



Summary of Airport International Council (ACI) Wildlife Hazard Management Handbook Second Edition 2013

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Wildlife hazards have become an important issue at airports around the world. More than 150,000 strikes have occurred in the US alone (from 1990 until 2015) with over \$480 million in damages.

Section 1) What is wildlife management?

The goal of wildlife management at airports is to reduce populations at or dissuade wildlife from coming to an airport. Efforts should be put forth to focus on critical areas such as the approach and landing zones of runways. To manipulate wildlife in a way to produce favorable outcomes, staff need to understand wildlife behaviors and needs. Knowing what basic requirements they need is essential to reducing numbers at airports. Food, water, shelter, and safety are key to survival and should be the focus of anyone involved in wildlife management.

1. Habitat management (Passive Management): Keeping grass cut to proper heights so as not to allow seeds to form or keeping it from becoming too tall. Drainage ditches should be free of vegetation and properly graded to drain quickly. Standing water should also be reduced or eliminated as it acts as a major wildlife attractant to hazardous species such as waterfowl. The installation of devices to block access to permanent water could include netting, bird balls, or grid wires. Trimming or removing trees to reduce perching/nesting locations for some birds such as raptors. Selecting specific species of grasses and vegetation that minimize wildlife attraction and provide turf-grass qualities needed across the airport landscape. Ensuring that trash bins are not overflowing and enforcing no feeding policies.
2. Active management (AM): On occasion, habitat management does not dissuade all wildlife and active steps must be taken when wildlife is present. Pyrotechnics, air sirens or truck sirens, shotgun blast or propane cannon are necessary to impose a fear into the animal to deter them from specific regions of an airport. AM may require an escalation of dispersal control methodologies. Removal can be used on wildlife that do not respond well to harassment or habitat management techniques. However, if physical removal is utilized, one must follow all federal, state and local rules and regulations to ensure proper methods are used.

Section 2) Roles and Responsibilities.

Airports should have in place a wildlife hazard management plan that outlines management practices and principals that need to be performed or completed on the airport. A wildlife coordinator should be appointed to oversee the plan and ensure all actions are being carried out.

1. Senior Manager: This person should be identified as head or leader of wildlife control onsite to insure all airport activities operate smoothly without wildlife interactions

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Ph: 800-243-1462 • Fax: 518-618-3129 • www.loomacres.com
E-mail: info@loomacres.com



2. Wildlife Control Coordinator: Does the day to day management, keeps supplies readily available, insures wildlife logs are correct and up to date, and coordinate with operations, ground maintenance, and provides supervision to wildlife control operators.
3. Wildlife Control Operator: Onsite surveillance of wildlife on airports, conducts daily, weekly, monthly surveys onsite, records activities
4. Airport Wildlife Committee: Anyone involved in bird or wildlife control at the airport and has a vested interest in safety.

Section 3) Risk assessment of wildlife hazard and wildlife hazard management plan

Airports should take the steps to conduct or have a risk assessment done. This allows airport to know the specific wildlife hazards and attractants that occur. From this assessment, the airport can then formulate a wildlife hazard management plan. The risk assessment delivers basic information that describes the level of hazard each species presents to aircraft. The risk assessment generally covers the entire AOA and should also include the approach and take-off areas near the airport.

The risk assessment should also include a ranking table of the probability of strikes. This scale typically goes from very low to very high. Probability should consider the biology and behavior of the animals being evaluated. In addition to the probability of strikes, the severity of strikes should also be evaluated for each species based upon biological characteristics such as behavior and weight. Creating a risk matrix provides a visual representation of each species strike and damage probability.

Wildlife hazard management plans are documents airports use to reduce the risks of wildlife. Some of the things a WHMP should include are;

1. Identify the hazards and attractants present
2. Clearly identify the roles and responsibilities of parties carrying out wildlife management activities
3. Outline a training curriculum
4. Describe the necessary actions to reduce hazards posed by individual species

Section 4) Operational Practices

The WHMP should detail what actions are needed to manage wildlife and habitat. There should be actions with descriptions for wildlife dispersal that occur on a daily/weekly/monthly basis.

Examples of operational practices are:

1. Habitat management; avoid creating or allowing conditions to occur that could attract wildlife.
2. On airport habitats; avoid the creation of water bodies and have plans for mitigation in place in case they are unavoidable. If the airport wants to do landscaping, avoid practices and plant species that could provide habitat, food, shelter, and water.
3. Off airport habitats; Know where off-site attractants are within 5 miles of the airport. In some cases, airport operators may want to work with the owners of off-site properties to create wildlife mitigations plans.

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4. Patrolling; Must be routine. Daily patrols to reduce wildlife on the airfield should be conducted. However, they should not always be done at the same time every day. Switch up patrol times so animals don't learn patterns.
5. Patrol Inspections; While doing daily wildlife patrols, observe other factors like habitat, fences, pick up FOD. Inspect traps and other visual deterrents.
6. Intervention Techniques; Any ethical and legal means to deter wildlife from loafing within the AOA. Make sure you do not become hazard to aircraft yourself.
7. Record and report; Record and report your activities. This helps keep track of problem species, your activities, time spent on wildlife hazard mitigation. Shows that the airport is performing their duties to mitigate wildlife hazards. At the end of each month a report should be submitted to an airport wildlife committee or similar functioning body.
8. Equipment; The wildlife control operator should have the proper equipment for the wildlife species encountered. Pyrotechnic launchers, vehicle mounted noise makers, traps, firearms, or the means to call an expert are common tools. Training to use the listed items should be mandatory.
9. Habitation; Switch up harassment efforts so animals do not become habituated to airport noises or sights and to your harassment techniques.

Section 5) Training

Airports must have a WHMP that identifies training programs for specific wildlife and habitat management issues. The airport staff that oversee and implement the WHMP must have the appropriate training to perform their duties. Roles and responsibilities must be completely and fully explained so duties can be properly executed.

Training programs and WHMP must:

1. Ensure training meets international, national, and local standards
2. The training is appropriate for the people tasked with wildlife control
3. Staff fully understand why they are implementing the objective of the WHMP
4. Staff fully understand their position in relation to the WHMP. There is a structure for whom is responsible for what jobs. Any questions can be taken up with the Senior Manager > Wildlife Coordinator > Wildlife Committee > Wildlife Control Operator
 - a. Senior Manager: Oversees proper implementation of WHMP, receives training and meets with experts to have necessary knowledge
 - b. Wildlife Coordinator: Similar roles to Senior Manager, has more face time with Wildlife Control Operators, day to day operations
 - c. Wildlife Committee: Works with Coordinator to give immediate action recommendations to Senior Manager
 - d. Wildlife Control Operator: Conducts day to day WHMP goals. Most involved in the field with wildlife control. Reports to all the above individuals/groups
5. In addition to wildlife training, all staff should have the appropriate airport related training
 - a. Taxiway and runway training

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- b. Proper airport safety training
 - c. Radio communication training
6. Training should also have refresher courses given on an annual basis so staff may refamiliarize themselves or learn new techniques

Training should include the specific area the airport is located and the wildlife the airport could have. The training also must be like national standardized training. This ensures everyone that operates under a WHMP does so in a similar fashion.

Section 6) Evaluation of WHMP

Airports should have the process to review and evaluate the WHMP and its effectiveness. The review must be completed on an annual basis, done by qualified individuals and ensure that anyone with an interest has a chance to give input on the current WHMP. The evaluation should contain surveys and comparisons of the previous year's wildlife activities, and a review of procedures and equipment.

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