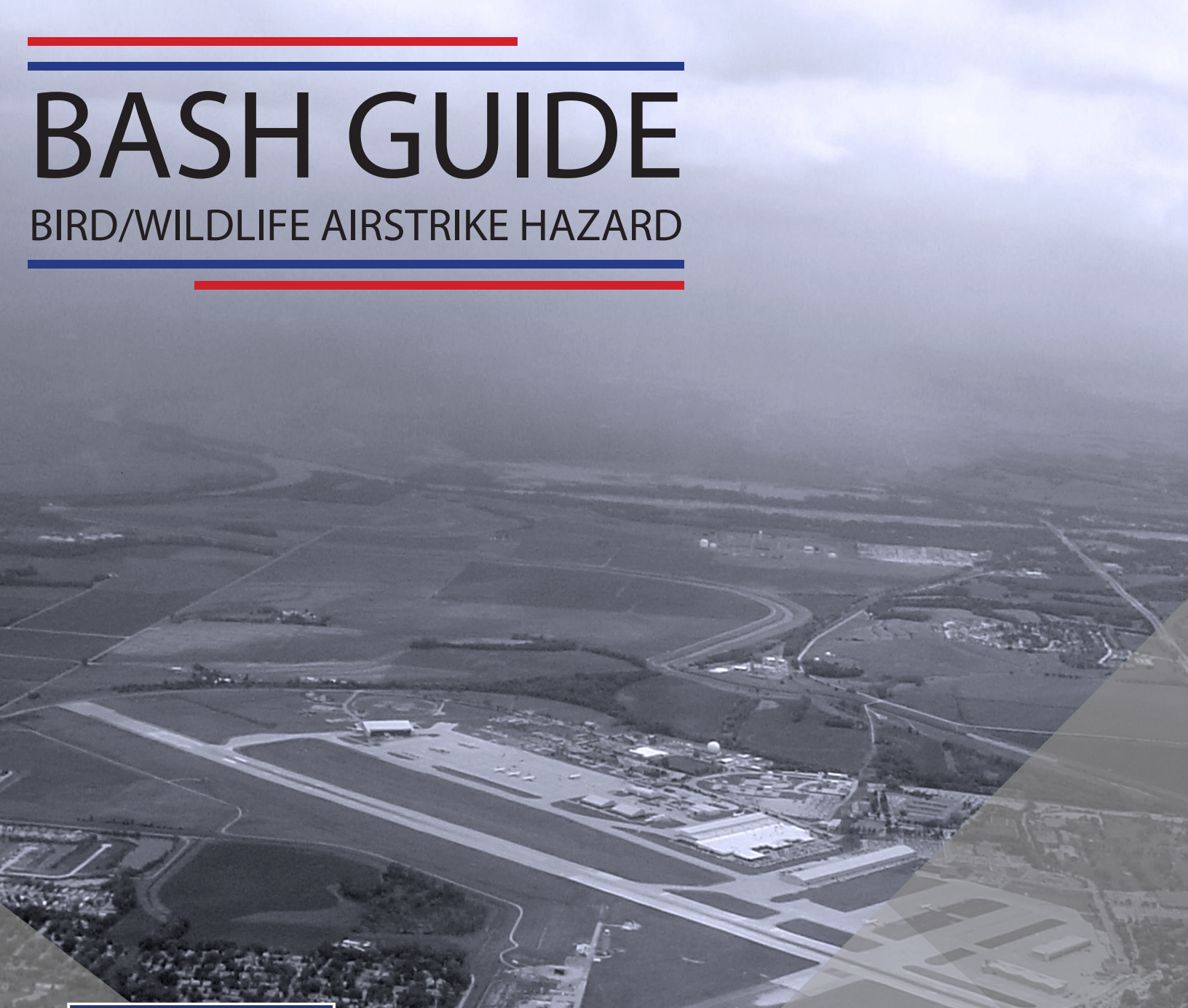
BASH GUIDE

BIRD/WILDLIFE AIRSTRIKE HAZARD



OFFUTT AIR FORCE BASE

JOINT LAND USE STUDY

MAPA

BASH GUIDE

The Federal Aviation Administration (FAA) Advisory Circular (AC) No. 150/5200-33B provides guidance on certain land uses that have the potential to attract hazardous wildlife on or near public-use airports. The FAA recommends that public-use airport operators implement the standards and practices contained in (AC) No. 150/5200-33B. In order to help reduce potential hazardous wildlife attractants near Offutt Air Force Base (AFB), this guide will provide recommendations to communities within a 5-mile radius of Offutt AFB.

ACRONYMS

Airport's approach or departure airspace or air operations area (AOA)

- Any area of Offutt AFB used or intended to be used for landing, takeoff, or surface maneuvering of aircraft. An air operations area includes such paved areas or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiways, or apron.

Wildlife Hazard Management Plan (WHMP)

- A Wildlife Hazard Management Plan (WHMP) establishes the responsibilities, policies, resources, and procedures recommended by the Wildlife Hazard Working Group (WHWG) to reduce wildlife hazards at a given airport.

Wildlife Hazard Assessment (WHA)

- A wildlife hazard assessment, conducted by a wildlife damage management biologist, provides the scientific basis for the development, implementation, and refinement of a wildlife hazard management plan. Though parts of the wildlife hazard assessment may be incorporated directly in the wildlife hazard management plan, they are two separate documents. Part of the wildlife hazard management plan can be prepared by the biologist(s) who conducts the wildlife hazard assessment. However, some parts can be prepared only by the airport. For example, airport management assigns airport personnel responsibilities, commits airport funds, and purchases equipment and supplies. Airport management may request the wildlife biologist to review the finished plan.

The wildlife damage management biologist's primary responsibilities are:

- to provide information on the wildlife attractants that have been identified on or near the airport,
- to identify wildlife management techniques,
- to prioritize appropriate mitigation measures,
- to recommend necessary equipment and supplies, and
- to identify training requirements for the airport personnel who will implement the wildlife hazard management plan.

GENERAL SEPARATION CRITERIA FOR HAZARDOUS WILDLIFE ATTRACTANTS ON OR NEAR AIRPORTS

When considering proposed land uses, Offutt AFB, local planners, and developers must take into account whether the proposed land uses, including new development projects, will increase wildlife hazards. Land-use practices that attract or sustain hazardous wildlife populations on or near Offutt AFB can significantly increase the potential for wildlife strikes.

The FAA recommends the minimum separation criteria outlined below for land-use practices that attract hazardous wildlife to the vicinity of airports. It must be noted that these criterion are not enforced on air force bases, but provide good recommendations in providing a guide for implementing objectives within the Bird/Wildlife Air Strike Hazard (BASH). Please note that FAA criteria include land uses that cause movement of hazardous wildlife onto, into, or across the airport's approach or departure airspace or AOA.

PROTECTION OF APPROACH, DEPARTURE, AND CIRCLING AIRSPACE

For all airports, the FAA recommends a distance of 5 statute miles between the farthest edges of the airport's AOA and the hazardous wildlife attractant **if the attractant could cause hazardous wildlife movement into or across the approach or departure airspace.**

Waste Disposal Operations

- Citing for new landfills
  - FAA recommends against locating Municipal Solid Waste Landfills (MSWLF) within the separation distances of five miles as identified in Sections 1-2 through 1-4 of the FAA Advisory Circular (AC) No. 150/5200-33B. The separation distances should be measured from the closest point of the airport's AOA to the closest planned MSWLF cell.

- Existing waste disposal facilities within the limits of separation criteria
  - The FAA recommends against airport development projects that would increase the number of aircraft operations or accommodate larger or faster aircraft near MSWLF operations located within the separations identified in Sections 1-2 through 1-4 of the FAA Advisory Circular (AC) No. 150/5200-33B.

- Enclosed waste-handling facilities that receive garbage behind closed doors; process it via compaction, incineration, or similar manner; and remove all residue by enclosed vehicles generally are compatible with safe airport operations, provided they are not located on airport property or within the Accident Potential Zone (APZ).

- Composting operations that accept only yard waste (e.g., leaves, lawn clippings, or branches) generally do not attract hazardous wildlife. Sewage sludge, woodchips, and similar material are not municipal solid wastes and may be used as compost bulking agents. The compost, however, must never include food or other municipal solid waste.

- The FAA recommends against the underwater discharge of any food waste (e.g., fish processing offal) within the separations identified in Sections 1-2 through 1-4 of the FAA Advisory Circular (AC) No. 150/5200-33B.

- Recycling centers that accept previously sorted non-food items, such as glass, newspaper, cardboard, or aluminum, are, in most cases, not attractive to hazardous wildlife and are acceptable.

WATER MANAGEMENT FACILITIES

- Storm Water

  - The FAA strongly recommends that off-airport storm water management systems located within the separations identified in Sections 1-2 through 1-4 of the FAA Advisory Circular (AC) No. 150/5200-33B be designed and operated so as not to create above-ground standing water.

- Waste Water Treatment
    - Existing
        - The FAA strongly recommends that airport operators immediately correct any wildlife hazards arising from existing wastewater treatment facilities located on or near the airport.
    - New
        - The FAA strongly recommends against the construction of new wastewater treatment facilities or associated settling ponds within the separations identified in Sections 1-2 through 1-4 of the FAA Advisory Circular (AC) No. 150/5200-33B.

WETLANDS

- Existing Wetlands
    - If wetlands are located on or near airport property, airport operators should be alert to any wildlife use or habitat changes in these areas that could affect safe aircraft operations.

- The FAA recommends that wetland mitigation projects that may attract hazardous wildlife be sited outside of the separations identified in Sections 1-2 through 1-4 of the Advisory Circular (AC) No. 150/5200-33B unless they provide unique functions that must remain onsite (see 2-4c(1)).
    - 2-4c(1)
        - The FAA may consider exceptions to locating mitigation activities inside the separations identified in Sections 1-2 through 1-4 of the Advisory Circular (AC) No. 150/5200-33B if the affected wetlands provide unique ecological functions, such as critical habitat for threatened or endangered species or ground water recharge, which cannot be replicated when moved to a different location.

- Mitigation Banking
    - Wetland mitigation banking is the creation or restoration of wetlands in order to provide mitigation credits that can be used to offset permitted wetland losses.

- The FAA recommends against locating dredge spoil containment areas (also known as Confined Disposal Facilities) within the separations identified in Sections 1-2 through 1-4 of the FAA Advisory Circular (AC) No. 150/5200-33B if the containment area or the spoils contain material that would attract hazardous wildlife.

- Confined livestock operations (i.e., feedlots, dairy operations, hog or chicken production facilities, or egg laying operations) often attract flocking birds, such as starlings, that pose a hazard to aviation. Therefore, The FAA recommends against such facilities within the separations identified in Sections 1-2 through 1-4 of the FAA Advisory Circular (AC) No. 150/5200-33B.

- **Aquaculture activities** (i.e. catfish or trout production) conducted outside of fully enclosed buildings are inherently attractive to a wide variety of birds. Existing aquaculture facilities/ activities within the separations listed in Sections 1-2 through 1-4 of the Advisory Circular (AC) No. 150/5200-33B must have a program developed to reduce the attractiveness of the sites to species that are hazardous to aviation safety.

OTHER LAND USE CONSIDERATIONS

- Golf courses
  - The FAA recommends against construction of new golf courses within the separations identified in Sections 1-2 through 1-4 of the FAA Advisory Circular (AC) No. 150/5200-33B. Existing golf courses located within these separations should develop a program to reduce the attractiveness of the sites to species that are hazardous to aviation safety.
    - For existing golf courses vegetation composition (grass) should be kept at a height that is considered unattractive to hazardous birds/wildlife, while accepting that this may not be applicable in arid locations. The attractiveness of vegetation is a balance between food presence, food accessibility and protection against predators:
      - Earthworms, insects, rodents and other animals are present in and on the soil and in the vegetation. The vegetation itself and its seed are food for plant and seed eaters;
      - Food accessibility depends on vegetation height and density. Long, dense vegetation will inhibit most hazardous birds/wildlife from moving around, detecting and accessing the food;
      - Birds/wildlife safeguard themselves from predators by hiding and/or fleeing. Long, dense vegetation is preferred as a hiding place by agoraphobian species. These species avoid the open space of the runway and short vegetation. On the other hand, claustrophobic species avoid long, dense vegetation and prefer to stay in the open space of the runway and short vegetation where they have a wide view to see predators well in advance to enable them to flee on time; and
      - Birds/wildlife feeding on seeds will avoid the airport if its vegetation is mowed during the flowering season. When these flowers attract insects that are attracting aerial feeders (for example swallows, swifts and bee-eaters), the vegetation should be cut before the flowering season in order to maximize deterrence of local wildlife species, and

- The FAA recommends that operators of airports surrounded by woodlands, water, or wetlands refer to Section 2.4 of the FAA Advisory Circular (AC) No. 150/5200-33B. Operators of such airports should provide for a WHA conducted by a wildlife damage management biologist. This WHA is the first step in preparing a WHMP, where required.

- Other specific land uses or activities (e.g., sport or commercial fishing, shellfish harvesting, etc.), perhaps unique to certain regions of the country, have the potential to attract hazardous wildlife. Regardless of the source of the attraction, when hazardous wildlife is noted on a public-use airport, airport operators must take prompt remedial action(s) to protect aviation safety.