



Excluding Birds and Bears Sechelt Landfill

"We want to be good neighbours, we don't want to be creating litter on or off site. The birds are a wild-life of concern at the landfill."



Cathy Kenney
Solid Waste Operations Coordinator

PROJECT SUMMARY

Name

Sechelt Landfill

Market

Solid Waste Management

Location

Sechelt, west coast
British Columbia, Canada

Landfills in Canada follow strict guidelines and regulations, not only what can be put into a landfill but attention to methane, water, drainage and covering cells of daily waste.

Even with all these measures in place, there are struggles to control animals and birds that are attracted to the smells of fresh waste as an easy food source.

The Sechelt Landfill is very conscious of their environmentally footprint and Margo Supplies is proud to be working with them on wildlife management issues for the past 20 years.

THE CHALLENGES

Sechelt Landfill is on the wild, west coast of British Columbia, Canada. It is located right between a quarry and a coastal temperate rainforest, just off the ocean.

This area is home to wildlife including black bears, wolves, elk and a large year-round population of gulls, crows, ravens, starlings, and blackbirds. Hundreds of bald eagles migrate to the area in the winter.





CASE STUDY

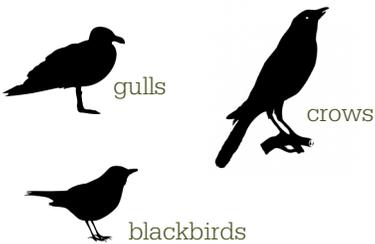
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Landfills contain all kinds smelly garbage, including residential food waste, which is a very valuable food source for wildlife.

Primary Species of Concern:



Secondary Species of Concern:



Despite the attractant, landfills are not safe places for wildlife, they can be exposed to heavy machinery or ingest chemicals and other harmful substances. Exposed garbage can interfere with the natural ecosystem by artificially increasing the population of some species.

Landfills isolate garbage from the surrounding environment (air, groundwater, rain). However, fresh waste in the active area is exposed to the air while it is being consolidated and compacted. Overnight it is covered with six inches of gravel before it is capped with a deeper cover.

Without other protection, bears can make short work of the daily cover material and easily access garbage. Even Bald Eagles and Ravens can get some access overnight. During the day, the day's waste is exposed and open for birds to receive food rewards.



Wildlife near landfills also pose hazards for humans. Bears will converge at unprotected waste, bird guano is a human health hazard and corrodes metal. Sometimes the flocks of seagulls are so thick it becomes hard for machine operators at the landfill to even see their work.

“Not only are they feeding here, which is a concern, but the birds are also spreading litter around the site. They are pulling things out, the plastic blows around, the eagles actually grab a lot of garbage in their talons and they take it off-site high into the trees and it falls down, creating a bear attractant.” - Cathy Kenny

ANIMAL FACT:



A seagull can get its entire daily calories from landfill waste in as little as five minutes instead of working all day searching for natural food.



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THE SOLUTIONS

Margo Supplies worked with the Sechelt Landfill to create a strategy to keep birds and bears from accessing garbage. Our goal was to prevent the birds from receiving a food reward by keeping them away during the day and providing a bird-proof nighttime cover system.

1. Electric Fencing

Keeping bears from accessing easy food such as at a landfill is both a concern for the safety of landfill workers as well as preventing bears from living at the site and consuming unnatural food.

Landfill scavenging bears can be the most determined bears and difficult to move as they are positively rewarded with a consistent high-calorie food source.

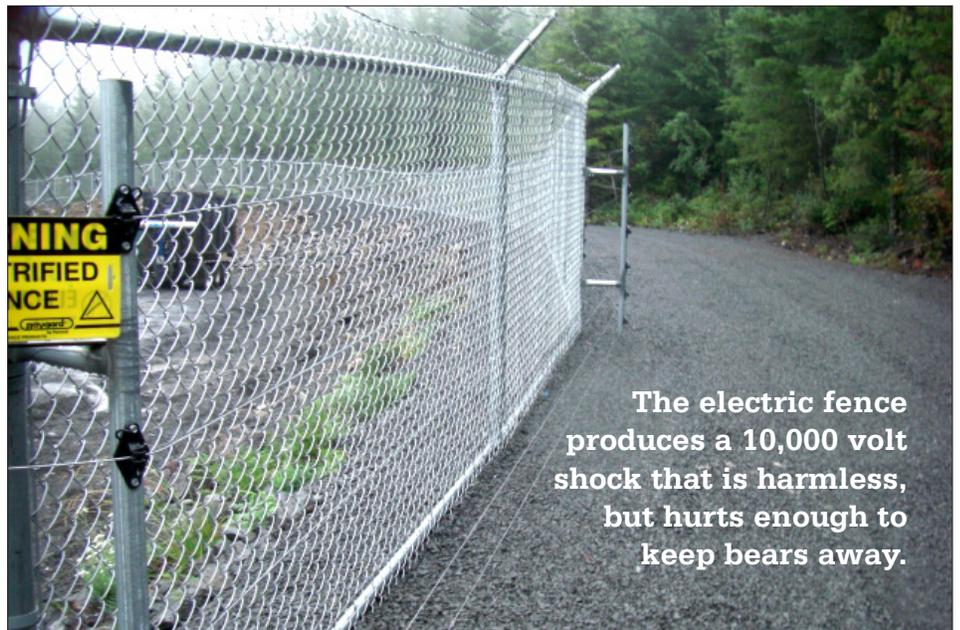
The electric fence prevented bears from entering the landfill but concern continued even after the fence was built as the bald eagles and ravens would scavenge on the active face then carry and drop waste outside the fence as they perch in the tall fir trees nearby. The waste was unsightly and created a continued bear attractant outside the fence. This created additional risk and cost as the landfill had to pay workers to clean up the areas outside the electric fence.

“When I first heard we were being required to put up electric fences at landfills in B.C. I was skeptical. I didn’t know how that would stop a bear. Electric Fencing is very effective, at this site it stopped the bears.”
-Cathy Kenny

In 1997 Margo built an electric fence at Sechelt consisting of:

- a four-strand hotwire with solar charger
- outriggered on an existing six-foot tall chain link
- chain-link behind the electric fence to prevent other animals from going through and acts as a catchment fence to contain loose rubbish.

Over **100** Electric Fences have been built at landfills by Margo Supplies.



The electric fence produces a 10,000 volt shock that is harmless, but hurts enough to keep bears away.

Electric fences are very effective, teaching even the most determined bears to move on and find natural food.



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"Wildlife issues, in any area need an integrative management strategy using a wide variety of tools and deterrents.

*-Jeff Marley, President,
Margo Supplies*

TOOLS USED

Rg-46 Launcher

(#5400)

The industry standard 15mm pyrotechnic scare cartridge launcher. Uses 6mm blanks. Reliable, easy to use, and fast firing.



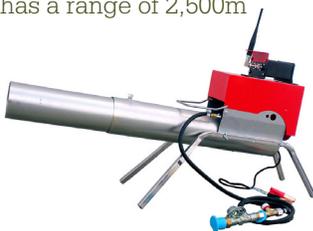
Pyrotechnics (#6000)

Travels 30m (90') downrange and explodes with a loud report, scaring wildlife out of the control area.



Zon Electra Scare Cannon with Radio Control (#1200)

Targeted on-demand bird deterrent. The long-range low-frequency radio controller has a range of 2,500m (8,200').



Whips (#1710-#1713)

The Rancher Stockwhip is made of nylon, coated with linseed oil, making it durable and resistant to water and dirt.



2. Sound and Visual Deterrents

Although birds and bears are attracted to the waste, if they are denied the food reward of fresh waste, they will go back to looking for natural food. A combination of physical, audio, and visual deterrents was used to prevent access for these animals.

Margo spent four days during the first phase using bird scare tools, also known as deterrents to keep the hungry birds away. We used and trained the staff in the use of pyrotechnics, scare cannons, and even whips.

Winter is the busy season for birds here and natural food can be scarce. At the start of the first day, there were hundred of bald eagles, raven, crows, and blackbirds on the garbage. We were particularly concerned with providing an environmentally friendly way of keeping the bald eagles and ravens away as these species were primarily responsible for spreading the waste outside of the fence.

The overall intention is to not interfere with the birds, their natural feeding or migratory patterns, but to keep them off the active face, forcing them to look elsewhere for food.



"We kept the control area very narrow, we were only trying to keep birds off the fresh waste," said Jeff Marley, President of Margo Supplies. "If they can't get food, they'll have to go elsewhere. The whip was very effective, the sharp cracking sound echoed around the site and visual impact of the swinging whip easily kept birds away."



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Margo trained the Sechelt Landfill staff how to use whips and pyrotechnics so they can continue to keep birds from feeding.

Landfill workers can also remotely activate propane scare cannons during working hours to further discourage birds from landing on the active face.

3. Eliminating the Reward

At the same time we denied birds daytime food rewards, Sechelt also received a delivery of the [Revelstoke Iron Grizzly](#). These giant metal panels are an Alternate Cover Material that provide a bird/wildlife proof cover for the active face afterhours.

"We are also looking at ways to keep the birds away using pyrotechnics, propane cannons, and even whips! So it is a two-pronged approach at this point. This time of the year the days are not that long, but in the summertime, the crows and ravens will stay onsite until dusk, so they have a lot of time to eat after we are closed. This should really stop and discourage all species of birds from thinking this is an all-day buffet kind of situation." -Cathy Kenny

"The beauty of the Revelstoke Iron Grizzly is, that unlike other alternate cover material, the operator never leaves the cab of their machine, avoiding the hazards of exposure to waste."

- Brett Renauld, Revelstoke Iron Grizzly.

The most precious commodity and overriding problem in a landfill is airspace. The amount of space is directly related to the capacity and usable life of the landfill. [How Landfills Work](#)



The Iron Grizzly is an excellent solution to providing cell coverage and removing an overnight feeding access when summer comes and daylight continues after closing.

The reusable, stackable metal covers have quick connectors and are easily moved on and off with a loader or excavator.

An effective, time-saving alternative for covering active cells at night, replacing the standard application of six inches of gravel, which is expensive and a challenge when the ground is frozen.

Adding six inches of gravel cover is costly in machine time, materials and space. The Iron Grizzly can extend the life of a landfill by 50 per cent or more.



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Margo Supplies provides effective, non-lethal solutions for human-wildlife conflicts.

Over 38 years experience keeping wildlife out of landfills and industrial sites.

[Contact us](#) to discuss environmental solutions to your wildlife management needs.



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SUMMARY

Most often, like at the Sechelt Landfill, it is necessary to provide a multi-faceted, behavioral-based approach for effective long-term solutions.



These techniques deter birds from daytime feeding as well as from landing and dropping excrement on equipment. Less birds swarming means reduced damage to equipment, reduced health risks to staff and a smaller environmental footprint.

“It’s great to work with a forward-thinking operation like the Sechelt Landfill. Cathy and her crew understand that wildlife management is part of the ongoing operation of the site and that their strategy and tool belt needs to continually evolve to meet the latest challenge.”

– Jeff Marley