



# Sustain 3S03 Course Report | Fall 2015

## A Letter from the Senior Manager

In September 2015, another fantastic cohort of students took part in Sustain 3S03 – Implementing Sustainable Change. Students from 5 faculties and the Arts & Science Program engaged in interdisciplinary, community-based, student-led, and experiential education related to sustainability.

Led by instructor Dr. Michael Mikulak, with support from Teaching Assistants Crystal Chan, Mariano Colicchio, and Elise Desjardins, students had the opportunity to examine the concept of sustainability by focusing on specific case studies and examples in relation to larger questions of power, knowledge, and human and non-human agency. Lectures, tutorials, and assignments were focused on developing truly interdisciplinary conversations that consider the different techniques and tools society has at its disposal for addressing the environmental crisis.



To complement their theoretical knowledge of sustainability, students undertook an experiential learning project of their choosing. During the first week of classes, 50 students formed 13 project groups based on their individual interests in sustainability. To offer support, guidance, and ensure students had the opportunity to work with members of the McMaster and broader community, 12 individuals formally accepted the role of Community Project Champion by offering their time, resources, and expert knowledge to assist students in achieving their project goals. Additionally, countless members of the community participated in events, provided feedback through consultation, and offered mentorship. The tremendous amount of community support and engagement is illustrated by each group in the pages to follow under the heading of Collaborators.

As you read this report, you will notice that the breadth of student interests related to sustainability is far reaching. Projects range from increasing the biodiversity of a small-scale organic farm, supporting the formation of a new cycling organization in Hamilton, conducting surveys and analyzing results to enhance the Bruce Trail, to analyzing bike parking inventory and making recommendations to the City of Hamilton.

I hope you enjoy reading this report as much as I have enjoyed my experience in working with the individuals who have created it.



*Kate Whalen*

Kate Whalen  
Senior Manager,  
Academic Sustainability Programs



## Mission

McMaster developed the Sustainable Future Program for students interested in learning about sustainability while having the opportunity to engage in experiential learning through developing and implementing real-world sustainability initiatives. The Sustainable Future Program (SFP) aims to build reciprocal relationships between students, community members and McMaster University to engage all parties in the journey towards a sustainable future.

## Guiding Principles

The guiding principles of the Sustainable Future Program are as follows

- Teach students about sustainability from an interdisciplinary perspective.
- Provide the opportunity for self-directed, interdisciplinary and experiential learning.
- Support student learning within the University and local community.
- Engage undergraduate students in taking part in meaningful, experiential research.
- Foster opportunities for students to place local knowledge and local action within a global context.

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# City of Hamilton Bike Parking Inventory and Analysis

Student Authors: Tabbish Aziz, Matthew Halleran, Agstya Kaul & Tom Yang

## Overview

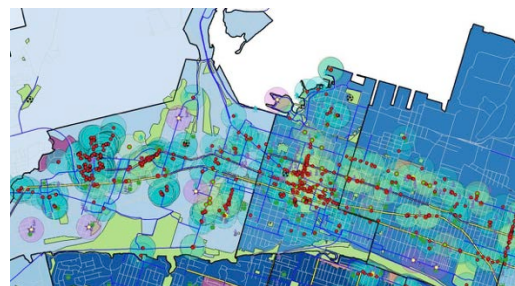
From an environmental perspective, cycling reduces greenhouse gas emissions, which helps to fight climate change by providing a transportation alternative to motor vehicles.<sup>1</sup> In 2015, the City of Hamilton inventoried locations and conditions of all bike racks in Wards 1, 2, 3, 11, 12, 13, 14, and 15 within the city, with Wards 4 through 10 nearing completion. The inventory data provided the opportunity for further analysis and recommendations for improvement. The main goals of this project are to analyse the data and provide the City of Hamilton with recommendations for next steps, specifically with respect to future bike rack placement and management. When additional bike racks are installed, more people will likely use the strategically placed stations, reducing the number of cars on the road. This will lower the air and noise pollution in Hamilton, and help make this community more sustainable.<sup>1</sup>

## Objectives

1. Conduct a gap analysis to identify priority locations for new bike rack installations based on inventory data and detailed criteria provided by the City of Hamilton.
2. Develop a method of organizing and maintaining all inventory data on an ongoing basis.
3. Develop a geographical representation of existing and planned bike racks along with other relevant information, such as population and places of interest.

## Reporting

To support our project, the City of Hamilton provided us with detailed information from their most recent inventory of City-owned bike racks, which included bike rack location, condition, capacity, and many other metrics. We then utilized geographic information software (GIS) to perform a gap analysis to see which locations in Hamilton were currently underserved by bicycle parking infrastructure based off a detailed criterion provided to us by the City of Hamilton. After assessing the data provided by the City and identifying key locations of interest, which include places of worship, schools, and malls, seven key bike rack locations have been proposed along with justifications for each. Methods to improve the City of Hamilton's cycling records have been developed in order to increase the accuracy and efficiency of data collection by observing practices carried out by the City of Toronto. The data gathered over the course of this report has been integrated in a GIS database, which shows all existing and potential bike racks provided by the City of Hamilton, along with bike racks proposed by our group. In addition to this integration, demographic data and locations of interest have also been shown in the GIS in conjunction with the bike rack information. This map will give the City of Hamilton a clear visual of their bicycle infrastructure throughout the city, and can potentially be used by the public if they wish to know the locations of bicycle racks in Hamilton. In order to summarize all of the deliverables mentioned above, a proposal report has been submitted to the City of Hamilton.



GIS of Existing and Proposed Bike Racks in Wards 1, 2, and 3

**Collaborators:** We would like to thank our Community Project Champion, Janelle Trant. Janelle was instrumental in providing us with inventory data, acting as a liaison with others at the City of Hamilton, and providing guidance and mentorship throughout. Additional support for our project was provided by Crystal Chan, Teaching Assistant for Sustain 3S03, and Kate Whalen, Senior Manager, Academic Sustainability Programs, McMaster University.

<sup>1</sup> Retrieved from Share The Road: <http://www.sharetheroad.ca/what-are-the-benefits-to-government-when-they-invest-in-cycling--p128284>



# Community CarShare at McMaster

**Student Authors: Rubaid Dhillon, Amanul Haque, Sushen Talwar & Dillon Phoenix**

## Overview

Developed in 1998, Community CarShare is a non-profit co-operative organization that provides carsharing services in several areas in Ontario. The goal of Community CarShare is to promote carsharing as an important component of a sustainable transportation system thereby reducing traffic congestion and transportation costs. The organization has grown from two vehicles to sixty-four vehicles. Through this project, we aim to inform the students at McMaster University about the environmental, social, and economic benefits of carsharing and thus, resulting in greater use of carsharing by the McMaster population.

## Objectives

1. Identify current travel preferences and habits as well as knowledge and applicability of carsharing to members of the McMaster community.
2. Promote Community CarShare through an interactive event to attract first-time users in the McMaster community.
3. Partner with an organization with the common goal or mission statement such as Hamilton Bike Share.

## Reporting

We surveyed students about their most frequent mode of transportation, average distance travelled, and familiarity with the different carshare services available. Through the 120 completed surveys, the data showed that 70% of students do not own a car. Furthermore, 64% are aware of the existence of Community CarShare.

On November 18th 2015, we organized an event on campus in front of University Hall where we had representatives from Community CarShare to help us promote the organization and our project goals. In order to attract students, one of the cars from Community CarShare organization was brought to the event and was displayed along with the organization's banners and posters. During this event, promotional material, such as \$30 discount coupons, and a brief summary of our project were handed out to students. The event was successful as several students were eager to learn about our project initiatives and sign up for Community CarShare. Through this event, valuable information was obtained about the perceptions and values of the student demographic which was instrumental in discussing the data with Community CarShare for recommendations for future initiatives to increase membership.



During the completion of our project, we were also able to get in touch with the Community Manager of Hamilton Bike Share and were able to further promote the sustainability initiatives of the Community CarShare organization through their social network. The Regional Services Coordinator of Community CarShare will keep us informed in terms of the number of customers signed up by January 2016 and this will allow us to further evaluate the success of our project.

**Collaborators:** We would like to thank our Project Champions Laura Beattie and Jess Webster (currently the Regional Services Coordinator of Community CarShare) for supporting us throughout the project and for providing us with all the promotional material and feedback regarding our ideas. In addition, we would also like to thank the Community Manager of Hamilton Bike Share Chelsea Cox, Kate Whalen and the Academic Sustainability Programs Office for the support and guidance throughout the project.

# Hamilton Burlington Trails

**Student Authors: Geetha Ramachandran, Ibrahim Kareemi, Jasmine Wong, Kritika Badhan & Neil Reu**

## Overview

The Hamilton Burlington Trails Council (HBTC) is a non-profit organization that serves as a trail alliance in developing an exceptional trail system in the Hamilton and Burlington regions. The HBTC recently launched their 2015-2016 Trail Use Survey to facilitate the development of a more effective and accessible trail system. The goals of this project were to support the HBTC in conducting and analyzing their survey as well as to make recommendations for positive change and trail enhancement.

## Objectives

1. Create and implement a volunteer recruitment and engagement strategy to support the collection of survey responses at various Hamilton-Burlington trail locations.
2. Engage users of the trail system to provide feedback through the Trail Use Survey
3. Analyze collected information to identify opportunities for improvement
4. Present opportunities for trail enhancement that would result in improved trail use, based on data collected from July to September 2015.

## Reporting

Volunteer recruitment was targeted through the design and use of posters and social media. In addition, to convey appreciation for our thirty volunteers, we planned a volunteer appreciation event, which was scheduled to occur on November 12th 2015 at 6:00pm. However, the event was cancelled due to a low response rate of volunteers. While analyzing the reason behind the failure of the event, we concluded that a hike in Cootes Paradise in November could have deterred the participation of volunteers since it was extremely cold. Therefore, our project champions will now take the plan and use it in April when the event will be rescheduled.

Moreover, to collect more information regarding trail use, each team member attended a weekly 2-hour survey shift in Hamilton and Burlington. Simultaneously, we inputted all the surveys from May to September 2015 and analyzed the results.

The analysis discussed modes of transportation used on trails, prominent reasons for trail use, and trail concerns. The statistics showed that 54.87% of trail users used the trails for walking, 29.74% for cycling, 8.99% for jogging, 4.59% considered other mode, 1.21% had strollers, and 0.60% used wheelchairs/walkers. Furthermore, the analyzed results suggested that trail users primarily used the trails for exercise, to enjoy nature, and very rarely for tourism. Since exercise is the most common use of the trails, improvements such as distance markers, and simple exercising equipment should be implemented. Moreover, Figure 1 displays an increased trail use during summer months and reduced trail use during winter months. The reason behind reduced trail use in winter could be due to inadequate trail maintenance. Therefore, snow clearance, garbage removal and directional signs should be implemented to ameliorate trail maintenance. These considerations will be taken into account, and appropriately addressed to the council by our project champions.

**Collaborators:** In collaboration with the HBTC, the team collected surveys, and promoted trail use. We would like to thank our Teaching Assistants Crystal Chan and Elise Desjardins for guidance and support throughout the project. We would also like to thank our project champions Alex and Victoria for providing us with information, resources and guidance pertaining to the project. Last but not least, we would like to thank all the volunteers who collected surveys. To obtain more information about the project please visit our Facebook page, follow us on twitter or visit our website <http://hamiltonburlingtontrails.ca>.

# Supporting the Formation of Cycle Hamilton

**Student Authors: Miranda Babbitt, Christine Luu, Janine Sziklasi, Kelly Yeung & Syed Zaidi**

## Overview

Cycle Hamilton is a community group that emerged in the spring of 2015 to meet the demand for a coordinated effort to advocate for a bike-friendly Hamilton. Cycle Hamilton's vision is to increase the amount of safe, confident, and knowledgeable cyclists in Hamilton by promoting better infrastructure and developing partnerships with organizations, community groups, and citizens. The aim of this project was to assist in the development of Cycle Hamilton as a sustainable community organization with a clear direction. The first step of the project was developing a workshop to obtain feedback from community members about what they would like to see Cycle Hamilton address. The second step of the project was producing a one-year action plan for Cycle Hamilton that integrated this community feedback into a clear set of objectives.

## Objectives

1. Raise awareness by informing the community about Cycle Hamilton's vision of a bike-friendly Hamilton and its goal to support and educate both citizens and policymakers on cycling-related topics
2. Integrate the input from the cycling community to steer the organization in a direction that the citizens of Hamilton believe is most in line with the community's vision
3. Assist in the formation of Cycle Hamilton as a sustainable, non-profit, community organization by developing a clear set of objectives that will support their first year of operation

## Reporting

In order to achieve Objectives 1 and 2, we developed and held a workshop for Cycle Hamilton on November 11th, 2015. This focused the direction of Cycle Hamilton's priorities for the upcoming year through roundtable discussions on a number of infrastructure, societal, and organizational issues for cyclists. There were 37 attendees, who were stationed at tables with discussions facilitated by Cycle Hamilton members. We recorded the discussions between the attendees, who were largely vocal and engaged with the issues at hand, and also provided alternative modes of feedback through a concurrent Twitter campaign and follow-up survey.



The data collected at the workshop informed Objective 3. We developed a comprehensive action plan, The Sustainable Formation of Cycle Hamilton: One-Year Action Plan, which incorporated community feedback from the workshop into a set of objectives to help direct and organize Cycle Hamilton. The plan includes a brief review of the workshop and suggested priorities for the coming year. Lastly, we included potential projects that future SUSTAIN 3S03 students could work on in partnership with Cycle Hamilton.

**Collaborators:** We worked closely with Cycle Hamilton to develop the topics discussed at the workshop and reported on them in The Sustainable Formation of Cycle Hamilton: One-Year Action Plan. We would like to thank Cycle Hamilton, workshop attendees, and our Community Project Champion, Dave Heidebrecht, for the extremely valuable support.



# Small Farm Biodiversity and Pollinator Habitat

**Student Authors: Hussain Abbas, Duncan Chambers, Liana Glass,  
Luc Hains & Jordan MacCarthy-Tilley**

## Overview

Common Ground Teaching Farm is a small-scale organic farm located in Mount Hope, Ontario, Canada. As with most farms, Common Ground depends on ecosystem services, including insect-pollination of flowering crop plants. In line with the principles of organic agriculture, Common Ground does not use synthetic herbicides or pesticides, warranting alternative methods of pest control. The goal of this project was to increase Common Ground's biodiversity by focusing on three main areas: pollinator attraction and activity, predator-based pest control, and the farm's supporting infrastructure. A more biodiverse surrounding environment will foster a more resilient and productive farm ecosystem. We hope that the methods we employed will apply to, and serve as an example for, other small-scale organic farms.

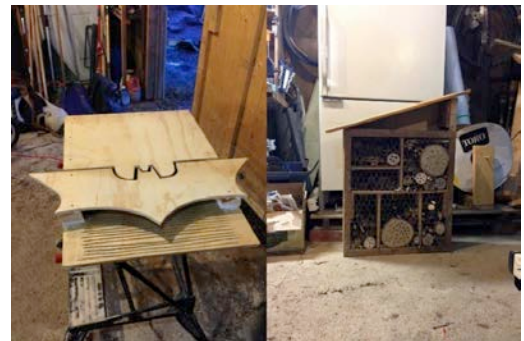
## Objectives

1. Assess the baseline level of biodiversity
2. Build habitats to attract pollinating insects
3. Build habitats to attract natural predators of agricultural pest insects
4. Design and implement infrastructure to encourage these pollinating insects and natural pest predators

## Reporting

We began by conducting a survey of the cultivated and bordering land in order to summarize the species of plants, insects, and other fauna that make up the farm's ecosystem. This list included endemic pest insects (such as the Crucifer Flea Beetle and Imported Cabbageworm), as well as pollinator-friendly native plants (such as Goldenrod and New England Aster). From this knowledge base, we were able to research other native plants that would further enhance the ecosystem. We chose plants such as Wild Bergamot and Yarrow as habitat components that, when introduced and established, will attract certain pollinators or predators of pest insects.

We followed organic agricultural methods in our efforts to control pests, attract pollinators, and plant beneficial plants. We built a bee hotel and a bat house in order to house pollinators and improve insectivorous pest control respectively, and used



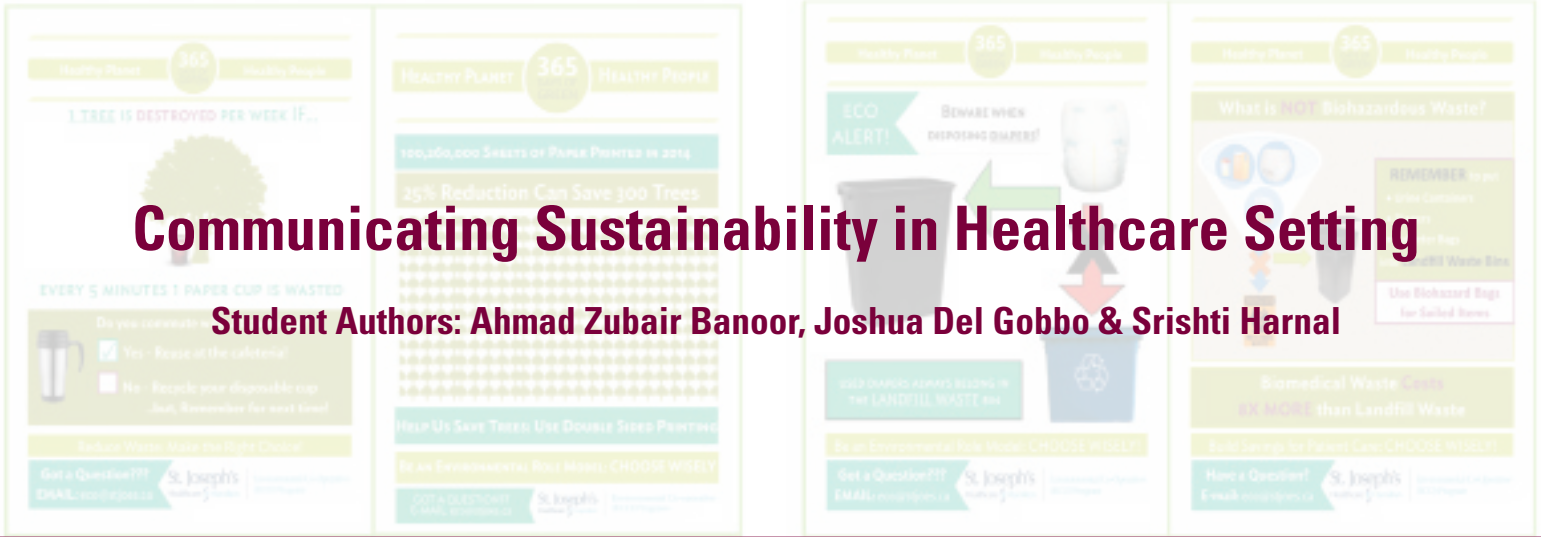
Unpainted bat house and completed bee hotel

untreated scrap wood in the construction of both. We also designed a pond to be installed in an area determined by the natural topography and drainage of the farm. Next, we acquired seeds from local farmers to grow pollinator and predator-attracting flowers such as Milkweed and Calendula. Finally, we have compiled a report of our findings (i.e., species lists, descriptions, and relationships) and recommendations (regarding implementation and maintenance) to be given to Common Ground for future reference. All of these biodiversity enhancement strategies may be employed and observed further to measure their efficacy over successive seasons.

**Collaborators:** Support from the owner of Common Ground Teaching Farm, Dr. Michael Mikulak, and non-academic supervisor Kate Whalen, Senior Manager of Academic Sustainability Programs. Notable mention goes to Michael Mikulak and Laura Anderson for providing aid and assistance while implementing changes to the farm, and Julia Hitchcock for sharing her seeds, plants, and stories with us.

# Communicating Sustainability in Healthcare Setting

Student Authors: Ahmad Zubair Banoor, Joshua Del Gobbo & Srishti Harnal



## Overview

Waste management is an important issue to healthcare. Improper management of waste products can pose health risks to patients, staff, visitors, and members of the community. St. Joseph's Healthcare Hamilton (SJHH) seeks to minimize the impact health operations have on human health by managing waste sustainably. With several new initiatives in place, SJHH has created a communications strategy to keep its staff informed and engaged in the collective effort to recycle, as well as to reduce and dispose of waste properly. With support from the Waste Management and Sustainability Department at SJHH, our project aims to increase recycling and reduce waste through informative posters displayed to hospital staff. Measures of success will be evaluated through location-specific waste audits.

## Objectives

1. Create a package of up to 15 informative posters that will assist SJHH staff understanding of proper recycling and waste disposal practices, as outlined by the Environmental Cooperative Program (ECO)
2. Ensure the availability of posters relating to waste and sustainability topics to staff and general public
3. Assess staff and general public understanding of waste and sustainability topics after creation and distribution of posters, through quantitative assessment of waste generation

## Reporting

On Monday September 28th, our group visited the Charlton campus. The group toured the waste management holding and handling area, and from this learned that an elephant's weight (or 2.5 tonnes) of waste is produced on average at the Charlton campus each day. We also reviewed the '365 Days of Green' campaign posters released in late 2014 by SJHH's Environmental Cooperative Program (ECO). Our project goals were to complement the '365 Days of Green' campaign posters by analyzing the 2014 waste audit of the Charlton campus and determining the most viable waste reduction initiatives to be placed on the posters we would design. A poster template was created to ensure all posters followed the branding protocols of the ECO program. With guidance from our CPC, we then decided on the 15 waste reduction topics that would be addressed individually on the posters. These topics ranged from: 'Turn off the lights,' 'What is not biohazardous waste,' and 'Turning off computer screens.' While continuously designing our posters, we began preparing ways to assess the staff's understanding of our posters. Due to incidents of improper sorting of recycling in the operating rooms (ORs), our CPC advised that we complete a recycling audit to understand if the newly implemented OR recycling containers and info-posters are effective. While the posters were not created by the group, the posters are part of the same ECO Program messaging campaign. Implemented in 6 of 13 ORs, the new recycling hampers contain an info-poster on the lid, instructing the user to not recycle gloves and pictures of recyclable material. Recycling was collected over an 8 hour period from the ORs and put aside to sort. On December 1st, the team audited the recycling hampers and determined that the ORs without info-posters produced 62.3% more recycling waste than the ORs that had info-posters on the hampers. Furthermore, the group analyzed that hampers without info-posters contained 155% more contaminated waste. Therefore, it was concluded that notifying the hospital staff by means of educational posters is an effective way to communicate the proper recycling methods within the hospital.

**Collaborators:** Collaborators involved in this project include our Sustainability 3S03 group: Ahmad Zubair Banoor (Honours Life Sciences, Faculty of Science), Joshua Del Gobbo (Honours Kinesiology, Faculty of Science), and Srishti Harnal (Honours Biology & Pharmacology Co-op, Faculty of Science). We gratefully acknowledge the support and guidance of our Community Project Champion Victoria Brzozowski, Sustainability & Waste Management Coordinator at St. Joseph's Healthcare Hamilton, with her knowledge and novel experience of the waste management sector at SJHH that she provided us with.



# Waste Management Initiative at McMaster University Medical Centre

Student Authors: Negin Balaghi, Zaki Bayat, Christian Monti, Mansi Patel & Hiba Shah

## Overview

The perioperative services department at McMaster University Medical Centre (MUMC), comprising of the operating room (OR), same day surgery (SDS), post anesthetic care unit, and the pre-operative clinic, is a large generator of unique recyclable materials. One of the main criteria in recycling is to avoid mixing non-recyclables and recyclables into a recycling container, otherwise all recyclables are considered contaminated and cannot be handled in accordance to the legislation and disposal standards. In order to address this principle and to discretely address the concerns of the staff regarding recycling practices in the perioperative services department, a unified poster was required to be designed and distributed across all wards within the perioperative department.

## Objectives

1. Identify existing gaps in effective recycling practices at MUMC perioperative services department compared to leading healthcare systems in Ontario
2. Propose solutions for improvement, with a focus on proper recycling education
3. Develop an effective mode of communication to educate and relay information about sustainable recycling practices
4. Conduct pre and post implementation visual recycling reviews and analyze the impact of the new communication plan in improving proper recycling habits

## Reporting

In the first phase of this project and in order to assess the status of recycling practices prior to implementing any changes at the site, our team conducted interviews with four main categories of staff in contact with the perioperative services department waste generation and handling. After gathering initial information from nurses, environmental aides, health care aides, and waste operator site lead, an initial visual audit was compiled to study the quantity, nature, and composition of the recyclable materials generated in the four areas of focus in the hospital and to understand how this recycling is being managed. As per our findings, surgeries, therefore the OR and SDS, are known to account for the majority of the waste produced by the hospital per unit operation. In order to ensure a sustainable change to recycling practices, we designed and implemented a unified poster, addressing primarily the materials handled in the perioperative service department of the hospital. By presenting the poster to the wards within the perioperative services, we were able to play a part in increasing awareness among staff about existing waste disposal issues, engage the team in identifying the most beneficial solutions and discuss available improvement opportunities as part of future phases of our project. During our final visit of MUMC in December, going through a number of recycling bags, we noted correct identification of a lot of recyclable items in comparison to the samples collected previously. Upon the success of this project and with the recommendations presented in the project report, we hope to see enhanced recycling equipment (e.g. visible recycling bins with proper lids in place, unified clear bags, etc.) across HHS in the near future.



From left to right – Mansi Patel, Rosemary Van Oostrom, Sandy McLean, Negin Balaghi

**Collaborators:** Much appreciation goes to our project champion, Rosemary Van Oostrom, Waste Management Coordinator of the Hamilton Health Sciences team for her constant support and guidance throughout this project. Special thanks to Sandy McLean, our amazing clinical leader for her mentorship and support.



# KINDNESS

## Random Act of Kindness Day® (RAK) – McMaster Outreach

NO ACT OF KINDNESS, NO MATTER HOW SMALL, IS EVER WASTED. -AESOP

**Student Authors: Morgan Brauer, Hannah Hinchey & Jonathon Tonietto**

### Overview

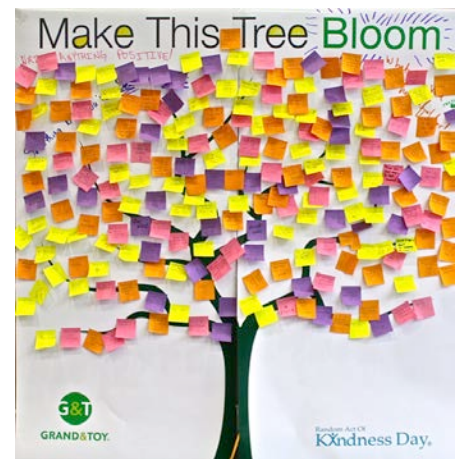
This project was initiated with the aim to instill positivity and joy through acts of kindness in communities surrounding Grand & Toy's (G&T) offices across Canada. Members from G&T distributed positivity cards, performed acts of kindness such as high fives, holding doors for individuals, as well as collected food donations for local charities. Originally, RAK Day started when one of the foundations volunteer's was given a free parking pass from an anonymous individual. The common theme that RAK Day and the "Pay it Forward" movement share is to create social sustainability through genuine acts of helping others without expecting incentives of any kind. These actions help to restore childhood optimism and aim to create human connection through individual interactions. On November 6th 2016, the McMaster Community participated in RAK Day.

### Objectives

1. Identify opportunities to promote McMaster's RAK Day through social media, leading up to and on the day of the event
2. Share the Pay it Forward message through taking part in RAK Day at McMaster on November 6th, 2015
3. Quantify the results of individuals impacted by RAK Day at McMaster

### Reporting

To build excitement leading up to the event, we created a social media presence by making a Facebook group, which reached over 200 participants. When RAK Day occurred, members of the McMaster community joined individuals from G&T and other communities all across the country taking part in the initiative. Volunteers from across Canada took part in activities geared toward the promotion of actions



that instilled positivity and happiness. Our group procured a spot in the middle of McMaster's Student Centre where we hung a "kindness tree" for people to leave their "leaves" containing positive messages and ideologies, envisioned or witnessed. We were able to collect 235 leaves for the tree. The group utilized the location in the Student Centre to interact with traffic traveling through the space between classes and persons waiting in lines for services. Throughout the day, our group handed out over 400 cards containing inspirational messages, over 400 pieces of candy as well as demonstrated positive actions towards a range of individuals. The ways in which intangible happiness was analyzed included the trending of tweets on the day of the event, the reactions received to the kind actions and gifts, in addition to the reactions viewed during our interactions with people throughout the day. Individuals were leaving after interacting with group members noticeably more cheerful and the group witnessed a few embrace the idea of paying it forward. Media played a big factor in our event, and we concluded by holding a contest to promote RAK where six participants won McMaster shirts donated for the event.

**Collaborators:** We would like to thank our Community Project Champions: Serguei Tchertok, Sustainability Manager at Grand & Toy, and Tiffany Scott, Business Development Manager at Grand & Toy for providing the handouts and supplies for the event as well as guiding us throughout the semester. Finally, we would like to thank the other Random Act of Kindness Day® Internal group for all of their help and support on the Day.



# SustainableJoes EdTEAM

**Student Authors: Ashley Darch, Andre Marini, Melina Ralph & Hayya Usmani**

## Overview

In collaboration with SustainableJoes, a module series was created to complement SustainableJoes' current documentary project. This module series ensures "student-centred" learning through a topic centred interactive framework, which incorporates interviews with sustainability experts and concept illustration. The EdTeam's intention is to enable professors to easily implement sustainability focused curriculum into their classrooms that is educational, engaging, entertaining, empowering, and makes sustainability easy for 'all everyday Joes'.

## Objectives

1. From the current hazards and concerns that people are facing, to the practical solutions individuals and communities are implementing, this module series is meant to educate young adults in how sustainability looks today
2. To spread sustainability awareness in such a way that it becomes realistic and attainable for everyday individuals

## Reporting

EdTeam began by meeting SustainableJoes' founder, Stephen Szucs, to identify the goals for the project. Four modules were identified and agreed upon for the EdTeam's focus: Sustainability at Large, Water and Wastewater, Sustainability and Business, and Good Governance. Following this, preliminary investigations were conducted into the Ontario grade 11 and 12 curriculum. This allowed the team to identify the baseline of the sustainability knowledge young adults would have prior to viewing the modules. Further investigations were conducted to identify the optimum methods of educational practices. It was discovered that a "student-centred" learning approach and visually rich content would be required to insure SustainableJoes' message was properly received.

From there, The EdTeam moved on to creating the four modules, beginning first by watching the raw footage of the SustainableJoes documentary. Templates were then created for each module. These templates identified key themes, topics, concepts, and interviews that each module would need to contain. As superior quality would be required for each module to ensure a professional look, Stephen was provided a list of businesses and schools that could complete this task.



**Collaborators:** We would like to thank Stephen Szucs, founder of SustainableJoes, for the opportunity to work on this module series.



# Random Act of Kindness Day

**Student Authors: Omar Balbaa, Charlie Coe & Sandra Hernandez**

GRAND&TOY®

## Overview

The Canadian subsidiary of Office Depot, Grand & Toy Limited (G&T), founded in 1882, wanted to improve their corporate culture by enhancing the relationships across their branches as well as internally. This was done by implementing a “Random Act of Kindness (RAK) Day” which was held on November 6, 2015. It consisted of doing good deeds for others in the community and/or encouraging one another through kind notes posted on a “kindness tree”. The main objective was to improve the relationships between various branches across the country internally (between the employees at G&T) and externally (between G&T, their customers and other community members). Although this is the first time Grant & Toy attempted to host the Random Act of Kindness Day, the hopes are for it to continue yearly and become a long-term commitment to their associates and the community.

## Objectives

1. Engage all Canadian locations of G&T offices to participate in Random Act of Kindness Day
2. Measure the impact of the event through participation and community involvement on social media
3. Conduct an online survey at all participating and non-participating Grand & Toy locations to obtain feedback and make recommendations for future Random Acts of Kindness events on years to come

## Reporting

The project’s main focus was the creation of a Random Act of Kindness day on November 6th 2015 alongside Grand & Toy, while focusing on internal engagement across agencies as well as on each individual location with their respective communities. Internal and external engagement was discussed with all locations involved ensuring its completion. Communication such as emails, Facebook and Twitter announcements along with delivery of kindness trees and supplies were done as scheduled. The project was deemed successful as nine out of the twelve locations contacted participated in the event. Four event locations participated internally and externally through the use of the kindness tree and donations to their local food banks or shelters. In addition, five locations participated actively in the community by distributing candy, hamburgers, recycled bags and, cards to members of their communities.

There was a remarkable response and online participation with the Grant & Toy RAK event as the potential number of people reached was 139 000. There were 538 interactions between Grand & Toy and their online users that day. Page impressions jumped from an average of 2.6 thousand to 5.8 thousand on the day of the event. On Twitter, the Grand & Toy page received over 80 tweets and through Facebook, there were 123 new likes from the 9000 users that accessed the page on the day of.

The survey that was conducted from the employees in G&T showed clear benefits to holding a Random Act of Kindness day. From the surveys conducted after the event, we found that over 60% of the people participating felt that RAK day affected their day in a positive way. Almost 70% of participants would like to have it happen again in the coming years, and are inclined to pay it forward due to this event.

**Collaborators:** We would like to thank our Community Project Champions: Serguei Tchertok, Sustainability Manager at Grand & Toy, and Tiffany Scott, Business Development Manager at Grand & Toy.

# Student Attitudes Towards Food Waste

**Student Authors: Komal Aryal, Aqsa Arshad, Mackenzie Kretz, Nikhil Kumar & Pauline Varona**

## Overview

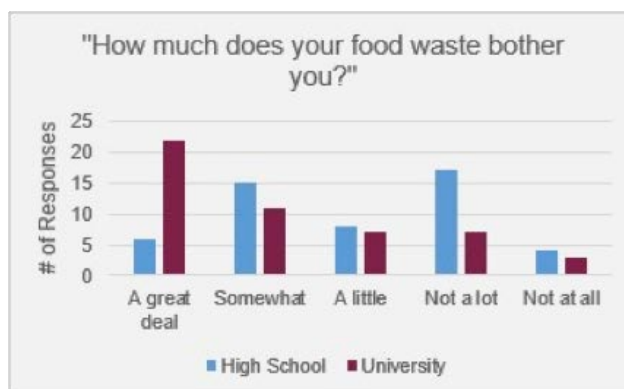
In this era of urbanization and unprecedented population growth, waste production and management is a pressing concern. In particular, food waste is a colossal issue, with almost one-third of the food fit for consumption wasted annually.<sup>1</sup> Canada is one of the worst offenders when it comes to this, with roughly \$31 billion of food thrown out each year.<sup>1</sup> It is important to understand where students stand on this matter, as they are part of the next generation, and the ones who will ultimately face the consequences of these issues. As such, this project focused on high-school and university students within Halton Region to determine their opinions on food waste. Specifically, we wanted to identify demographic differences, and critically examine potential downfalls to proposed solutions. This was done by conducting a survey with the target audience to gather feedback for further analysis.

## Objectives

1. Identify attitudinal differences between different demographic groups on the topic of food waste
2. Determine potential barriers against the implementation of food waste reduction programs among consumers
3. Educate consumers about food waste production issues, as well as reduction strategies

## Reporting

The survey was conducted in person using paper copies for high school students, and an electronic version for university students. We were able to meet our target of 50 responses from each group, allowing us to move forward with the data analysis to identify attitudinal differences between Robert Bateman High School and McMaster Ron Joyce Center students. One immediate observation is that the majority of responses from both groups claimed to waste up to or less than 19 percent of food on a weekly basis. Of this, high school students believed that leftovers comprised most of their food waste. University students felt similarly; however, they believed that fruits and vegetables were equally wasted. One significant difference between the two demographics was with regards to their attitudes towards household food waste. It was reported that 44 percent of university students said that it caused them a great deal of discontent, whereas only 12 percent of high school students felt the same. In spite of this, both groups only made 'somewhat' of an effort to cut down on the amount of waste they generate. The two sets agreed that the biggest reason for food waste generation is due to food being forgotten in the fridge. In order to overcome food waste as an issue, both demographics felt that the best strategy would be to use conscientious.



**Collaborators:** Special thanks goes to our Community Project Champion, Anna DeMarchi-Meyers, Agricultural Liaison Officer at Halton Region, for providing guidance and mentorship instrumental to our group's success. Our project would not have been possible without her approval and feedback. As well, we thank Shannon Bowden, Head of Math and Science at Robert Bateman High School, for connecting us to students to take part in our survey.

<sup>1</sup> Gooch, M., Felfel, A., & Glasbey, C. (2014, December) Food Waste in Canada – \$27 Billion Revisited. Value Chain Management Center. Retrieved from <http://vcm-international.com/new-report-annual-food-waste-in-canada-is-31-billion/>





# Halton Consumer Food Waste Advocacy Team: Promoting Conscious Consumption

**Student Authors: Sarah Dzin, Sohana Farhin, Agatha Maciaszek, Varun Muddaluru & Aheen Mukherjee**

## Overview

Food is a vital component for life, however one-third of food produced for human consumption is lost or wasted globally. Our experiential learning project focused on the problem of food waste at the consumer level, as Canadian households are responsible for 47% of the total \$31 billion wasted on this problem across the country. We aspired to understand widespread consumer values and behaviours through the implementation of a survey while simultaneously, raising awareness on this issue. Influencing individual's to become conscious consumers was realized through the dissemination of a brochure, a visual presentation board combined with an effective dialogue.

## Objectives

1. Create awareness about consumer food waste
2. Survey grocery store customers in the Halton Region to identify consumer attitudes
3. Analyze and interpret survey results and exhibit them in an Executive Summary
4. Present project overview, survey results, and suggest food waste reduction programs to the Halton Food Council

## Reporting

We successfully executed the objectives of the project by raising awareness and learning about consumer food waste attitudes and behaviours. First, our team performed a literature review of articles and video materials pertaining to consumer food waste in the United States, Canada, and Europe. We used information from the articles and videos to create a brochure and presentation board to raise awareness, and a survey to learn about consumer food waste attitudes.

To target consumers in the Halton Region, the team approached Longo's and Farmer Jack's Market in the Fairview and Guelph Line neighbourhood to set up a kiosk and conduct the survey. The survey was approved by the McMaster Ethics Board and we obtained appropriate insurance coverage in order to conduct our survey on-site. Between November 21st to the 28th, we connected with and distributed brochures to over 150 customers at Longo's and Farmer Jack's Market. Furthermore, we surveyed 26 customers at Longo's, 18 at Farmer Jack's Market, and an additional 13 residents from Halton region. Following our community engagement and data collection, we analyzed the survey results to find correlations between various demographic categories (age, gender, income, marital status, and household composition) and food waste patterns. A major finding was that young adults (25-44 years old) disposed of food based on the expiration date labels, while the primary considerations for respondents 65 and over were appearance, texture and/or smell of the food. Younger individuals are dependent on labels to determine freshness and the older generation relies on their senses, associated with the fact that many individuals 65 or older may not have grown up with widespread food labels. The survey results and recommended next steps were described in an Executive Summary, and the results of which were formally presented to council members of the Halton Food Council.

**Collaborators:** We would like to thank our Community Project Champions, Moira Matsubuchi-Shaw and Anna De-Marchi-Meyers who are members of the Halton Food Council (HFC), for guiding us throughout the semester. Moira provided us with quality literature materials, efficiently critiqued our documents, and composed a letter of recognition to provide our proof of collaboration with the HFC. We would also like to thank Longo's and Farmer Jack's in the Fairview and Guelph Line neighbourhood in Burlington. These retailers provided us with a platform to raise awareness on the issue and learn about consumer attitudes and behaviours towards food waste. And last, but not least, we would like to thank all of the individuals who took the time to connect with us and complete our survey.



# SustainableJoes: Making Sustainability Easy

**Student Authors: Alexandra Crone, Nicole Vandenheuvel, Samantha Wright & Christine Yachouh**

*Clear Conscience Cards*  
A SUSTAINABLEJOES PRODUCT

## Overview

SustainableJoes is an organization founded by Stephen Szucs with the goal of making sustainability easy for “everyday Joes.” In December of 2015, SustainableJoes is releasing a documentary as a part of an edutainment series in hopes to make sustainability more accessible and understandable. This portion of the project coordinated a marketing campaign to promote the release of the SustainableJoes documentary and their new Clear Conscience Card initiative. The majority of our marketing campaign relied on creating a social media presence through websites such as Twitter and Facebook. Our goal was that through creating a social media presence we would be able to promote the ideals of SustainableJoes while simultaneously helping to educate people on how to live more sustainably. This social media campaign was important for advertising the SustainableJoes project but more so for creating a dialogue online among social media users about what it means to be sustainable.

## Objectives

1. Educate and engage social media users on sustainable life practices
2. Increase social media presence through the use of hashtags, graphic images and relatable facts to advertise SustainableJoes and advocate for sustainable lifestyles
3. Continental outreach within the campaign; with a focus on Canada and the United States

## Reporting

The online campaign took place during the first week of December 2015 and promoted the anticipated release of the SustainableJoes documentary and the new Clear Conscience Cards initiative. Each post utilized eye-catching graphics with sustainability facts and words of encouragement for practicing sustainability. Clear Conscience Cards were used as an incentive to further encourage social media participation and advertise the new project. Followers who reached out to SustainableJoes accounts and utilized the campaign’s hashtag #SustainableU were entered to win free Clear Conscience Cards. During the week of the campaign there were drastic increases in social media compared to the month prior. Furthermore, over 100 Clear Conscience Cards were sold during the week of the campaign. The social media campaign helped to educate social media users on sustainable life practices by directing them to resources on sustainability, and was monitored by the amount of engagements on SustainableJoes posts.



Behind the scenes photo taken from SustainableJoes social media interview with Captain Paul Watson, which will be featured in the documentary. Seen interviewing the Captain are Stephen Szucs and Samantha Wright

**Collaborators:** Special thanks goes to Community Project Champion, the founder of SustainableJoes: Stephen Szucs for providing information, support, and mentorship; our Education Team: Ashley Darch, Andre Marini, Melina Ralph, and Hayya Usmani and our Academic Sustainability Programs Office liaison: Kate Whalen.



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Designed by the Academic Sustainability Programs Office