UBC Social Ecological Economic Development Studies (SEEDS) Student Report

Baseline Inventory of the UBC Food System: Socially and Ecologically Responsible

Food Options and Action Plan

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# University of British Columbia Food System Project 2012

Baseline Inventory of the UBC Food System: Socially and Ecologically Responsible Food Options and Action Plan

Scenario 3 | Group 7

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a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA



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# **►** ABSTRACT

This is the first attempt by the University of British Columbia Food System Project to engage franchises in working towards a sustainable campus. The problem identified illustrate that franchises on campus are currently exempt from following the various strategies and initiatives set forth by the university to curb unsustainable practices. Therefore, through a Baseline Inventory of Socially and Ecologically Responsible Food Options, the team was able to evaluate the sustainability of food options at three franchises - Triple O's, Tim Hortons and Starbucks Coffee. Although Tim Hortons and Triple O's have implemented composting bins on-site, the current resources in place are ineffective in guiding correct waste sorting behaviour. The team collaborated with Triple O's to categorize their packaging materials into compostable, recyclable and garbage items. Templates were created for Triple O's to consider; however, they expressed desire to design their own signage. To demonstrate the efficacy of the proposed intervention, temporary signage were put up at Triple O's; surveys conducted at the restaurant during peak hours were compared to pre-intervention observations. Through the survey, improvements were noted after signs were in place. Recommendations to stakeholders involved are given based on data and observations collected.



Overflowing Waste at Triple O's

# MEDIA RELEASE



he third scenario of the University of
British Columbia Food System Project
involves three franchises on the UBC
campus and evaluates the socially and
ecologically responsible food options they provide.
These franchises include Triple O's, Tim Hortons
and Starbucks Coffee. The main goal of this
project was to compare the practices of franchises
to other UBC food outlets as franchises do not
have to adhere to sustainable standards set by

UBC. A prominent factor was the inaccurate waste disposal seen at the franchises. We partnered with Triple O's Supervisor, Josie Midha to conduct further research on waste disposal. The knowledge deficit on the proper disposal of waste materials at Triple O's was resolved through working with Victoria Wakefield, the Purchasing Manager of UBC Food Services. Through Victoria, we learned that most of the items were recyclable or compostable, with only several items that belong in garbage.

Several on site visits helped to determine how waste was disposed of by patrons of Triple O's through detailed surveys that were conducted to observe customers' behaviours of waste disposal habits. We first conducted the survey through observation of disposal patterns with existing no-visual signage (bins labelled: garbage, recycle, composting). The next visits included two on-site visits with the addition of Triple O's packaging-specific visual signage. With our results compiled, we then established several recommendations for Triple O's and other stakeholders.

Through this project, our team hopes to encourage other franchises at UBC to become more active in the movement towards more sustainable operations. We also hope to improve the overall recycling and composting knowledge of students to further establish UBC as a leader in sustainability.



#### **► INTRODUCTION**

The UBC Food Systems Project (UBCFSP) is a collaborative, multi-faceted community-based initiative that aims to progress the University of British Columbia (UBC) towards a vision of a sustainable food system. As a large component of the capstone course in the Land, Food and Community Series, the UBCFSP is unique in that it builds upon the work of over ten generations of researchers. Guided by an annually updated *Vision Statement for a Sustainable Food System* to reflect the complex nature of food systems, the UBCFSP, as a Community Based Action Research initiative, benefits the student researchers, the teaching team, the stakeholders involved and future generations of UBC students.

This report begins with a definition of the problem at hand and addresses how this project is relevant in the contexts of the global, North American, and UBC food systems. A discussion of the UBCFSP Vision Statement will provide insight into our team's values and perspectives on the principles stated. The methodology section details how the project progressed through utilizing literature review, surveys, stakeholder meetings, and examination of projects conducted by past Land and Food Systems (LFS) 450 students. The proceeding section objectively illustrates the findings and outcomes gathered about consumers' disposal habits, a baseline inventory list, and packaging at the on-campus franchises investigated. From these findings, the discussion section describes the implications of the data and the connections it has to the UBC Food System. From synthesizing information obtained and critically evaluating the project scenario's objectives, we were able to develop specific, time-bound recommendations for all stakeholders involved.

#### **Problem Statement**

In a global report conducted in 2007, Canada was ranked last out of seventeen countries and received a "D" grade on the municipal waste generation calculator (The Conference Board of Canada, 2011). Canada produced 894 kilograms per capita of municipal waste – well above the average of 635 kilograms per capita and more than twice as much as Japan, the top performing country (The Conference

Board of Canada, 2011). The municipal waste generated per capita in Canada has been on the rise since 1980 and almost doubled between 1990 and 2006 (The Conference Board of Canada, 2011). Statistics Canada (2008) estimates that approximately 35 million tonnes per year of waste is being generated, and that more than 78% of this ends up at landfills. However, an estimated 50 – 60% is organic waste that can be diverted from landfills if alternative technologies are in place (Statistics Canada, 2008).

Waste diversion options are not only important on the household level, but also on the business and industry levels as well. Businesses, including fast food chains and franchises, account for 67% of the waste generated across Canada (Statistics Canada, 2008). Therefore, it is becoming increasingly more imperative that socially and ecologically responsible food and waste management options be implemented nationwide. In recent years, sustainable waste management programs have become more visible, particularly within Canadian universities such as UBC.

The UBC Food System involves a complex network of collaborators, stakeholders, and students including UBC Food Services, the Alma Mater Society Food and Beverage Department (AMSFBD), UBC Waste Management, and the Faculty of Land and Food Systems. In 2005, UBC implemented a university-wide, five-year strategy committed to creating a more sustainable campus (Campus & Community Planning, 2011). UBC aimed to achieve this by operating in a socially and ecologically responsible way. This meant that food and waste operations on-campus had to fulfill its social responsibility through improving human health and safety, increasing sustainability inside and outside the university, and making UBC a sustainable community model (Campus & Community Planning, 2011). The university defined its ecological responsibility as reducing pollution, conserving resources, and protecting biodiversity (Campus & Community Planning, 2011).

Throughout the years, UBC has put into place sustainability programs such as WasteFree UBC, on-campus composting, and the provision of fairly traded and organic coffee at all UBC Food Services-run outlets. In addition, the AMSFBD provides discounts for reusable containers and support the

purchase of UBC Farm produce. These sustainability initiatives, among many others, demonstrate that advancing sustainability efforts is a top priority at UBC.

In recognition as a leader in sustainability, UBC received a "Gold" rating by the Sustainability Tracking, Assessment and Rating System for sustainability achievements in higher education in 2011 (UBC Public Affairs, 2011). That same year, UBC was also named Canada's first Fair Trade Campus through an evaluation conducted by Fair Trade Canada (UBC Public Affairs, 2011). This evaluation, however, explicitly excluded on-campus franchises from the assessment (UBC Public Affairs, 2011).

Although there have been great efforts to promote sustainability, on-campus franchises are excluded from the standards of sustainability that UBC-run food outlets are mandated to follow. Franchised food providers have become an inherent part of the UBC campus with a population of 48,000. Therefore, franchises represent an area of improvement in the UBC Food System's movement towards a more sustainable campus community.

This project serves to audit and evaluate the extent to which franchises make an active effort in providing socially and ecologically responsible food options across campus. With baseline inventory data of food and food packaging options from three select franchises – Triple O's, Tim Hortons, and Starbucks Coffee – an evaluation can be conducted to assess the sustainability of their operations through the products they offer. Through gathering this information, on-campus franchises will be encouraged to become a more integrated component of the UBC community, working together towards a shared goal of a sustainable UBC Food System.

Integration of on-campus franchises will not only benefit the UBC Vancouver Campus, rather, its success can be looked upon as an example and replicated outside the university's boundaries in municipal, provincial, national and global arenas where franchises exist. With the goal that external food system policies will be affected and modified to reflect the shift to responsible sustainability internally within the UBC Food System, collaboration with franchise outlets and development of strategies to be implemented

and evaluated on campus are key steps along this process. Ultimately, an evaluation of the project's success will further secure UBC's position as a leader in campus sustainability while challenging other campuses across the nation and the world to explore innovative solutions.

#### **Value Assumptions**

After our initial meeting, the team unanimously agreed that we wanted to affect change at the franchises in our scenario. Whether the change is great or small, we were optimistic and willing to learn more about franchise operations on the UBC campus. Through meetings with Josie Midha, manager of Triple O's on campus, their issues with improper waste disposal strategies were revealed and explained. While Triple O's and Tim Hortons have implemented compost bins on site, current cues to action in aiding sorting behaviours of their patrons are inadequate. Our group felt that the lack of applicable knowledge hinders people's awareness to the effects of overflowing landfills due to excessive waste produced.

While we agree with many of the principles listed in the *Vision Statement for a Sustainable UBC Food System*, very few had direct relation to our scenario. We also recognize the difficulty in recommending changes when corporations are involved. Although possible, it is certainly not feasible within the time span of this project to implement permanent changes to the corporation's front-line retail outlets. Structured at the bottom of the hierarchy to the corporate brands they represent, change is often managed through a *top-down* approach; a *bottom-up* scenario involving students with limited knowledge about the company or the industry is not often considered.

We feel that the vision statement is an adequate list of guiding principles for the UBC Food System. While the majority of the principles are not directly applicable to our scenario, they do reflect what all stakeholders of the UBC Food System want for their campus. However, a few principles are over-idealistic and unattainable at the present time for the UBCFSP. For example, we often take for granted the inexpensive ingredients sourced unethically from developing nations. In order to alter this

practice, it may take years before concrete changes can begin to occur even at UBC, a campus often synonymous with sustainability. Therefore, it may take several more years of the UBCFSP before UBC is truly sustainable. We believe that it is also important to include a principle defining what should be considered socially, environmentally and economically feasible food options.

Although each team member may come from different backgrounds and view the project through various lenses and paradigms, collectively our take on the scenario is solid and uniform. While initiating change is desirable, we recognise that limits do exist. Though we may be hindered by these obstacles, we feel that our efforts will and can be momentous for future UBCFSP teams.

# ► LITERATURE REVIEW

#### **McGill University**

In May 2010, McGill University's Office of Sustainability acquired Big Hanna, an in-vessel composter for their downtown campus (Waste, 2012). The on-campus composter is the largest of its kind in North America and composts pre-consumer food waste daily from various campus food service locations. With the installation of Big Hanna, at least 62 tonnes of organic waste generated at the university can be processed on-site annually (Waste 2012). The in-vessel composter also provides great opportunities for students to get involved through course work as well as the Gorilla Composting project, a student-run volunteer-based organization (Gorilla Mission Statement, 2010). In addition to the diversion of campus generated organic waste to the composting facility, the Gorilla Composting project at McGill has ambitions to implement a vermiculture initiative (i.e. worm swap) that will help to educate their local communities about vermicomposting (Gorilla Mission Statement, 2010). In the long term, the Gorilla Composting project looks to install a campus-wide composting infrastructure for every McGill building and residence with an appropriately sized composting facility (Gorilla Mission Statement, 2010).

Looking towards the future, McGill has created Vision 2020, a goal that aims to harness the energy behind various on-campus sustainability initiatives that will develop and build an overarching vision and action plan for the university community by 2020 (Vision 2020, 2012). Components of Vision 2020 include McGill's \$800,000 per year Sustainability Projects fund, Local Food Day events, and the creation of the Office of Sustainability in 2010 (Vision 2020, 2012). In expanding sustainability initiatives already in place and creating new innovative programs, McGill's vision of a more sustainable campus community will be achieved.

#### **Simon Fraser University**

At Simon Fraser University (SFU), they have recently implemented two units for compostable and recyclable materials (Waste initiatives, 2012). The collected materials are then transported to an off campus composting facility in Richmond for further processing (Bowen et al. 2008). In the Zero Waste SFU report, several recommendations were made to help decrease the amount of waste at SFU (Bowen et al. 2008). Of these recommendations, the most difficult is to combat the heavy use of Styrofoam plates as they are non-compostable; cups and plastic cutlery used are also not recycled. In the SFU report, they also alluded to several post secondary institutions and programs as guides for improving their campuses (Burnaby Mountain, Surrey Central and Downtown Harbour Centre), most notably the University of Oregon, Toronto Green Bin Program and the University of British Columbia.

# **University of Oregon**

The Office of Sustainability at the University of Oregon has been on campus since 2007 and has helped encourage sustainable practices on campus (About the Office of Sustainability, 2012). Despite the recent addition of the Office of Sustainability, the university has been implementing green practices for over 20 years. Similar to UBC, the University Of Oregon has a Climate Action Plan in place to try to reduce greenhouse gas emissions (Rainwater & Nystrom, 2010). Last year, in 2011, the university also introduced a Sustainability Centre where students from a variety of academic backgrounds come together

to discuss and possibly implement their ideas about new sustainability initiatives (About the Office of Sustainability, 2012). The Sustainability Center is only one of the sixteen student groups that dedicate their time to sustainable practices.

#### **Past UBCFSP Projects**

By looking back on the accomplishments of previous LFS 450 UBCFSPs, it allowed our team to build a foundational understanding of where the present scenario fit into the bigger picture of the food system. Two key reports provided the team with the necessary background information to guide further research.

In the first report, the concern over socially and ecologically responsible food options were also investigated and reported through a Sustainable Food Purchasing Guide developed by Bell et al. (2010). The team of researchers stressed the importance of local, seasonal and socially equitable options for UBC food providers to consider in their purchasing practices (Bell et al., 2010).

In the second report, while investigating on the waste behaviours of students in UBC Food Services dining halls, Cheng et al. (2011), found that current designs for UBC Food Service kitchens did not facilitate efficient composting and recycling as compost and recycling bins were not well situated for convenience. Post consumer waste was also observed by the Cheng et al. (2011) to be adequately sorted in residence dining halls. They did also note that miscategorization of waste may render some items to be contaminated and thus non-compostable at the In-Vessel Composter. One of the concerns that the researchers noted was the lack of consistency in signage across locations on the UBC Vancouver Campus and the effect this had on the effectiveness of sorting behaviour in students.

# **City of Vancouver Initiatives**

The City of Vancouver has taken several steps to initiate sustainable practices in an attempt to reduce the city's carbon footprint and become "green". Some of these initiatives include becoming the leader in climate control (Robertson et al., 2009). As global warming and other pollution issues come to

the forefront, Vancouver's mayor, Gregor Robertson, has commissioned for Vancouver to undergo a series of changes to become a more sustainable city. The Greenest City Action Team has proposed an action plan that was approved last spring and is currently at the implementation stage of the Vancouver 2020 visionary plan (Robertson et al., 2009). Some specific projects already in place are the new bike lanes built to encourage more green transportation (Bikeways and Maps, 2011). One Day, an online resource page has also been set up to provide Vancouverites information on how to reduce waste at home and introduce monetary incentives for green households (One Day, 2008). This online resource aims to create sustainability awareness at the family level.

The City of Vancouver also has waste reduction and recycling initiatives for its residents.

Programs include the Residential Drop-Off Area, Disposal Bans and Yard Trimmings Collection and Composting. These initiatives will aid the City of Vancouver in diverting up to 70% of their waste from the garbage to the compost, a vast improvement from the 55% diverted in 2010 (City of Vancouver, 2011).

#### **►** METHODOLOGY

To achieve the project objectives, a variety of different methods were used. Our first step involved contacting our community partner, Josie Midha. We met with Josie in-person in order to determine which issues she wanted us to focus on and obtained an inventory list of the food and packaging items used at Triple O's. During this initial meeting we were also given a tour of the restaurant, kitchen, and refrigerators to get a feel of the layout of the restaurant. Furthermore, we observed the restaurant during operation to determine customer traffic flow throughout the space.

In order to locate more sustainable food packaging alternatives for Triple O's we attended the BC Food Service Expo 2012 at the Vancouver Convention Centre on January 29, 2012. We talked to a number of different companies about their biodegradable packaging products and arranged for a number

of samples to be sent to Triple O's. We then met with Josie at the restaurant to discuss the economic viability of these samples and the possibility of implementation.

With the aim of creating a new design for the disposal units located at Triple O's at UBC, we contacted and set up a meeting with Victoria Wakefield, the purchasing manager for UBC Student Housing and Hospitality Services. At our meeting, we brought samples of every container and packaging item used at Triple O's so they could be tested at UBC's large-scale In-Vessel Composter. When we received the test results from Victoria, we were then able to categorize each container and packaging item as compostable, recyclable, or garbage.

Next, we measured the dimensions of the disposal bins and took photographs of each packaging and container item (*see* Appendix A). We then imported the photos into Photoshop and created a number of different designs for the disposal bin signs (*see* Appendix B). In addition, we created a similar signage design to fill the small Plexiglass stands found on the top of each table in the restaurant (*see* Appendix C). We presented our designs to Josie during our next meeting and she approved our design involving three colour-coded sections, compost (green), recycle (yellow), and garbage (red), with the images of each type of packaging placed accordingly. However, we needed to come up with a way of proving the effectiveness of our new disposal bin signs.

In order to do so, we created a checklist on excel containing a list of the packaging products available at Triple O's and the three columns with the headings: garbage, recycle, and compost (*see* Appendix D). We then sat at a table at the Triple O's restaurant and observed and recorded the amount of times that customers sorted their packaging items into the waste bins correctly before our new signs were placed on the disposal bins. More specifically, if a customer put a burger wrapper into the garbage bin, we would place an "x" underneath the column for garbage and note which item was sorted incorrectly. We conducted these observations on a Tuesday (March 6, 2012) and Thursday (March 8, 2012) beginning at 11am and ending at approximately 12:30pm. We recorded observations of 30 customers for each of the

two disposal bins located in the restaurant. Therefore, we had a total of 60 observations for each disposal bin for a total of 120 observations prior to sign implementation. Our rationale for participant selection was not specific as the participants used for this study were simply customers that used the disposal bins at Triple O's during the times and days we were observing. Thus, we had a response rate of 100%. We chose Tuesday at 11am because the lunch hour on Tuesday is the busiest day of the week for Triple O's due to the "Triple O Tuesday" burger special. Thursday, on the other hand, is a regular day (much less customers) at Triple O's during the lunch hour. Comparing these two days was beneficial to determine whether there was a pattern between incorrect sorting of packaging items and the volume of customers at the restaurant. Furthermore, we conducted our observations from a table at the restaurant (as opposed to standing next to the disposal bins with clipboards) in order to prevent influencing or interfering with the customers' sorting decisions.

After our first set of observations, we contacted a number of printing stores in order to create a budget for the printing and laminating of our new disposal bin signage. Once we had gathered this information we had another meeting with Josie to submit our budget. Unfortunately, our plans to print, laminate, and place our new disposal bins signage up in the restaurant was not approved by the higher management of Triple O's. Considering the inconvenience of this news, we then had an additional meeting with Sophia Baker-French to discuss our options as a successful evaluation of our scenario relied upon the implementation of the signage. Thus, we decided to create a simplified, smaller, temporary set of paper signs to place on the disposal bins instead of our original design (*see* Appendix E). These signs were printed on letter size paper with three basic pictures of White Spot Triple O's packaging items categorized under the headings: garbage, compost, and recycle. After getting these temporary signs approved by Josie, we placed them on each of the two disposal bins in the restaurant using tape.

With the implementation of these temporary signs, we went back on a subsequent Tuesday (March 20, 2012) and Thursday (March 22, 2012) from 11am to 12: 30pm and observed another 120

students in total to complete our data collection. Thus, we were able to compare the difference in correct disposal bin use before and after the implementation of our new signs. With the data we collected from the excel checklists; we were able to analyze and visually display our findings (*see* Appendices F - I). We then presented these graphs to Josie. Although we used this data, it was not as accurate as we had hoped because we were not able to use our original, larger, color-coded, laminated signage design. This original design would have likely created more noticeable results. Another issue we had with our data included customers use of the White Spot Triple O's take-out bags. It was impossible to account for what may have been inside the take-out bag when it was placed in the disposal unit. Thus, the customers may or may not have sorted their packaging items correctly.

Next, our group gathered a list of the inventory items at Triple O's, Tim Horton's, and Starbucks Coffee on the UBC campus by conducting a number of site visits. We categorized each product into the excel sheet provided from LFS 450. This helped us determine the number of socially and ecologically responsible food options available at Triple O's, Tim Horton's, and Starbucks Coffee (*see* Appendix J).

In order to write our final report we also conducted a literature review to find other relevant information on franchise sustainability initiatives. To determine the amount of municipal waste generated by Canada (per capita annually) for a more global perspective, we used Google Scholar as a search engine. We typed in the key words "Canada municipal waste" and were directed to a document titled, "Waste Management Industry Survey: Business and Government Sectors 2008," available on the Statistics Canada website. To gather information on other sustainability efforts being implemented on similar university campuses, we also looked at the websites of McGill, Simon Fraser, and University of Oregon. The other websites that we gathered sources from include: UBC Food Services, UBC Sustainability, and UBC Building Operations.

#### **► FINDINGS**

#### **Inventory List**

Through various on site visits and interviews with our community partner, an inventory list of all the franchises' socially and ecologically food options was compiled (*see* Appendix J). Only items that qualified in at least one of the categories were included. Where no items are listed under the outlet heading (e.g. Tim Hortons, David Lam Business), they did not carry any items that were available for consideration in this report.

## Triple O's

The beef patties are sourced from Alberta. The chicken strips, chicken breast, veggie burger, ice cream, french fries, tomatoes and cheese are all sourced from British Columbia. Triple O's will also start serving Fair Trade Coffee in the Fall of 2012.

#### **Starbucks Coffee**

Only one location on campus has merchandise that was considered for the report. The Italian Roast Coffee is Fair Trade; the Yukon Blend Coffee is organic.

# Packaging

After consultation with Victoria Wakefield, it was determined that three packaging options currently used at Triple O's are non-recyclable or non-compostable as they are made with polystyrene (Recycle Code 6). They are the clear caesar clamshell container, Styrofoam poutine container with clear lid, and the Styrofoam gravy container with lid.

Twenty other packaging options were also categorized as recyclable or compostable with guidance from Victoria Wakefield. There was one additional packaging option – the take-out fries container – that was yet to be determined and it was sent via Victoria Wakefield to the In-Vessel Composter for further examination. The results of the test are still unavailable at this moment.

# Survey

In order to gain a more site-specific understanding of the Triple O's environment, surveys were carried out before and after employing the intervention. Two surveys were performed before and two were performed after the intervention. Through the surveys conducted for this scenario, our team was able to collect and assemble data to provide a quantitative perspective to understand the current situation at Triple O's. The data, and subsequent findings and outcomes, presented here are primary in nature and do not reflect any statistical significance as statistical analyses and tests were not conducted.

#### **Pre-Intervention**

On both days that the surveys were carried out, less than one-quarter of the surveyed customers demonstrated the ability and confidence in ensuring all waste were sorted properly (*see* Appendix F). The data collected shows that the majority of customers that dine in at Triple O's are not aware of the correct categorization of their waste. Furthermore, they demonstrated that the majority of the waste will go to the first available opening that they see. There was very poor understanding of what was to be considered composting or recycling and therefore resulted in depositing the majority into the garbage receptacle. The top three items that were recorded as being miscategorised were the burger wrappers, fries liner and tray liner (*see* Appendix I).

#### **Post-Intervention**

After employing our intervention, the team was able to see that the number of customers who were able to correctly sort all of their waste increased (*see* Appendix G). With the help of visual aids, the most dramatic improvement was seen in the correct placement of items that are compostable (*see* Appendix H). The number of customers who were able to correctly identify and categorise their compostable waste is shown to have doubled. Garbage and recycling still proved to be a challenge as the numbers do not reflect comprehension of the visual aids given. The top

three items most frequently miscategorised remained the same: burger wrappers, tray liners and fries liner (*see* Appendix I). There is an overall decrease in quantity disposed.

# **► DISCUSSION**

#### **Challenges with Franchises**

Involving franchises in this project proved to be rather challenging with several problems.

Communication with Josie Midha was extremely efficient as both parties kept up regularly with the progress. However, as a franchise operator, Josie noted that some decisions cannot be made lightly. For example, the signage implementation was terminated due to the unforeseen notification that Josie received about Triple O's wanting to design the signage themselves. As such, a discussion with Sophia Baker-French resulted in preparing an alternative solution. The effectiveness of the intervention was debatable because it became obvious to some that they were being surveyed. One example observed showed a man with two trays who immediately left Triple O's after seeing our table and leaving his trays on the counter.

Franchises outlets on campus were observed to be extremely busy. Without adequate contacts to the management at other outlets, it proved more challenging than initially anticipated. Starbucks Coffee and Tim Horton's had their own agenda and promotions throughout the term and were not able to spare time to meet with students requesting for interviews. On-site visits and phone calls to Starbucks Coffee and Tim Horton's were made responses were not received. Therefore, the alternative was to source out online information, on-site observations and prior knowledge about the establishments. We were also explicitly informed by Josie though other supervisors at other outlets might express interest in participating; their schedules simply could not accommodate meetings with students.

#### **Customer Behaviours & Disposal Bins**

Through the surveys and observations pre- and post-intervention, it was noted that customers actually stopped and took time in sorting out their trash. The main concern was that the majority of customers did not have a clear idea of where to dispose the items properly and ended up throwing everything in the garbage. Most of the customers have a consciousness about sustainable initiatives but are lacking the knowledge of how and where to throw the garbage. However, it is also noted through the surveys that some people do not pay much attention and do not even bother sorting out the garbage. When customers go in group to throw out the garbage, there is a trend of following what the previous person had done and this often cause a continuation of the same mistakes.

A few limitations are observed through the surveys conducted in Triple O's. The garbage bins are easily filled up especially on the busiest day of the week, Triple O's Tuesday, where there is a promotion. Through the survey, the team discovered that customers tended to throw everything on the tray into any open and empty holes when the other ones are filled. The lack of paper recycling created over-filling of the composting bin.

# **Packaging**

As noted in the findings, the three items currently in use that are of most concern with respect to waste disposal are the *caesar salad clamshell, poutine container with lid and gravy container with lid.*They are reported by Josie Midha to have been selected due to their functionality in keeping poutine and gravy at a consistent temperature without negatively influencing the quality of the product. They are currently all considered to be waste and are disposed of as such.

After consultation with Victoria Wakefield that concluded that these items were made with class-6 polystyrene plastics that are not readily recycled or composted, the team discussed the possibility of substituting the current packaging options with an alternative that was sent by one of the companies visited at the British Columbia Food Service Expo. Of the three packaging listed of concern, the caesar

salad clamshell has the highest likelihood in being substituted. There are non-class-6 clear plastic clamshells made in the exact format currently used at Triple O's; therefore, the team believes that a transition may not be too difficult.

Further correspondence with Victoria Wakefield concluded that sourcing out a completely new supplier was neither practical nor economically feasible. A suggestion was made to encourage Triple O's to collaborate with UBC Food Services and work with the existing suppliers that UBC Food Services currently orders eco-friendly packaging from. If an agreement can be reached between Triple O's and UBC Food Services in adopting an alternative to the three stated packaging options without compromising the financial viability of its operations and product integrity, then a step towards deeper partnerships can be established.

## **Inventory List**

The Baseline Inventory for this scenario is summarised in Appendix J. The original inventory set out to evaluate food options and categorise them as socially or ecologically responsible. The categories included vegan, vegetarian, medication free, gluten free, made on campus, local (within 250 kilometres), organic and Fair Trade. However, soon after collecting the necessary data it was noted that the majority of the categories would not have any food options listed under them. The final inventory list only included the categories local, organic and Fair Trade. The term *local*, although originally defined as being produced within a 250 kilometre radius of the campus, was expanded to include any item that is produced in the province of British Columbia. This was done to illustrate the difference between items that were brought in from other provinces (e.g. beef from Alberta at Triple O's).

Initially, the objective in sourcing the necessary data and compiling an inventory list was to illustrate what is available in terms of socially and ecologically responsible food items. It was determined shortly after that the lack of socially and ecologically responsible food options at all three franchises proved that an inventory list to illustrate what is not available would be more appropriate. Therefore, the

inventory list only included items that were qualified to be considered local, organic or Fair Trade; it is a substantially shorter list than originally anticipated.

What can be inferred from the inventory collected is that much improvement is needed from the franchises to incorporate more socially and ecologically responsible food options, especially Starbucks Coffee and Tim Horton's. This inventory list shows where further partnerships and opportunities can be investigated. However, it may also demonstrate the complexity of operating a franchise outlet on a university campus and the contracts in place that stipulate what can or cannot be done by the licensee (UBC Food Services).

While UBC Food Services currently oversees the operations of the Starbucks Coffee outlets at Pacific Spirit Place and Fred Kaiser Building, the team also looked into the corporate location (i.e. operated by Starbucks Coffee) at Technology Enterprise Facility 3. A comparison was done to evaluate the difference in food options available against licensed stores operated by UBC Food Services. The inventory list (*see* Appendix J) shows that the corporate store does offer one Fair Trade certified whole bean coffee (Italian Roast) and one certified organic whole bean coffee (Yukon Blend).

Consequently, the compilation of this Baseline Inventory indicates that more diverse food options, especially socially and ecologically responsible food options, are needed at all franchise locations on the UBC Vancouver Campus.

#### ► STAKEHOLDER RECOMMENDATIONS

# **Recommendations for Triple O's**

# 1. To implement the colour-coded, Triple O's packaging-specific signage created for the disposal units and restaurant tabletops.

This recommendation is for the Triple O's on UBC campus and is the responsibility of Triple O's higher management to approve and provide funding for the production of the signage as soon as possible. Several potential designs can be found in Appendix B. According to our observations compiled prior to any signage being implemented (*see* Appendix F), 77% of consumers made at least one or more mistakes while sorting their waste and only 23% sorted completely correctly. On the second day of observations, 80% of the customers at Triple O's sorted one or more of their waste items incorrectly, and a mere 20% sorted without error. It is noted in our findings that the majority of the waste items, although compostable, were placed in the garbage. However, after implementation of our temporary signage with Triple O's specific visuals (*see* Appendix G), correct sorting of waste items by consumers increased to 42% on both days of observation post-intervention. It is seen that the number of individuals who disposed of their waste appropriately doubled as a result of the simple signage. Therefore, a combination of Triple O's specific visuals with aesthetically appealing colour-coding of the proposed signage will be highly effective in reducing waste and increasing proper disposal of compostable and recyclable items within the restaurant.

# 2. To make the frequently utilized Triple O's packaging the most prominent on the signage using visuals with labels.

This is a recommendation for Triple O's if they were to implement the proposed signage.

Appendix I lists the most frequently utilized items utilized according to our findings. As an extra precaution to prevent these items from being incorrectly sorted, signage should include larger and clearly labelled pictures of the ten specific items. In particular, it may be beneficial to include pictures of what the item would look like after use. For example, during our observations it was noted that consumers had problems imagining the burger wrappers flat as depicted on our signage because their wrappers were

either wrapped around food or crinkled. Therefore, to have clear, prominent visuals of the more frequently used items would be very beneficial.

3. To incorporate paper recycling as a component of the disposal units already present at Triple O's.

Triple O's on the UBC campus would be responsible for carrying out this recommendation. This can be accomplished immediately by placing paper recycling receptacles beside the disposal units and labelling it accordingly. A paper recycling bin would be incredibly beneficial as, according to our findings, the most frequently utilized Triple O's packaging items are the burger, tray, and fries liners which are all made out of recyclable/compostable paper material. After discussion with our community partner from Triple O's, Josie Midha, and correspondence with Victoria Wakefield, purchasing manager at the UBC Student Housing and Hospitality Services, they advised that composting paper products, although acceptable, is not the most effective way to divert paper waste from the garbage as it tends to clog the In-Vessel Composter on the UBC campus. This is because, as stated by Victoria Wakefield during personal communication, that the In-Vessel requires a 2:1 ratio of organic material to compostable packaging and often there is not enough organic waste to keep the composter running smoothly. The technology developed for recycling is currently much more advanced than composting technology; therefore, it would be most advantageous to utilize both systems as effectively as possible. Thus, the objective for implementing paper recycling would be to divert waste away from garbage and into both recycling and composting.

4. To change the poutine, gravy, and clamshell salad containers currently being utilized at Triple O's to alternatives that can be recycled and/or composted and increase the size of ketchup containers.

Triple O's will be responsible for carrying out this recommendation in conjunction with UBC Food Services and discussion can begin immediately. At present, the poutine and gravy containers at

Triple O's are composed of Styrofoam, a material that goes directly into the garbage. The clamshell salad containers also go into the garbage due to the type of unrecyclable plastic it is made out of (polystyrene). However, the Triple O's located at UBC has the unique ability to collaborate with UBC Food Services to find better alternatives to the packaging mentioned above. UBC Food Services currently has specific suppliers for compostable packaging and, as stated by Victoria Wakefield, is very willing to cooperate with the franchise to supply them with recyclable/compostable packaging for these specific items. In addition, observations conducted at Triple O's have shown that typically, dine-in customers use more than one paper ketchup cup for their food. It may be beneficial to increase the size of the 1 ounce cups to perhaps a 3-ounce which may use less paper material in the long run.

#### **Recommendations for LFS 450 Teaching Team & Future Students**

5. To extend the UBCFSP project to other franchises like Tim Horton's to help them create their own packaging-specific disposal units.

This recommendation is for the LFS 450 teaching team and future LFS 450 students in collaboration with the UBC campus Tim Horton's locations for the coming year. This project would involve contacting Tim Horton's management, finding out what packaging is compostable and recyclable, creating visuals of each Tim Horton's packaging item, producing an attractive design, and evaluating its efficacy. It is of utmost importance for future LFS 450 students to request approval for producing and funding the disposal units by Tim Horton's upper management beforehand. Implementing this recommendation for franchises on the UBC campus, especially one as popular as Tim Horton's, would set a positive example for other franchises to take strides towards the vision of sustainability that the UBC food system aims to achieve.

6. At the beginning of the project, to collaborate with specific cooperative community partners from each franchise involved in the scenario.

This recommendation is for next year's LFS 450 teaching team to gain contacts and is the responsibility of future LFS 450 students to develop and maintain relationships formed. Securing continuous communication with specific individuals from all franchises involved in the scenario who have agreed to work with students beforehand would be extremely helpful in obtaining a more in-depth look at franchise operations.

#### **► SCENARIO EVALUATION**

The selected methodology of observing the disposal habits of Triple O's customers before and after signage implementation can provide crucial information about the efficacy of the recommended layout for the disposal bins. Sampling prior to implementing the picture signage will provide insight to improper waste disposal habits. From this information, we are then able to gauge if any improvements have been made as a result of our signage. Through surveying Triple O's post-implementation, we should be able to gather information on the efficacy of the displays by comparing our results to our observations prior to implementation.

The primary evaluation method for this project is the survey. Feedback from Josie and her staff regarding the usefulness of the signs will also be included. Project evaluation for its success will be done by comparing the primary data collected before and after signage implementation.

The inventory list with information collected from all three franchises is also part of the evaluation plan. The inventory list provides a good sense of how sustainable each franchise currently is at UBC. From observing the franchises' food menus and websites, we categorized the foods offered at each store and made notes on the types of packaging used. By categorizing the goods and products into local, organic or Fair Trade, we were then able to provide recommendations to our community partners. One of the difficulties we faced when doing this project is to collect the inventory lists from all three franchises. At first, we misinterpreted the guideline of the evaluation methods for this project and ended up trying to

contact both Starbucks Coffee and Tim Horton's in person for the inventory list. We failed to contact the managers from Starbucks and Tim Horton's because they were too busy and they were not informed about our project. However, we successfully evaluated the foods offered at each of the franchise by the end through in-person visits and looking at their menus or advertisements they had at the time.

The project primarily focused on Triple O's as suggested by the teaching team and our community partners. Through interviews and meeting with our community partners we were able to come up with several recommendations for Triple O's. Due to the time constraints of this project, a full execution of our proposed design was not feasible.

We strongly recommend future LFS 450 students to discuss the project with the LFS teaching team and the community partners early on in the term in order to fully understand the tasks given and discuss the desired outcomes for the project. It is critical to use all resources provided including past UBCFSP reports, project stakeholders and teaching team. More specifically, clear and open communication between project partners and the teaching team is essential in driving success for this project. Given the project time frame, it is also important to be set pragmatic expectations of the project as it progresses. Though broad in nature with a multitude of aspects to consider, the project allows teams to investigate individual issues separately while ensuring the integrity of the UBCFSP.

#### **►** CONCLUSION

This is the first attempt in establishing partnerships between franchises and the UBCFSP.

Franchises are unique in that they are excluded from the operational standards as set by UBC; therefore, franchises are not required to fulfill campus standards for sustainable practices. This pilot project permitted the establishment of dialogue between franchises and the UBCFSP with regards to socially and ecologically responsible food practices through the development of a Baseline Inventory. In echoing one

key guiding principle of the Vision Statement for a Sustainable Food System that anchored this project, our team firmly believes that "on-campus food providers [should continue to] work with off-campus distributors and wider food system actors to transition to a more sustainable system ... and where possible positively influence food system policy beyond the university." Through fostering deeper partnerships between all stakeholders involved, progress toward a sustainable campus can be achieved. To this end, these relationships can benefit students who are willing to participate and contribute to a shared vision of a sustainable UBC Food System while ensuring that all food system actors are adequately equipped with the knowledge and tools so that our shared vision is sustained.

#### **►** ACKNOWLEDGEMENTS

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#### **► APPENDICES**

#### Appendix A

Samples of photos taken for disposal bin signage (from left to right): coffee cup sleeves, poutine container with lid, caesar salad clamshell, gravy container with lid, salad dressing container with lid and tray liner. The complete set of photos is not included







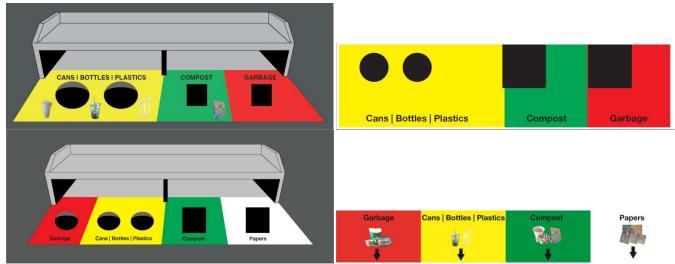






#### **Appendix B**

Signage design: (top left) colour-coded with sample pictures attached to template; (top right) colour coded without pictures attached; (bottom left) final design with inclusion of paper recycling; (bottom right) sample pictures to be used with final design (bottom left)



# **Appendix C**

Table-top signage design



# Appendix D

Survey used to collect primary data

Table 1: Number of Times Customers Improperly Sort Waste in Each of the Three Bins

Garbage Recycling All Correct Total

Table 2: Number of Times Selected Items are Improperly Sorted

Item	Mistakes	Total
Burger Wrapper		
Container - Dressing		
Container - Fries		
Container - Gravy		
Container - Ketchup		
Container - Poutine		
Container - Salad		
Cup - Coffee		
Cup - Cold Beverage		
Cup - Sundae		
Lid - Coffee Cup		
Lid - Cold Beverage		
Lid - Gravy		
Lid - Poutine		
Lid - Sundae		
Lid Dressing		
Liner - Fries		
Liner - Tray		
Plastic Fork		
Plastic Knife		
Plastic Spoon		
Sleeve - Coffee		
Straw		
Straw Wrapper		
Plastic Sundae Spoon		
Take Out Bag		

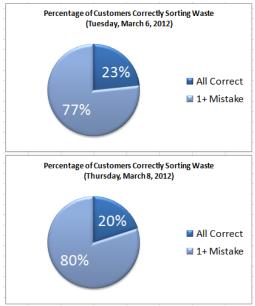
Additional Notes:

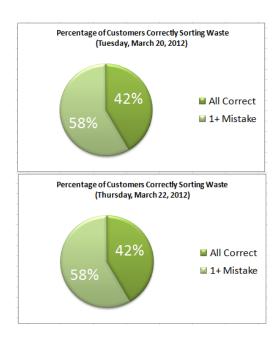
**Appendix E** 

Temporary signage design (left to right): garbage, compost and recycle; (bottom) implementation of temporary signs at Triple O's



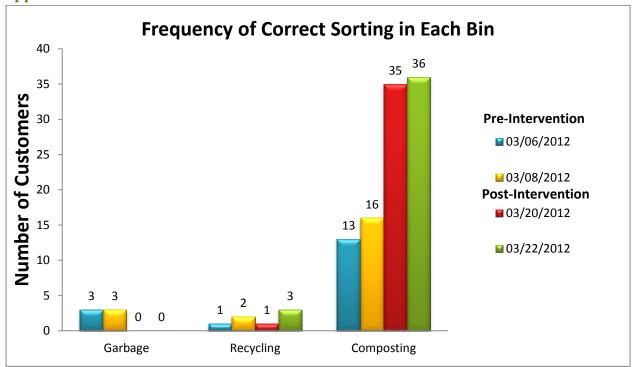
# **Appendix F**



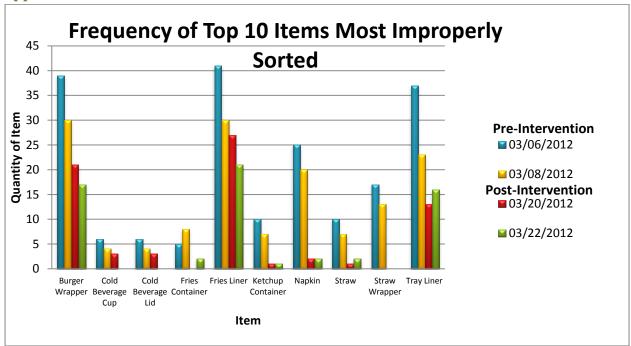


## Appendix G

# **Appendix H**



# **Appendix I**



# **Appendix J (Baseline Inventory List)**

Baseline Inventory of the UBC Food System: Socially and Ecologically Responsible Food Options and Action Plan 2012 Land and Food Systems 450 - Group 7 (Cathy Chan, Samuel Chendan, Leigh Gaffney, Ashley Lin, Charlene Tang)

Food Category	Food Item	Where item is sold	Local (Within BC)	Third- Party Certified Organic	Fairtrade	Packaging Type
Triple O's (Da	avid Lam - Busine	ess)				
Entrée	Beef Patty	Triple O's Vancouver Campus	No (From Alberta)	No	No	Paper Wrapper
Appetizer	Chicken Strips	Triple O's Vancouver Campus	Yes	No	No	Cardboard Container
Entrée	Chicken Breast	Triple O's Vancouver Campus	Yes	No	No	Paper Wrapper
Entrée	Veggie Burger	Triple O's Vancouver Campus	Yes	No	No	Paper Wrapper
Dessert	Ice Cream	Triple O's Vancouver Campus	Yes	No	No	Plastic Cup (Recycable)
Appetizer	French Fries	Triple O's Vancouver Campus	Yes	No	No	Laminate Container
Condiment	Tomatoes	Triple O's Vancouver Campus	Yes	No	No	(In Burger)
Condiment	Cheese	Triple O's Vancouver Campus	Yes	No	No	(In Burger)
Beverage	Coffee	Triple O's Vancouver Campus	No	No	Yes (Fall 2012)	Paper Cup (Compostable)

#### Tim Hortons (David Lam - Business)

No food items are available for consideration in this report

#### Tim Hortons (Forestry - Forest Sciences)

No food items are available for consideration in this report

#### Starbucks (Pacific Spirit Place) [licensed]

No food items are available for consideration in this report

#### Starbucks (Fred Kaiser - Engineering) [licensed]

No food items are available for consideration in this report

#### Starbucks (TEF 3) [Corporate]

	4			
Whole Beans Italian Roast	Starbucks (TEF 3 Vancouver Campus)	No	Yes	Aluminum Laminate
Whole Beans Yukon Blend	Starbucks (TEF 3 Vancouver Campus)	No Ye	25	Aluminum Laminate