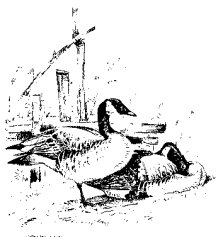


# Managing Problems Caused by Urban Canada Geese



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Jack H. Berryman Institute  
for Wildlife Damage Management  
and  
International Association  
of Fish and Wildlife Agencies



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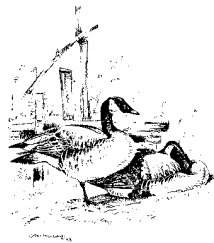
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by Allen L. Gosser, Michael R. Conover  
and Terry A. Messmer

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## Introduction

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Canada geese (*Branta canadensis*) started nesting in urban areas during the past 50 years. Today, most urban areas in the U. S. and Canada support breeding populations of these birds. Many of these resident goose populations are the result of a successful effort by fish and wildlife agencies to restore populations of giant Canada goose (*Branta canadensis maxima*), which is the largest of the 11 races of Canada geese. Their large body mass enables them to survive colder temperatures; thus, they tend to winter as far north as open water can be found.

Many urban and suburban areas provide excellent goose habitat. Well-kept lawns, golf courses, business parks, city parks, and recreational fields provide excellent spring, summer, and fall forage. These areas often contain water reservoirs, lakes, ponds, and marshes that are dotted with islands which provide safe nesting sites for geese. In addition, the traditional predators of geese (foxes, coyotes, etc.) are present in low numbers or are absent in most urban areas, and hunting pressure is low or nonexistent.

Urban Canada goose populations are large, and they continue to increase. In 1992, cities in the United States contained an estimated 300,000 urban Canada geese.

Some people enjoy seeing geese in urban areas, while others consider them a nuisance. Large flocks leave behind a large amount of fecal material, especially if the geese routinely use the same sites. Their defecations can reduce the water quality of ponds and spoil the lawns of parks, golf courses, apartment complexes, and business parks. Also, geese near airports can create a human safety hazard by increasing the possibility of goose-plane collisions. Geese also have been blamed for damaging lawns and shrubbery, as well as garden and farm crops.

## General Biology and Reproduction

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Canada geese are herbivores. During spring and summer, they selectively graze on plants, or parts of plants, that are high in protein, such as grass shoots, seed heads, and aquatic vegetation.

Canada geese have many natural predators. Raccoons, skunks, foxes, crows, and snakes prey on their eggs; snapping turtles, foxes, bobcats, hawks, coyotes, and raccoons prey on goslings; and coyotes, bobcats, and people prey on the adults.

Geese generally start breeding at three years of age. Nest construction and egg-laying begins in late March or early April, depending upon latitude. Geese tend to nest on islands, muskrat houses, or nesting platforms that are surrounded by water. Such sites offer additional security, although the male guards the female and the nest, protecting his territory from other geese and predators. Geese lay 4 to 8 eggs; incubation begins when the last egg is laid and lasts about 28 days. Hatching occurs from late April through mid-May. About mid-June, adult geese shed (molt) all of their long flight feathers to grow new ones. They are flightless for 30-45 days.

## Legal Status

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Canada geese are protected by the Migratory Bird Treaty Act. As such, they can be legally hunted in the fall and early winter. Adult geese, their nests, eggs, or young cannot be harmed out of the legal hunting season without the necessary permits. Contact your state wildlife agency before taking any action that might adversely affect geese.

## Reducing Problems Caused by Geese

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Managing damage caused by urban Canada geese is seldom quick or easy. It usually takes time depending on the number of geese, the features attracting them to the problem site, and the length of time they have used that site. The key to controlling the damage is to make the problem site less attractive than other sites they could use. Therefore, it is necessary to identify why the geese use the current site and how to make it less attractive to them. Damage control measures fall into two categories: nonlethal and lethal. The following is a discussion of techniques used to control damage caused by Canada geese. Not all of the techniques are legal or available in all states. Consult with your state wildlife agency for advice and current restrictions.

### NONLETHAL METHODS

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Nonlethal techniques are most effective when two or more are used in combination. However, timing can be critical. It may be useless as well as illegal to use scaring or hazing techniques while geese are on nests or when they have young. Scaring and hazing methods are best employed when the birds first arrive at a site. Nonlethal control techniques include elimination of food handouts, exclusion, landscape modification, and removal/relocation, and the use of frightening devices, hazing, and repellents.

#### **Elimination of food handouts**

for urban geese is essential if geese are to be dissuaded from using a site. If people continue to feed geese on the property, the geese will be difficult to remove.

**Exclusion** can be one of the most effective nonlethal techniques in controlling goose damage. Canada geese prefer to feed, roost, and loaf near water where they can escape if threatened. Restricting a goose's ability to move between water and land will deter geese from an area, especially during the molt. To be effective, pond edges should be completely fenced. Fencing also can be used to protect lawns or other areas where geese tend to forage. Short fences, vertical banks, or hedges at least one foot high around ponds are usually adequate, especially if the geese have young. While they have the ability to fly over these fences, geese which have to fly constantly between lawns and ponds often will leave the area.

On small ponds (1 acre or less), a grid of high tensile wire or UV-resistant polypropylene line stretched or strung across the pond to create a flight hazard may deter geese from using the pond. The strands should be no more than five feet apart and at least 3-4" above water level. If access is needed to the pond, the lines can be raised 4-6 feet above the surface and strung 10 feet apart. Tie the strands individually to stakes making it possible to repair a broken line without having to reconstruct the entire grid. The strands should be as tight as possible to minimize sagging.

Electric fences also have been used to deter geese from accessing lawns. Some electric fences are portable and can be installed quickly and removed easily for storage. A two-strand fence, with the bottom strand 8-10 inches off the ground and the top strand 8-9" above the bottom strand is effective in most situations. The fence can be attached to stakes which should be no more than 20 feet apart. Polytape, strands of conductive wire woven into a tape made of polyethylene, or 10-gauge high tensile wire can be used for the fence



*Geese will not abandon a site as long as people feed them.*

strands. Regardless of the material used, strand tension must be maintained and the fence tested daily while the geese are present. The fence wires cannot be allowed to touch the ground or vegetation or the charge will ground out. Commercial fence energizers which run off of a battery, solar power, or 120 V systems are available that deliver low impedance charges and are safe and effective. To ground the system, one wire should be connected to an iron rod driven 2-3 feet into the ground. The other wire should run from the charger to the fence wires. With this set up, a goose will complete the circuit between the wire and the ground and receive a shock whenever it touches either wire.

The energizer delivers an uncomfortable shock that geese quickly avoid. Electric fences should not be used in public areas or where people, especially children, may contact the wire. Check with the state fish and game office before using electric fences to exclude geese; also check local ordinances.

Drawbacks to exclusion exist. Fencing or overhead wires may restrict movement or access by people, as well as by geese. Moreover, the methods may not be visually pleasing.

**Landscape modification** is one of the most effective and environmentally sound methods for reducing goose damage to lawns and yards. It deters geese from sites by restricting the ability of geese to move between water and lawn without flying, by reducing the nutritional value of the lawn, or by making the site appear to be unsafe for geese. For instance, a golf course design known as "links-style" incorporates pre-existing natural areas into the course. These areas resemble the rugged courses of Scotland which follow the natural layout of the land and use natural vegetation. Such areas are less attractive to geese than the more traditional golf course.

Physical barriers along the water's edge restrict the movements of geese between the water and shore. Access can be restricted by:

1. Bordering ponds with a boardwalk or boulders over two feet in diameter.
2. Planting thick shrubs or hedges.
3. Placing a short fence (1-2 feet high) in the water and surrounding it with aquatic vegetation. (Submerged structures are illegal in some states; check with the state department of natural resources concerning their legality before constructing one.)

Urban geese obtain much of their food from eating grass, and they feed in areas with the most nutritious grass (i.e., lawns that are mowed and fertilized regularly). Consequently, geese can be discouraged from foraging at a site by making the grass less nutritious. Techniques for accomplishing this may include:

1. Mowing and fertilizing the lawn as infrequently as possible. It is difficult for geese to access the young shoots if the grass is tall, dense, and rank.
2. Planting a less-palatable grass species. Although geese will feed on almost any grass, they exhibit a feeding preference for Kentucky bluegrass. They dislike tall fescue, especially certain varieties which contain an endophytic fungus that produces bitter-tasting alkaloids (such as K-31).

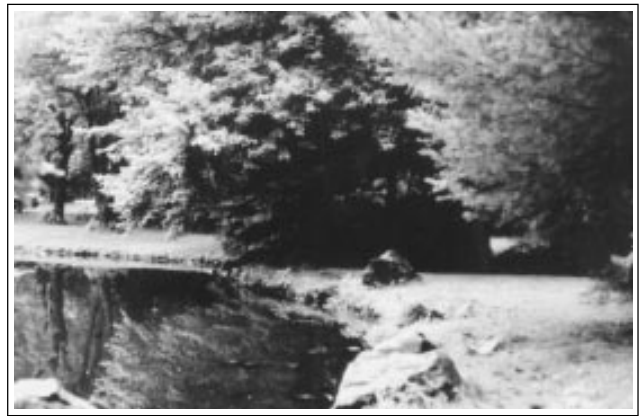


*Short fences can be hidden in cattails to make them less conspicuous.*

3. Replacing lawns with an unpalatable ground cover. Canada geese will not eat common periwinkle, Japanese pachysandra, and English ivy. Lawns bordering ponds could be replaced with a Japanese garden, a natural meadow, or wildflower area.

Geese avoid sites with bushes, hedges, or other objects that would allow a mammalian predator to approach without being seen. Other methods that make a lawn appear less safe to geese include:

1. Placing shrubs or boulders close to foraging areas. The obstacles should be large enough for other animals or predators, such as a dog, to hide behind.
2. Planting tall-growing trees or not removing tall trees in the area. Geese prefer not to use areas where trees obstruct their ability to fly. Geese are so heavy that they gain altitude slowly when flying--they require a low flight angle of about 13° to take flight.



*Geese do not like sites like these where tall trees and vegetation obstruct their view and impede their movements.*



**Removal/relocation** of nuisance flocks is costly, labor intensive, and requires a special permit. Hence, it is used only for serious problems, such as those involving public health or safety. The easiest method of trapping geese is with a funnel trap (also known as a drive trap) during June or July, when the geese are molting and unable to fly.

A major problem with relocating geese to a new area is that the geese have imprinted on the urban environment. If released at a rural site, they will return to an urban area. For these reasons, captured geese often are euthanized by the officials because there are few places to release them. However, because goslings may not have imprinted on their environment, they may be relocated successfully in rural areas.

Relocating or removing Canada geese is a stop-gap effort. The site must be modified to make it less attractive to Canada geese, or the removed geese will be replaced with new ones.

**Frightening devices** include pyrotechnics (shellcrackers, screamers, bangers, noise bombs, etc.), flagging, balloons, scarecrows, and recorded distress calls. These devices work best when geese first move into an area or when combined with other techniques. Unfortunately, geese may quickly get used to these devices (habituate) and ignore them after a few days. Frightening devices are most effective if used at night when the geese are roosting. Because pyrotechnics are loud and can be annoying to neighbors, people within hearing distance and the local police should be notified. Prior to using pyrotechnics, check local ordinances for any restrictions that apply to these devices.

**Hazing** involves chasing geese from the site each time they arrive. To be successful, hazing must be consistently applied until the geese leave the area, and efforts must be renewed as soon as any geese return. As such, successful hazing programs may require the organized effort of many people for several weeks.

Because most people lack the time needed for hazing, some golf courses and cities have begun to use dogs to haze geese. Geese are afraid of dogs, and they respond quickly when one is in their area. Any dog may be a satisfactory hazer although border collies are preferred because they are bred to herd sheep and are more

relentless than other breeds in pursuing geese. However, dogs used for hazing must be supervised by a handler or tethered on a leash or a slip-wire. Some situations may allow the use of an “invisible fence” to restrict the dog. One potential drawback of using dogs to haze geese is that geese may swim out into the middle of the water and wait until the dog leaves. For hazing to be most effective, geese must be made to fly away.

**Repellents** currently marketed to deter geese from feeding on lawns have had limited success. The only goose repellent registered with the U. S. Environmental Protection Agency is ReJeX-iT. Recent research indicates that large quantities are necessary to repel geese, thus causing this repellent to be costly. Effectiveness of repellents varies due to weather, repellent concentration, and frequency of application.

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## Lethal Methods

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If nonlethal control efforts are unsuccessful and the damage situation persists, lethal control may be an option. Four forms of lethal control of urban Canada geese currently in practice are legal hunting, shooting out of season by permit, egg destruction by permit, and euthanasia of adults by government officials.

**Legal hunting** can be effective in reducing local populations and deterring geese from using areas that are hunted. Most states with populations of nuisance Canada geese offer special hunting seasons that target the local geese while they are moving in the fall but before or after the migratory goose populations move through. Special seasons often have more liberal bag limits than the regular season. All hunting must comply with local, state, and federal regulations regarding the harvest of Canada geese.

**Shooting geese out of season and egg destruction** require special permits. Your state fish and wildlife agency should be consulted for further information.

**Euthanasia of adult geese by government officials** was used as a large-scale damage control measure for the first time in 1996. This technique involves the roundup of adult geese during molt. The meat from the geese is usually given to local food banks. The goslings are either released or relocated. Because of the political sensitivity of this action, many states view this method as a last resort.

Any lethal measure used to control or manage damage caused by wildlife can generate negative public reactions. Plans to control wildlife damage should consider all possible sources of opposition prior to implementation and should involve state wildlife agencies. Effective methods for defusing possible confrontation are to include people with opposing views in the decision-making process and to educate the public in general as to the consequences of inaction.

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## Deciding Which Methods to Use

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Prior to selecting and implementing control measures, the following questions should be considered:

- 1) What is the site’s attractiveness to the geese (food, nesting structure, security, etc.)?
- 2) Can the attractiveness of the site to geese be lowered below that of alternative sites by increasing the geese’s perception of risk or by lowering food quality?

Because geese quickly habituate to one type of control, the full range of control measures should be considered. Canada geese are persistent and adaptable. Therefore, it is necessary to be diligent and aggressive when implementing damage-control procedures.

For more information on managing problems caused by urban Canada geese contact the state wildlife agency, a USDA-Animal Damage Control (ADC) office, the county extension agent, or a land-grant university wildlife specialist. If the nearest ADC office is difficult to locate, call the national office at (202) 720-2054.



## A Partial Directory of Suppliers of Devices for Urban Canada Geese

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No discrimination is intended against those companies or products not listed here, and it is not implied that the products or companies list are endorsed by Utah State University or the Jack H. Berryman Institute.

### **ReJeX-iT Repellent**

R J Advantage  
Cincinnati, OH  
1-800-423-2473

### **Pyrotechnics**

Agricultural Supply Inc.  
Escondido, CA  
1-800-527-6699

New Jersey Fireworks Co.  
Vineland, NJ  
1-609-692-8030

Reed-Joseph International Co.  
Greenville, MS  
1-800-647-5554

Stoneco, Inc.  
Trinidad, CO  
1-719-846-2853

### **Balloons and Flagging**

Birdbusters  
Washington, DC  
1-800-662-4737

Orchard Supply Co.  
Sacramento, CA  
1-916-446-7821

Bird-X, Inc.  
Chicago, IL  
1-800-662-5021

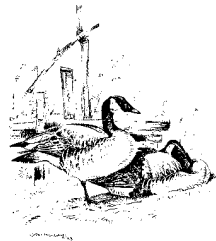
Sutton Ag Enterprises, Inc.  
Salinas, CA  
1-408-422-9693

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