with Tower of any change to the associated BWC. Periods of heavy migratory activity (PHASE II) shall be announced on the ATIS along with BWC.

2.9.3. Allow detection and dispersal teams priority access on the runway to disperse birds in the Controlled Movement Area (CMA) at all times, but especially during BWC MODERATE or SEVERE.

2.9.4. Provide bird advisory information to aircraft in accordance with FAA Order 7110.65, *Air Traffic Control* and FAA Order 7210.3, *Facility Operation and Administration*.

2.9.4.1. Include position, species or size of birds, if known, course of flight, and altitude. Do this for at least 15 minutes after receipt of such information from pilots or from adjacent facilities unless visual observation or subsequent reports reveal the activity is no longer a factor.

2.9.4.2. Ensure bird watch conditions are included in GFAFB Automated Terminal Information System (ATIS) broadcasts, as appropriate. For rapidly changing BWCs, place a statement on ATIS advising aircrews to contact tower for the latest BWC.

2.9.4.3. Regardless of Phase designation, the highest levels of daily wildlife activity normally occur +/- one hour of sunrise/sunset as birds move to and from their roosts. Flight operations should be avoided during these periods unless mission essential. A risk analysis shall be completed to determine the potential risk to operations during these periods. Missions scheduled during +/- one hour of sunrise and sunset should be included in pre-mission risk management and analysis worksheets. Appropriate measures should be taken to mitigate the risk if required. For other than ACC aircraft, continued operations are at their discretion, and in accordance with their respective command directives.

2.9.5. Issue traffic advisories such that pilots can make operational changes such as missed approaches or delayed takeoffs when possible bird hazards appear.

2.9.6. Coordinate with AMOPs (or Airfield Management) when active dispersal is required or on-going within the airport operating area on a workload-permitting basis.

2.9.7. Ensure all tower personnel review and are familiar with their responsibilities as specified in this instruction.

2.10. 319th Civil Engineer Commander (319 CES/CC).

2.10.1. Conduct and assist with habitat modification operations in accordance with this instruction and GFAFB INRMP.

2.10.2. Ensure all 319 CES personnel and affiliated contractors close all airfield access gates upon entering and exiting entry control gates, and prohibit "piggy-backing." Multiple vehicles entering and exiting at one time is only permitted if gate access is monitored to prevent wildlife from entering the flightline.

2.10.3. Ensure personnel are properly trained and equipped to use bird dispersal/depredation techniques and equipment.

2.10.4. Ensure Civil Engineering personnel review this instruction.

2.11. Civil Engineer Squadron (319 CES).

2.11.1. Initiate bird/wildlife surveys and write environmental impact assessments and statements as required. Shall maintain all records up to five years for data analyzing purposes and recommendations.

- 2.11.2. Provide guidance and support for biological monitoring of wildlife populations and habitat management to improve technical advice for wildlife and vegetation management programs.
- 2.11.3. Conduct and assist with habitat modification operations.
- 2.11.4. Advise 319 RW/SEF and AMOPS of civil engineering projects that may impact airfield operations related to bird and wildlife hazards through the Construction Working Group meetings hosted by the 319 CES.
- 2.11.5. 319 CES/CEIEC monitor bird migration activity and coordinate with both 319 RW/SEF and AMOPS if PHASE II dates should be modified due to changes in the bird population or migratory activity.
- 2.11.6. Engage in constant communication between the 319 RW/SEF and AMOPS to determine the best solution to any wildlife that may pose a threat and/or hazard to aircraft.
- 2.11.7. Provide a natural resource representative and pest management representative to the BHWG to monitor and advise the group of environmental modifications.
- 2.11.8. Assist with procedures for removal or control of bird attractants.
- 2.11.9. Address environmental issues potentially impacting BASH.
- 2.11.10. Use landscape and maintenance activities that comply with the land management goals of the BASH Program Instruction and the Integrated Natural Resources Management Plan (INRMP) by not establishing or maintaining vegetative species on or adjacent to the airfield that provide food, cover, roosting or nesting habitat to wildlife to the max extent possible.
- 2.11.11. Modify and maintain airfield habitat consistent with runway lateral and approach zone management criteria IAW AFI 32-7063 *Air Installations Compatible Use Zones Program*, AFI 32-7064, *Integrated Natural Resources Management*, and AFI 91-202, *United States Air Force Mishap Prevention Program*, and AFPAM 91-212, *Bird/Wildlife Management Techniques*, such that the turf shall be maintained 500 feet outside the AMA boundary, where able, and in a manner that is least attractive to wildlife.
- 2.11.12. Ensure the AMA grass height and AMA +500 feet where able remains between 7 to 14 inches IAW AFPAM 91-212, AFI 91-202, AFI 13-204V3, and AFI 32-7064.
- 2.11.13. Ensure the INRMP supports this BASH Program Instruction.
- 2.11.14. With input of all those who participate in harassment and depredation activities, coordinate wildlife studies as necessary to improve wildlife hazard control at GFAFB.
- 2.11.15. Apply for and maintain the applicable and necessary federal and state permits required for depredation, salvage, collection, and possession birds and wildlife. IAW the GFAFB INRMP.
- 2.11.16. Collect nest removal data and produce annual reports to the USFWS, form 3-2020-9. See [Attachment 11](#).
- 2.11.17. Collect an annual calendar year summary from agencies of wildlife, nests, and eggs that were removed by lethal control listed under the GFAFB depredation permit. Submit depredation permit reports as required by federal and state regulations

2.12. Aircrew Standardization and Evaluation (OGV). This section is not used but is reserved for future use.

2.13. Flying Squadron Commanders. This section is not used but is reserved for future use.

2.14. Squadron Assigned Flight Safety Officers (SAFSO). This section is not used but is reserved for future use.

2.15. Grand Forks AFB, DoD Tenant Units.

2.15.1. 319th Operations Group (319 OG).

2.15.1.1. Provide guidance to aircrews for the use of the United States Bird Avoidance Model (USBAM) and, when available, the Avian Hazard Advisory System (AHAS) during the mission planning process, if able.

2.15.1.1.1. AHAS is a national radar bird detection system for the US Air Force. It uses the next generation radar (NEXRAD) weather radar system to monitor large-scale migratory bird activity in the lower 48 states. The current conditions shown by the AHAS web page also include the risk from migration and soaring bird activity, which is determined by predictive models using National Weather Service (NWS) weather data. More information is available on the AHAS website: <http://www.usahas.com>.

2.15.1.1.2. The USBAM program objective was to develop a predictive bird avoidance 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.

2.15.1.2. Incorporate coverage of this instruction for all Hawkeye initial and recurrent Hawkeye training.

2.15.1.3. Issue specific guidance for aircrews and Hawkeye on procedures to be followed under BWC MODERATE and SEVERE.

2.15.1.4. The BASH Phase shall be updated in the NOTAMS system and BWC status in ATIS during PHASE II. Aircrew shall utilize all resources at their disposal to actively monitor the bird status in the local flying area.

2.15.1.5. In BWC SEVERE, follow AFI 11-202V3 ACC Sup I, *General Flight Rules*, for guidance. For 319 OG aircrews conducting local flights out of GFAFB, the waiver authority for non-emergency landings in BWC SEVERE shall require approval by the 319 OG/CC or per their local guidance.

2.15.1.6. In BWC MODERATE, Pilot in Command (PIC) should apply AFI 11-202V3 ACC Sup I, *General Flight Rules*, **Paragraph 5.26.1.2**

2.15.1.7. Hawkeye should report observed bird activity to ATC.

2.15.1.8. Check the BWC status before flight. Bird hazards mitigation should be considered during mission planning and briefed to the flight.

2.15.1.9. Strike reporting shall be conducted IAW AFI 91-212, AFI 91-202, *The US Air Force Mishap Prevention Program*, and AFI 91-204, *Safety Investigations and Reports*. Non-damaging bird strikes shall be reported by the pilot, maintenance debrief personnel, or maintenance QA personnel, as appropriate, through the 319 RW "Aircraft Incident

Worksheet” or the AF Form 853 and forwarded to 348 RS/SE no later than close of business the next duty day. 348 RS/SE shall compile all reported bird strike data and submit the AF Form 853 to the 319 RW/SEF. In addition, 348 RS/SE shall forward a copy of AF Form 853 to 319 RW/SEF (319rw.sef@us.af.mil) to identify local BASH trends.

2.15.1.10. Ensure maintenance buildings on the airfield do not become sanctuaries for birds by denying access to locations suitable for bird nests and remove nest buildups as required. Support is available from 319 RW/SEF (701-747-4114 or 701-747-3366) or 319 CES pest management.

2.15.1.11. Oversee 319 OG scheduling changes to avoid recommended areas and times of known hazardous bird concentrations, mission permitting, per unit guidance.

2.15.1.12. Consider implementing any of the following measures depending on BWC and airframe type:

2.15.1.12.1. Restrict transition +/- 1 hour of dawn and dusk.

2.15.1.12.2. Change pattern direction to avoid bird concentrations.

2.15.1.12.3. Limit or prohibit formation takeoffs and landings

2.15.1.12.4. Reschedule local training or transition training elsewhere.

2.15.1.12.5. Restrict night flying.

2.15.1.13. Pilot Reports (PIREPS) by aircrews and ground observations are essential to adequately assess and help identify bird and wildlife hazards on the airfield and in the local flying vicinity. When pilots spot birds or other wildlife, notify the controlling agency so others can be informed of the hazard. Aircrew should relay the following information:

2.15.1.13.1. Location

2.15.1.13.2. Altitude

2.15.1.13.3. Local time of sighting

2.15.1.13.4. Approximate number of birds and direction of flight

2.15.1.13.5. Wildlife type, species or size of bird, if known

2.15.2. **Other DoD Tenant Unit.** This section is not used but is reserved for future use.

2.16. Grand Forks AFB Non-DoD Tenant Units.

2.16.1. Following a bird strike during take-off, in local pattern, or landing, aircrews should immediately advise ATC.

2.16.2. Tenant units operating out of GFAPB should promptly report all bird strikes and hazardous conditions to 319 RW/SEF as soon as possible. Anytime an aircraft experiences a bird strike, the 319 RW/SEF request the aircrew complete an AF Form 853, *Air Force Bird Strike Report*, to collect all wildlife remains and strike information to identify local BASH trends. These forms are available at AMOPS, Wing Flight Safety, and in respective tenant units. Return forms and information to 319 RW/SEF building 607, room 241 or organizational email to address: 319rw.sef@us.af.mil.

- 2.16.3. Ensure any applicable bird activity data is readily available to aircrews during mission planning.
- 2.16.4. Check the BWC status before flight. Bird hazards mitigation should be considered during mission planning and briefed to the flight.
- 2.16.5. Pilot Reports (PIREPS) by aircrews and ground observations are essential to adequately assess and help identify bird and wildlife hazards on the airfield and in the local flying vicinity. When pilots spot birds or other wildlife, notify the controlling agency so others can be informed of the hazard. Aircrew should relay the following information:
 - 2.16.5.1. Location
 - 2.16.5.2. Altitude
 - 2.16.5.3. Local time of sighting
 - 2.16.5.4. Approximate number of birds and direction of flight
 - 2.16.5.5. Wildlife type, species or size of bird, if known
- 2.16.6. Ensure all aircraft cavities and openings are inspected on the ramp or after undergoing maintenance in hangars for birds or nesting materials before returning to operation.
- 2.16.7. Ensure all personnel and affiliated contractors close all airfield access gates upon entering and exiting entry control gates and prohibit "piggy-backing." Multiple vehicles entering and exiting at one time is only permitted if gate access is monitored to prevent wildlife from entering the flightline.
- 2.16.8. Ensure maintenance buildings on the airfield do not become sanctuaries for birds by denying access to locations suitable for bird nests and remove nest buildups as required.
- 2.16.9. Make seasonal bird hazards a regular topic at flying safety meetings.
- 2.16.10. Oversee their own respective scheduling changes to avoid recommended areas and times of known hazardous bird concentrations, per their own local guidance.
- 2.16.11. Consider implementing any of the following measures depending on BWC and airframe type:
 - 2.16.11.1. Restrict transition +/- 1 hour of dawn and dusk.
 - 2.16.11.2. Change pattern direction to avoid bird concentrations.
 - 2.16.11.3. Limit or prohibit formation takeoffs and landings
 - 2.16.11.4. Reschedule local training or transition training elsewhere.
 - 2.16.11.5. Split formation during recovery.
 - 2.16.11.6. Discontinue formation approaches.
 - 2.16.11.7. Direct full-stop landings.
 - 2.16.11.8. Restrict night flying.
- 2.16.12. Tenant units should advise 319 RW/SEF of any mission impacts related to BASH or BWC for increased coordination and safety measures.

2.17. Security Forces (319 SFS).

2.17.1. Train all personnel listed on the deprecation permit who are authorized the use of shotguns. BASH shotguns and shotgun ammunition are authorized to be stored at one of the following locations: Airfield Management (bldg. 528) in a GSA-approved Class 5 storage container (once approval is obtained), the 319th Security Forces Squadron Armory (bldg. 339), or the 319th Logistics Readiness Squadron Weapons Vault (bldg. 408). USDA and Safety firearms will be stored IAW with Federal and DoD regulations in an approved area of the Wing Safety Office. *Note: If supporting the BASH program, then individuals shall be identified by their unit commander in writing and coordinated with 319 RW/SEF prior to receiving weapons and screened for suitability to bear firearms IAW the Lautenberg Act. It is the requesting unit commander's responsibility to ensure all personnel scheduled for weapons training comply with AFI 31-117, Arming And Use Of Force By Air Force Personnel, Paragraphs 2.3, 2.6., and AFI 36-2226, Combat Arms Program, Paragraph 5.2.7 A list of BASH support eligible individuals shall be maintained by 319 RW/SEF and 319 OSS/OSA.*

2.17.2. During normal security patrols, visually scan the runway and infield areas for the presence of birds or animals. Immediately report any potential bird hazards to the Tower or AMOPS.

2.17.3. If requested, the 319 SFS shall provide courtesy storage of BASH shotguns and ammunition, and ensure Arming Authorization Letters meet AFI requirements.

2.17.4. Ammunition for the BASH program must be procured and stored IAW AFMAN 91-201, *Explosives Safety Standards*, Paragraphs 3.10 and 11.25. If BASH ammunition is to be temporarily stored in the 319 SFS Armory, it shall be in an in-transit status only. Ammunition stored at bldg. 528 may not be excess of quantities approved on an Explosive Facility License and any ammunition in excess or no longer being utilized it must be returned to the non-nuclear Munitions Storage Area for long-term storage.

2.18. Public Affairs (319 RW/PA).

2.18.1. Participate as required and upon request shall provide a public information program designed to inform base personnel, dependents, and the general public on the hazards and costs of uncontrolled bird activity and the measures being taken to minimize them. This information shall educate the base on the hazard that wildlife pose to aircraft operations and efforts required by all personnel and residents to prevent bird strikes.

2.18.2. Local Interest. GFafb response actions to bird activity are a normal event but have potential to generate media interest. Possible target markets for this information are the local newspaper, TV, and radio stations.

2.18.3. Regional Interest. Communities outside the immediate GFafb area may want information about activity as bird migration may move through their "neighborhood".

2.18.4. National Interest. Limited to short "spot" news, if any at all. Coverage would state the bare facts about operations, along with identifying information about general aircraft procedures.

2.18.5. Approval. Release authority for all activity information in this plan rests with the 319 RW/CC.

2.18.6. Shall review and coordinate a memorandum for 319 RW/CC or 319 RW/CV's approval for any photography on the airfield, to include BASH program support. An approval certification/notice, without Personal Identification Information (PII) shall be maintained by the individual(s), whenever on the airfield taking BASH related photographs. A copy of the approved memorandum shall be provided to 319 SFS.

2.18.7. Community Relations.

2.18.7.1. Consider including short summary of BASH activity in tours or speeches. Summary could include:

- 2.18.7.1.1. A fact sheet on bird strike avoidance activity.
 - 2.18.7.1.2. Basic explanation of program purpose.
 - 2.18.7.1.3. How activity takes place.
- 2.18.7.2. Prepare educational information for the base community.

CHAPTER 3

CHAPTER 4

HABITAT MODIFICATION

4. Habitat Modification. By incorporating specific practices into the base land management, GFAFB can maintain an airfield habitat less attractive to birds and other wildlife. 319 CES is responsible for habitat modification. Contact 319 CES at DSN 362-3111/Commercial 701-747-3111 for work order requests involving airfield maintenance.

4.1. BASH Areas of Concern.

4.1.1. Hangar Nesting. The most common BASH occurrences on GFAFB, are with nesting birds.

4.1.2. Common Transition Areas. Typical waterfowl habits are to roost on protected waterways for the night and then feed in the morning. Following a morning feed, many will return to water around mid-day to rest and then feed again later in the afternoon, before returning to roost. Due to this pattern of behavior, many waterfowl have been observed transitioning near West Ditch, Strata Ponds, GFAFB Proper Wastewater Lagoons, and Kelly's Slough NWR in the early mornings and late afternoon. The most common areas they are observed is heading north or west to fields of corn, wheat, etc.

4.1.3. Unmaintained Airfield Areas. The most unmaintained habitat at GFAFB occurs on the airfield in the western, southwestern, southeastern, northwestern areas. These areas provide habitat suitable for a variety of wildlife such as hawks, owls, deer, songbirds, waterfowl, badger, fox, small mammals, and upland birds, which all increase aviation hazards.

4.1.4. Waterfowl. Canada geese, swans, snow geese, and assorted ducks present a significant hazard to the Grand Forks flying environment. The presence of waterfowl on the airfield is elevated during migration season (both spring and fall). Monitoring the Avian Hazard Advisory System, (AHAS), <http://www.usahas.com/home/> and online hunting websites for the region shall typically yield the best information on bird migration trends. To mitigate the risk of waterfowl aircraft strikes 319 RW typically implements BASH PHASE II during spring and fall migration seasons.

4.1.5. Swallows. During the summer months the majority of aircraft bird strikes have been caused by swallows. Success in reducing the number of swallow strikes has been achieved by persistent removal of nests from buildings next to the flightline. Methods for removal include high pressure water for buildings with high eaves or a scraper tool with a long handle for buildings with lower eaves. Additionally, if applied early in the year, a bird proofing repellent or netting can be added to problematic buildings to prevent nests from being constructed.

4.1.6. Birds of Prey. Periodically, hawks and other raptors soar over and near Grand Forks AFB's runway in search of food. While searching, they often fly co-altitude with aircraft on the approach or departure flight paths. Mitigation efforts include maintaining the proper airfield grass height, reducing habitat attractiveness and edge features, capture and relocation by qualified personnel (USDA), the use of pyrotechnic dispersal techniques and depredation when necessary.

4.1.7. Gulls. Gulls present a hazard in late summer when they hunt for worms around the airfield. Dispersal techniques include, but are not limited to, vehicle patrols, the use of pyrotechnics, and depredation when necessary.

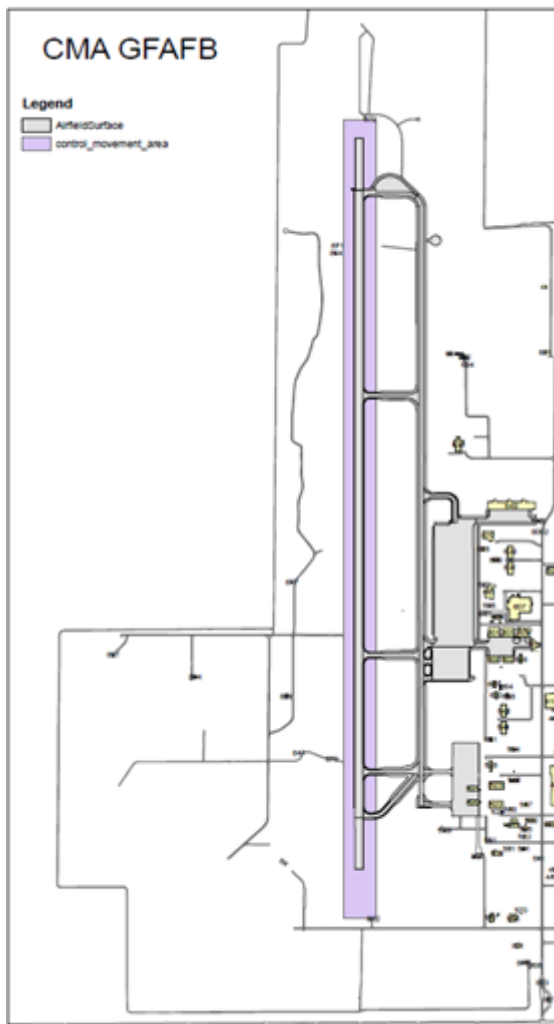
4.1.8. Deer. Deer occasionally find their way into the airfield interior area where they pose a risk to aircraft on the runway. Airfield gates are to be closed to prevent deer from entering the airfield. Fences shall be inspected and repaired as needed to eliminate deer from entering the airfield as well.

4.1.9. Noxious and Invasive Weeds. Six noxious and three invasive weeds have been identified on the installation. The noxious weeds are absinth wormwood (*Artemisia absinthium*), Canada thistle (*Cirsium arvense*), leafy spurge (*Euphorbia esula*), musk thistle (*Carduus nutans*), spotted knapweed (*Centaurea stoebe*), and kochia (*Bassia spp.*). The invasive weeds are field bindweed (*Convolvulus arvensis*), bull thistle (*Cirsium vulgare*) and perennial sowthistle (*Sonchus arvensis*). These weeds are prolific throughout the airfield, especially on the West, South, North, Northwest and Northeast areas of the airfield, to include near the runway.

4.2. BASH Vegetation and Wildlife Management.

4.2.1. Airfield. The airfield is that area inside the airfield perimeter fence. A monotypic vegetative environment within the airfield perimeter fence is preferable. Non-berry, brome, wheat grass, or non-seed producing grass is most desirable. In addition, the spraying of insecticide is recommended along aircraft movement surfaces (within 500 feet) where the establishment of vegetative growth is minimal. Do not allow trees and shrubs to grow in the Controlled Movement Area (CMA), Clear Zones, or infield areas as these areas pose the highest hazard to aviation. See **Figure 4.1** The following are techniques/procedures or activities that should be considered during vegetation and wildlife management, however are not required. 319 CES will work with 319 OSS and 319 SE to develop best management practices.

Figure 4.1. GFAFB CMA

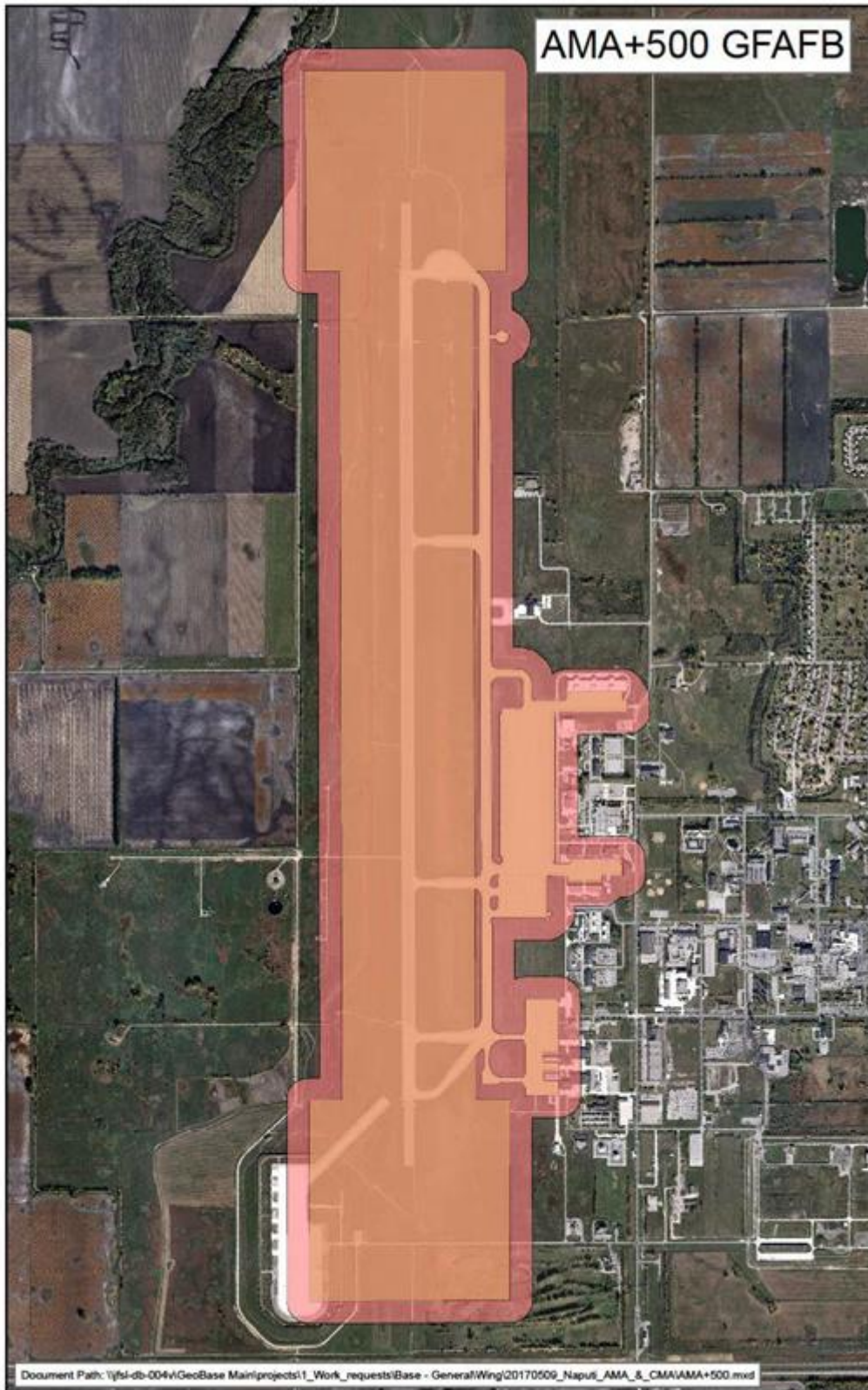


4.2.2. Airfield Movement Area (AMA). Maintain airfield vegetation IAW AFI 91-202, *The US Air Force Mishap Prevention Program*. Monotypic vegetative shall be the preferred vegetation. Eliminating weeds and cultivating a uniform monoculture of grasses can be more effective in discouraging seed-eating birds from feeding on the airfield than mowing grass seed stalks. See [Figure 4.2](#)

Figure 4.2. AMA

4.2.3. AMA Plus 500 Feet. Maintain airfield vegetation IAW AFI 91-202, *The US Air Force Mishap Prevention Program*. This area starts at the end of the AMA and continues to 500 feet beyond the AMA. Monotypic vegetation shall be preferred in this area. Planned landscaping and continuous maintenance of the area greatly reduces the attractiveness to wildlife and minimized aviation hazards. See [Figure 4.3](#)

Figure 4.3. GFAFB AMA PLUS 500 FEET



4.2.4. Grass Height. Maintain airfield vegetation IAW AFI 91-202, *The US Air Force Mishap Prevention Program*. Mow to maintain a uniform grass height between 7 and 14 inches, IAW AFI 91-202, *The US Air Force Mishap Prevention Program*, AFI 32-7064, *Integrated Natural Resources Management*, AFI 13-204V3, and AFPAM 91-212. 319 CES and AMOPS shall coordinate mowing with periods of low flight activity. While maintaining the grass height at 7-14 inches, make sure faster growing weeds are cut before they go to seed to discourage seed eating birds from using the airfield. Primary focus should be on the grass height and weed seed heads. Grass between 7-14 inches discourages flocking species from foraging on the airfield because reduced visibility disrupting inter-flock communication and flock integrity by reducing the ability to detect predators. Grass exceeding 14 inches (36 cm) is known to attract some bird species and rodents, which in turn attract raptors. In addition, grass heights in excess of 14 inches may result in the grass lying flat (lodging) thus reducing its deterrent effect. Grass heights below 7 inches are of equal concern, as they are generally more palatable and thus more attractive to geese in particular.

4.2.4.1. Haying is considered an agricultural activity which is prohibited within the AMA or inside the boundaries of the airfield security fence (AFI 32-7064, *Integrated Natural Resources Management*). Additionally, AFI 91-202 ACC Sup [Paragraph 7.3.1.5.10.](#), *The US Air Force Mishap Prevention Program* further restricts vegetation maintenance to within AMA plus 500 feet. Areas outside of this defined prohibited area can be leased for haying operations, however, since haying typically requires higher grass height, such operations would allow grass to exceed the 7-14 inch requirement. This would violate AFI 91-202, *The US Air Force Mishap Prevention Program*, AFI 91-212, AFI 13-204V3, and AFI 32-7064, *Integrated Natural Resources Management*, requirements. Therefore, if areas within any land use lease fall within the confines of the airfield security fence and AMA plus 500' (as defined by AFI 91-202 and IAW AFI 32-7064), these areas must be maintained by the responsible party IAW safety regulations of 7"-14", where physically able, at all times

4.2.4.2. Desire for suitable grass height haying conditions within these restrictive areas shall not supersede safety regulations.

4.2.5. Managing Shrub Lands. Shrubs should be cut every year prior to ground thaw and before leaf-out to minimize its attractiveness to wildlife.

4.2.6. Controlling Broad-Leafed Weeds. Keep volunteer broad-leafed plants to a minimum in grasslands on the airfield and industrialized/housing areas as they attract a variety of birds, may produce seeds or berries, and may limit grass growth. Heights of broad-leafed weeds should be maintained to minimize their attraction to wildlife. Obtain assistance in herbicide selection for weed control, grass seed selection, fertilization, and erosion control vegetation from, 319 CES/CEIEC, and 319 RW/SEF (specifically USDA/WS). Apply herbicides, mow, cultivate, and conduct controlled burns as necessary to achieve control broad-leafed weeds. Apply herbicides as a last resort after other integrated pest management practices IAW AFI 32-1053, *Integrated Pest Management Program*, requirements.

4.2.7. Planting Bare Areas. **Note:** *Bare areas are frequently used by birds as feeding and resting sites, or to obtain grit, so they shall be eliminated on the airfield.* Plant grass as necessary and appropriate irrigation maintained until 70% cover is established.

4.2.8. Fertilizing. Selectively stimulate grasses to promote a uniform cover based on soil test results. Irrigation may be required to support turf growth for limited times, such as when establishing new cover.

4.2.9. Reducing Edge Effect. Edge effect refers to the highly attractive transition zone between two distinct habitat types (e.g., brush to grassland). Maintain the airfield as uniformly as possible to reduce this effect.

4.2.10. Removing Dead Vegetation. As soon as possible, remove dead vegetation such as brush piles, grass clippings, hay bales, etc., and the cover it affords.

4.2.11. Woodlands. Managing woodland density and structure can effectively discourage large birds or large concentrations of birds and mammals (foxes, deer, coyote, etc.). Woodlands within the airfield should be removed or greatly thinned to prevent moose, deer and canids from finding cover, to reduce raptor perches, and to prevent birds roosting or nesting near the airfield.

4.2.12. Berry/Fruit Producing Trees and Shrubs. Mature berries can attract several species of birds during fall and winter. Minimizing their presence within the airfield is a BASH objective. Berry/fruit producing trees within airfield should be phased out on a planned basis. No new berry/fruit producing trees or shrubs that attract birds shall be planted within the airfield.

4.2.13. Bird-Proof Buildings, Hangars, and Structures. Excluding birds from a structure they currently use will often displace them to an adjacent structure. Existing bird nests should be destroyed prior to egg laying (in accordance with federal and state permits). Facility managers are responsible for purchasing and utilizing the equipment necessary to keep their buildings free of swallow nests. Rock pigeons, house sparrows, swallows and starlings frequently live in buildings and hangars and must be excluded from these structures. Denying access by screening windows, closing doors, and blocking entry holes are best recommended best management practices.

4.2.14. Netting. Consider installing netting under building superstructure to exclude pest birds from roosting areas. Ensure no gaps or holes are present for birds to get through.

4.2.15. Avitrol, Starlicide, or Other Avicides. Coordinate with 319 CES/CEIEC and 319 RW/SE about using any labeled bird control chemicals. 319 CES/CEOIE should place in or near hangar to kill birds or create a distressed response that scares other birds. **All pesticides have to be approved prior to use on the installation and all applicators certifications need to be verified.**

4.2.16. Trapping/Removal. Lethal trapping and removal of wildlife may be conducted by properly trained individuals on the applicable permits. 319 RW/SEF USDA/WS is the primary contact for non-lethal trapping/relocating of wildlife on the airfield. Off of the Airfield, the 319 CES Entomology is the primary contact for trapping and removal of wildlife other than migratory birds.

4.2.17. Door Coverings. Consider use of netting or plastic strips suspended over the doors to exclude birds. Ensure no tears or holes are present that allow birds access to the hangar.

4.2.18. Sharp Projections. Consider use in limited areas such as ledges, overhangs, or small places where birds cannot be allowed to roost. Expense prohibits their use over the entire structure.

4.2.19. Harassment. Use high pressure air or water to make hangars an undesirable roosting site. Persistence is the key.

4.2.20. Eliminate Roosting Sites. Management of known active roosting sites can greatly help reduce bird activity. 319 CES/CEIEC shall survey bird roosting sites and apply appropriate products in locations that shall affect the greatest number of birds. Within the airfield, 319 CES/CEIEC may employ the help of USDA for roosting site surveys.

4.2.21. Bird Nest Removal. Use water or other means to wash/remove nests from hangars and buildings during nest construction. Only subpermittees listed on the U.S. Fish and Wildlife Services (USFWS) Migratory Bird Permit are authorized to remove active nests or those with eggs. Any removal of nests must be recorded (number and location) and reported to 319 CES/CEIEC. Monthly reporting to CEIEC is preferred so the data is not forgotten and lost. Data reporting is required by Permit.

4.2.22. Pellet Guns. Only subpermittees listed on the U.S. Fish and Wildlife Services (USFWS) Migratory Bird Permit are authorized to take birds. Proper safety equipment is required at all times. A depredation permit is required for all birds except rock pigeons, house sparrows, and European starlings. Refer to 50 CFR 10.13, *Migratory Bird Depredation Permits*, for a complete list of all protected bird species. For dispersal and depredation procedures, refer to section 5.6.

4.2.23. Leveling of the Airfield. Level or fill high or low spots to prevent standing water and reduce attractiveness to birds. *Note: Filling of wetlands is prohibited under EO 11990, however it can be relocated. Coordinate with 319 CES/CEIE to determine if the area of proposed action (leveling/filling) is a wetland and review options available.*

4.2.24. Maintaining and Controlling Drainage Ditches. Fresh water is one of the most important airfield wildlife attractants. Standing water creates a source of drinking water and a breeding place for insects, amphibians and other food sources for birds. Mark areas of the airfield with chronic standing water after heavy rains. Coordinate with 319 CES to fill, level, and re-seed these areas with grass to match the rest of the airfield. Since federal and state laws strictly control wetlands, coordination with CE or EM is a must before making any modifications to airfield drainage. However, non-tidal drainage and irrigation ditches excavated on dry land are not generally considered to be “waters of the United States” (51 FR 41206, *Final Rule for Regulatory Programs of the Corps of Engineers*) and therefore are not considered wetlands. Make airfield drainage ditches as deep as possible to limit the surface area of the water and still allow proper drainage according to civil engineering requirements. Grade the banks of the drainage ditches to allow mowing up to the edge of the ditch. Regularly inspect and keep drainpipes, culverts, and screens clear of debris so drainage is not impeded. Improve drainage as necessary to inhibit even temporary standing water areas.

4.2.25. Minimize Open Water. All activities affecting wetlands must be coordinated with 319 CES/CEIEC and US Army Corps of Engineers. When properly permitted, eliminate snowmelt ponds or standing open water on the airfield. *Note: These activities shall be coordinated with AMOPS in accordance with AFI 13-204V3.* If unable to relocate snowmelt pond, ensure it is drained as soon as possible. Monitor ponds throughout year and drain as necessary. Eliminate standing water immediately is essential to avoid development of wetlands. Coordination with the Army Corps of Engineers and the appropriate state environmental permitting office is required prior to altering wetlands. Also see the 2004 Memorandum of Agreement between

the Corps of Engineers, Federal Aviation Administration, USAF, and other federal agencies regarding waivers or exemption for on-site wetland mitigation procedures. Eliminate small ponds or puddles and some large bodies of standing water to reduce attractiveness to birds. Low spot and ditch maintenance is essential.

4.2.26. Erosion Control Vegetation. Outside of the airfield use vegetation that does not attract birds. Woody vegetation species such as willow, birch, poplar, or alder are desired species. Non-invasive annual grasses may be planted for initial soil stabilization.

4.2.27. Pest Controls. Invertebrates and rodents are key food sources for many birds. Grasshoppers are of special concern on the airfield, when abundant grasshoppers can attract several species of gulls, ravens, and passerines. July and August are primary months of grasshopper abundance. Another attractant to avian predators, coyotes, and foxes are small mammals, primarily microtines. A reduction of mammalian predators shall likely promote small mammal population outbreaks of greater frequency and higher numbers that will attract increased numbers of avian predators. Any persistent gull concentrations on the airfield should be considered an indication of a potential insect population outbreak. Appropriate pesticides should be on hand to respond to insect outbreaks if deemed practicable. Preventive treatments attacking larval stages should be applied within the airfield where practicable. All pesticides have to be approved prior to use on the installation and all applicators certifications need to be verified. 319 CES/CEOIE should periodically survey and reduce these pests when required. Pest Management can be contacted at DSN 362-5201/4022/4025 Commercial 701-747-5201. The airfield manager shall request pest control services when deemed necessary.

4.2.28. Controlling Waste Disposal. All dumpsters used on the base, including base housing, shall be designed to remain closed and inaccessible to wildlife. Non-securable dumpsters shall be replaced on a planned basis when economically feasible. Ravens and gulls are frequently attracted to dumpsters that are not closed and secured. Facility managers shall have primary responsibility to monitor dumpster repair and remove waste prior to being overfilled.

4.2.29. Discourage Wildlife Feeding. Signs should be placed appropriately to educate the public to the hazard posed by feeding any wildlife. Bird feeders shall not be allowed on the airfield. Hazards of feeding wildlife should be presented during Newcomer's orientation by 319 RW/SE.

4.2.30. Toxic perches. Install where maximum numbers of birds shall contact them. Ensure perches are maintained with avicides to remain effective.

4.2.31. Bioacoustics, Pyrotechnics, and Other Harassment Techniques. Bioacoustics, pyrotechnics and other harassment techniques can provide sufficient bird control in most situations. Yet, birds become accustomed to these techniques, and a few individual birds/wildlife may have to be killed to reinforce the idea that a significant threat exists. When bird/wildlife activity threatens the safety of flight, depredation shall be used but only as a last resort. Depredation activities shall be in compliance with the BASH depredation permits. Any removal of nests must be recorded (number and location) and reported to 319 CES/CEIEC. Monthly reporting to CEIEC is preferred so the data is not forgotten and lost. Data reporting is required by Permit.

CHAPTER 5

BIRD HAZARD WARNING SYSTEM

5. Bird Hazard Warning System. These procedures establish methods to use for the immediate exchange of information between ground agencies and aircrews concerning the existence and location of birds that pose a hazard to flight safety. If a bird hazard exists, notify the Tower, AMOPS, and 319 RW/SEF. Radio net or telephone can be used to make this notification.

5.1. Bird Activity Phase.

5.1.1. PHASE I. Bird Activity extends from December – March and June – August and is typically the period of limited threat of bird strike.

5.1.2. PHASE II. Bird Activity is associated with migratory seasons and extends normally March – May and September – December. It is the period of increased bird concentration in the region.

5.1.3. Phase periods are determined by the BHWG. However, the declaration of a Phase shall be determined real-time by 319 RW/SEF, AMOPS, and 319 CES/CEIEC as the migration and weather may alter the increase/decrease of activity.

5.2. Bird Watch Condition (BWC) Codes. The following terminology has been established for rapid communication of bird activity (Ref: DOD Flight Information Handbook and AFI 91-202, *The US Air Force Mishap Prevention Program*). Bird conditions and location should be relayed with the BWC code.

5.2.1. [Condition SEVERE]: Heavy concentrations of birds on or immediately above the active runway or other specific locations that represents an immediate hazard to safe flying operations and high potential for strikes. Aircrews and supervisors must thoroughly evaluate mission need before operating in areas under condition SEVERE.

5.2.2. [Condition MODERATE]: Concentrations of birds observed near the runway or other locations that represent an increased hazard to safe flying operations. This condition requires increased vigilance by all agencies and caution by aircrews. Positive actions shall be taken by all agencies to disperse the concentrations of birds that are causing the hazard. Bird concentration areas shall be tracked for future habitat modification.

5.2.3. [Condition LOW]: Normal bird activity on and above the airfield with low probability of strike hazard.

5.3. Declaring a BWC.

5.3.1. Authority. The authority to declare a BWC is vested in AMOPS, Tower personnel, and 319 RW/SEF. The AMOPS is the central authority in downgrading the BWC. Upgrading the BWC should err on the side of safety, and can be declared based on ground observations, pilot reports, radar observations, etc. Before downgrading the BWC, the AMOPS should consider all available resources and will downgrade based on observed bird activity. *Note: One bird in any given location can drive a BWC of SEVERE or MODERATE.*

5.3.2. BWC SEVERE. Declare when any of the following occur: any large bird or high concentrations of birds above or in the vicinity of the runway or in arrival/departure routes; flocking birds crossing near runway ends; any reported bird strike in Class D airspace.

Suggested guidance: 15 or more large birds (waterfowl, gulls), over 30 small birds (swallows), or any wildlife posing a high potential for strike.

5.3.3. BWC MODERATE. Declared when any of the following occur: high daily bird survey numbers; flocking birds are observed near the airfield; or moderately increased levels of birds are observed, not meeting the BWC SEVERE criteria. BWC moderate requires increased vigilance by all agencies and supervisors and caution by aircrews. Suggested guidance: 5 to 15 large birds, 15-30 small birds, or any wildlife posing an increased potential for strike.

5.3.4. Under BWC MODERATE, AMOPS will maintain constant presence on the airfield to observe bird activity changes and respond to wildlife appropriately. When a constant presence cannot feasibly be maintained, update the status at least once an hour. Under BWC SEVERE, when a constant presence cannot feasibly be maintained, update the BWC every 30 minutes as a minimum based on information provided by ground, dispersal personnel, and observed activity. Once the dispersal personnel have moved the birds and the airfield is clear, the BWC should be lowered. The Bird Log shall be annotated with BWC codes with condition entry and exit times, bird locations, and actions taken.

5.3.5. BWC LOW. Bird activity on or around the airfield representing low potential for strikes.

5.3.5.1. *Note: Daily flight scheduling considerations are not a valid reason to downgrade the BWC if other factors support a higher condition.*

5.4. Notification of BWC.

5.4.1. Ground Personnel. If a bird hazard exists, any ground personnel on the flight line will notify the 319 RW/SEF and AMOPS of the increased bird activity. This notification can be made on a radio net or by telephone. Telephone reports can be passed to 319 RW/SEF (747-3366) and AMOPS (747-4409). In addition, AMOPS monitors the Ramp net. The report should include:

5.4.1.1. Caller identity (e.g. agency for ground personnel, call sign for aircrews.)

5.4.1.2. Location.

5.4.1.3. Altitude.

5.4.1.4. Time of sighting.

5.4.1.5. Approximate number of birds.

5.4.1.6. Type of birds (if known).

5.4.1.7. Behavior of birds (soaring, flying to or from a location, etc.)

5.4.2. Aircrews. Notify the Tower.

5.5. Dissemination of BWC. The Declaration of a BWC starts a process. Disseminate updated BWC's as follows:

5.5.1. Notify the Tower when upgrading the BWC to MODERATE or SEVERE.

5.5.2. Relay MODERATE or SEVERE BWC to arriving flights through Hawkeye and Tower frequency.

5.5.3. Air Traffic Control (ATC):

5.5.3.1. Notifies departing and arriving aircraft of BWC.

5.5.3.2. Passes BWC to AMOPS.

5.5.3.3. Update the ATIS (Automatic Terminal Information Service) to reflect BWC of MODERATE or SEVERE. For rapidly changing BWC, place a statement on ATIS advising aircrews to contact Tower.

5.5.3.4. Under elevated BWCs, GFAFB Tower shall issue the advisories, IAW FAA Order 7110.65.

5.5.4. AMOPS:

5.5.4.1. Coordinate with Tower to upgrade or downgrade the BWC.

5.5.4.2. Notifies Command Post (747-6711), RAPCON, Global Hawk Operations Center (747-6595), 319 RW/SEF (747-3842), Customs and Border Protection Operations Center (747-8116), and Grand Sky 701-317-3206 of BWC changes (upgrade and downgrade).

5.5.4.3. AMOPS shall post the BWC in AMOPS for transient aircrews.

5.5.4.4. Dispatches dispersal personnel to the site of the bird/wildlife hazard for investigation and dispersal.

5.5.5. Command Post:

5.5.5.1. If BWC SEVERE, then in addition notify 319 RW/CV. Once no longer BWC SEVERE notify 319 RW/CV.

5.5.5.2. If a bird activity report is received from airborne aircraft, notify AMOPS and complete appropriate checklist.

5.5.6. Flying Squadrons: Ensure the current BWC is displayed on the airfield status board. Squadron supervision must be notified when the BWC moves into or out of condition SEVERE.

5.5.7. 319 RW/SEF: Upon notification of BWC MODERATE, the USDA/WS with available dispersal personnel shall be dispatched if not already responding. Upon notification of BWC SEVERE, all available 319 RW/SEF shall be dispatched in support of dispersal personnel with USDA/WS as lead, if not already responding.

5.6. BASH Dispersal Procedures

Figure 5.1. BASH Dispersal Procedure

NOTE: All permittees and sub-permittees must comply with the 50 CFR 21.41, Standard Conditions for Migratory Bird Depredation Permits that are a continuation of the issued permit. Specifically noted are the following:

1) To minimize the lethal take of migratory birds, you are required to continually apply non-lethal methods of harassment in conjunction with lethal control.

2) The permit does not authorize take or release of any migratory birds, nests, or eggs on Federal lands without additional prior written authorization from the applicable Federal agency, or on State lands or other public or private property without prior written permission or permits from the landowner or custodian. (Since we are adding trapping [and POLE trapping] to our permit this year, explain where the hawks will be released/relocated and what that process will be.)

5.6.1. Authorization. Personnel authorized for BASH dispersal shall be trained IAW **Chapter 7** of this publication and included in the depredation permit as required.

5.6.2. Notification. Before initiation of dispersal actions, authorized dispersal personnel shall notify the Tower of the location and methods being used. Dispersal Personnel shall coordinate with Base Defense Operations Center (BDOC at 747-5351) prior to dispersals to mitigate any potential for false active shooter alerts. Coordination shall include location, duration, and type of dispersal.

5.6.3. Actions.

5.6.3.1. The authorized dispersal personnel shall determine the specific dispersal activities to ensure removal of the wildlife hazards from the airfield. If dispersal methods are ineffective or the birds become accustomed to the hazing, it may become necessary to depredate several birds to reinforce the dispersal methods via behavioral conditioning. Ensure proper depredation permit is in effect before depredating wildlife. Also ensure proper disposal of the carcasses.

5.6.3.2. Dispersal Operations. USDA/WS shall manage wildlife in accordance with guidance as stated in state and federal law. 319 RW/SEF, AMOPS personnel, and 319 CES/CEOIE can also be called for dispersal actions, if required. In addition, 319 RW/SEF and AMOPS personnel that are trained IWA **Chapter 7** can also perform dispersal duties, if required.

5.6.3.3. Prior to initiation of dispersal actions on the airfield, dispersal personnel shall coordinate the location and number of wildlife with the Tower.

5.6.3.4. Birds and mammals shall be managed utilizing a variety of methods. The method used shall be at the discretion of dispersal personnel based on the situation.

5.6.3.5. When the target birds depart the area, the Tower and AMOPS shall be notified so the BWC can be lowered.

5.6.4. Disposal. All species depredated must be retrieved and transported using government transportation and disposed of IAW permit rules.

5.6.4.1. The primary disposal for small game would be burying or landfilling. In the case of big game, the carcasses shall be donated to max extent possible. Donations shall be IAW

federal and state regulations. A list of authorized agencies whom may accept the donation is maintained in the 319 RW/SEF office.

5.6.4.2. Under no circumstances shall any individual possess or make use of any part of an animal taken under this permit.

5.6.5. Communication. Dispersal personnel should be accessible by radio and/or phone during their duty period and available for rapid response to the runway and ramp during BASH PHASE II. Following dispersal activities and when the target flock departs the area, AMOPS and Tower should be notified as soon as practical.

5.6.6. Reporting.

5.6.6.1. If harassment is conducted, no later than at least monthly, report number, location, species, and harassment techniques to 319 CES/CEIEC, as all harassment activities must be documented and reported. If that does not work and depredation is required, all Subpermittees must comply with the 50 CFR 21.41, Standard Conditions for Migratory Bird Depredation Permits and all issued permits. No later than at least monthly, report number, location and species to 319 CES/CEIEC, as all depredation data must be documented and reported.

5.6.6.2. Any removal of nests must be recorded (number and location) and reported to 319 CES/CEIEC. Monthly reporting to 319 CES/CEIEC is preferred so the data is not forgotten and lost. Data reporting is required by Permit.

5.7. Traffic Pattern Restrictions. ATC may restrict aircraft according to the BWC IAW FAAO 7110.65 and local regulations.

CHAPTER 6

BIRD STRIKE REPORTING

6. Bird Strike Reporting. This section outlines the procedures and forms required to report bird strikes IAW AFI 91-202, *The US Air Force Mishap Prevention Program*, and 91-204, *Safety Investigations and Reports*, and to enhance the BASH program at GFafb.

6.1. General. All DoD bird strike shall be reported to 319 RW/SEF for local identification and data/trend analysis. All non-DoD bird strikes are highly encouraged to be reported to 319 RW/SEF for local identification and data/trend analysis.

6.1.1. Wildlife-related information contained in BASH reports is not privileged and is releasable outside AF channels with the exception of PII. Any subsequent safety investigation into these events and the resultant analysis, findings, and recommendations are privileged and not releasable outside AF channels.

6.1.2. Damaging Bird/Wildlife Strike. 319 RW/SEF shall be notified of any bird/wildlife strike that causes reportable damage according to AFI 91-204, *Safety Investigations and Reports*.

6.1.3. Non-damaging Bird/Wildlife Strike. 319 RW/SEF may be notified of any bird/wildlife strike that does not cause reportable damage to the aircraft IAW AFI 91-204, *Safety Investigations and Reports*. **Note:** *If a Class E BASH event is non-damaging, reasonable investigation efforts and documentation within AFSAS are still required.*

6.1.4. All bird/wildlife strikes falling below Class D dollar damage threshold will be reported in AFSAS as a Class E BASH event. Non-damaging BASH reports are important and required to trend accurately for mishap prevention. Information contained in BASH reports is not privileged and is releasable outside AF channels, with the exception of personally identifiable information. Ensure the reports do not include safety privileged information IAW AFI 91-204.

6.1.5. RPA Mishaps. RPAs are considered aircraft, and mishaps will be reported IAW DoDI 6055.07 and AFI 91-204 unless exempted IAW AFI 91-223.

6.2. Damage Totals. Report all bird/wildlife strikes falling below the Class B threshold in AFSAS as a Class C, D, or E BASH mishap/event. Class B or A bird strikes shall be reported IAW AFI 91-204. 319 RW/CP shall provide incident notification IAW AFMAN 10-206, *Operational Reporting* as supplemented by ACC.

6.3. Bird Remains Identification. Identification of bird species involved in bird strikes is an important part of the overall assessment and management of this complex issue. Knowing the species involved in a bird strike provides guidance to the size, behavior, and ecology of the bird involved. Additionally, documenting wildlife strike species is essential in providing baseline data needed to assess trends, focus prevention efforts, and interpret investigation dynamics. In an effort to increase the accuracy and efficiency of identifying the bird species from bird strike remains, the following guidelines and recommendations are presented.

6.3.1. Collecting Remains. Utilize the Snarge Kits to ensure proper evidence for identification. These kits may be obtained from 319 RW/SEF. Place non-fleshy and or non-fleshy bird remains (feathers, beaks, or feet) from all strikes in a plastic bag and forward to 319 RW/SEF. Small remains, even tiny pieces, such as downy feathers, can be used for positive identification,

and are not to be discarded. Coordinate with aircraft maintenance personnel prior to collecting remains from aircraft surfaces. For whole bird or partial carcass, pluck a variety of feathers from the head, breast, back, body, and tail if possible. Collect any/all blood, tissue, or fluid remains for DNA analysis. To do this, spray the area with ethyl alcohol (ethanol) or 70% isopropyl alcohol and wipe with a clean paper towel, or use pre-packaged alcohol wipes. If there is a concern over using alcohol on certain aircraft surfaces, use a dry cloth. Use water and a clean paper towel as a last resort. Ethanol is preferable to isopropyl alcohol but both types of alcohol are preferable to water. Allow all bird strike remains to completely dry, fold the towel, and place remains into a labeled re-sealable plastic bag. Investigators should not delay recovering and shipping remains to the Smithsonian Institution's Feather Identification Lab (FIL), as the DNA in the sample could degrade.

6.3.1.1. Feathers.

6.3.1.1.1. Whole Bird. Pluck a variety of feathers (breast, back, wing, and tail).

6.3.1.1.2. Partial Bird. Collect a variety of feathers with color of pattern.

6.3.1.1.3. Feathers Only. Send all material available. Do not cut feathers from the bird. The downy part at the base of the feathers is best. Do not use any sticky substance (no tape or glue).

6.3.1.2. Tissue/Blood ("Snarge").

6.3.1.2.1. Dry Material. Scrape or wipe off into a clean re-closeable bag or wipe area with pre-packaged alcohol wipe or spray with alcohol to loosen material, then wipe with clean cloth/gauze. Do not use water, bleach, or other cleansers as they destroy the DNA.

6.3.1.2.2. Fresh Material. Wipe area with alcohol wipe and/or clean cloth/gauze or apply fresh tissue/blood to an FTA®DNA collecting card.

6.3.1.3. Always include any feather material available.

6.3.1.4. Include a copy of bird strike report (AFSAS, WESS, or FAA 5200-7).

6.3.1.5. Always secure all remains in re-sealable plastic bag.

6.3.1.6. Send samples of the remains (if available) to the FIL for identification and record the incident in AFSAS.

6.3.2. DoD Bird Strikes. Non-fleshy bird remains taken from DoD aircraft or airfield following bird strikes shall be forwarded to the organization owning the aircraft. If strike occurs on GFAFB, then the 319 RW/SEF may assist agencies with the process. DoD tenant units shall submit AF Form 853, *Air Force Bird Strike Report* IAW their local unit guidance; however a copy is requested to be sent to 319 RW/SEF for local identification and trend data.

6.3.3. Non-DoD Bird Strikes. Non-local DoD bird strikes are highly encouraged to notify the 319 RW/SEF and provide information of the strike. *Non-DoD tenant units shall adhere to their local guidance on reporting; however, they should provide the information to 319 RW/SEF for local identification and trend data. Non-DoD are encouraged to utilize the AF Form 853, Air Force Bird Strike Report (Attachment 7) to assist with standardizing data, but it is not required in order to inform Wing Safety of a bird strike.*

6.3.4. 319 RW/SE shall forward wildlife remains IAW AFI 91-212 and AFI 91-202, *The US Air Force Mishap Prevention Program*. After remains are identified, 319 RW/SEF shall finalize the AFSAS report.

6.3.4.1. Shipping Information.

6.3.4.1.1. Routine/Non-Damaging Cases. Use US Postal Service and mail to the following address:

Figure 6.1. Routine/Non-Damaging Cases Postal Address

Feather Identification Lab
Smithsonian Institution
NHB, E600, MRC 116
P.O. Box 37012
Washington, DC 20013-7012 36

6.3.4.1.2. Priority/Damaging Cases. Use overnight shipping and mail to the following address:

Figure 6.2. Priority/Damaging Cases Postal Address

Feather Identification Lab
Smithsonian Institution
NHB, E600, MRC 116
10th & Constitution Ave., NW
Washington, DC 20560-0116 44

6.3.5. AMOPS shall notify the 319 RW/SEF if any bird remains are found on or in the immediate vicinity of the runway or any area used by aircraft. AMOPS and Transient Alert personnel shall assist transient aircrews and shall obtain unit/organization information and forward the information to 319 RW/SEF. If runway operations must be immediately resumed for inbound aircraft, AMOPS shall remove remains and provide them to the 319 RW/SEF after operations have resumed.

6.3.6. Maintenance Personnel. This section not used, but reserved for future use.

6.3.7. SAFSOs Assistance. This section is not used, but reserved for future use.

6.4. Wildlife Remains Identification.

6.4.1. Wildlife other than bird, contact 319 RW/SEF, USDA/WS, for assistance.

6.4.2. For wildlife strikes other than birds, gather samples of skin, hair, teeth, or other non-fleshy remains following same procedures as for bird strikes (**Paragraph 6.3** of this instruction). While physical evidence is preferred, gathering remains of wildlife other than birds may not be practicable. In these cases, photographs will be accepted. Send an electronic image/email of the carcass or remains to the FIL (dovec@si.edu).

6.4.3. Report all wildlife remains, whether whole or in part, found on the airfield within 200 feet of a runway centerline in AFSAS as a bird strike, unless another reason for the animal's

death is identified, and send remains to the FIL for identification and record the incident in AFSAS.

CHAPTER 7

TRAINING

7. Training. All base personnel shall be briefed at the Newcomer's orientation by 319 RW/SE on the responsibility each individual has in reporting bird or wildlife hazards.

7.1. Annual Training. 319 RW units and tenant units should receive an annual refresher brief just prior to the spring migration. 319 RW/SEF may brief groups in conjunction with a safety meeting or a commander's call at the squadrons. If this cannot be accomplished prior to the beginning of the spring migration period, unit commanders have the responsibility to ensure their members receive refresher training to remind members of wildlife hazards. 319 RW/SEF shall have the training available for electronic distribution by request.

7.2. Installation and Tenant Safety Offices. 319 RW/SEF and all DoD tenant units, shall maintain a bird/wildlife hazard awareness program. All non-DoD units are encouraged to maintain a bird/wildlife hazard awareness program. Briefings, films, posters, and other methods shall be used to inform personnel about local bird hazards and reporting procedures and can be obtained through 319 RW/SEF.

7.3. Dispersal Personnel. 319 RW/SEF and AMOPS personnel authorized for BASH dispersal/depredation acquire appropriate BASH dispersal/depredation qualifications. Coordinate with 319 RW/SEF for required BASH dispersal/depredation training. AMOPS conducts and maintains their own BASH training and qualifications. Users authorized for lethal depredation shall comply with training in 7.3.1.1. of this publication. 319 RW/SEF, AMOPS personnel, and BASH personnel shall augment USDA/WS capability during peak migration periods. All personnel required to actively interact with wildlife on or around the airfield will attend USDA Managing Wildlife Hazards at Airports training, to include 319 OSS and 319 CES.

7.3.1. 319 RW/SEF.

7.3.1.1. Complete SFS/CATM M870 shotgun qualification training IAW AFMAN 36-2227v1. Must receive Use of Force training IAW AFI 31-117. 319 RW/SEF personnel are the primary authorized depredation source, but should be supplemented by other authorized personnel as needs arise.

7.3.1.2. Receive hands-on training on proper operation and transportation of airfield pyrotechnic devices by 319 RW/SEF.

7.3.1.3. Attend USDA Managing Wildlife Hazards at Airports training. This training is mandatory for all personnel directing dispersal/depredations. If unable to attend formal training, USDA/WS shall provide ad hoc training sessions on using pyrotechnic devices and other dispersal methods. All personnel must be familiar with bird identification, wildlife deterrent procedures, and the proper use of pyrotechnic devices.

7.3.1.4. Complete BASH Detection and Dispersal Training and any applicable CBT as currently defined by 319 RW/SEF.

7.3.1.5. BASH training records shall be created and maintained by 319 RW/SEF for each volunteer. All training shall be documented IAW AFPAM 91-212.

7.3.2. AMOPS.

7.3.2.1. Depredation authorized personnel: Complete SFS/CATM M870 shotgun qualification training IAW AFMAN 36-2227v1. Must receive Use of Force training IAW AFI 31-117. These personnel supplement the 319 RW/SE capability to disperse and depredate and must notify 319 RW/SE prior to depredation activities.

7.3.2.2. Receive hands-on training on proper operation and transportation of airfield pyrotechnic devices.

7.3.2.3. Attend USDA Managing Wildlife Hazards at Airports training.

7.3.2.4. BASH training records shall be created and maintained by 319 RW/SEF for each authorized dispersal/depredation member. All training shall be documented IAW AFPAM 91-212.

CHAPTER 8

BIRD/WILDLIFE HAZARD WORKING GROUP (BHWG)

8. Bird/Wildlife Hazard Working Group (BHWG): The function of the BHWG is to collect, compile, and review data on bird/wildlife strikes and other wildlife hazards, identify and recommend actions to reduce hazards, recommend changes in operational procedures and habitat, and initiates procedures, responsibilities and changes to the 319 RW BASH program instruction. In addition, prepares informational programs and other educational items for aircrews. BHWG assists the commander by acting as a discussion forum for off-base BASH related issues. Read-ahead slides shall be provided to attending agencies 48 hours before the meeting.

8.1. Authority. The BHWG submits all major recommendations to the 319 RW/CV for approval. Implementation of recommendations is through the normal chain of command.

8.2. Composition. The chairperson is the Vice Commander (319 RW/CV).

8.2.1. Main Representatives: As a minimum, the group shall consist of representatives from the following:

8.2.1.1. 319 RW Representatives:

8.2.1.1.1. Wing Safety (319 RW/SE, 319 RW/SEF, USDA/WS)

8.2.1.1.2. Public Affairs (319 RW/PA)

8.2.1.1.3. Comptroller Squadron Commander (319 CPTS/CC)

8.2.1.1.4. Judge Advocate (319 RW/JA)

8.2.1.2. 319 OG Representatives:

8.2.1.2.1. This section not used, but is reserved for future use.

8.2.1.3. 319 MXG Representatives:

8.2.1.3.1. This section not used, but is reserved for future use.

8.2.1.4. 319 MSG Representatives:

8.2.1.4.1. Mission Support Group Commander (319 MSG/CC)

8.2.1.4.2. Operations Support Commander (319 OSS/CC)

8.2.1.4.3. Civil Engineering Commander (319 CES/CC)

8.2.1.4.4. Security Forces Commander (319 SFS/CC)

8.2.1.4.5. Airfield Operations Flight Commander (319 OSS/OSA)

8.2.1.4.6. Airfield Manager (319 OSS/OSAA)

8.2.1.4.7. Chief Controller, Air Traffic Control Tower (319 OSS/OSAT)

8.2.1.4.8. Airspace Manager/Scheduling Representative (319 OSS/OSO)

8.2.1.4.9. Chief, Civil Engineering Operations (319 CES/CEO)

8.2.1.4.10. Natural Resources Office (319 CES/CEIEC)

- 8.2.1.4.11. Community Planner (319 CES/CENPL)
- 8.2.1.4.12. Pest Management (319 CES/CEOIE)
- 8.2.1.4.13. Fire Department (319 CES/CEF)
- 8.2.1.5. DoD Tenant Units Representatives:
 - 8.2.1.5.1. Operations Group Commander (319 OG/CC)
 - 8.2.1.5.2. Aircraft Maintenance Commander (319 AMXS/CC)
 - 8.2.1.5.3. Reconnaissance Squadron Commander (348 RS/CC)
- 8.2.1.6. Additional Representatives: The following agencies may be invited to attend the BHWG meetings:
 - 8.2.1.6.1. Homeland Security Customs and Board Patrol (CBP UASOC-ND)
 - 8.2.1.6.2. Grand Forks County [Grand Sky Mixed-Use Aviation Business Park] Operations Manager
 - 8.2.1.6.3. North Dakota Air National Guard Safety Office (119 WG/SE)
 - 8.2.1.6.4. Minnesota Air National Guard Safety Office (133 AW/SE)
 - 8.2.1.6.5. Air Wing Reserves Safety Office (934 AW/SE)
 - 8.2.1.6.6. Fighter Wing Safety Office (148 FW/SE)
 - 8.2.1.6.7. Other agencies may be invited based on need and/or agenda.

8.3. Meeting Schedule. The BHWG shall meet and least semi-annually. Recommended schedule is an initial meeting in March to focus on the upcoming BASH season and spring migration, and an October meeting to summarize the BASH season and identify any outstanding issues prior to the next season. The BHWG shall meet separate from the Quarterly Airfield Operations Board.

8.4. Meeting Agenda and Minutes. BHWG meetings should concentrate on preventing future strikes by utilizing data and taking a proactive role in BASH related issues and procedures. The BHWG meetings may discuss, but are not limited to, the following topics: local bird/wildlife strike statistics, locally observed bird/wildlife activity, wildlife habitat management/modification, annual bird migration, local 319 RW BASH program instruction procedures, responsibilities and changes, BASH awareness, education, training, and status and activities of the BASH team. Meeting minutes shall be maintained for 3 years, attendance recorded, and appropriate distribution approved minutes.

CAMERON S. PRINGLE, Colonel, USAF
Commander, 319 Reconnaissance Wing

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

50 CFR 21.41, *Migratory Bird Depredation Permits*

51 FR 41206, *Final Rule for Regulatory Programs of the Corps of Engineers*

AFI 10-206, *Operational Reporting*

AFI 11-202V3, *General Flight Rules*

AFI 11-202V3, ACC Sup I, *General Flight Rules*

AFI 13-204V3, *Airfield Operations Procedures and Programs*

AFI 21-201, *Management and Maintenance of Non-Nuclear Munitions*

AFI 31-101, *Integrated Defense*

AFI 31-207, *Arming and Use of Force by Air Force Personnel*

AFI 32-1053, *Pest Management Program*

AFI 32-7061, *Environmental Impact Analysis Process*

AFI 32-7063, *Air Installations Compatible Use Zones Program*

AFI 32-7064, *Integrated Natural Resources Management*

AFI 32-7086, *Hazardous Materials Management*

AFI 33-360, *Publications and Forms Management*

AFI 33-363, *Management of Records*

AFI 91-202, *The US Air Force Mishap Prevention Program*

AFI 91-204, *Safety Investigations and Reports*

AFI 91-207, *The US Air Force Traffic Safety Program*

AFMAN 31-229, *USAF Weapons Handling Manual*

AFMAN 91-201, *Explosives Safety Standards*

AFMAN 91-223, *Aviation Safety Investigations and Reports*

AFPAM 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Management Techniques*

AFPD 91-2, *Safety Programs*

GFAFBI 13-204, *GFAFB Airfield and Air Traffic Operations*

GFAFB INRAMP, *GFAFB Integrated Natural Resources Management*

FAA Order 7110.65, *Air Traffic Control*

FAA Order 7210.3, *Facility Operation and Administration*

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

Prescribed Forms

None.

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

AF Form 853, *Air Force Bird Strike Report*

319 RW Incident Report (RQ-4), *RQ-4 Incident Report* [Only for 3]

USFWS 3-202-9, *Depredation and Nest Removal Tracking Sheet Form*

Abbreviations and Acronyms

AC—Aircraft Commander

ACC—Air Combat Command

AFMAN—Air Force Manual

AFI—Air Force Instruction

AFPAM—Air Force Pamphlet

AFSAS—Air Force Safety Automated System

AGL—Above Ground Level

AFSEC—Air Force Safety Center

AHAS—Avian Hazard Advisory System

ATC—Air Traffic Control

ATIS—Automatic Terminal Information Service

BAAP—Bird Avoidance Action Planner

BAM—Bird Avoidance Model

BASH—Bird/Wildlife Aircraft Strike Hazard

BHWG—Bird Hazard Working Group

BWC—Bird Watch Condition

CATM—Combat Arms Training & Maintenance

CBT—Computer Based Training

CBP—U.S. Customs and Border Protection

CC—Commander

CES—Civil Engineer Squadron

FIL—Feather Identification Lab

GFAFB—Grand Forks Air Force Base

GFAFBI—Grand Forks Air Force Base Instruction

HQ—Headquarters

IAW—In Accordance With

MXG—Maintenance Group

OG—Operations Group

OPR—Office of Primary Responsibility

POC—Predator Operations Center (CBP)

RDS—Records Disposition Schedule

RW—Reconnaissance Wing

SAFSO—Squadron Assigned Flight Safety Officer

SFS—Security Forces Squadron

USBAM—United States Bird Avoidance Model

USAHAS—United States Avian Hazard Advisory System

USDA—United States Department of Agriculture

USFWS—United States Fish and Wildlife Service

Terms

Accountable Forms—Forms that the Air Force stringently controls and which cannot be released to unauthorized personnel, since their misuse could jeopardize DOD security or result in fraudulent financial gain or claims against the government.

Administrative Change—Change that does not affect the subject matter content, authority, purpose, application, and/or implementation of the publication (e.g., changing the POC name, office symbol(s), fixing misspellings, etc.).

Approval Authority—Senior leader responsible for contributing to and implementing policies and guidance/procedures pertaining to his/her functional area(s) (e.g., heads of functional two-letter offices).

Authentication—Required element to verify approval of the publication; the approval official applies his/her signature block to authenticate the publication. The signature block includes the official's name, rank, and title (not signature).

AMA—As defined in UFC 3-260-01, *Airfield and Heliport Planning and Design*, is that area of the airfield encompassed by the Primary Surface and the Clear Zones, as well as apron areas and taxiways, regardless of their location.

Bird Avoidance—Techniques (including radar detection, warning, and use of bird data) that reduce potential for bird strikes by allowing aircrews to schedule or maneuver to avoid bird concentrations.

Bird Control—Any biological, chemical, or physical procedure that discourages the presence of birds. These procedures include repellents, toxicants, harassment, grounds maintenance, and habitat modification.

Bird Data—Information about the ecology, anatomy, physiology, behavior, size, movement, and distribution of birds that may be helpful in bird control, bird avoidance, and aircraft design.

Bird Hazard Reduction Plan—A written document that addresses bird strike hazards and designates organizations responsible for implementing solutions.

Bird Hazard Warning System—A set of procedures, using standard bird watch condition codes, for immediate exchange of information between ground and airborne personnel concerning the existence and location of birds posing a hazard to flight.

Bird Species—A group of interbreeding birds with common characteristics such as size, shape, voice, and behavior.

Bird/Wildlife Strike—Any collision between a bird or other species of wildlife and an aircraft.

Bird Watch Condition Codes—The following terminology is established for rapid communication of bird activity. When communicating, avoid color-coded conditions to eliminate any confusion with color codes used during exercises, contingencies, and emergencies (e.g., disaster preparedness exercises). Also, give bird locations with the condition code:

- Bird Watch Condition SEVERE. Bird activity on or immediately above the active runway or other specific location representing high potential for strikes. Supervisors and aircrews must thoroughly evaluate mission need before conducting operations in areas under condition SEVERE.

- Bird Watch Condition MODERATE. Bird activity near the active runway or other specific location representing increased potential for strikes. BWC moderate requires increased vigilance by all agencies and supervisors, and caution by aircrews.

- Bird Watch Condition LOW. Bird activity on and around the airfield representing low potential for strikes.

Damaging Bird/Wildlife Strike—Any bird/wildlife strike that causes reportable damage according to AFI 91-204, *Safety Investigations and Reports*.

Endangered Species Act, 16 U.S.C. 1531—Federal environmental statute that makes it a felony to "take" an endangered species. As used in the Act, "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect an endangered species. Criminal liability under the Act can be imposed for indirect takings resulting from the destruction of an endangered species habitat.

Habitat—The total environmental elements of food, water, shelter, nesting sites, and space that must be present for wildlife species to survive.

Migratory Bird Treaty Act, 16 U.S.C. 703—Federal statute which makes it a felony to kill, take or possess migratory birds without a permit.

Non-damaging Bird/Wildlife Strike—Any bird/wildlife strike that does not cause reportable damage to the aircraft IAW AFI 91-204, *Safety Investigations and Reports*.

Piggy-backing—The practice of allowing one vehicle to open a flightline access gate and leaving it open for another vehicle to enter or exit unmonitored at a later time.

Attachment 2

TASKED ORGANIZATIONS

A2.1. Organizations.

A2.1.1. 319 RW/CV

A2.1.2. 319 MSG/CC

A2.1.3. 319 RW/SEF

A2.1.4. 319 RW/CP

A2.1.5. 319 RW/PA

A2.1.6. 319 RW/JA

A2.1.7. 319 CPTS

A2.1.8. 319 OSS

A2.1.9. 319 CES

A2.1.10. 319 SFS

A2.1.11. GFAPB DoD Tenant Units

A2.1.12. GFAPB Non DoD Tenant Units

Attachment 3
DISTRIBUTION

A3.1. Addresses No. Copies

A3.1.1. HQ AFSEC/SEF1

A3.1.2. HQ ACC/SEF1

A3.1.3. 25 AF/SEF1

A3.1.4. 319 RW/SE1

A3.1.5. 319 RW/CP1

A3.1.6. 319 RW/PA1

A3.1.7. 319 RW/JA1

A3.1.8. 319 RW/XP1

A3.1.9. 319 CPTS1

A3.1.10. 319 OSS1

A3.1.11. 319 CES1

A3.1.12. 319 SFS1

A3.1.13. 319 OG1

A3.1.14. 348 RS1

A3.1.15. 319 AMXS 1

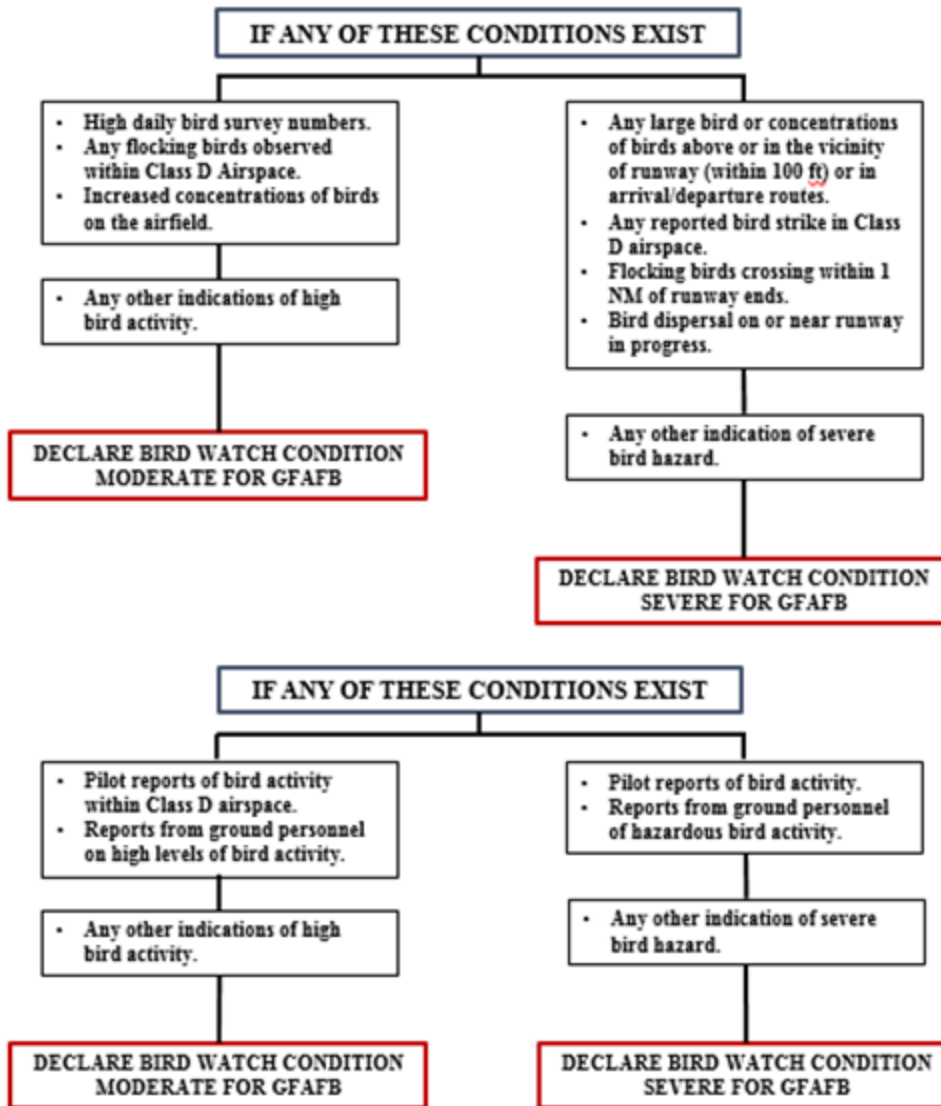
A3.1.16. DoH CBP1

A3.1.17. Total: 16

Attachment 4

BIRD WATCH CONDITION (BWC) FLOW CHART

Figure A4.1. Bird Watch Condition Flowchart



THE BWC SHALL REMAIN IN EFFECT UNTIL THE DECLARING AUTHORITY REASSESSES BIRD ACTIVITY AND DETERMINES A NEW BWC. THIS REASSESSMENT AUTHORITY MAY BE DELEGATED.

LARGE BIRD = WATERFOWL, GULLS, RAVENS, AND BIRDS OF COMPARABLE SIZE
SMALL BIRD = STARLINGS, SPARROWS, OR SWALLOWS

A4.1. Figure A4.1. Bird Watch Condition Flowchart provides objective criteria to assist the members in determining BWC.

Attachment 6

AF FORM 853, AIR FORCE BIRD STRIKE REPORT

Figure A6.1. AF853, Air Force Bird Strike Report, Pg. 1

AIR FORCE WILDLIFE STRIKE REPORT		
1. UNIT-WING/SQUADRON <input type="text"/>	7c. LOW-LEVEL ROUTE <input type="checkbox"/> INSTRUMENT ROUTE IR <input type="text"/> <input type="checkbox"/> SLOW ROUTE SR <input type="text"/> <input type="checkbox"/> VISUAL ROUTE VR <input type="text"/> <input type="checkbox"/> UNKNOWN OTHER: <input type="text"/>	4. PHASE OF OPERATION (cont) <input type="checkbox"/> LANDING TRAFFIC PATTERN <input type="checkbox"/> LANDING FLARE ROLLOUT <input type="checkbox"/> MISSED APPROACH/TOUCH & GO <input type="checkbox"/> OTHER
2. AIRCRAFT (alphanumeric designation) <input type="text"/>	8. STRIKE AWARENESS IN FLIGHT <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN <input type="text"/>	15. BIRD AVOIDANCE MODEL <input type="checkbox"/> UNKNOWN <input type="checkbox"/> NO REPORT <input type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> SEVERE
3. TAIL NUMBER/REGISTRATION <input type="text"/>	9. LATITUDE (DDMM.M) N <input type="text"/> S <input type="text"/>	16. BIRD WATCH CONDITIONS <input type="checkbox"/> UNKNOWN <input type="checkbox"/> NO REPORT <input type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> SEVERE
4. DATE (dd mmm yyyy) <input type="text"/>	10. LONGITUDE (DDMM.M) E <input type="text"/> W <input type="text"/>	17. WILDLIFE STRUCK <input type="checkbox"/> UNKNOWN <input type="checkbox"/> NONE <input type="checkbox"/> ONE <input type="checkbox"/> 2-11 <input type="checkbox"/> 11-100 <input type="checkbox"/> MORE THAN 100
5. TIME (local) <input type="text"/>	11. EFFECT ON FLIGHT <input type="checkbox"/> UNKNOWN <input type="checkbox"/> ABORTED TAKE-OFF <input type="checkbox"/> ENGINES SHUTDOWN <input type="checkbox"/> NONE <input type="checkbox"/> OTHER <input type="checkbox"/> PRECAUTIONARY LANDING	18. AVIAN HAZARD ADVISORY SYSTEM <input type="checkbox"/> UNKNOWN <input type="checkbox"/> NO REPORT <input type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> SEVERE
6. DAILY PERIOD <input type="checkbox"/> UNKNOWN <input type="checkbox"/> DAWN <input type="checkbox"/> DAY <input type="checkbox"/> DUSK <input type="checkbox"/> NIGHT	12. SPEED (KIAS) <input type="text"/>	19. REMARKS ON LOCATION <input type="text"/>
7a. AIRPORT NAME ICAO <input type="text"/> HOST ID (FAA IDENT) <input type="text"/> RUNWAY <input type="text"/> OTHER <input type="text"/>	13. ALTITUDE (ft AGL) <input type="text"/>	
7b. SPECIAL USE AIRSPACE <input type="checkbox"/> ALERT <input type="checkbox"/> DANGER <input type="checkbox"/> MILITARY OPERATIONS AREA <input type="checkbox"/> PROHIBITED <input type="checkbox"/> RESTRICTED <input type="checkbox"/> TEMPORARY RESERVED AIRSPACE <input type="checkbox"/> RESTRICTED <input type="checkbox"/> UNKNOWN NAME: <input type="text"/>	14. PHASE OF OPERATION <input type="checkbox"/> UNKNOWN <input type="checkbox"/> PARKED <input type="checkbox"/> TAXIING <input type="checkbox"/> TAKEOFF ROLL <input type="checkbox"/> TAKEOFF INITIAL CLIMB <input type="checkbox"/> CRUISE CLIMB <input type="checkbox"/> CRUISE <input type="checkbox"/> CRUISE LOW LEVEL <input type="checkbox"/> RANGE OPS <input type="checkbox"/> CRUISE DESCENT <input type="checkbox"/> HOVER <input type="checkbox"/> LANDING FINAL APPROACH	


Figure A6.2. AF853, Air Force Bird Strike Report, Pg. 2

AIR FORCE WILDLIFE STRIKE REPORT																																																																																															
<p>20. COST ESTIMATE</p> <p><input type="checkbox"/> NOT APPLICABLE</p> <p><input type="checkbox"/> ESTIMATED COST(not yet known)</p> <p><input type="checkbox"/> ACTUAL COST</p> <p>\$ _____</p> <hr/> <p>21. CLASS</p> <p><input type="checkbox"/> CLASS A <input type="checkbox"/> CLASS C</p> <p><input type="checkbox"/> CLASS B <input type="checkbox"/> CLASS E</p> <hr/> <p>22. IMPACT POINTS (description of impact points and struck or damaged; if list is not representative of the strike, please explain in the remarks section)</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 5%; text-align: center;">S</th> <th style="width: 5%; text-align: center;">D</th> </tr> </thead> <tbody> <tr><td>UNKNOWN</td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td></tr> <tr><td>INSIDE ENGINE 1</td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td></tr> <tr><td>INSIDE ENGINE 2</td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td></tr> <tr><td>INSIDE ENGINE 3</td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td></tr> 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type="checkbox"/></td></tr> <tr><td>LANDING GEAR</td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td></tr> <tr><td>LIGHTS</td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td></tr> <tr><td>WING/ROTOR</td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td></tr> <tr><td>FUEL TANKS</td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td></tr> <tr><td>PROPELLER</td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td></tr> <tr><td>ECM PODS/PYLONS</td><td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td></tr> <tr><td>OTHER</td><td style="text-align: center;"><input 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type="checkbox"/>	<input type="checkbox"/>	OTHER	<input type="checkbox"/>	<input type="checkbox"/>	<p>23. REMAINS FOUND</p> <p><input type="checkbox"/> YES, remains found on aircraft</p> <p><input type="checkbox"/> YES, remains found on runway (aircraft struck known)</p> <p><input type="checkbox"/> YES, remains found on runway (aircraft struck unknown)</p> <p><input type="checkbox"/> NO</p> <hr/> <p>24. DATE REMAINS SENT TO SMITHSONIAN INSTITUTION (dd mmm yyyy)</p> <p>_____</p> <hr/> <p>25. ADDITIONAL REMARKS</p>	<p>26. SHIPPING WILDLIFE REMAINS</p> <p>LAW AFMAN 91-223, 5.4.2, feather remains from every bird strike (if available) must be sent to the Smithsonian National Museum of Natural History for identification. Send feathers or feather fragments and a copy of the corresponding AFSAS report to:</p> <p>Smithsonian Institution Feather Identification Lab NHBE 610 MRC 116 PO BOX 37012 Washington, DC 20013-7012</p> <p>Send as much material as possible to include feet, beak, wing, tail, breast, and back feathers. For wildlife strikes other than birds, send samples of skin, fur, teeth, other non-fleshy remains, or a picture if possible, along with the corresponding AFSAS report to the Smithsonian for identification.</p> <p>In the event that remains are found on the runway as the result of a suspected strike, they should also be sent to the Smithsonian.</p> <p>For overnight shipping of a specimen, wrapping the remains in newspaper and freezing it entirely should be adequate. If you collect a whole bird carcass, freeze it per the above instructions and contact the Smithsonian at (202) 633-0801 to see if they could use the specimen in their collection. For overnight shipping send the remains to:</p> <p>Smithsonian Institution Feather Identification Lab ATTN: Dr. Carla Dove NHBE 610 MRC 116 10th and Constitution Ave NW Washington DC 20560</p>
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Attachment 7

319 RW AIRCRAFT INCIDENT WORKSHEET (RQ-4)

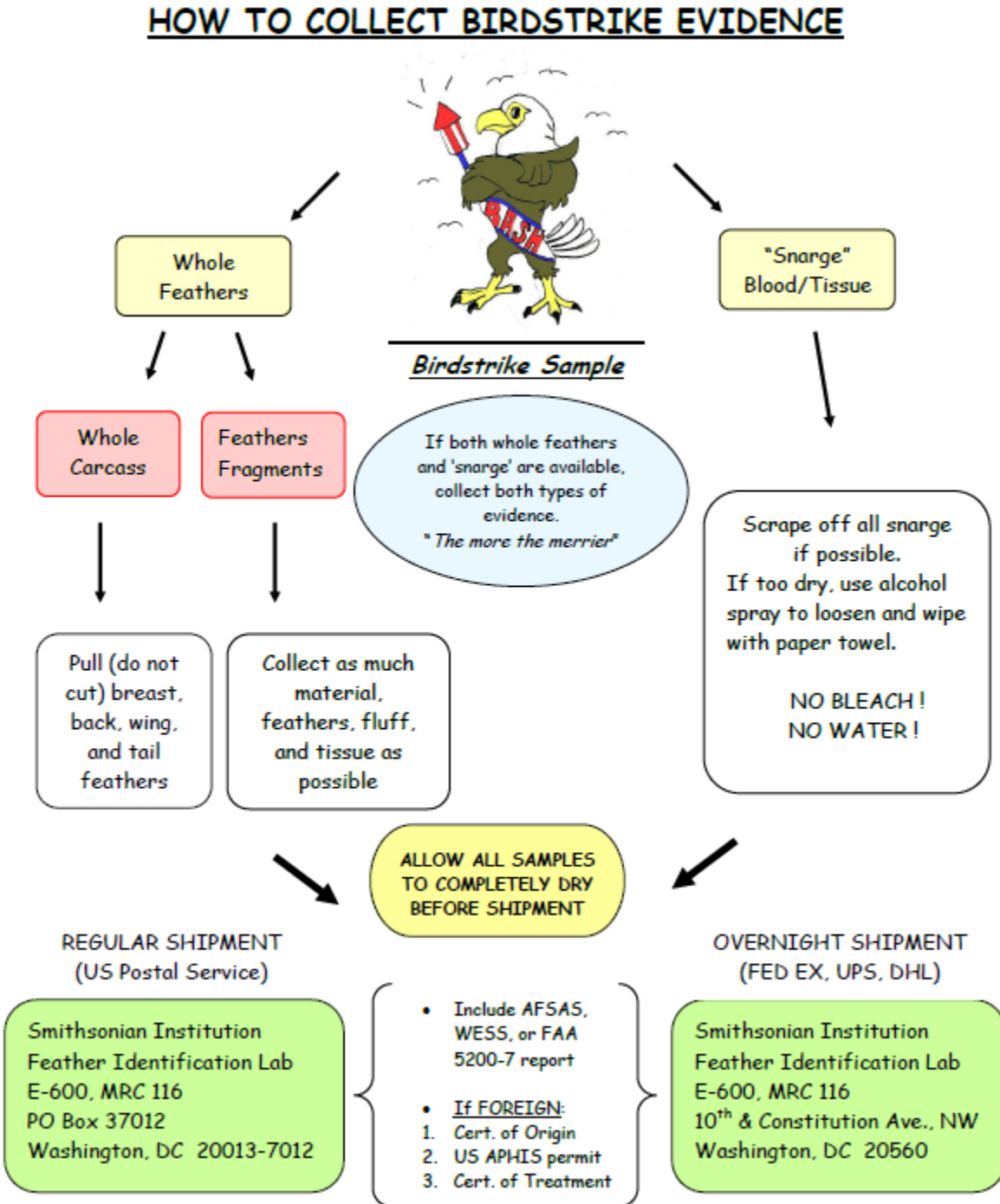
Figure A7.1. 319 RW Aircraft Incident Worksheet (RQ-4)

319 RW AIRCRAFT INCIDENT WORKSHEET RQ-4					
INSTRUCTIONS:					
1. Please complete this worksheet for bird strikes, in-flight emergencies, or unusual occurrence.					
2. Once you save this worksheet to file, forward it as an <u>attachment</u> via email to Wing Flight Safety office: 319RW.SEF@us.af.mil and to the appropriate squadron safety office (12RS.SE@us.af.mil , 348rs.safety@us.af.mil).					
3. If you wish to speak directly to a Wing Flight Safety Officer, call extension DSN 362-4114 or the 319 RW Command Post at extension DSN 362-6711.					
					
SECTION I. SORTIE INFORMATION/MISHAP DETAILS					
MISSION COMMANDER NAME (Last, First, Middle)/RANK:			UNIT:	PHONE NO. (DSN):	
AIRCRAFT TYPE:		TAIL NUMBER:	SHELTER TYPE:	SHELTER NUMBER:	
HEADING:	AIRSPEED:	ALTITUDE: AGL/MSL:	FLIGHT MODE:	SORTIE DURATION:	
DATE:	TIME:	C1 TIMER (SECONDS):		LOST LINK TIME (MINUTES):	
LOCATION OF INCIDENT (include specific MOA or approximate location in the pattern):					
WHICH ACTIVE LINKS WERE INVOLVED IN THIS INCIDENT: <input type="checkbox"/> INMARSAT <input type="checkbox"/> UHF LOS <input type="checkbox"/> KU SATCOM <input type="checkbox"/> UHF SATCOM <input type="checkbox"/> CDL <input type="checkbox"/> TCDL					
WHICH LINK WAS PRIMARY:			WHICH CONTINGENCY MODES WERE ENTERED: <input type="checkbox"/> C1 <input type="checkbox"/> C2 <input type="checkbox"/> C3 <input type="checkbox"/> C4a <input type="checkbox"/> C4b		
WHICH SYSTEMS (IF ANY) WERE INVOLVED IN THIS INCIDENT: <input type="checkbox"/> COMMUNICATIONS <input type="checkbox"/> CONTROL SURFACES <input type="checkbox"/> ECS <input type="checkbox"/> ELECTRICAL <input type="checkbox"/> ENGINE <input type="checkbox"/> FUEL <input type="checkbox"/> GUIDANCE/NAVIGATION <input type="checkbox"/> HYDRAULIC <input type="checkbox"/> PAYLOAD <input type="checkbox"/> SHELTER <input type="checkbox"/> OTHER (put in narrative)					
SECTION II. WEATHER CONDITIONS					
LIGHTING CONDITIONS:			VISIBILITY:		
TURBULENCE:			ICING CONDITIONS:		
SECTION III. FOR BIRD/WILDLIFE STRIKES (& submit AF 853)					
BIRD WATCH CONDITION:		NUMBER OF BIRDS:		WILDLIFE SIZE:	
AIRCRAFT IMPACT POINTS:			CHECK IF APPLIES: <input type="checkbox"/> SOF/ATC WARNING OF BIRD HAZARD		
SECTION IV. NARRATIVE COMMENTS					
DESCRIBE WHAT HAPPENED INCLUDING ANY FAULT CODES ASSOCIATED WITH THIS INCIDENT:					

Attachment 8

HOW TO COLLECT BIRD STRIKE EVIDENCE

Figure A8.1. How to Collect Bird Strike Evidence



Attachment 11**BASH SELF-INSPECTION CHECKLIST**

A11.1. The following is the GFAFB BASH self-inspection checklist which shall be reviewed annually in December.

- A11.1.1. Are all BASH related regulations current and readily available?
- A11.1.2. Has a BASH reduction program been implemented?
- A11.1.3. Has a BASH plan been written?
- A11.1.4. Is the BASH plan reviewed annually?
- A11.1.5. Are changes and annual reviews posted to the plan?
- A11.1.6. Does the program establish a Bird Hazard Working Group (BHWG)?
- A11.1.7. Are base agencies such as Safety, CE or EM (Environmental Management) and Ops assigned responsibilities for the BASH program?
- A11.1.8. Is the wing vice commander (or equivalent) the BHWG chairman?
- A11.1.9. Is there an assigned OPR of the BHWG?
- A11.1.10. Does the BHWG meet at least semiannually, are minutes being recorded and filed?
- A11.1.11. Are BASH topics included in flight safety briefings?
- A11.1.12. Are BASH related materials posted in aircrew briefing areas, on safety bulletin boards or base operations flight planning areas?
- A11.1.13. Are local bird problems documented?
- A11.1.14. Are both damaging and non-damaging bird strikes recorded?
- A11.1.15. Are all damaging and non-damaging bird strikes reported IAW AFI 91-204?
- A11.1.16. Are all bird strike remains being collected and sent to the Smithsonian Institution IAW 91-204?
- A11.1.17. Is the bird strike information tracked to facilitate the identification of trends?
- A11.1.18. Is a bird identification book readily available?
- A11.1.19. Are daily surveys taken of the airfield and surrounding area to observe potential and actual bird hazards?
- A11.1.20. Are records of daily observations kept in order to establish trends?
- A11.1.21. During the surveys, are areas of standing water, food sources or areas birds use for protection noted?
- A11.1.22. Is the vegetation on the airfield particularly attractive to birds?
- A11.1.23. Does the mowing or guideline contract specify the grass be maintained at a height of 7-14 inches?
- A11.1.24. Does the base practice controlled burning?

- A11.1.25. Are birds attracted to the taxiways or runways?
- A11.1.26. Have the birds utilizing taxiways and runways been identified?
- A11.1.27. Are birds attracted to areas of water on the airfield?
- A11.1.28. Are the birds feeding in these wet areas?
- A11.1.29. Are the birds attracted to these wet areas identified?
- A11.1.30. Do the wet areas contain vegetation along their perimeters?
- A11.1.31. Do the wet areas contain fish and/or amphibians?
- A11.1.32. Are the wet areas permanent?
- A11.1.33. Are there other areas near the runways that attract birds (horse stables, recreation areas, golf courses, etc.)?
- A11.1.34. Can it be determined what is attracting the birds?
- A11.1.35. Have the birds been identified?
- A11.1.36. Do agricultural practices around the area attract birds?
- A11.1.37. Is the base notified of the plowing times in order to alter operations?
- A11.1.38. Does the base outlease cropland on adjacent areas?
- A11.1.39. Does the lease provide for restrictions concerning BASH?
- A11.1.40. Are landfills or sewage lagoons located near the base?
- A11.1.41. Are these sites covered daily with dirt, wire or netting to discourage birds?
- A11.1.42. Do these sites attract birds?
- A11.1.43. Are other areas near the base attractive to birds (e.g. lakes, ponds, swamps, cemeteries or wildlife areas)?
- A11.1.44. Are game birds and deer controlled so as not to interfere with flying operations?
- A11.1.45. Does the control tower warn operations and pilots of birds in the airdrome?
- A11.1.46. Is there a designated bird dispersal team?
- A11.1.47. What is the average time between upgrade to Bird Watch Condition SEVERE and downgrade back to MODERATE?
- A11.1.48. Is bird harassment equipment on hand and readily available?
- A11.1.49. Are members of the bird dispersal team trained on dispersal techniques?
- A11.1.50. Is a depredation permit on hand and current?
- A11.1.51. Are the BAM and/or AHAS being used during flight scheduling and mission planning?

Attachment 12

BASH RELATED WEBSITES

A12.1. Bird Strike Committee: www.birdstrike.org

A12.2. Air Force: <http://www.safety.af.mil/Divisions/Aviation-Safety-Division/BASH/>

A12.3. Civil Aviation: <http://wildlife-mitigation.tc.faa.gov>

A12.4. USAF Avian Hazard Advisory System: <http://usahas.com/>

Attachment 13

BIRD STRIKE KIT

A13.1. “Make Your Own” Bird Strike Kit: The following list is not all inclusive, but is a minimum to safely ensure “snarge” is successfully accomplished.

Figure A13.1. “Make Your Own” Bird Strike Kit

“MAKE-YOUR-OWN” – BIRDSTRIKE COLLECTING KITS

Birdstrike Collecting Kits are cheap to make and easy to assemble. Having pre-made kits available improves birdstrike reporting and encourages the sampling of birdstrike remains. Most folks assemble the contents into individual bags or envelopes and keep a supply in field vehicles or office supply cabinets for quick access. Below is a list of recommended items to include in your birdstrike collecting kits; mix and match as budgets permit:

Re-sealable plastic bags: A variety of sizes for various amounts of debris; Re-sealable bags help contain liquids and keeps odors to a minimum.

Sharpie Markers: Permanent markers are water resistant and used for writing data (date, time, aircraft, etc.) directly on the bag of remains.

Alcohol Wipes: Pre-packaged alcohol hand-wipes can be used to wipe “snarge” off the aircraft. Alcohol is better than water at preserving DNA, preventing mold growth and is more sanitary for humans. Alternatively, use a spray bottle with 70% alcohol to spray the area before wiping with paper towels. ***Do not use wipes with bleach or other cleansers, it destroys DNA.**

FTA Micro Card and Sterile Applicators

If you send a lot of fresh blood/tissue samples for DNA identification, you may want to look into getting Whatman FTA DNA cards. The material is sampled with a sterile applicator and placed onto the surface of the card that “fixes” the DNA is the sample. For more information on ordering these items contact the Feather Lab.

*Note: If you only occasionally send blood/tissue samples, a paper towel with alcohol, or alcohol wipe is still a good option for this type of material.

Miscellaneous Items for Birdstrike Collecting

Kitchen shears - good for cutting feet, wings, bills

Tongue depressors, tweezers, cotton swabs/cotton-tipped applicators, hand cleaners, or other alcohol based gel hand sanitizers.