# Pest Birds a Burden on Business. Green Solutions Save.

Pest birds are costing businesses millions of dollars each year in clean-up costs, repairs, and damaged equipment. From the mess and damages caused by their droppings, to the health and safety liabilities they bring— pest birds are a serious problem. In fact, some of the past decade's biggest news incidents have been traced back to birds and could have been prevented by 'green' Bird-X pest control solutions.

Bird-X is a full-service provider that offers humane, eco-friendly and effective pest control products. As the market shifts to a 'greener' mindset, business owners and facility managers will be able find 'green' solutions for every bird problem, every property, and every budget when working with Bird-X. When the ongoing cost of labor, cleaning, and maintenance needed to deal with pest bird infestation is evaluated, it becomes clear that an investment in bird control today will reveal big savings in the future.

# The Cost of Pest Birds

There are a number of growing problems associated with pest birds in residential, industrial and agricultural areas. As human beings continue to alter and eliminate birds' natural habitats, these adaptable creatures find ways to inhabit man-made structures, feeding on commercially-grown crops and other valuable resources—thus becoming unwanted pests<sup>i</sup> to many businesses and homeowners.

The roosting and infestation of pest birds is much more complex than a mere issue of inconvenience to those affected. In fact, pest birds are costing businesses millions of dollars each year in clean-up costs, repairs, and damaged equipment, while lar

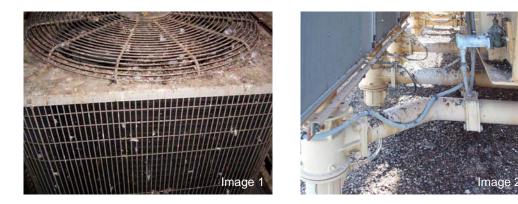
### Total Annual Cost (per 500 ft. sidewalk cleaned weekly)

- •\$35,000 labor
- •156,000 gallons of water
- •3,120 kwh electricity
- •Ongoing risk of disease and slip-and-fall liability

each year in clean-up costs, repairs, and damaged equipment, while larger individual companies are spending in the six-figure range.

In addition to being an unpleasant eyesore, bird droppings can cause walking surfaces to become slippery and dangerous. They are also linked to over sixty transmissible diseases (some even potentially fatal). These factors create unsanitary and hazardous working conditions. Government organizations and health boards such as OSHA and the USDA can give citations and fines for bird mess problems. Businesses that fail to correct these situations in a timely manner can face even harsher penalties and may be forced to shut down completely.<sup>ii</sup>

The corrosive effects of bird dropping can cause irreversible damage as well—defacing building rooftops, walkways, walls, vehicles and equipment. In fact, when bird droppings are not quickly washed away, they turn to salt and ammonia; when they later come into contact with rainwater, small electrochemical reactions take place that can speed up the rusting process.<sup>iii</sup> These acidic droppings eat away at paint, concrete and metal, and can eventually cause structural failure.



Birds are also destructive to property, equipment, and products. They can interfere with operations by entangling themselves in machinery, causing fires, pecking holes in roofing, downing power lines, and even bombarding aircraft—endangering themselves and workers. The increased need for cleanup, repairs, replacements and additional labor costs time and money, which often places a huge burden on business owners, municipalities and the federal government, as these are generally unforeseen expenses for which no funds have been allocated within the companies' annual budgets.

# Bird Problems in the News

You can find birds in the news more often than you might realize. In fact, a few of the more high-profile news stories in the past few years have been bird-related:

Birds are known to carry all kinds of infectious diseases, including salmonella. In 2007, more than 500 people were reported sick, and at least eight died due to salmonella contamination in over 400 popular peanut butter products. It was quite possibly the largest food recall in FDA history. In the end, a leaky roof was blamed for the sanitation breach, and it is highly likely that pest pigeons were the vector.

In 2007, the I-35W Bridge over the Mississippi River in Minneapolis, Minnesota collapsed due to weak and rusted steel beams. After closer inspection, it was discovered that the structure's framework was covered with corrosive pigeon dung that was eating away at the metal.

According to the National Defense Center for Environmental Excellence (NDCEE), approximately 5,000 bird strikes occur each year, costing the airline industry an estimated \$1.5 billion in damages and repairs.<sup>iv</sup> Who can forget the 'Miracle on the Hudson' that occurred in January of 2009? Shortly after taking off from New York's LaGuardia Airport, Flight 1549 was struck by a flock of Canada geese, losing thrust in both engines and forcing pilot, Captain Sullenberger, to make an emergency landing in the Hudson River. Fortunately, all 155 passengers survived.





It is clear that bird problems are inconvenient at best, and deadly at worst. However, there are products on the market—within every budget range—that can address all of these issues using safe, humane, non-toxic, eco-friendly solutions.

#### Image 1:

HVAC unit is covered with bird droppings and feathers.

Image 2:

The pipes and walkway on a rooftop are littered with bird messes.

#### Image 3:

An airplane engine shows damage from a bird strike.

#### Image 4:

U.S. Airways Flight 1549 rests in the Hudson River in New York City after a bird strike caused the need for an emergency landing.



# Bird-X, Industry Innovators for Almost 50 Years

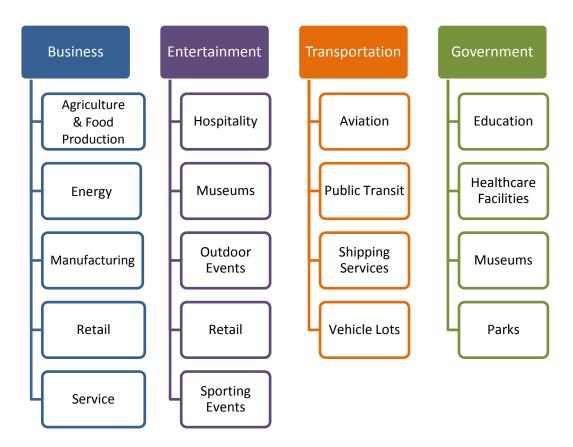
Bird-X, Inc. has been a leader in producing humane pest and bird repellent products, since 1964. With bird deterrents ranging from state-of-the-art laser technology to sonic/ultrasonic bird control, bird spikes and netting to animal sound and visual scare repellers—Bird-X offers the most comprehensive line of green bird control products on the market.

Bird-X customers include Fortune 1000 companies, all branches of the military, and many major institutions nationwide. Distribution spans every major municipality with exports to over 150 countries.

Bird-X is a full-service corporation that can provide customers with start-to-finish support including access to industry experts, consultation services, custom packages, customer service, installation guidance, and more. Bird-X strives to help find the pest control solution that will work best for each customer's particular problem and situation.

# Where is Bird Control Needed?

Bird control can be implemented anywhere. Some of the most common applications fall into these industry categories:



# **Green Pest Control**

In the past, pest control solutions have been limited to traps, poisons, and other chemical deterrents. When these methods work, users are left to deal with the horrible mess of captured, injured, ill and dead animals or insects. These products don't teach pests to stay away for good—they simply destroy any pest that enters the area, which could continue indefinitely. Nor do these products solve pest problems; instead, they wage an endless war against pests, placing both the battlefield and the graveyard at the end-user's feet. 'Green' pest control solutions are humane and eco-friendly, and they can provide extremely effective long-term results.

There are several benefits to choosing 'green' pest control over the alternative. First, they are safe and non-toxic. The use of harmful chemical pesticides can put workers and customers at risk, and can potentially compromise any materials that are manufactured or stored on the premises. In residential cases, these substances can be a danger to children and pets.

Second, 'green' pest control solutions are eco-friendly and do not negatively impact the environment. Pesticides can contaminate food and get into the water supply. This can affect all living things surrounding the property—killing/harming plants and wildlife—disrupting the natural balance of this small eco-system.

Third, it is better to choose pest control products that teach animals to stay away for good. Pest control products that kill pests (aside from being inhumane) are counterproductive. Pests develop a resistance to chemicals, so that dosages must be continually increased in order to produce the same results. Also, when a pest population decreases, this leaves the survivors with more food, which attracts pests from other areas and increases breeding rates—creating a larger problem than before!

Finally, green pest control is better for business. The last thing any business owner wants is a public relations problem related to poisonous substances, pollution, or animal cruelty. Avoid chemical pesticides and traps by using products that keeps birds and pests away without harming the creatures or the environment.

# **Preventing Pest Bird Infestation**

In order to prevent pest bird infestation, it is helpful to understand *why* birds choose to inhabit specific areas. Birds will perch on any surface that is easily available, like rooftops, ledges, and wires; they also look for elevated places where they can avoid predators while scanning for food. Birds prefer to roost where they feel safe and warm— often building nests in vents and chimneys.

Bird control solutions vary from physical barriers to sensory attacks. Barrier control includes bird netting and spikes—these products work anywhere they are installed. Other options include sonic and ultrasonic devices, visual scares, taste aversions, and landscape alterations.

Bird-X offers all of these products and they are safe, humane, eco-friendly, non-toxic, non-harmful solutions for pest bird problems. If you are already experiencing pest bird infestation, these products can be used to quickly remove the creatures from your property. If your facility is not yet burdened by birds, it may be the perfect time to take preventative measures in conditioning pest birds to avoid the area completely. The next few pages will describe these solutions in detail.



# Physical Barriers: Netting & Spikes

As previously stated, one popular method of bird control is the use of barriers such as bird netting and/or bird spikes. These barrier methods are 100% effective everywhere they are installed, making them a popular choice for areas of zero tolerance. Exclusion netting is excellent for larger areas like warehouses, loading docks, bridges, ceilings, rafters, parking structures, crop fields, vineyards and more. BirdNet is a strong, longlasting, maintenance-free solution to almost any bird problem.

Bird spikes can be installed on rooftops, chimneys, along ledges and window sills—any surface where birds perch or roost. Spikes make these surfaces uncomfortable and uninviting without harming the birds.

A lower-profile option is roost-inhibiting gel. It makes surfaces sticky and uncomfortable for birds, but is more discreet than spikes or netting, and is often the product of choice on public facades, signs and entryways.









# Sonic & Ultrasonic Devices

For areas where property owners do not wish to install spikes or netting, there are various methods that attack the birds' senses to keep them away. When birds encounter dangerous situations or predators, they let out very specific distress and alarm calls to notify other birds that the area is not safe. Sonic repellent devices rebroadcast naturally recorded versions of these sounds, as well as the calls of natural predators, to create an environment that birds perceive as life-threatening.

Ultrasonic devices are appropriate in areas where a quieter solution is preferred. The high-frequency sound waves are inaudible to humans, yet effectively frighten, annoy, and repel birds and other wildlife within range. It is important to install ultrasonic speakers at a height that is parallel to the pest birds, as higher-frequency sound waves have a narrow range and direct projection. In other words, if installed at ground level, the ultrasonic sound waves will not affect birds in the trees above.



#### Image 5:

Bird netting keeps birds and other critters away from blueberry bushes.

#### Image 6:

A worker installs polycarbonate bird spikes to keep birds off utility poles.

#### Image 7:

Pest control operators installing bird netting at a food manufacturing facility.

#### Image 8:

Stainless steel bird spikes installed on a building ledge to prevent birds from roosting.

#### Image 9:

Sonic repellent device, the BirdXPeller PRO, installed outside of a historical lighthouse to keep seagulls away from the property.

# Visual Scares & Predator Replicas

There are also a variety of visual scare tactics that can be used to keep pest birds away. Visual products provide instant results without an extensive installation process. For



large, open outdoor areas, predator replicas can be installed to deter birds, geese, and other small pests. For indoor or semi-enclosed spaces—such as warehouses or hangars—electronic laser devices are effective. To be effective, all visual scares must incorporate some element of surprise or motion, so it is important to occasionally move the units. They are especially useful in combination with methods affecting other senses, such as sound or taste.

One of the newest advances in bird control

technology is the BirdXPeller remote-controlled drone—a model aircraft predator replica that swoops down to scare and chase away pest birds, emitting natural sounds of hawk cries and bird distress. It is used to control birds in challenging outdoor environments like golf courses and airports.

### **Taste Aversions**

For grass, turf, crops, and buildings—pretty much any food source or convenient surface—taste aversions can be used. Bird Stop is a biodegradable food-grade bird repellent liquid that is made from a bitter, smelly derivative of concord grapes (the active ingredient is methyl anthranilate). This substance renders food sources unpalatable to birds and irritates their trigeminal systems (similar to our sense of smell). It is also safe and non-toxic.

Another taste aversion product is the Nature's Defense 100% Organic Animal Repellent. These granules can be sprinkled on any food source or surface to deter geese and other pest birds.

### Landscape Alterations

In some cases, it is possible to deter birds just by changing the landscape or environment. For instance, geese seek out areas around lakes and ponds just before they are ready to begin nesting. Unobstructed access to the water's edge is a key factor in their selection. They avoid areas where predators can easily conceal themselves and they need to be able escape into the water if a predator does attack. Simply allowing grass and foliage to grow tall around the edges of your lake or pond will deter geese from nesting on your property.

# Synergy: Attacking Multiple Senses for Lasting Results

The bird repellent methods mentioned above can be applied effectively to various situations and problem areas. However, for the highest probability of success, a synergistic approach is recommended. In bird control, 'synergy' is a terrific ally.

### synergy syn•er•gy (sin-er-jee)

n.

The interaction of two or more agents or forces so that their combined effect is greater than the sum of their individual effects.<sup>v</sup>

#### Image 10:

3D-Coyote protects a softball field from pest geese.

For an airplane hangar, it might be best to install a sonic device on the rooftop for an audio attack on the pest birds. Simultaneously, visual scares such as Terror Eyes balloons can be hung outside the opening doors, while the Bird Blazer laser device is installed inside the hangar to ward off bird intruders. This kind of combined audio-visual attack is what makes up a synergistic bird control program and ensures the highest probability of success.



Image 11: Terror Eyes balloon

hanging from the rafters

of an airplane hangar.

### Implementation & Installation

When implementing a bird control program, the key factors are: a thorough assessment of the problem and the environment, appropriate product selection, and proper installation. These issues can be addressed by choosing a full-service bird control provider such as Bird-X. Full-service providers have access to industry experts and all the latest technology. They also have knowledgeable consultants who can design a comprehensive bird control program based on the variables of each project.

For example, a large factory may be made up of several areas that require completely different approaches. Installing bird spikes on the rooftop would prevent birds from roosting on the building; covering the warehouse ceiling with bird netting would keep birds out of the rafters; while placing a sonic device in the trees and a predator replica on the lawn would help to keep birds away from the grounds altogether.

While this particular example describes a very large bird control program, Bird-X can provide many solutions that are simple, affordable, and easy for anyone to install.

# Summary

From factories and warehouses, to golf courses and vineyards; hospitals and airports, to public parks and roadways—the damages and liabilities caused by pest birds are costing businesses millions of dollars each year in cleanup and repair expenses. Bird droppings alone are a serious problem—corroding surfaces and equipment, increasing the potential for slip-and-fall accidents, and carrying numerous diseases and bacteria. And birds themselves can be a nuisance—pecking holes in roofing, building nests in vents, and bombarding aircraft—putting workers and customers in danger.

'Green' bird control solutions are a great way to get long-lasting, low-maintenance results while preserving the reputation of the business. A full-service provider such as Bird-X can assess each situation and give recommendations for a comprehensive bird control program. Some 'green' product options include bird netting, bird spikes, visual scares, sonic and ultrasonic devices. In some situations, using a combination of these tactics is ideal.

When assessing a pest bird problem, consider what will be spent in the following years to clean up after the birds and to repair the property and equipment they damage—it will become clear that the investment in 'green' preventative solutions now will add up to significant savings in the future.

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