BY ORDER OF THE COMMANDER
3RD WING (PACAF)

3RD WING INSTRUCTION 91-212

23 JULY 2020

Safety

BIRD/WILDLIFE AIRCRAFT STRIKE HAZARD (BASH) MANAGEMENT PROGRAM

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements AFPD 91-2, *Safety* Programs, and is used in conjunction with AFI 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Management Program,* AFIs 91-202, *U.S. Air Force Mishap Prevention Program* and 91-204, *Safety Investigations and Reports*, AFMAN 91-223, *Aviation Safety Investigations and Reports*, PACAF guidance, and 11th Air Force guidance. This instruction provides a base program to minimize aircraft exposure to potentially hazardous bird strikes and applies to all host, associate, tenant and temporary duty (TDY) organizations on Joint Base Elmendorf-Richardson (JBER) (Elmendorf Airfield side) including the Air National Guard and US Air Force Reserve members and units. 3 WG/SEF is responsible for the implementation of this instruction. Blanket waivers for this instruction are prohibited. The 3 WG/SE chief may grant waivers on individual sections/procedures. 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 the AF Form 847 through the appropriate chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained according to AFI 33-322, *Records Management and Information Governance Program*, and disposed of in accordance with the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at **https://www.my.af.mil/afrims/afrims/afrims/rims.cfm**. See **Attachment 1** for Glossary of References and Supporting Information. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed. Changes to this document include new JBER office symbols, specific responsibilities, and contact information.

1. BASH Program Management:

1.1. Introduction. This instruction establishes a program to minimize wildlife strikes. It delineates Elmendorf Airfield's Bird and Waterfowl Exclusion Zones for dispersal purposes and defines Vegetation Management Zones designed to make Elmendorf Airfield unattractive to wildlife. Furthermore, it defines 3 WG BASH responsibilities and outlines procedures for issuing bird conditions and reporting wildlife strikes. All agencies, to include but not limited to the Alaska Air National Guard (AKANG) and Air Force Reserve units, operating at JBER will incorporate this instruction into their respective BASH plans. All BASH briefings and training will be adhered to in accordance with this instruction.

1.2. Overall Program. The 3rd Wing Safety office will manage the overall program. The United States Department of Agriculture - Wildlife Services (USDA - WS) is Elmendorf Airfield's primary BASH detection and dispersal agency. They will be the primary dispersal team for all of the wildlife within and up to ¼ mile outside the airfield security fence and birds within the exclusion zones following guidance in both the wildlife hazard management protocol and the 3 WG/JBER USDA -WS Memorandum Of Understanding (MOU). The 673d Civil Engineer Group (673 CEG) will be responsible for vegetation management and overall wildlife management outside the airfield security fence. The 673 CEG Natural Resources Office (673 CES/CEIEC) Wildlife Biologist will advise the BASH program

managers on habitat modification projects and base wildlife populations and will secure the proper federal and state depredation permits required for the program.

1.3. Phase I and Phase II. 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. Elmendorf and many of its associated Military Operations Areas, ranges, and low level routes are located near or within primary migration routes. Historical bird migratory patterns are used to determine Phase II periods (see **Attachment 3**). Phase II periods are typically 15 April thru 31 May (spring migration) and 15 August thru 31 October (fall migration). These periods are subject to change based on climatological variations. 3 WG/SE, USDA - WS, and 673 CES/CEIEC will coordinate to determine if Phase II operations will begin or end on different dates.

1.4. Wildlife Strikes. All wildlife strikes to aircraft will be reported to 3 WG/SEF using AF Form 853, *Air Force Wildlife Strike Report*. All wildlife remains found will be collected and given to the nearest military airfield safety office. All Form 853s will be forwarded to the USDA-WS office and the wing safety office that owns the aircraft involved. It is the responsibility of the person who identifies the bird strike to fill out the Form 853. Normally this will be the aircraft commander or the maintenance member who discovered the bird strike. Identified species should be reported to USDA - WS for data capture/trend analysis.

2. Environment:

2.1. Elmendorf Airfield is located in south central Alaska. The airfield has an altitude of 213 feet above sea level. JBER straddles both the alluvial fan of the Anchorage Plain and the moraine and glacial alluvium complex near the Knik Arm shore. The southern portion of the Elmendorf moraine contains kames (conical hills or irregularly shaped ridges) and kettles (steep sided depressions) (JBER INRMP, 2016). Many of the kettles areas near the Elmendorf Airfield are classified as wetlands with several locations having year round standing water present.

Waterbodies bracket Elmendorf Airfield on three sides. The Knik Arm of Cook Inlet lies west of the airfield and lays within the Accident Potential Zone II. Sixmile Lake lies to the north, this waterbody supports salmon spawning/rearing and it too lays within a APZ II. Ship Creek lays direct south of the airfield, this waterbody supports a State Fish Hatchery but a hatchery dam prevents salmon from migrating further upstream. This is noteworthy, since Ship Creek upstream from the Hatchery flows through an Airfield Clear Zone.
The Elmendorf portion of JBER has over 6,000 acres of commercial forest, with the majority being birch-white spruce cover type. The Ship Creek riparian area supports a diverse forested canopy that includes Populus trichocarpa, cottonwood trees. Cottonwood trees are the largest JBER tree and these trees provide nesting habitat for some of JBER's biggest BASH threats, Bald eagles, Red tail hawks and Ravens.

2.2. Bird hazards exist on the airfield year round with peaks in the spring and fall during migration. Species of particular concern are Canada geese, sandhill cranes, gulls, raptors, corvids, bohemian waxwings and swans. The bird hazard on the aerodrome will be significantly reduced by minimizing habitats attractive for feeding, drinking, nesting, roosting and loafing, through active and passive dispersal and effective warning techniques. Proper insect and habitat (grass height, converting grass to shrubs, eliminating open water)

management are the best methods for controlling most birds. Abundance of or access to food sources should also be eliminated, including overflowing or broken dumpsters.

2.3. Terrestrial wildlife also poses a threat to flying operations. Of concern are moose, wolves, coyotes, foxes, bears and smaller mammals. However, with diligence, maintained fencing, routine habitat maintenance and proper gate management, wildlife can be kept from the airfield complex. Maintaining the existing airfield fences/gates, and proper dumpster/waste management is critical to minimize terrestrial BASH risk.

3. Training:

3.1. All personnel will be briefed at the Newcomer's orientation. This briefing will emphasize the responsibility each individual has in reporting bird or wildlife hazards.

3.2. All 3 WG, 673 ABW personnel working on Elmendorf airfield and tenant units, to include the AKANG and Air Force Reserve units located at JBER will receive an annual refresher brief just prior to the spring migration. The 3 WG/SEF will attempt to brief the 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 (April 15), unit commanders and unit safety representatives have the responsibility to ensure their members receive the required annual refresher training. Training will be available on the 3 WG/SEF SharePoint ® page under "Training and Briefings." Civilian personnel are highly encouraged to accomplish the training or attend a BASH briefing during the onset of Phase II conditions.

3.3. 3 WG/SEF, in conjunction with squadron safety officers, will maintain a bird hazard awareness program. Briefings, films, posters, and other methods will be used to inform personnel about local bird hazards and reporting procedures.

3.4. Based on the complexities of the bird and wildlife at JBER, the USDA - WS office is Elmendorf Airfield's primary BASH dispersal agency and depredations are normally handled by them. However, 3 WG/SEF, 3 OSS/OSAM, and 673 CES/CEIEC military conservation agents may become dispersal qualified to serve as a back-up for the USDA.

3.4.1. If BASH dispersal/depredation qualifications are desired, 3 WG/SEF and 3 OSS/OSAM personnel will qualify by completing the following requirements:

3.4.1.1. Complete the USDA Airfield Wildlife Hazard course; contact USDA for more information.

3.4.1.2. Become shot-gun qualified (contact 673 SFS/CATM, 552-1852).

3.4.1.3. If unable to attend formal training, will not use pyrotechnic devices for bird dispersal. Coordinate with the USDA for ad hoc training sessions on using pyrotechnic devices and other dispersal methods.

3.5. If desired to maintain BASH dispersal/depredation qualifications, 3 WG/SEF and 3 OSS/OSAM personnel will maintain currency with annual shot-gun refresher training. BASH training records will be created and maintained by 3 WG/SE Records Point of Contact. All training will be documented in accordance with AFI 91-212.

3.6. The use of Small Unmanned Aerial Systems or Radio Control Vehicles with cameras may be authorized for use and have the potential to provide valuable wildlife diversity,

abundance, habitat, behavior, and location information without dispersing or flushing the wildlife into the Wildlife Exclusion Zone. The information provided by these tools, allow Bird/wildlife aircraft strike hazard managers to evaluate their programs' effectiveness and identify where to focus limited resources.

3.6.1. The use of Small Unmanned Aerial Systems will be in accordance with the Joint Base Elmendorf – Richardson (JBER) Small Unmanned Aerial System Plan.

4. Exclusion Zones:

4.1. These boundaries have been established to aid all agencies in defining when a bird hazard exists, dispersal priorities and vegetation management goals.

4.2. Bird Exclusion Zone (BEZ). The BEZ includes all runways and taxiways shown in dark blue in **Attachment 2, Figure A3.1** Movable signs will be placed outlining the BEZ, using the airfield perimeter fence as a guide. The USDA/WS/3 WG Safety dispersal team will position signs in appropriate locations at the start of the migratory season. The signs will have a graphic representation of "no birds" with the 552-BIRD phone number on them. The BEZ identifies an area where no bird presence will be tolerated. Dispersal priority is: large birds, flocking birds, and singular smaller species.

4.3. Waterfowl Exclusion Zone (WEZ). The Elmendorf Airfield WEZ consists of Elmendorf defined by the described area below, in a clockwise direction, and shown in **Attachment 2**, **Figure A3.1**

Airfield south of the port pipeline corridor…
east along Dena'ina Road to Talley Avenue, thence…
Southeast to the southwest corner to Ammo Area A then…
Due south of Zeamer Avenue to the base perimeter (to include Joint Military Mall and the hospital) west
Northwards back to the intersection of Fairchild Avenue and Airlifter Drive, to include the Petroleum Oil and Lubricant area on the northwest side of this intersection

4.3.1. The WEZ identifies an area where waterfowl, such as geese and ducks, will not be tolerated. Other large birds, such as raptors and gulls, will be dispersed as well. Habitat modification, to include minimizing open water and managing large open areas to be unattractive to geese, will be used in conjunction with aggressive hazing. All waterfowl activity in the WEZ should be reported. Dispersal of Bald Eagles requires specific approval from the US Fish and Wildlife Service. Unauthorized harassment of Bald Eagles, threatened and endangered species, for which a permit to haze does not exist, could result in federal prosecution. 673 CES/CEIEC will maintain an annual permit with the U.S. Fish and Wildlife Service and Alaska Department of Fish and Game to authorize Eagle dispersion/hazing within the BEZ and WEZ and remove inactive nests that present a BASH risk.

5. Habitat Modification:

5.1. By incorporating specific practices into the base land management, Elmendorf Airfield can maintain an airfield habitat less attractive to birds and other wildlife. The 673 CEG is primarily responsible for habitat modification.

5.2. BASH Vegetation Management Zones. Vegetation management will vary by BASH vegetation zones as delineated by the BASH Exclusion Zones (**Attachment 2, Figure A3.1**).

5.2.1. Airfield Zone. The Airfield Zone is that area inside the airfield perimeter fence. Within this zone the primary vegetation will be grasses within 300 meters of the edge of runways, taxiways or ramps. The objective is to create an area of dense, erect grass in accordance with **paragraph 5.2,** this instruction. The species of grass will include Canadian blue-joint redgrass (Calamogrostis canadensis) and beach wildrye (Elymus mollis) but may include as much as 60% erect domestic species such as red fescue (Festuca rubra). In those portions of the airfield greater than 300 meters from runways, taxiways and ramps. No trees or shrubs will be allowed within 300 meters from runways, taxiways, and ramps to avoid creating a hospitable hunting perches for raptors. Lawns within the airfield zone may extend no more than 1 meter from sidewalks and streets and no more than 20 meters from buildings. All dumpsters within the Airfield zone must be bear-proof. Airfield zone facility managers are responsible for dumpster house-keeping, monitoring maintenance and repairs. Facility managers will ensure the dumpsters within the airfield zone remain closed at all times. Facility managers are responsible to identify dumpster repair immediately and shall submit a service request through NexGenIT to 773 CES/CEOER.

5.2.2. Cantonment Zone. The Cantonment Zone is the industrialized/housing area on the south side of the airfield within the BEZ/WEZ outside of the airfield perimeter fence and north of Ship Creek. The primary vegetation type is grassland with scattered shrubs/trees, as identified in the Airfield Zone. Groomed lawns are generally permitted within 2 meters of sidewalks, 5 meters of streets and parking lots. Lawns are allowed in association with buildings, housing, playgrounds, and displays. When possible, large lawns should have trees and shrubs dispersed at 6-10 plants per acres to discourage geese. All new trees and shrubs will be non-berry producing species. As funds allow, berry/fruit producing trees and shrubs will be replaced with non-berry/fruit producing species.

5.2.3. Clear Zones. Clear Zones are those portions of the BEZ located at the end of each runway outside of the airfield perimeter fence. The preferred vegetation type is shrubland. The shrubland vegetation objective is to provide over 60% canopy coverage by shrubs and small trees to discourage raptors from hunting small mammals and to discourage the population of grasshoppers. Grass will be the preferred vegetation in association with approach lights, other navigational aids and within 50 meters of the airfield perimeter fence. Berry or fruit producing species will be eliminated.

5.2.4. WEZ Remainder Zone. Within the remaining area of the WEZ, open, non-lawn areas greater than one acre in size will be managed as shrublands. Grass will be the preferred vegetation within 50 meters of the airfield perimeter fence. Berry or fruit producing species will be eliminated, as funding allows. Groomed lawns are generally permitted within 2 meters of sidewalks, 5 meters of streets and parking lots. Lawns are allowed in association with buildings, but will be limited to no more than ½ acre.

5.3. Managing Grass Height. The 773 CES/CEOH in coordination with 673 CES/CEIEC will determine the timing of mowing operations to keep grass height within tolerance (e.g. 8-11”). The intent of grass management is to cut during the period when birds are least likely to be attracted to short grass, to remove the seed heads from the plants before they fully

mature, late enough that alternate seed heads do not mature, and with adequate time for the grass to reach 11 inches by 10 August. Grasses will be encouraged to grow to at least 11 inches in height during periods of migration (April 15-May 31, September 1-October 15) and staging (August 10-31). Unless otherwise directed, grass should be mowed to a height no lower than 8 inches, during the period July 10 –Jul 25. When mowing the Airfield Zone mow infield beginning adjacent to the runway and finish in the outermost areas to drive rodents and insects away from the runway.

5.4. Managing Shrublands. Shrubs will be encourage/planted to fill gaps to reach a desired canopy coverage of at least 60%. Shrubs will include native, non-berry producing trees and shrubs that easily regenerate after aggressive cutting which include alder, willow, poplar, and birch. Shrubs will need to be cut to 6-8 inches above the ground on a 2-3-year rotational basis. Cutting should be conducted in early April prior to ground thaw and before leaf-out.

5.5. Controlling Broad-Leafed Weeds. Keep volunteer broad-leafed plants to a minimum in grasslands in the Airfield and Cantonment Zones as they attract a variety of birds, may produce seeds or berries and may limit grass growth. Non-invasive broad leaved plants may be allowed in shrubland habitats in the Clear Zones and outside the BASH vegetation zones.

5.6. Woodlands. Within the BEZ/WEZ managing woodland density and structure can effectively discourage large birds or large concentrations of birds. Woodlands within the Airfield Zone will be removed or greatly thinned to prevent moose, bears and canids from finding cover, to reduce raptor perches and to prevent birds roosting or nesting near the airfield. Within the remainder of the BEZ prune trees that attract roosting birds to reduce the number of perches.

5.7. Berry/Fruit Producing Trees and Shrubs. Mature berries can attract several species of birds during fall and winter. Minimizing their presence within the BEZ/WEZ is a BASH objective. Berry/fruit producing trees within the BEZ should continue to be phased out. No new berry/fruit producing trees or shrubs will be planted within the WEZ without permission granted by 3 WG/SE.

5.8. Bird-Proof Buildings and Hangars. The 673 CES will ensure all new structures within the BEZ/WEZ are designed to avoid attracting nesting birds. These designs will minimize open vents, covered ledges, and graveled flat roofs. Bird proofing of existing buildings and hangars within the BEZ/WEZ is required to exclude birds, primarily pigeons and swallows. 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). All vents or other openings in buildings within the BEZ will be covered with ¼ or ½ inch hardware mesh to prevent nesting by tree and violet-green swallows. Facility managers are responsible to identify exclusion and nest removal needs through the NexGenIT service request process to 773 CES/CEOER if the actions are beyond their capabilities.

5.9. Leveling of Airfield Zone. Level or fill high or low spots to prevent standing water and reduce attractiveness to birds.

5.10. Maintaining Drainage Ditches. Regularly inspect ditches to keep them clear. Maintain ditch sides as steeply as possible (minimum slope ratio of 5 to1) to discourage wading birds

and emergent vegetation. Improve drainage, as necessary, to inhibit even temporary ponds or puddles.

5.11. Minimize Open Water. All activities affecting wetlands must be coordinated with 673 CES/CEIEC and US Army Corps of Engineers. When properly permitted, eliminate snowmelt ponds or standing open water in the BEZ, especially on the airfield. (**NOTE:** These activities will be coordinated with Airfield Management Operations (AMOPS) (3 OSS/OSAM) in accordance with AFI 13-204, Vol 3, *Airfield Operations, Procedures and Programs*. If unable to relocate snowmelt pond, ensure it's drained as soon as possible. Monitor ponds throughout the year and drain as necessary. The 673 CES/CEIEC along with USDA - WS will manage beaver populations within the BEZ/WEZ to minimize creation of standing water.

5.12. Erosion Control Vegetation. Outside of the Airfield Zone use vegetation that does not attract birds. Woody vegetation species such as willow, birch, poplar, and/or alder are desired species. Non-invasive annual grasses may be planted for initial soil stabilization. Any new planting should be done as soon as spring migration is over so that the grass will have time to grow before the fall migration. Two inch crushed rock can also be used as erosion control in areas that would benefit from avoiding the use of grass because of difficult maintenance. The USDA can assist in identifying those areas.

5.13. Pest Controls. Invertebrates and rodents are key food sources for many birds. Of special concern in the BEZ are grasshoppers that, when abundant, attract several species of gulls, ravens, magpies, and passerines. June, 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 can promote small mammal population growths which in turn could increase the number of avian predators. While this is possible, it should not deter the management of mammalian predators as they do pose a threat to aircraft operations.

5.13.1. Insects. Any persistent gull concentrations on the airfield should be considered an indication of a potential insect population outbreak. The USDA - WS will conduct grasshopper population surveys on the airfield during June and early July and will request pest reduction services when required. 773 CES/CEOIE will maintain a stock of appropriate pesticides on hand to respond to insect outbreaks within a 24-hour period, and preventive treatments attacking larval stages will be applied within the Airfield Zone.

5.13.2. Small Mammals. 673 CES/CEIEC will conduct small mammal surveys if a reoccurring BASH risk is identified, and if funding and staffing allows.

5.14. Controlling Waste Disposal. All dumpsters used within the BEZ/WEZ will be designed to remain closed and inaccessible to wildlife. They will be equipped with securable lids that are windproof and bear-proof. Ravens, magpies, gulls and bears are frequently attracted to dumpsters that are not closed and secured. Facility managers within the BEZ/WEZ are responsible for dumpster house-keeping, monitoring maintenance and repairs. Facility managers will ensure the dumpsters within the BEZ/WEZ remain closed at all times. Facility managers are responsible to identify dumpster repair immediately and shall submit a service request through NexGenIT to 773 CES/CEOER.

5.15. Discourage Wildlife Feeding. Signs should be placed appropriately to educate the public to the legality and hazard posed by feeding any wildlife. Bird feeders will not be allowed within the BEZ. Hazards of feeding wildlife will be presented during newcomer's orientation.

6. Bird Hazard Warning System:

6.1. 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 AMOPS (3 OSS/OSAM), the Supervisor of Flying (SOF) (3 OG/OGV), or the Tower Supervisor (3 OSS/OSAT). Radio net or telephone can be used to make this notification. Telephone reports can be passed to the dispersal team at 552-BIRD (-2473).

6.2. Bird Watch Condition (BWC) Codes. The following terminology has been established for rapid communication of bird activity. Bird locations will be given with the condition code.

6.2.1. Declaring a BWC. The Tower Watch Supervisor will notify AMOPS to establish/change a bird watch condition. Tower Watch Supervisor is the authority to declare the bird watch condition. Conditions are declared based on ground observations, pilot reports, reports received from USDA personnel, and so forth. AMOPS and USDA - WS personnel will provide recommendations of BWCs to the Tower Watch Supervisor when there is a visual observation of bird activity on or near the airfield. The 3 OG/CC (SOF) or Tower Supervisor may determine if bird activity near the primary runway constitutes a threat to flying operations. If it does not, the BWC may be lowered for the primary runway while keeping the higher BWC for the other runway.

6.2.2. 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. To allow maximum flexibility for the tower controllers and the SOF, a BWC may be declared for an approach or departure end of the affected runway. For example: "BWC SEVERE, departure end, Runway 34; eagle soaring at 100 feet above ground level."

6.2.3. Condition MODERATE. Represents 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.

6.2.4. Condition LOW. Represents bird activity on or around the airfield representing low potential for strikes.

6.3. Specific Cardinal Direction. Additionally, controllers may declare a BWC for a specific cardinal direction. For example: "BWC MODERATE north; a flock of seagulls at 1,000 above ground level over taxiway Golf heading east." Once the dispersal teams have moved the birds and the airfield is clear, the BWC will be lowered.

6.4. Traffic Pattern Restrictions. The SOF will direct fighter type aircraft according to **Attachment 3, Table A3.1** If the SOF is absent, the Tower Supervisor will be the

controlling authority. For other aircraft refer to the MDS Vol. 3 or locally developed guidance.

6.5. Dispersal Operations. During the migration seasons, a USDA - WS detection and dispersal team will operate on the airfield 24 hours a day. During the winter months, USDA - WS personnel will be available during 3WG flying operations. They will manage all the wildlife following guidance in both the wildlife hazard management protocol and the Interagency Agreement between the USDA/WS and the 3 WG. The 673 CES/CEIEC can also be called for further assistance, if required (552-9453 or 552-8609), or radioed on the LE or Wildlife nets. AMOPS (552-2444/2107) or 3 WG/SEF (552-4798) can also perform dispersal duties, if required and if the required training is completed by the personnel.

6.5.1. Prior to initiation of dispersal actions in the BEZ, the dispersal team will coordinate the location and methods with the Tower Supervisor and ensure the appropriate Bird Watch Condition has been declared prior to dispersal activities. **Prior to any outside walking patrols carrying anything that resembles a weapon or the discharge of such devices, the dispersal team must ensure 673 SFS/Base Defense Operations Center (BDOC), at 552-3421, has been properly notified.**

6.5.2. Birds and mammals will be dispersed using physical harassment, vehicle harassment, shooting, or with pyrotechnics. The method used will be at the discretion of the dispersal team based on the situation. Any personnel who disperses, hazes, or depredates any birds should document and record the location (preferably with GPS coordinates) of the incident (BASH MAP). A geo-referenced record and map illustrating of all dispersions, hazes, takes, and depredations should be produced annually. An annual report summary of operations should be prepared and presented to 3rd Wing Safety office and 673 CES/CEIEC by end of 1st Quarter, Calendar Year by USDA - WS.

6.5.3. When the target birds depart the area, the Tower Supervisor will be notified so the bird watch condition can be lowered, if necessary.

7. Specific Responsibilities:

7.1. This list is not all-inclusive and should be tailored, as necessary.

7.2. The Vice Wing Commander (3 WG/CV) chairs the bird hazard working group (BHWG) and is the approval authority for its recommendations.

7.3. Wing Safety (3 WG/SE):

7.3.1. Is the BASH Program Manager/OPR for this instruction and will ensure this instruction is reviewed and/or revised annually; to include inserting updated maps surveys.

7.3.2. Ensures 3 WG/SEF personnel are BASH dispersal qualified as desired (reference **paragraph 3.4**, this instruction).

7.3.3. Maintains current BASH data and BASH training on the 3 WG SharePoint ® webpage under 3 WG/SEF.

7.3.4. Manages all 3 WG bird strike and mammal strike reports. Forward remains in accordance with AFMAN 91-223. After remains are identified, ensure Air Force Safety

Automated System (AFSAS) reports are finalized. Assist temporary duty (TDY) aircrews with bird strike procedures, as required.

7.3.5. Coordinates with USDA - WS and 673 CES/CEIEC to determine if Phase II dates, listed below, need to be modified in response to significant changes in the local bird population or migratory activity.

7.3.6. Coordinates with 3 WG/OGV and AMPOS to announce Phase II operations.

7.3.6.1. BASH PHASE I - All dates not designated as Phase II.

7.3.6.2. BASH PHASE II - 15 April through 31 May and 15 August through 31 October. Ensure a notice to airmen (NOTAM) is published announcing the start and end of Phase II and coordinate with 3 OG/OGV to make BASH a special interest item (SII) accompanied by a Flight Crew Information File (FCIF).

7.3.7. Briefs aircrew on bird strike hazards prior to each spring migration season. Ensures bird strike hazards and reports are briefed periodically during Flying Safety Meetings.

7.3.8. Serves as the BHWG coordinator. Schedules meetings of the BHWG and publishes meeting minutes. Maintain BHWG meeting minutes for at least 3 years.

7.3.9. Ensures availability of AF Form 853, *Air Force Bird Strike Report*, for Maintenance Debrief, AMOPS, and all flying organizations, including mission/trip kits. This form can be found on the 3 WG SharePoint ® webpage under 3 WG/SEF.

7.3.10. Ensures AMOPS has a current annual produced BASH Map that illustrates local BASH hazards to transient aircrews. Coordinate with 673 CES/CEIEC and the USDA for updates, as required.

7.3.11. Engages in constant communication between the USDA - WS and 673 CES/CEIEC to determine the best solution to any wildlife that may pose a threat to aircraft.

7.3.12. Considers all sources for the improvement of this program. There are many national and international BASH conventions and committees that the 3 WG Safety office is encouraged to attend. Many of these opportunities are listed on the Air Force Safety Center's BASH website.

7.3.13. Reviews this BASH plan, in accordance with AFI 91-202, and runs the Self Inspection Checklist (AFI 91-212) annually. Document the review and self inspection via memo for record (MFR).

7.3.14. Provides guidance, when requested, on the collection of bird/wildlife remains for identification (reference AFI 91-212, paragraph **2.5.2**). Also, reference the Air Force Safety Center BASH website for the latest collection methods: **http://www.safety.af.mil/Divisions/Aviation-Safety-Division/BASH/**.

7.3.15. Requests funding to support BASH programs, that is, training, equipment and material, purchase and maintenance, conference attendance, and so forth. This includes ensuring the annual cost estimate and the military intragovernmental agreement (MIPR) is processed before each fiscal year to ensure funding for the USDA - WS contract.

7.3.16. Provide administrative oversight for the all airfields supported and maintained by the PACAF Regional Support Center (PRSC). This includes Wake Island (PWAK), Eareckson AS (PASY), Cape Lisburne LRRS (PALU), Cape Newenham LRRS (PAEH), Cape Romazof LRRS (PACZ), Indian Mountain LRRS (PAIM), Sparrevhon LRRS (PASV), Tatalina LRRS (PATL), and Tin City LRRS (PATC). Any administrative BASH issues, along with all bird strike reports from these airfields will be briefed and covered in the 3 WG/SE bi-annual BHWG meetings.

7.4. Command Post (673 WG/CP) will notify inbound aircraft of any bird watch condition above low. Include location, movement, and other known data of the bird activity that is driving the bird watch condition.

7.5. The Operations Group Commander (3 OG/CC) will:

7.5.1. Issue specific guidance for aircrews, SOFs, Air Traffic Control, AMOPS, and Command Post on procedures to avoid areas and times of known hazardous bird concentrations, mission permitting.

7.6. Operations Group Standardization and Evaluation (3 OG/OGV) will:

7.6.1. At the start of Phase II, makes BASH a SII accompanied by an FCIF.

7.6.2. Brief bird hazard awareness and the Elmendorf Airfield BASH program to all TDY Red Flag personnel and distributes BASH cards at this briefing.

7.6.3. Provide guidance to aircrews for the use of the United States Bird Avoidance Model (USBAM) and, if available, the avain hazard advisory system (AHAS) during the mission planning process.

7.6.3.1. 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 and is updated every 6-10 minutes. 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. Soaring bird forecast models are not available in Alaska. More information, including an Alaska specific AHAS briefing, is available on the AHAS website: **http://www.usahas.com**.

7.6.3.2. The US Bird Avoidance Model (BAM) program objective was to develop a predictive bird avoidance model using Geographic Information for observations of 60 key BASH species over a 30 year period. It is based on all bird species present during a daily time period, in a particular area, for one of 26 two-week periods in a year. Several key datasets as well as common behavior of species groups by time of day are used to generate the BAM condition.

7.7. The SOF (3 OG/OGV) has responsibility to conduct airfield inspections and direct detection and dispersal teams, when necessary. The SOF will:

7.7.1. Recommend declaration of a BWC to the Tower Watch Supervisor when there is a visual observation of bird activity on or near the field, when aircraft relay bird hazard information, or when any personnel or agency on or near the airfield relay observations to the SOF.

7.7.2. Notify departing flights of the BWC when they check in on SOF frequency prior to takeoff. Notify arriving flights of the BWC when they check in during their arrival.

7.7.3. Incorporate coverage of this instruction for all SOFs during initial and recurrent SOF training.

7.8. Aircraft Maintenance Squadron Commanders will:

7.8.1. Issue specific guidance to maintenance personnel for reporting hazardous bird activity to the SOF, Tower Watch Supervisor or AMOPS. If the 3 WG/SEF office is unable to provide the annual BASH training in March to all Maintenance Group personnel, ensure entire squadron completes online training available on the 3 WG SharePoint ® webpage under 3 WG/SEF: **https://jber.eis.pacaf.af.mil/3WG/SE/SEF/_layouts/15/start.aspx#/BASH/Forms/AllItems.aspx**.

7.8.2. Issue specific guidance to maintenance personnel for reporting all bird strikes discovered on aircraft to Quality Assurance (3 MXG/MXQA) and Wing Flight Safety (3 WG/SEF) and the preservation of all remains. Even the smallest fragment of remains or blood will be forwarded for identification.

7.9. Squadron Flight Safety Officers (SFSO) will:

7.9.1. Brief aircrews to promptly report all bird strikes and hazardous conditions in accordance with this instruction.

7.9.2. Ensure any applicable bird activity data is readily available to aircrews during mission planning.

7.9.3. Make seasonal bird hazards a regular topic at flying safety meetings. Use movies, articles and other information to maintain awareness.

7.9.4. If the 3 WG/SEF office is unable to provide the annual BASH training in March to all Operations Group personnel, ensure entire squadron completes online training available on the 3 WG SharePoint ® webpage: **https://jber.eis.pacaf.af.mil/3WG/SE/SEF/_layouts/15/start.aspx#/BASH/Forms/AllItems.aspx**.

7.10. AMOPS (3 OSS/OSAM) has responsibility to conduct airfield inspections and direct Detection and Dispersal teams, when necessary. The 3 OSS/OSAM will:

7.10.1. Ensure all AMOPS personnel review this instruction, especially the specific OSAM responsibilities.

7.10.2. Recommend declaration of a BWC to the Tower Supervisor when there is a visual observation of bird activity on or near the field, when aircraft relay bird hazard information, or when any personnel or agency on or near the airfield relay observations to the SOF.

7.10.3. Ensure detection and dispersal teams are dispatched to the location of the birds creating the hazard.

7.10.4. Monitor bird/wildlife population, grass height, and standing water within the Airfield Zone and report problems to the appropriate OPRs for modifying or eliminating the problem.

7.10.5. After being notified the BWC has changed, pass the updated information to the Command Post.

7.10.6. Notify USDA - WS or 673 CES/CEIEC for disposal of wounded or deceased animals.

7.11. Air Traffic Control (3 OSS/OSAT): the Tower Supervisor, or designated representative, declares Bird Watch Conditions as authorized by the 3 OG/CC in accordance with **paragraph 6.2.1,** this instruction**:**

7.11.1. Declare a BWC immediately when there is a visual observation of bird activity on or near the airfield, when aircraft relay bird hazard information, or when personnel or agencies on or near the airfield relay observations. AMOPS will be notified of all BWC changes.

7.11.2. Advise AMOPS and the SOF of bird activity on or near the airfield or in the traffic pattern and the associated BWC.

7.11.3. Allow detection and dispersal teams priority access on the runway to disperse birds in the primary bird exclusion zone. Ensure appropriate BWC condition has been declared prior to initiation of dispersal operations in the BEZ and as warranted by operations in the WEZ if aircraft are in the immediate vicinity.

7.11.4. 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*. Include location of bird hazard that is driving the bird watch condition. Provide bird watch conditions above condition low in Elmendorf Airfield air traffic information system (ATIS) broadcasts. For rapidly changing BWCs, place a statement on ATIS advising aircrews to contact Ground, Tower, or Final Controller for the latest BWC.

7.11.5. If BWC MODERATE or SEVERE is declared for extended periods of time and will impact flying operations, Elmendorf Airfield Tower will notify Anchorage Terminal Radar Control (TRACON) who will pass the information to the Anchorage Air Route Traffic Control Center (ARTCC).

7.11.6. Notify other Anchorage area airfields (Merrill Field and Anchorage International, Fort Richardson) prior to major bird dispersal activities. After bird dispersal activities, notify other airfields if dispersal actions cause large flocks to fly towards them. Elmendorf Airfield controllers will make this notification via air traffic control (ATC) direct lines.

7.11.7. Ensure all Tower personnel review and are familiar with their specific responsibilities as specified in this instruction.

7.12. The 673d Civil Engineer Group (673 CEG/CC) will:

7.12.1. Initiate surveys and write environmental assessments and environmental impact statements as required by law.

7.12.2. Provide 673 CES/CEIEC support in obtaining Federal and State permits required for depredation, salvage, collection and possession of all migratory or local species. Provide guidance and support for biological monitoring of wildlife populations and habitat management to improve technical advice for wildlife and vegetation management programs.

7.12.3. Conduct operations in accordance with **paragraph 5** of this instruction.

7.12.4. Advise the 3rd Wing BASH officer of civil engineering projects that may impact airfield operations related to bird and wildlife hazards.

7.12.5. Monitor bird migration activity and advise 3 WG/SEF if Phase II dates, outlined in **paragraph 7.2.6.2,** this instruction, should be modified.

7.12.6. Ensure 673 CES/CEIEC produces and provides annual raptor nest survey to 3 WG/SE and USDA - WS.

7.13. The Maintenance Group Commander (3 MXG/CC) will support this instruction as recommended by the BHWG and approved by the 3 WG/CC.

7.14. The Medical Group Commander (3 MDG/CC) will support this instruction as recommended by the BHWG and approved by the 3 WG/CC.

7.15. Aircrew will**:**

7.15.1. Check the BWC status before flight. Bird hazards mitigation will be considered during mission planning and briefed to the crew. Aircrews will reference the Avian Hazard Advisory System **http://www.usahas.com**.

7.15.2. The aircraft commander is responsible for securing off-station bird activity status. **NOTE:** Most other airfields in Alaska do not have the same level of wildlife management/ mitigation that Elmendorf Airfield does. Therefore crews should exercise caution particularly during the migratory season (15 April through 31 October). If wildlife is spotted, 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:

7.15.2.1. Location.

7.15.2.2. Altitude.

7.15.2.3. Local time of sighting.

7.15.2.4. Approximate number of birds and direction of flight.

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

7.15.3. Following a bird strike, aircrews should land as soon as conditions permit to have the aircraft inspected by qualified maintenance personnel. Bird strike damage cannot be accurately assessed in-flight and may result in a complex airborne emergency.

7.15.4. Promptly report all bird strikes and hazardous conditions to 3 WG/SEF (552-4681/4128) or your unit safety representative as soon as possible. Any time an aircraft

experiences a bird strike; the pilot-in-command will complete an AF Form 853. Aircrews that experience a bird strike while off-station are responsible for filling out AF Form 853 and collecting remains. In lieu of AF Form 853, aircrew may contact 3 WG/SEF via phone and pass the required information to them. For guidance on the collection of bird/wildlife remains, contact 3 WG/SEF or reference AFMAN 91-223. Also, reference the Air Force Safety Center BASH website for the latest collection methods: **http://www.safety.af.mil/Divisions/Aviation-Safety-Division/BASH/**.

7.16. 176 WG/SE will:

7.16.1. Manage all 176 WG bird strike and mammal strike reports. Forward remains in accordance with AFMAN 91-223. After remains are identified, ensure Air Force Safety Automated System (AFSAS) reports are finalized. Forward all airfield BASH concerns to 3 WG/SE.

8. Bird Strike Reporting:

8.1. All bird strikes WILL be reported IAW AFI 91-204 and every effort will be made to collect samples or remains in accordance with AFMAN 91-223.

8.2. Squadron Flight Safety Officers or aircrew involved in a bird strike will provide the AF Form 853 to 3 WG/SEF as soon as practical. If damage is suspected notify 3 WG/SEF or 673 ABW/CP immediately.

8.3. Maintenance personnel discovering a bird strike will notify Quality Assurance (3 MXG/ MXQA) who will notify 3 WG/SEF (552-4681 or 552-4128) and USDA Wildlife Services (552-BIRD). Collect bird remains from the aircraft or airfield and forward to 3 WG/ SEF.

8.4. AMOPS and Transient Alert personnel will assist transient aircrews and will obtain unit/organization information and forward the information to 3 WG/SEF.

8.5. AMOPS will notify the USDA Wildlife Services dispersal team (552-BIRD) if any bird remains are found on or in the immediate vicinity of the runway or any area used by aircraft.

8.6. The 3 WG/SEF will forward remains in accordance with AFMAN 91-223. After remains are identified, 3 WG/SEF or 176 WG/SE will finalize the AFSAS report.

9. Bird Hazard Working Group (BHWG):

9.1. The function of the BHWG is to collect, compile and review data on bird strikes, identify and recommend actions to reduce hazards, recommend changes in operational procedures, prepares informational programs for aircrews, and assist the commander by acting as a point of contact for off-base issues. The BHWG will submit all recommendations to the 3rd Wing Commander for approval.

9.2. BHWG meetings should discuss, but are not limited to, the following topics: The 3rd Wing bird strike statistics, USAF bird strike statistics, USAF BASH team updates, locally observed bird activity, local wildlife habitat management/modification, local BASH plan or instruction procedures, responsibilities and changes, BASH awareness, education and training, and status and activities of the USDA Wildlife Services teams. BHWG meetings will concentrate on taking a proactive role in preventing future strikes, and not focus only on reviewing historical data.

9.3. Meetings will be held two times a year. 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 any outstanding issues prior to the next season. Any other meetings will be held as directed by the 3rd Wing Vice Commander if unusual bird or wildlife conditions warrant. BHWG minutes will be maintained IAW AFI91-202 PACAFSUP.

9.4. The chairperson of the BHWG will be the 3 WG/CV or equivalent. As a minimum, the group should consist of a representative from 3 OG, 3 MSG, 3 MXG, 673 MSG, 673 ABW/JA, 673 CEG, 477 FG, 732 AMS, JBER Wildlife Biologist, 673 ABW/PA, 3 WG/SE, 3 OSS/OSA, 3 OSS/OSAM, 90 FS, 525 FS, 517 AS, 962 AACS, 3 WG/FOD, 3 OG/OGV, 176 WG/SE, Aero Club Manager, USDA/WS, FAA, and a representative from Bryant Army Airfield. Attendance will be included in the BHWG minutes.

10. Information Collections. No information collections are required by this publication.

ROBERT D. DAVIS, Colonel, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 13-204 Volume 3, *Airfield Operations, Procedures, and Programs*, 31 August 2010.

AFI 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Management Program*, 31 May 2018.

AFI 91-202, *U.S. Air Force Mishap Prevention Program*, 12 March 2020.

AFI 91-204, *Safety Investigations and Reports*, 26 April 2018.

AFI 33-322, *Records Management and Information Governance Program*, 23 March 2020.

AFMAN 91-223, *Aviation Safety Investigations and Reports,* 13 September 2018.

AFPD 91-2, *Safety Programs*, 02 September 2019.

FAA Order 7110.65W, *Air Traffic Control*, 10 December 2015.

FAA Order 7210.3Z, *Facility Operation and Administration*, 10 December 2015.

JBER Integrated Natural Resources Management Plan (INRMP), 01 June 2016

JBER Small Unmanned Aerial System Plan, 24 January 2020.

Wildlife Hazard Management Protocol Manual (March 2006), *USDA - WS, Alaska District.*

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*, 21 September 2009.

AF Form 853, *Air Force Bird Strike Report*, 14 October 2005.

Abbreviations and Acronyms

AFRIMS—Air Force Records Information Management System.

AGL—Above Ground Level.

AHAS—Aavain Hazard Advisory System.

ARTCC—Air Route Traffic Control Center.

ATC—Air Traffic Control.

ATIS—Air Traffic Information System.

BASH—Bird and Wildlife Aircraft Strike Hazard.

BAM—Bird Avoidance Model.

BEZ—Bird Exclusion Zone.

BHWG—Bird Hazard Working Group.

BWC—Bird Watch Condition.

CONUS—Continental United States.

FCIF—Flight Crew Information File.

GIS—Geographic Information System.

LOWAT—Low Altitude Training.

MDS—Mission Design Series.

MFR—Memo For Record.

MOA—Maintenance of Agreements.

NEXRAD—Next Generation Radar.

NOTAM—Notice to Airmen.

NWS—National Weather Service.

OPR—Office of Primary Responsibility.

PIREPS—Pilot Reports.

RDS—Records Disposition Schedule.

SII—Special Interest Item.

SOF—Supervisor of Flying.

SUASP—Small Unmanned Aerial System Plan.

TRACON—Traffic Control.

TDY—Temporary Duty.

USBAM—United States Bird Avoidance Model.

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

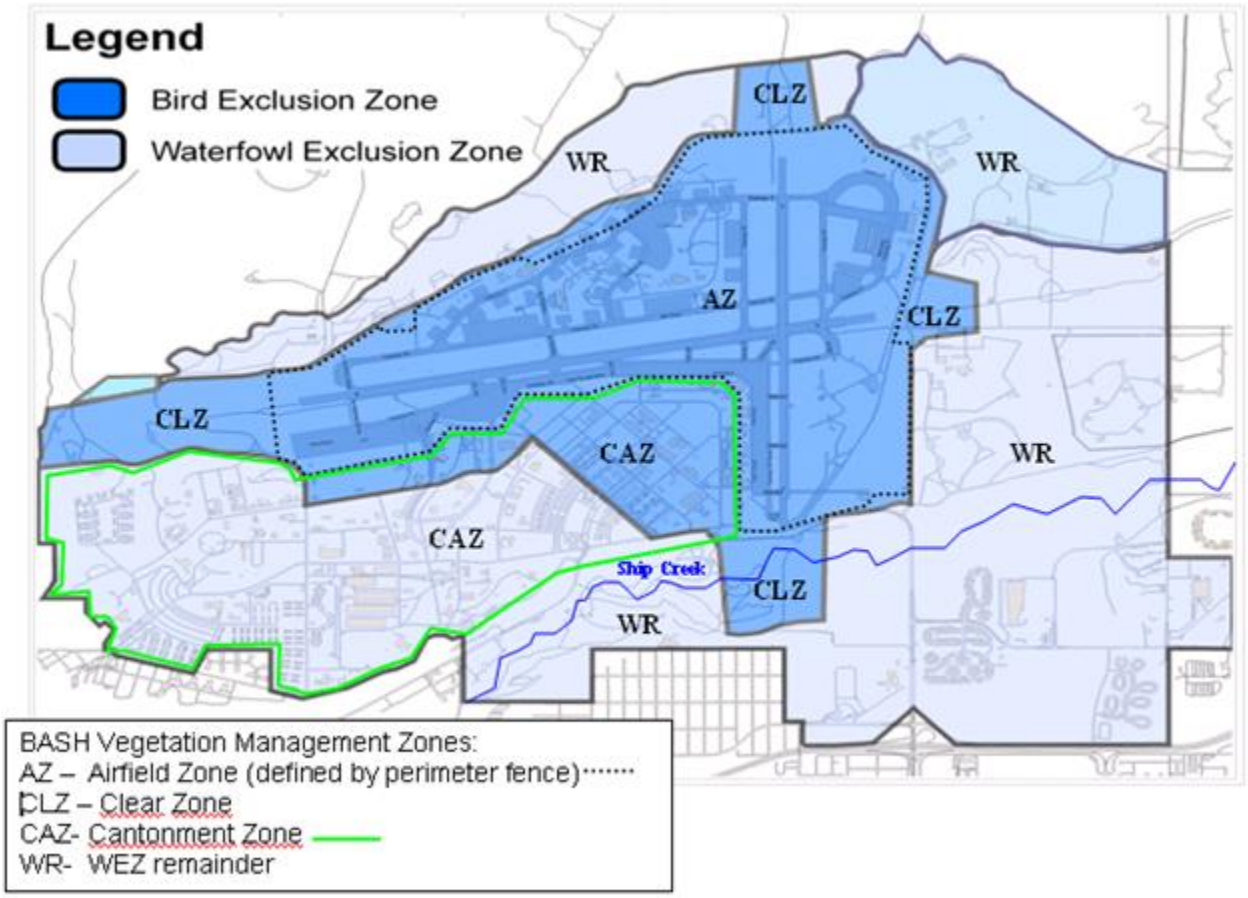
USR—Unit Safety Representative.

WEZ—Waterfowl Exclusion Zone.

Attachment 2

ELMENDORF FIELD BIRD AND WATERFOWL EXCLUSION ZONES

Figure A2.1. Elmendorf Field Bird and Waterfowl Exclusion Zones.



Attachment 3

TRAFFIC PATTERN RESTRICTIONS

Table A3.1. Traffic Pattern Restriction.

PHASE OF FLIGHT	**BWC LOW**	**BWC MODERATE**	**BWC SEVERE**
Takeoff	Normal Ops	No Fighter Formation T/O 20 sec. Minimum spacing. AB Takeoff Required (Fighters). T/O only when departure routes avoid identified bird activity	Prohibited without 3 OG/ CC or higher approval.
Patterns	Normal Ops	No Fighter Formation Approaches. No Practice Approaches (VFR or Inst).	Aircraft will hold (fuel permitting).
Landing	Normal Ops	No Fighting Formation Landings. 6,000’ between landing aircraft. Only when arrival routes avoid identified bird activity	Prohibited without 3 OG/ CC or higher approval (unless required for emergency or to meet normal/divert fuel requirement - landing authority delegated to SOF, regardless of condition).