



**-- Case Study --**  
**Dock Protection for Canada Geese**  
**at**  
**Gaynor Lake**

### **About Gaynor Lake**

Gaynor Lake is a 70-acre private reservoir located in Boulder County, Colorado. It is approximately 40 miles north of Denver. Canada geese make Gaynor Lake their home year round.

The reservoir is surrounded on three sides by a small residential community that is comprised of approximately 60 homes. Half of these homes are lake-front properties with backyards on the reservoir. While the reservoir generally freezes during certain periods of the winter, two aerators maintain open water year round.

The Gaynor Lake subdivision is surrounded by farm land that is either part of the County's Open Space program or is governed by a conservation easement.

### **Study Location**

The location for this Case Study is a dock at one of the lake-front residential homes in the northeast corner of Gaynor Lake reservoir. The home is bordered on each side by other lake front homes where two of the neighboring homeowners encourage geese to use their property.

The shoreline of the study location is approximately 250 feet south from the house and has approximately 140 feet of shoreline that runs east to west:

- The western edge of the property is delineated by a 3-foot high split rail fence and a line of Russian Olives trees that extends to the shoreline.
- The eastern edge of the location is a mixture of small trees, bushes and a patio area.
- The balance of the study location is covered in turf, which is approximately  $\frac{3}{4}$  of an acre.

Features along the shoreline include a concrete boat ramp and a covered boat lift with a dock area. The rest of the shoreline is mix of rip-rap (rock) and dirt bank.

### **Nuisance situation**

Geese are present year round at Gaynor Lake, which has a resident Canada goose population of approximately 25 birds. During migratory and winter seasons, the population varies and, at times, can swell to several hundred birds.

The study location is an attractive spot for the geese. They exit the reservoir using the boat ramp as well as the dirt portion of the shoreline. The geese habitually graze in the turf area and as a result, cover it with their droppings. While this creates an ongoing nuisance for the property owners, a greater nuisance is created when the geese go onto the dock area and blanket it with droppings as well.

According to the study location's property owner, Ali Allen, *"It takes me over an hour to clean off the dock with a power washer – it's disgusting! Using the dock becomes an event because we need to clean it first, I'd like to be able to use it without having to clean it all the time."*

Canada geese are attracted to the grass and use the dock as a place to loaf and preen while they digest their meal and produce large amounts of goose droppings. Within two weeks of cleaning, the Allen's dock is once again blanketed with goose droppings.

### Solution

While many different hazing methods have been developed to deter Canada geese, they have proven to be ineffective. TKO Enterprises developed a first-of-its-kind demand-performance Canada goose deterrent known as the Goose Guardian. Employing an image-based object recognition sensor, it controls an array of geese hazing methodologies. The revolutionary Goose Guardian is the *only* long-term solution for protecting specific areas such as docks and other features of affected properties.

TKO Enterprises arranged to conduct a Case Study on the Allen’s dock. As a feature protection device, the Goose Guardian is ideally suited to prevent the geese from loafing on their dock. As part of the study, arrangements were made for TKO Enterprises to test some different hazing devices and new software.

The Goose Guardian was deployed to the Allen’s dock on June 5, 2011 after they cleaned two weeks’ worth of goose droppings from their dock. The unit was placed on the dock 20 feet from its entrance. Within 1 hour, the geese were attempting to enter the dock and were effectively hazed. Two experimental hazers were used until June 28<sup>th</sup> where the activation parameters and distance were varied from the dock entry. TKO collected data during this period and identified design improvements for the experimental hazers.



**The dock was clean 2 weeks ago**



**6 days after the start of the Study**

While the experimental hazers and software had sporadic activation, they drastically cut down on the amount of droppings during this 23 day period – at most there were six droppings in any one week period.

It is important to note that during the study period, only resident geese were present and the birds were flightless (molting), which means same birds were being hazed. On June 28<sup>th</sup>, the experimental hazer was replaced with the proven Tuber and, at 7 feet from the dock entrance, prevented any goose droppings from being deposited on the dock for over 3 weeks. (i.e. through July 22<sup>nd</sup>). As shown at right, the geese steered clear of the Goose Guardian and did not enter into the detection zone. *The Goose Guardian effectively prevented the geese from trespassing onto the docks, keeping it free and clear of droppings for over three weeks, proving that the Goose Guardian is an effective Canada goose deterrent!*



**After 40 days of operation, a zone of protection**

GOOSE GUARDIAN CASE STUDY:  
DOCK PROTECTION AT GAYNOR LAKE

The results were conclusive – **the Goose Guardian works!** And more importantly, the Case Study demonstrated the Goose Guardian’s long-term effectiveness. It worked successfully on the dock *for almost two months* in contrast to other deterrents that only worked for a few days at most.

*“The Goose Guardian has recovered our dock for us – it’s awesome,”* said Ali Allen at the conclusion of the Case Study.

**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 offensive nuisance. The Goose Guardian is an affordable, long-term solution that eliminates the time necessary for repeatedly cleaning goose droppings. For the Allen family, it now gives them the opportunity to relax and enjoy their property again without the added effort of cleaning the dock every week.

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