

**To:** Erika Paterson  
**From:** Brent Hanover  
**Date:** February 1, 2019  
**Subject:** Proposal for Reducing Non-Recyclable Waste at UBC Food Vendors

### **Introduction:**

Waste management is a part of society that we interact with every single day but often pay little attention to. Takeout containers, plastic food wrappings, straws, Styrofoam cups, disposable utensils and other single use plastics comprise about half of the world's annual 350 million ton plastics production. It's bad enough that the overwhelming majority of these single use plastics are sent directly to landfills, but millions of tons of plastic are also added to the ocean every year.

While the fault of this massive pollution crisis lies at the fault of the manufacturer of these single use plastics, plastic waste can be reduced by implementing green initiatives in local communities. UBC appears to be forward thinking with the different recycling bins in each building, but single use utensils, Styrofoam sushi boxes, plastic takeout containers, straws, and coffee cups can be easily found in almost every food vendor on campus. There must be more dramatic environmental initiatives put in place to reduce the amount of single use plastics sent to landfills at UBC. This report details viable methods of not only implementing plastics reduction initiatives, but lowering costs for local businesses by consolidating supply chains.

### **Statement of Problem:**

Every year, 500 billion disposable cups, 500 billion plastic bottles, 4 trillion plastic bags, and 250 billion plastic straws are produced worldwide every year, yet only a tiny fraction of them are properly recycled. 40 percent of all plastic produced in the world is single use and 32 percent of that single use plastic ends up in our oceans. Canada currently produces about 2 percent of the world's plastic, and in order to reduce global waste we should be striving to reduce our dependency on plastic. We can be doing this on a local level by either only using recyclable single-use plastics, or using biodegradable alternatives.

### **Proposed solution:**

By far the best environmental measures that can be enacted is non-use. While recycling is a viable solution to plastic waste, the only way to truly eliminate plastic waste is to not use single use plastics. In order to solve this ecological issue at a local level, there should be anti-plastic initiatives implemented in all food vendors in UBC. A poor solution would be to ban single use plastics and impose fines on local businesses who do not comply. A better solution is making environmentally friendly single use items a more cost effective solution so they are motivated to make the change. It is possible to not only eliminate single use plastics by replacing them with environmentally friendly alternatives, but also lower costs through innovative supply chain management.

The first step to reducing costs for local businesses would be to create a standard list of approved environmentally friendly single use food items. These items would include straws, takeout boxes, cups,

cutlery, napkins, and bags. Then, UBC would broker high volume deals with suppliers to receive the lowest costs possible as mass manufactured parts are always cheaper in higher volumes. Finally, UBC could offer lower prices to local food vendors, replacing their higher cost items. This would be a huge win for both local businesses and the environment as they would be able to switch to less wasteful products and simultaneously increase their profit margins.

### **Scope:**

To assess the feasibility of this project I plan to research four areas:

1. What single use plastic products are being used at a sampling of food vendors at UBC?
2. What approximate volumes do these vendors see yearly?
3. Are they willing to change suppliers if more cost-friendly alternatives are presented?
4. Are there modern technologies that can provide truly zero impact single-use food items?

My intended readers are the owners of UBC restaurants and UBC food services. They can act on my recommendations because they are the ones that are purchasing non-recyclable food items.

### **Methods:**

The study will be conducted by surveying for what types of single use disposable food items (takeout containers, straws, cups, cutlery, etc) are being used at different UBC food vendors. Volumes can be estimated from UBC reports. Costs can be estimated by procuring quotes from local suppliers in the approximate volumes seen in the aforementioned reports. All of this information can then be compiled to prove whether or not there are cost-effective environmentally friendly alternatives.

### **My qualifications:**

I have a degree in Mechanical Engineering and have worked in a medium volume manufacturing facility for four years. I am very familiar with supply chain management and driving cost savings initiatives through mutually beneficial innovation. At my workplace I have reduced yearly cardboard waste by over 1 000 000ft<sup>2</sup> and decreased annual cardboard expenditure by over \$170 000 (32%).

### **Conclusion:**

Immediate action is needed to combat the worldwide plastic pollution crisis. Anti-plastic initiatives must be driven at a local level to reduce the amount of single-use plastics being used by members of UBC. The best solution would be to be able to provide UBC food vendors with lower cost recyclable materials so they have incentive to reduce the use of single use plastics. Ideally, this initiative will be powerful enough to bring the net waste of the entire university to zero.