

CANADA GEESE



Figure 1. Canada goose (*Branta canadensis*). Photo by Stephen M. Vantassel.

OBJECTIVES

1. Explain key elements about Canada goose biology important for their control.
2. Explain Canada goose control options to clients.

SUMMARY OF DAMAGE PREVENTION AND CONTROL METHODS

HABITAT MODIFICATION

- Ban public feeding of geese
- Grow trees to interfere with flight lines
- Allow grass to grow tall; avoid fertilizing
- Create vegetative or stone barriers around water

EXCLUSION

- Grid wires
- Fencing, non-electric and electric

FRIGHTENING DEVICES

- Human, coyote effigies
- Mylar® tape, flags, and balloons
- Lasers
- Remote controlled boats or aircraft
- Pyrotechnics
- Propane cannons
- Long range acoustic devices
- Bio-acoustic alarm and distress calls
- Dogs

REPELLENTS

- Anthraquinone
- Methyl anthranilate

TOXICANTS

- None registered

FUMIGANTS

- None available

SHOOTING

- Hunting
- Sharpshooting (Special Permit required from Wildlife and Freshwater Fisheries.)

TRAPPING

Netting

OTHER METHODS

Roundups

Nest control

OvoControl®-G

Egg addling

Alpha-chlorolose

SPECIES PROFILE

IDENTIFICATION

Canada geese (*Branta canadensis*) are a valuable natural resource that provides recreation and enjoyment to bird watchers, hunters, and the general public. The sight of the distinctive V-formation of a flock of Canada geese flying in the spring or fall is a sign of the changing seasons. Migrating geese do not necessarily cause nuisance problems. In this module we refer mostly to the flocks of local-nesting or “resident” geese that have become year-round inhabitants of parks, waterways, residential areas, and golf courses, often causing significant problems.

In many urban and suburban areas, expanses of short grass, abundant lakes and ponds, lack of natural predators, limited hunting, and supplemental feeding have created an explosion in resident goose numbers.

While most people find a few geese acceptable, problems develop as local flocks grow and the droppings become excessive (a goose produces about a pound of droppings per day). Nuisance problems include over-grazed lawns, accumulations of droppings and feathers on play areas and walkways, nutrient loading to ponds, public health

concerns at beaches and drinking water supplies, aggressive behavior by nesting birds, and safety hazards near roads and airports.

PHYSICAL DESCRIPTION

The Canada goose is one of the most widely distributed waterbirds in North America. The best identifying mark on Canada geese is the white cheek patch (Figure 1). Male (gander) and female (goose) Canada geese look similar, but the male is slightly larger. Canada geese are known for their V-shaped flying patterns and honking sound.

SPECIES RANGE

Canada geese live along both coasts and throughout central and lower U.S. In the summer, migratory geese fly north with many nesting in Canada and parts of Alaska. During the winter, they will migrate south. Geese inhabit the middle latitudes of the U.S. throughout the year (Figure 2).



Figure 2. Range of Canada geese, combining winter and summer residences.

NAME

Though commonly called Canadian geese, this name is in fact wrong. The correct name for the animal is Canada geese. The scientific name is *Branta canadensis*.

SIZE

Geese range in size from 22 to 48 inches from beak to feet and can weigh from 3 to 24 pounds. Large geese can have a wing span of 6 feet.

VOICE

Canada geese communicate through body language, calls and honking sounds.

TRACKS AND SIGNS

The droppings of Canada geese are usually tubular. Droppings have green coloration when grass is eaten (Figure 3). Tracks are easy to find in soft soils or sand (Figure 4).



Figure 3. Fresh dropping of a Canada goose. Photo by Stephen M. Vantassel.

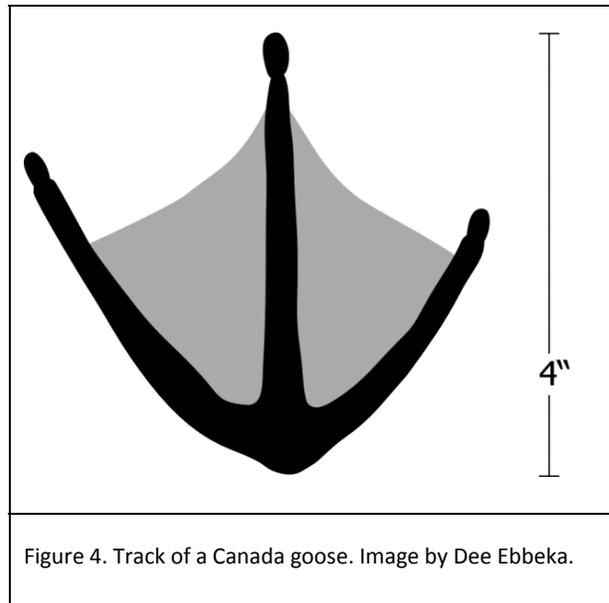


Figure 4. Track of a Canada goose. Image by Dee Ebbeka.

GENERAL BIOLOGY, REPRODUCTION, AND BEHAVIOR

The annual life cycle for geese begins in late winter when adult pairs return to nesting areas in late February or March, as soon as ice melts.

Before molting (a four to five week flightless period when birds shed and re-grow their outer wing feathers), some geese without young travel hundreds of miles to favored molting areas; this accounts for the disappearance or arrival of some local goose flocks in early June. After the molt and through the fall, geese gradually increase the distance of their feeding flights and are more likely to be found away from water. Large resident flocks, sometimes joined by migrant geese in October, may feed on athletic fields and other large lawns during the day, and return to larger lakes and ponds to roost at night. This continues until ice or snow eliminates feeding areas and forces birds to other open water areas nearby or to the south, where they remain until milder weather returns and nesting areas become available.

REPRODUCTION

Egg-laying (one to two weeks) and incubation (about four weeks) generally extend through April, with the peak of hatching in late April or early May, depending on location within the range.

Five to six cream colored eggs are laid in March, or later in cooler regions. Young geese, called goslings, weigh 3 to 4 ounces when they hatch. Within 24 hours they are swimming. Geese are precocial which means they are born with their eyes open, down covered and able to move about freely. Altricial birds, like robins, are born helpless and need parental support.

Geese aggressively defend their nests and may attack if approached. Non-breeding geese often remain nearby in feeding flocks during the nesting season. After hatching, goose families may move considerable distances from nesting areas to brood-rearing areas, appearing suddenly at ponds bordered by lawns.

After nesting, geese undergo an annual molt, a four to five week flightless period when they shed and regrow their outer wing feathers. Molting occurs from mid-June through late July, and the birds resume flight by August. During the molt, geese congregate at ponds or lakes that provide a safe place to rest, feed, and escape danger.

Severe conflicts with people often occur during the molt because the geese concentrate on lawns next to water and cannot leave.

Most Canada geese begin breeding when they are 2 to 3 years old and they nest every year for the rest of their lives. Resident geese may live more than 20 years in suburban areas.

Geese mate for life, but if one member of a pair dies the other will mate again. A female Canada goose may produce more than 50 young over her lifetime.

Canada geese develop strong bonds with mates and are very protective of their family group. Families

migrate together. They stay together in the winter and return to the same nesting area each year. Yearlings join other yearlings and move to new areas.

NESTING COVER

Canada geese build nests of twigs, grasses, bark, leaves and mosses on the ground near water. Islands are preferred nesting sites.

BEHAVIOR

Resident Canada geese, as their name implies, spend most of their lives in one area, although some travel hundreds of miles to wintering areas. Resident geese are distinct from the migratory populations that breed in northern Canada. Banding studies have shown that resident geese are not simply migrant geese that stopped flying north to breed. Canada geese have a strong tendency to return to where they were born and use the same nesting and feeding sites year after year, making them difficult to eliminate once they become attached to an area.

Additionally, geese will disperse from areas of higher concentration to lower concentration. Removal of geese from a particular pond will not necessarily mean geese will not inhabit the pond during the same season or the following year.

HABITAT

Canada geese prefer habitats with standing water and low sloping banks adjoining low grass.

FOOD HABITS

Canada geese are herbivores. They feed most often during early morning and late afternoon. They are grazers that eat grasses, a variety of terrestrial plants, aquatic plants, and occasionally agricultural crops (e.g., winter wheat and corn grain).

LEGAL STATUS

All Canada geese, including resident flocks, are protected by Federal and State laws and regulations, which govern the capture, handling, or killing of Canada geese, including disturbance of goose nests and eggs. Permits are required for some activities, but there are exceptions. Contact your local Wildlife and Freshwater Fisheries office for detailed information.

DAMAGE IDENTIFICATION

Damage by Canada geese is often very apparent. Look for over-grazed lawns, accumulations of droppings and feathers on play areas and walkways, nutrient loading to ponds, public health concerns at beaches and drinking water supplies, aggressive behavior by nesting birds, and safety hazards near roads and airports.

BIOLOGICAL SIGNS OF PRESENCE

Geese are obvious when they are present. As flocking animals, large numbers of these large birds can be seen and honking can be heard. Droppings accumulate rapidly; even if the birds are not actively foraging at a particular time of the day, droppings are sign of geese in the area.

DAMAGE TO STRUCTURES

Canada geese generally do not damage structures.

DAMAGE TO LIVESTOCK AND PETS

Canada geese may attack pets and animals that approach a nest or young.

DAMAGE TO LANDSCAPES

Geese are particularly attracted to lawns and ponds located near apartment complexes, houses, office areas and golf courses. The birds can rapidly denude

lawns, turning them into barren dirt areas strewn with feces.

Canada geese eat crops such as wheat, corn, rice, alfalfa, and turf grasses (grasses grown for lawns and golf courses). In some areas, Canada geese may cause agricultural damage to crops through consumption or trampling. Sprouting crops can be severely damaged by grazing, and muddy fields can be compacted by trampling, resulting in reduced yields to the farmer.

HEALTH AND SAFETY CONCERNS

Geese may charge or attack if nests are approached. They may inflict a painful bite or strike with the edge of a wing. People may be injured after slipping on goose droppings. Urban geese may create road hazards and traffic accidents.

NUISANCE PROBLEMS

GOOSE DROPPINGS

Most complaints about geese are from people frustrated with goose droppings. A single goose can defecate every 20 minutes and up to 1½ pounds of feces each day.

Droppings from Canada geese may contain cryptosporidium, giardia, toxoplasmosis, campylobacter, chlamydiosis, e-coli, listeria, pasteurilla multocida, salmonella, avian influenza, encephalitic viruses, and histoplasmosis. Legitimate concerns exist regarding the impact of goose droppings on water quality. Geese should not be permitted to congregate near intake sites for water treatment plants. Areas where people swim should be tested regularly for contamination if large numbers of geese are present.

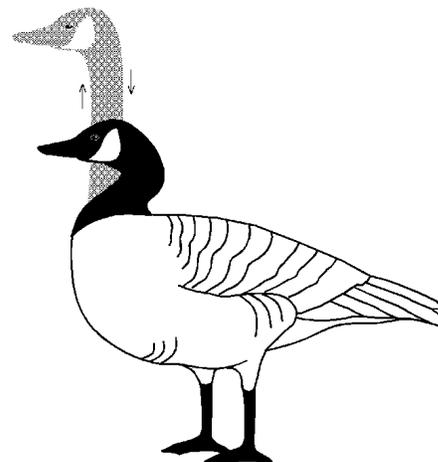
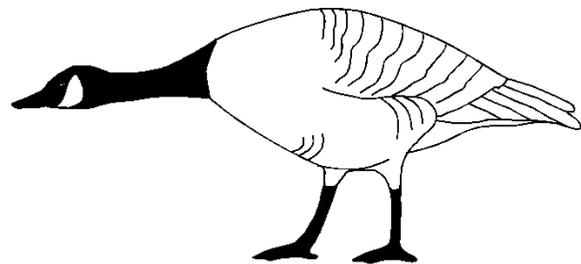
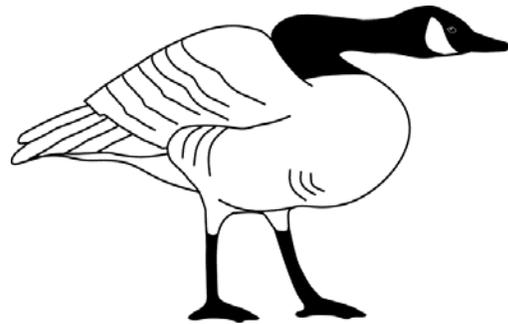
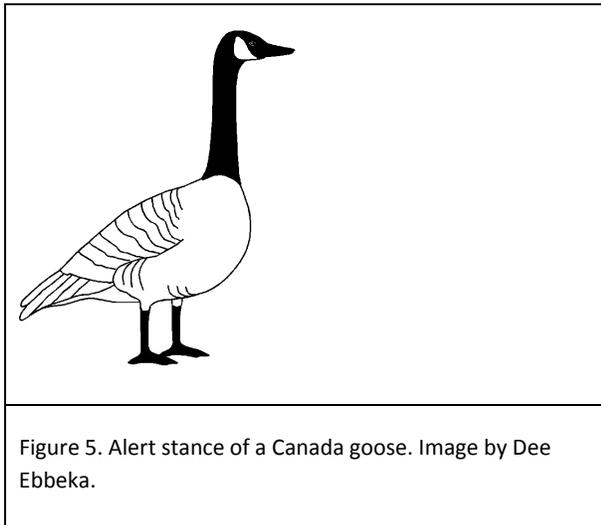
Fecal contamination on land where people could come into contact with feces, such as parks, golf courses, and residential areas has also been of great concern. People should wash their hands before

eating and change shoes before entering their homes or vehicles.

Excessive amounts of droppings can be aesthetically unpleasant on lawns, beaches, docks, sidewalks, athletic fields, and golf courses. If high goose numbers persist in shallow water areas, they may elevate levels of fecal coliform bacteria. Coupled with other contaminants, this can lead to the temporary closure of beaches. Public health agencies frequently test for levels of fecal coliforms to determine if public lakes are safe for swimming.

NESTING BEHAVIOR

Geese typically nest along shorelines and on islands, but they also may nest in shrubbery near buildings or parking lots. They often demonstrate aggressive behavior toward people while defending their nesting territory. (Figures 5-8).



Flock Behavior

Canada geese sometimes collide with aircraft causing substantial damage to property as well as loss of human life. Between 1991 and 1997, 16,949 civilian aircraft-wildlife strikes were reported to the Federal Aviation Administration. The number of reported strikes is likely about 20 percent of the number that actually occurred. The U.S. Air Force reports it has 3,000 bird strikes each year. About 90 percent of the strikes on aircraft occur on or near airfields when aircraft are below 2,000 feet. Strikes at this altitude are dangerous because aircraft are close to the ground and flight crews are occupied with complex take-off or landing procedures.

Gulls (32 percent), waterfowl (31 percent) and raptors (17 percent) have been increasing in numbers and are involved in 80 percent of the reported bird strikes where damage to airplanes occurred.

The most significant military aircraft disaster caused by birds occurred at Elmendorf Air Force Base on September 22, 1995. An E-3 Sentry Airborne Warning and Control System aircraft struck several Canada geese on take-off and crashed, killing 24 people.

More recently, US Airways flight 1549 was forced to land in the Hudson River after colliding with a flock of geese. Thankfully, no lives were lost in that incident.

DAMAGE PREVENTION AND CONTROL METHODS

INTEGRATED PEST MANAGEMENT

TIMING, ECONOMICS, AND METHODS

HABITAT MANIPULATION

Communities should enact ordinances to prohibit the feeding of geese (Figure 9). Plant trees around small ponds (< ½ acre) to interfere with flight lines.

Geese are grazing birds that prefer short, green grass or other herbaceous vegetation for feeding. Well-manicured lawns and newly seeded areas provide excellent habitat for these grazing birds. Wherever possible, let grass or other vegetation grow to its full height (10 to 14 inches) around bodies of water so that it is less attractive to geese. In time, most geese will stop feeding in those areas.



Figure 9. Prohibiting the feeding of geese is an important part of an integrated approach to goose damage management. Photo by Stephen M. Vantassel.

Geese prefer clear lines of sight so they can spot threats quickly. Avoid straight paths to water. Plant or encourage native shrubs to block the line of sight, and less palatable ground cover, such as ivy,

pachysandra, or junipers, to reduce food supply. Install large stones or cut steep banks to make travel between water and land more difficult for geese (Figure 10).



Figure 10. Large stones can interfere with goose movement between water and land. Photo by Stephen M. Vantassel.

Plant species of grass that are less palatable to geese, including some that go dormant in the winter. Geese tend to prefer Kentucky bluegrass, and are less attracted to fescue.

Minimize use of lawn fertilizers to reduce the nutritional value of grass to the birds.

Geese are very adaptable and nest in a variety of habitats, including wetlands, woodlands, flower gardens, and rooftops. Islands and peninsulas are preferred nesting sites and often support many more nesting geese than mainland shorelines. Avoid creating such features during landscaping of ponds in problem areas. Local zoning regulations may be a way to discourage habitat developments that favor geese.

EXCLUSION

GRID WIRES

Geese normally rest on open water or along shorelines and they tend to land and take off from

open water when feeding on adjacent lawns. Where practical, construct a system of suspended wires over the water to deny birds access to such areas.

Single strands of 14-gauge wire, 80 to 100 pound test monofilament line (stainless steel cable is also an option) line can be arranged in a grid with 10 to 15 feet between wires. Each wire must be secured so that it remains 12 to 18 inches above the water surface. Perimeter fencing may be needed to keep geese from walking under the grid. To reduce the risk of birds flying into the wires, attach brightly colored rope, flagging or other markers to make them more visible.

Grid-wire systems are not practical for bodies of water over 1 acre or when used for swimming, fishing, or other recreation. Golf course ponds, reflecting pools, wastewater ponds, and newly seeded lawns with limited public access, may be suitable. Human disturbance (vandalism) of grid wires may be a problem in public areas.

FENCES

Fences can be effective where geese land on water and walk up onto adjacent lawns to feed or rest. Fences work best during the summer molt, when geese are unable to fly and must walk between feeding and resting areas. In these situations, fencing, dense shrubbery, or other physical barriers installed close to the water's edge are effective ways to control movements of geese. Fences must completely enclose the site to be effective. Fences also may be used to block aggressive birds on nests near buildings or walkways. Although birds can get around most fences, direct attacks may be prevented. Fences around large open areas, such as athletic fields or ponds, has little effect on free-flying birds.

Fences should be at least 30 inches tall to block aggressive birds and solidly constructed. Welded wire garden fencing made with 2-inch x 4-inch mesh is durable and will last years. Less expensive plastic

or nylon netting is effective, but must be replaced more often. Fences may be hidden by planting shrubs close by.

Snow fence or erosion control fabric may be used as a temporary barrier to molting geese. Fences made of two parallel monofilament fish lines (20-pound test) strung 6 inches and 12 inches above ground and secured by stakes at 6-foot intervals can work, but are less reliable. Success has been reported with low voltage electric fencing. Two strands of at least 17-gauge wire are needed, 8 inches and 16 inches off the ground respectively or three strands at 5, 10, and 15 inches off the ground. Check local ordinances before installation.

FRIGHTENING DEVICES

Frightening devices are used for short-term control of nuisance behaviors. Haze geese as soon as they begin to inhabit an area to avoid their becoming attached to the location. Once nests are constructed, hazing is no longer a viable option. Geese, similar to other birds, quickly learn if something poses a real danger or not. They habituate to most scare devices in a few days to a few weeks, and the devices quickly lose effectiveness. The exception is using trained dogs or other natural predators.

Locate frightening devices so as not to become entangled in tree branches or power lines. They also may be subject to theft or vandalism in areas open to the public. Relocate the devices frequently to avoid acclimation to these materials by geese.

VISUAL

Various devices may be used to create a visual image that geese will avoid, especially if they are not already established on a site. Coyote effigies have been reported to have some success in frightening geese. The effigies can be as simple as black silhouettes to stuffed coyotes.

Geese normally are reluctant to linger beneath an object hovering overhead. Visual scaring devices are not likely to be effective on suburban lawns where trees or other overhead objects exist and where geese have been feeding for years.

Mylar-style tape that reflects sunlight to produce a flashing effect is often an effective deterrent for geese (Figure 11). When a breeze causes the tape to move, it pulsates and produces a humming sound that repels birds. Mylar-style tape is available in ½- to 6-inch widths. To discourage geese from walking up onto lawns from water, string the tape along the water's edge. Leave some slack in the tape and twist the material as you string it from stake to stake.



Figure 11. Irri-tape® is mylar tape and can be attached to poles to scare geese. Photo by Bird-X.

Flags or balloons can be placed on poles (6 feet or taller) in and around an area to be protected. Flags can be made of 3 to 6-foot strips of 1-inch colored plastic tape or 2-foot x 2-foot pieces of orange construction flagging (Figure 11). Balloons, 30 inches in diameter, with large eye-spots and filled with

helium, are sold at some garden or party supply stores. Several flags or balloons may be needed to protect each acre of open lawn.

Lasers have proven effective in dispersing geese at night. Red and green lasers have been successful in frightening geese. Use the lasers as soon as darkness permits. Do not use lasers during molt.

For small ponds, remote controlled boats have been used to repel geese. This technique may be practical if staff or volunteers are available on a daily basis (Figure 12).



Figure 12. Remote controlled motorboats can be an effective way to haze geese. Aaron Hildreth pictured. Photo by Stephen M. Vantassel.

SOUND

Noisemakers work best as preventive measures before geese establish a habit of using an area and where the birds must fly away to avoid the noise. At sites with a history of frequent use by geese and people, the birds may become acclimated in one to two weeks. Noise devices often are not effective for moving nesting geese.

Geese may be discouraged from an area through the use of various noisemakers or pyrotechnics. Shell crackers are special shells fired from a 12-gauge shotgun that project a firecracker up to 100 yards. Other devices, such as screamer sirens, bird-bangers,

and whistle bombs, are fired into the air from a hand-held 6mm pistol launcher. These devices generally have a range of 25 to 30 yards.

Automatic exploders that ignite propane gas to produce loud explosions at timed intervals are effective for migrant geese in agricultural fields, but are not suitable for residential or public areas.

The Long Range Acoustic Devices (LRAD) project a high decibel sound up to 153 dB out to 219 to 328 yards. The further an animal is from the source of the sound, the lower the decibel will be. LRADs are useful for hazing birds off of surfaces such as airports, parks, and golf courses.

Alarm and distress calls of Canada geese have been used to disperse geese from areas with varying results. Geese may only move to another side of the pond and may acclimate to the calls, but a commercially-available device (Goose-Be-Gone) is purported to overcome other reported limitations.

Check with local law enforcement agencies about noise control ordinances, fire safety codes, or restrictions on possession and discharge of firearms before using any of these techniques. Obtain special permits if necessary. In some areas, starter pistols are considered a handgun, and their possession and use may be regulated. Where discharge of firearms is allowed, occasional shooting of geese can increase the effectiveness of noisemakers, as geese associate the sound with a real threat. Special Federal and State permits generally are needed to shoot geese outside of established hunting seasons.

DOGS

Using trained dogs to chase geese is among the most effective techniques available. Dogs are used to disperse geese from golf courses, parks, athletic fields and corporate properties.

Border collies or other breeds with herding instincts tend to work best. The dogs must be closely supervised and except where permitted, compliance

with local leash laws or park regulations is still required.

Initially, chasing must be done several times per day for several weeks, after which less frequent but regular patrols will still be needed. Geese will not become acclimated to the threat of being chased by dogs.

This method is most practical where the dog and handler are on-site at all times, or where daily service (as needed) is available from private handlers. Another approach is to allow dogs to roam freely in a fenced (above ground or “invisible” dog fence) area that is not open to the public, but this may be less effective.

Dogs should not be used when geese are nesting or unable to fly, such as during the molt or when goslings are present. Use of dogs may not be practical near busy roads or where a property is divided into many small sections by fences, buildings, or other barriers. Also, dogs cannot repel geese easily from large water areas, but may be able to keep geese off shoreline lawns or beaches. Although this technique has proven effective, it can be expensive and labor intensive.

REPELLENTS

The commercial use of repellents requires the applicator to be a state-certified pesticide applicator. Special training is necessary to safely apply chemical repellents. The U.S. Environmental Protection Agency has approved the use of anthraquinone and methyl anthranilate as goose repellents on lawns. Geese will feed less often on treated lawns because they experience nausea or pain associated with the repellents respectively. Geese may still walk across treated areas to get to adjacent untreated areas.

Repellents lose effectiveness over time. The active ingredients are typically coupled with a chemical that can be seen in the ultraviolet spectrum. Geese can see this spectrum and it allows them to avoid

treated areas. These products are expensive and therefore are most practical in only small areas. Always follow directions on product labels.

Methyl anthranilate (MA) may also be fogged to cause geese to leave immediately. MA is a human-safe food flavoring derived from grapes.

TOXICANTS

No toxicants are currently registered for goose control.

FUMIGANTS

No fumigants are currently registered for goose control.

SHOOTING

HUNTING

Hunting in urban and suburban areas often is limited by lack of open space and local ordinances prohibiting discharge of firearms. Open shoreline areas, reservoirs and large private properties where access can be controlled (such as golf courses) are good places to try hunting as a control option.

Hunting can help slow the growth of flocks of resident geese. It removes some birds and discourages others from returning to problem areas. Hunting also increases the effectiveness of noisemakers, because geese may learn that loud noises may be a real threat to their survival.

A Federal Migratory Bird Hunting Stamp is required to hunt waterfowl, in addition to any state hunting permits and licenses. Hunters should check local laws regarding permits and the discharge of firearms. Landowners concerned about potential conflicts can easily limit the number of hunters and times they allow hunting on their property. For more information about goose hunting regulations or

setting up a controlled hunt, contact your state wildlife agency.

SHARP SHOOTING

A high-powered pellet rifle (.177 caliber) or .22 caliber rifle can be effectively used to remove individual or injured birds. A great deal of skill and discretion is required to make a humane and quick killing shot. Sub sonic .22 caliber loads can be used to minimize noise in urban areas. Shooting over water poses a great risk of ricochet. A better alternative may be a 12-gauge shotgun with No. 6 shot directed at the head and neck (Figure 13). A metrobarrel and subsonic loads can be used to minimize noise. Shooting geese outside the regulated hunting season requires Federal and State permits.



Figure 13. Target showing proper shot placement for rifle or pellet gun (small circles around eye) and shotgun (large dotted lines around head and neck). Image by Dee Ebbeka.

TRAPPING

Canada geese can be captured by nets propelled over a feeding location. This method is used only when geese are able to fly. If geese are in the molt period, roundups typically are used.

Nets launched with rockets or other explosive charges require additional special permits and safety precautions. The WCS Netblaster™ does not require these additional permits because it uses compressed air (Figure 14).



Figure 14. WCS Netblaster™ uses compressed air to launch a net. Photo by Stephen M. Vantassel.

Pre-baiting is required to lure geese into range of the net. Two individuals are required for successful trapping. One person must remain behind the net to launch it and the other must be at the side to call for the net to be fired. Both people are needed to ensure geese are properly positioned in the capture area. Once the net is launched, both people should to approach the net rapidly to subdue the geese to prevent injuries and escapes. Quickly grab geese by the wings or hold their wings tightly to the body and place them into holding cages. Canada geese can cause injury by hitting with their wings, biting, and scratching. Users must be cautioned that the NetBlaster™ is quite loud.

Any trapping of geese should be conducted by experienced personnel with appropriate Federal and State permits. Disposition of captured geese is often a concern. The public often opposes lethal control, and translocation may just move problem geese to

another area. Trapping is most often used for banding and research purposes.

OTHER

A lone goose may be captured using hand-nets or a carbon-dioxide-propelled net such as the Super Talon Ultra®. Consult law-enforcement in your area to see if the Talon is considered a firearm. Training in the use of the Talon is recommended.

HANDLING/DISPOSTION

RELOCATION

Relocation of geese is not effective except in a rescue situation.

TRANSLOCATION

Geese taken short distances (less than 50 miles) may return soon after they are able to fly. Adult geese are most likely to return, whereas goslings moved without parent birds often will join a local flock and remain in the release area. Some translocated geese return to their initial capture locations by the following summer. Birds that do not return may seek habitats similar to where they were captured.

Many wildlife and animal health professionals are concerned that relocating problem wildlife increases the risk that diseases may be spread to wildlife or domestic stock in other areas.

DISEASES

See Droppings.

CONTRACEPTION

OvoControl®-G is registered for control of egg fertilization in Canada geese. As long as female geese continue to eat the product during the laying

season, their eggs will be infertile. Use of the product requires federal and state permits.

EUTHANASIA

Geese are euthanized most easily with carbon-dioxide. Geese may also be euthanized by cervical dislocation (wringing the neck) but it requires training, strength, and skill to properly use this technique.

DISPOSAL

Refer to Volume 1 of the National Wildlife Control Program and your state regulations regarding carcass disposal.

OTHER METHODS

ROUNDUPS

The capture and removal of geese is an effective method of the period of molt when geese are flightless. Geese are flightless for a relatively short period of the year, so this technique is feasible only during early summer. Roundups can reduce year-round goose numbers in a given area significantly. Federal and state permits may be required for this activity (Figure 15).



Figure 15. Round up of Canada geese waiting to be tagged. Photo by Stephen M. Vantassel.

Roundups involve the driving of geese from the water to a fenced area on the shore where they can be corralled and removed. The corral site should be situated where geese can walk easily from water to the shore. Shaded locations situated away from the public are best.

The corral or fence must be at least 48 inches tall and made of plastic or cotton to prevent injuries to the geese. Your fence may be constructed from a large net hung with poles every 15 to 20 feet or by attaching nets to rectangular rings made from PVC pipes. Four netted rings (or more) sized 4 x 6 feet allow the sections of netting to be stacked for storage.

With the nets positioned in a crescent shape with the open end facing the water in the form of a funnel, technicians can paddle boats or use remote control boats to guide geese toward the shore with the net.

Careful planning is required for successful roundups. Round ups should be performed in the morning before temperatures reach 90°F (32°C) to prevent geese from heat stress. Technicians should be quiet and patient. Geese will quickly move away from approaching people and/or boats. Care should be taken to keep the geese together and directed toward the proper shore.

Once geese are on shore, technicians herd the geese into the net by walking slowly, hands outstretched. Once the geese have been herded into the net, the side(s) of the funnel are closed. The geese can then be hand captured by wildlife personnel. Canada geese tend to congregate on the side of the net farthest from people. In large groups, the juveniles may be trampled, so they should be removed from the net first.

The minimum number of technicians necessary for any size round up is two. One should be on shore and the other in the water. Roundups with 30 to 40 geese easily could require four to five personnel.

Captured geese must be moved quickly to the specially constructed trailer. Trailer boxes divided into four sections are ideal. Ventilation on the sides must be added. Young “fluffy” geese should be kept separate from the larger geese to prevent their being injured.

In large areas, it may be necessary to remove geese for several years to reduce densities. After geese are removed, the capture site will have substantially fewer geese for the rest of the summer or longer. Over time, geese from surrounding areas may move in if preventive measures are not in place.

Geese removed from problem areas can be processed and donated to charities for use as food. If properly handled by a licensed poultry processor, goose meat is a healthy and well received source of food for needy people.

NEST CONTROL

Geese usually return in spring to the area where they hatched or where they previously nested; resulting in increasing numbers of geese in areas that once had just a few birds. Local population growth may be controlled by preventing geese from nesting successfully. Although it is difficult to eliminate nesting habitat, harassment in early spring may prevent geese from nesting on a particular site. However, they may still nest nearby where they are not subject to harassment.

EGG ADDLING

If nest prevention fails, treating the eggs to prevent hatching is an option. This can be done by puncturing, shaking, freezing or applying 100% corn oil to all of the eggs in a nest. The female goose will continue incubating the eggs until the nesting season is over. If the nest is simply destroyed or all the eggs are removed, the female likely will re-nest and lay new eggs.

Federal and state regulations apply to any disturbance or treatment of Canada goose nests or eggs. Federal rules only require that persons register on-line at: <https://epermits.fws.gov/eRCGR> before conducting this activity. This website is also a good source of information about egg treatment.

Egg addling directly reduces the number of geese that will be present on a site later in the year. Geese without young will be more easily repelled from a site after the nesting season. If conducted on a large enough scale (throughout a town), egg treatment can help slow the growth of a local goose population, and over time lead to stable or declining numbers. Egg treatment may be necessary for 5 to 10 years before effects on goose numbers are evident.

ALPHA-CHLOROLOSE

Alpha-chlorolose is a chemical stupefying agent that is used to immobilize, anesthetize, and capture Canada geese that are susceptible to baiting. The product is only registered for use by certified employees of the USDA-APHIS-Wildlife Services.

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ONLINE RESOURCES

<http://wildlifecontroltraining.com>

<http://icwdm.org/>

<http://wildlifecontrol.info>

DISCLAIMER

Implementation of wildlife damage management involves risks. Readers are advised to implement the safety information contained in Volume 1 of the National Wildlife Control Training Program.

Some control methods mentioned in this document may not be legal in your location. Wildlife control providers must consult relevant authorities before instituting any wildlife control action. Always use

repellents and toxicants in accordance with the EPA-approved label and your local regulations.

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