Hangar Bird Control

Remove Birds From Large Structures & Keep Them Out

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Department of Defense
Partners in Flight

Our Mission

Providing expertise on the management and conservation of birds and their habitats to sustain and enhance the military mission

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A Messy Problem

Birds in hangars and other large structures create a very messy and expensive problem for military installations. Cleanup costs are not only expensive, but also can impact readiness.

Collection of bird droppings that cause serious issues for military installations. Photo credit: Rich Fischer.

Bird droppings are corrosive and cause expensive damage to aircraft coatings, windscreens, and other sensitive surfaces. Nesting material poses potential fire hazards and foreign object debris (FOD) damage to engines and other aircraft components. A steady rain of droppings, mites, and bird lice from overhead nests erodes human health and morale. The biggest offenders are typically a trio of non-native species: Rock Pigeon, European Starling, and House Sparrow. However, a number of other passerine species also make appearances including Barn Swallow, Cliff Swallow, Carolina Wren, House Finch, and others, as well as birds of prey, such as Barn Owl, Great-horned Owl, Eastern Screech-owl, American Kestrel, and Cooper's Hawk. The three non-native species are afforded no state or federal legal protection and may be controlled using any humane method, including lethal control. However, other species are afforded legal protection under the Migratory Bird Treaty Act, and federal permits are required for control activities involving the removal or potential harm to individual birds, active nests, or eggs.

Categories of Control Strategies

There are three main categories of treatment action: repellents, lethal control, and exclusion. Exclusion is, by far, the most effective control strategy, but each will be discussed in more detail below.

Repellents

Most repellents have very limited or short-term effectiveness, while others have no proven effect. Birds quickly become acclimated to any stimulus that is continually present and poses no genuine threat, including noise, flashing lights, and decoys or effigies like plastic owls, snakes, or other predators. Some attempts at repelling birds pose more hazards to humans working in the buildings than to the birds themselves. Some of these failed attempts include strobe lights, high frequency sound, and even introduction of carbon monoxide. Others, such as ultrasonic emitters, appear to be gimmicks, with no scientific evidence proving their effectiveness. In fact, Department of Defense regulations prohibit military services from purchasing such devices.

A number of commercial products are available that successfully deter birds from perching or roosting on structures, but even these have limitations. Tactical repellents, either sticky to the touch

(Tanglefoot) or producing a hot sensation (Hotfoot) work well when applied to pipes or ledges indoors and out of the rain, but lose their effectiveness once a layer of dust collects over the repellent. Fastening strips of spiny projections (such as Nixalite Bird Barrier) to roosting or nesting sites creates a painful landing site. However, some birds will use the strips to anchor nesting material and place enough sticks and grass to cover the sharp projections and allow for nesting over top of them.

Objects that mimic predators, such as these "owl" decoys, generally are ineffective due to habituation. Photo credit: Rich Fischer.

Lethal Control

Lethal control is sometimes an option and can provide short-term relief while pursuing long-term solutions, but should be coordinated with an installations' Natural Resources (NR) office. Remember that permits will be required for removal of all but non-native species, and NR personnel can assist with this determination. Chemical toxins registered for bird control can be effective at reducing hangar bird populations, but can only be applied by licensed applicators and require caution in preventing unwanted problems such as secondary mortality of non-target species, as well as storage, handling, and disposal complications. Contact avicides, administered in the form of perches with wicks and liquid-filled reservoirs, have been used successfully in the past but are not currently registered for use. Other toxins are delivered in the form of poisoned baits, which either kill birds outright or produce convulsions in the victims (as with Avitrol) – thus frightening away remaining birds. The use of any toxin demands that users follow product label instructions carefully. All reasonable steps must be taken to eliminate non-target kills, including careful searching, removal, and disposal of poisoned bird carcasses. One other, admittedly low-tech, solution involves the use of pellet rifles for the selective removal of birds in low to moderate-density infestations. It is cheap, quick, surprisingly effective, and eliminates the risk of non-target kills. However, it is imperative to use responsible, trained individuals and follow Military Services-specific policies for use to avoid safety concerns, damage to facilities, or possible FOD damage to aircraft.

Exclusion

Eliminating roosting and nesting sites within buildings, or at least making them inaccessible, is the most effective long-term solution, but may also be the most costly in the short-term. Denying birds access to large structures like hangars, where the doors stay open for extended periods, can prove nearly impossible, so it is usually wiser to focus efforts and resources on the actual nesting and roosting sites within the hangar, rather than wasting time and money on replacement door brushes and flaps.
Holes, cracks, and crevices that host bird nests can be identified by watching the areas for bird activity or recognizing telltale signs like staining at the entrance, protruding nesting material, or the sound of nestling birds. Most openings are easily plugged with masonry sealants, but ladders, man lifts, or cranes may be required to access them. Avoid expanding foam insulation as it is easily re-excavated by cavity-nesting birds and results in messy debris.

The most effective solution is likely to be overhead netting, even though it is surely the most expensive. When properly installed, overhead netting prevents birds from getting into the superstructure of a hangar or large building, where most preferred roosting and nesting sites are found. Poor installation, however, can result in birds penetrating the barrier, which then acts as a net to catch overhead nesting material and dead birds falling from nests or perches. Hangar modification is frequently required, to include lowering of lights, sprinkler heads, or other devices. If not, the design must include access panels in the netting to change light bulbs and test or service sprinkler heads and HVAC systems.