



## -- Case Study -- Fort Logan National Cemetery

### About Fort Logan National Cemetery

Fort Logan National Cemetery is part of the Department of Veterans Affairs National Cemetery Administration system and is located in Denver, Colorado. It is situated on 214 acres and includes 2 picturesque lakes that enhance the beauty of the surroundings. The site is home to a Ceremonial Area and three Committal Shelters, which serve an estimated 450,000 Veterans in Colorado.

### Business situation

Fort Logan's staff is responsible for maintaining the extensive grounds for the Veterans it serves. The ground cover is principally turf with a significant number of trees that, combined, create a park-like setting. This setting and the presence of the 2 lakes has proven to be an ideal habitat for the Canada goose (*Branta canadensis*).

The Canada goose population is estimated at nearly 6 million birds in the United States alone. Throughout the country, large populations of resident Canada geese are often considered a nuisance and potential health risk because they foul land and water with their droppings. A single goose can generate up to 3 pounds of droppings a day.

Geese are present year round at Fort Logan. In addition, during migratory season and winter months, the population swells to well over a thousand birds. With a single goose generating up to 3 pounds of droppings per day, this presents a significant and ongoing concern.

Many different hazing methods have been developed that attempted to deter geese, but have proven to be ineffective. TKO Enterprises has developed a first-of-its-kind demand performance Canada goose deterrent. A low-cost, image-based, object recognition sensor that controls an array of geese hazing methodologies, the system is the only long-term solution for protecting specific areas such as Fort Logan's Committal Shelters and Ceremonial Area.

### Nuisance situation

Canada geese have been a nuisance at Fort Logan since 1997. Despite the efforts of the Fort Logan staff, including the involvement of State and Federal agencies, the geese remain a nuisance today. Not only do their droppings render areas unusable for cemetery services, the nuisance factor also has a significant impact on the maintenance operation budget.

Canada geese are attracted to grass and water. With two of the three Committal Shelters at Fort Logan located in close proximity to the lakes, this is where the geese population lands predominantly. They exit the lakes and graze across the property without limitation. With regular consistency (more often daily) the geese pass through the two Committal shelters, littering the Shelter services area, service sidewalk and parking lot with droppings.

This situation requires Fort Logan staff to clean these areas before the first service of the day, which is routinely scheduled for 9:00 a.m. The resources required for the clean-up involves a full-time maintenance employee for an hour and a half each day. The expense for each employee averages \$20/hour, which annualized totals over \$7,800 a year, *and does not include* the cost of repairing any damage to the grounds caused by the geese or clean up for special events.

Since 1997, the Fort Logan personnel have been attempting to address their goose nuisance problem by deploying most commercially available products. In addition, they have conducted trials with products that have never made it to market. Fort Logan continues to have a goose nuisance problem.

## Solution

To demonstrate the effectiveness of its revolutionary goose deterrent, the Goose Guardian, TKO Enterprises arranged to conduct a pilot program with Fort Logan. The Goose Guardian was deployed for 14 continuous days to protect the Ceremonial Area from goose droppings. It was then moved to Committal Shelter B, where it operated for 42 days. *In both locations, the Goose Guardian effectively prevented the geese from trespassing onto the grounds, keeping it free and clear of droppings.*

The Ceremonial Area demonstrated the most dramatic results. Prior to beginning the pilot, the area turf was cleaned by Fort Logan personnel. Within 14 days, the grounds were free of goose droppings (see left hand photo below). Within a day and a half of removing the working unit, and replacing it with a dummy unit (i.e. no electronics), the Area was once again littered with goose droppings (see right hand photo below).



**Ceremonial Area after 14 days of operation**



**1 ½ days after removing the working product**

The second location, Committal Shelter B, has a higher value for protection and showed similar results to the Ceremonial Area. *During the 42 days that the Goose Guardian was in operation, no goose droppings were found in the Shelter, service sidewalk or parking lot.* Furthermore, the Goose Guardian did not disrupt services at the Shelter by falsely activating.

The results were conclusive – **the Goose Guardian works!** And more importantly, the pilot program demonstrated the Goose Guardian's long-term effectiveness. It worked successfully at the Shelter for more than a month in contrast to other deterrents that only worked for a few days at most.

## Benefits

Proven effective, the Goose Guardian provides an unattended, unobtrusive and humane method of deterring Canada geese from trespassing into areas where their droppings create an expensive nuisance. It is an affordable, long-term solution that significantly reduces the cost associated with cleaning up the droppings and for Ft. Logan, increased visitor satisfaction.

**For the complete, detailed Fort Logan Pilot Program Report, visit  
[www.GooseGuardian.com](http://www.GooseGuardian.com)**

The views expressed in this Case Study do not necessarily represent the views of the National Cemetery Administration, the Department of Veterans Affairs, or the United States.