

Rethinking the “Scoop it, Bag it, Trash it” Approach to Make Dog Waste Disposal in the Lower Trent Region Watershed More Eco-Friendly

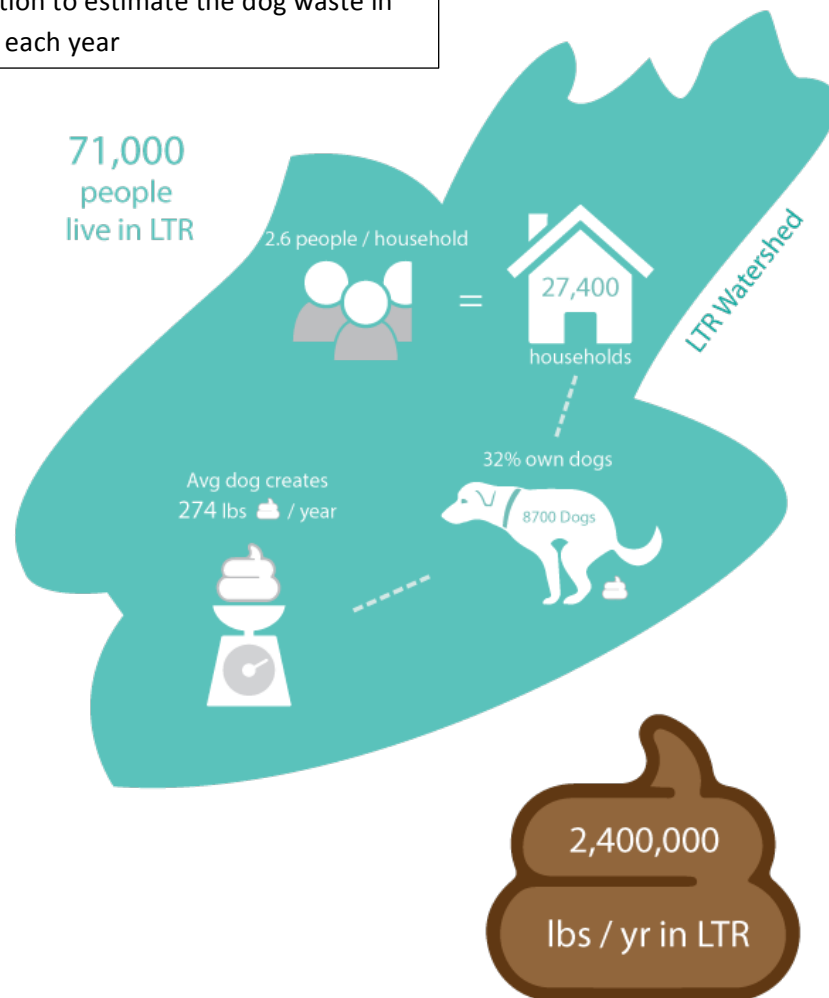
A proposal for the Caring for Our Watershed Contest by Kendrick Webster

Overall Goal: This project will reduce the bacteria levels in the Lower Trent Region (LTR) Watershed by educating dog owners about the environmental impact of dog waste disposal and providing them with an eco-friendly alternative, the Dog Waste Digester.

Watershed and Environmental Concerns

Many people have dogs that they love and care for, but are they aware of the environmental impact of the waste that the dogs produce? Based on Canadian statistics, I have estimated that the Lower Trent Region Watershed is home to 8700 dogs. Altogether they would produce 2.4 million pounds of fecal waste per year and the majority of this ends up in landfills across the LTR.


Fig. 1 – Calculation to estimate the dog waste in LTR watershed each year



- Population of LTR watershed = 71,000¹
- 2.6 people per household in Ontario²
- 32% of Canadians own dogs³
- Average dog creates 274 lbs of waste per year⁴

Using current dog waste disposal methods, millions of bacteria enter our air, land, and water⁵. Examples of harmful bacteria that enter our watershed from dog waste are E.coli, salmonella, and giardia⁵. These contaminants shouldn't be in our environment and have consequences such as diseases like roundworms or whipworms, breakdown of immune systems, and in serious cases, death^{6,7}. If we can start disposing dog waste differently, it will result in better air quality, it will cut down on water pollution, and will decrease the rate at which our landfills are growing. Through this project, I will educate the community about safer ways to dispose of dog waste.

The most common way to dispose of dog waste is to pick it up, bag it and put it into the garbage. This is the disposal method that is recommended by our local municipalities⁸. There are many things that go wrong when this happens. First, the bag rips open in the landfill and the untreated waste leaches into the surface and groundwater, contaminating the water table⁹. This waste can also produce methane which is a contributor to global warming⁹. Studies show that air samples contain bacteria that can be traced back to dog waste⁵. You might think you're being environmentally conscious when you use biodegradable bags. The problem is, these bags need to be exposed to extreme heat to biodegrade⁹. These compost conditions aren't usually met in a landfill⁹ but if they are, the waste inside is still untreated. What could we do differently? There are alternatives available as summarized in the following chart¹⁰.



Dog Waste Containment Options

	Biodegradable Materials	Compostable Materials	Uses Landfill Space	Uses Water	Convenience	Maintenance Required	
Petroleum Based Plastic/Waste Bags	No	No	Yes	No	Easy	None	Petroleum Based Plastic/Waste Bags
Corn Based Waste Bags	Yes	Yes	Yes	No	Easy	None	Corn Based Waste Bags
Flushable Waste Bags	Yes	Yes?	No	Yes	Med	None	Flushable Waste Bags
Mini Septic Digester System	NA	NA	No	Yes	Med	Med	Mini Septic Digester System
Compost or Bury	NA	NA	No	No	Med	High	Compost or Bury
Sewer Flush Kit	NA	NA	No	Yes	Easy	None	Sewer Flush Kit

Project Details

In this project, I will be educating the LTR watershed community about how the dog waste put in the garbage is hurting our environment. I will provide information on options to reduce the amount of dog waste going to landfills across the LTR. I will have public presentations and announcements through local radio stations to communicate the problem of improper dog waste disposal and the environmental concern that it is. I will also offer solutions to dog owners to help them reduce the harmful effects of dog waste. The proposed ways to dispose of dog waste aren't going to stop the problem completely, but will reduce the environmental impact of our dog waste disposal.

It is very important to educate people because many dog owners are just unaware that dog waste disposal creates environmental problems. I will be making dog waste digester systems to provide dog owners in the LTR Watershed with an environmentally friendly alternative to dispose of dog waste. I will educate the families on where to install them and how to use them.

There are a few alternate methods to consider, but the one that I have chosen is the dog waste digester system. These digesters are easy to use and convenient, and the waste is filtered so it doesn't contaminate the air, land, and water. The digester system is made from a garbage can. You make holes throughout the sides. Then you dig into the ground deeply enough so only a quarter of the garbage can is visible above the ground. Then, inside the can, you will need to add a layer of rocks and water. You can also add septic starter solution to speed things along. This system filters the fecal waste into the ground¹¹.

I am going to give away 24 dog waste digesters and will be selling the others depending on the demand. I will provide flyers to educate the public to create awareness about the improper disposal of dog waste with my contact information so they can order dog waste digesters. There will also be links to websites so they can expand their knowledge about dog waste. I will be handing these out to every student in my school.

Budget

Item	Source	Cost (including tax)
	Home Depot	$\$39.58 \times 24 = \950
	Canadian Tire	$\$14.68 \times 4 = \58.72
	Home Depot	$\$7 \times 36 = \252
<p>Photos: Reference www.homedepot.ca www.canadiantire.ca</p>	<p>\$1260.72 for 24 Dog Waste Digesters</p>	

Benefits

We need to start disposing dog waste in a way that won't have such a negative impact on our environment. By educating the community, and offering them alternatives, they will be more likely to improve their practices. Using dog waste digesters in our watershed will cut down on dog waste wrapped in plastic bags in our landfills. Improving the disposal of dog waste will reduce the harmful bacteria in our air, land, and water. It won't completely fix the problem, but it will be a start.

This project has potential economic benefits for our watershed and municipalities. People are investing in local economy with the purchase of a dog digester. The municipalities save money with people using the dog digester because it reduces the amount of waste they have to take to the landfills and could invest that money into other ways to benefit the population.

Conclusion

Dog waste is a major environmental problem in our watershed and we need to improve how we deal with this waste. My main goal is to decrease the environmental impact of dog waste in the LTR watershed. To make this happen, I will create awareness about this problem and will work towards having dog waste digester systems being used by dog owners and decreased bacteria levels in the Lower Trent Region Watershed.

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