

**Reusable mug program: Assessing campus perspectives and use of the pilot program at the  
Killam Library, Dalhousie University**

Final Research Project

Carley Archibald  
Jingwen Bi  
Megan Fong  
Junita Privado

ENVS/SUST 3502

Dr. Amy Mui

April 10, 2019

**Table of Contents**

**1.0 EXECUTIVE SUMMARY.....2**

**2.0 INTRODUCTION.....3**

**3.0 METHODS.....5**

    3.1 QUALITATIVE ..... 5

    3.2 QUANTITATIVE ..... 6

**4.0 RESULTS.....7**

    4.1 QUALITATIVE ..... 7

    4.2 QUANTITATIVE ..... 10

**5.0 DISCUSSION ..... 11**

**6.0 CONCLUSION ..... 14**

**ACKNOWLEDGEMENTS ..... 15**

**REFERENCES ..... 16**

**APPENDIX A: SAMPLE SURVEY..... 17**

## 1.0 Executive Summary

The main objective of this study is to assess perspectives and use of the reusable mug pilot program at the Killam Library, Dalhousie University. Reduction of solid waste is a widespread environmental and sustainability issue as the solid waste that is sent landfills has many associated negative effects (Government of Canada, 2012). These negative effects include contamination of surrounding land, groundwater, and surficial bodies of water (Government of Canada, 2012). Additionally, the landfill itself produces greenhouse gases such as methane and carbon dioxide, thus contributing to overall climate change (Government of Canada, 2012). Solid waste production is an important issue at Dalhousie University because 40% of waste produced at Dalhousie University ends up in landfills (Dalhousie University, 2015). Disposable cups contribute to solid waste at Dalhousie University and because of this, the Office of Sustainability is piloting a reusable mug program at Second Cup with the goal of reducing disposable cup waste. By assessing perspectives of the reusable mug pilot program launched on March 5, 2019, this study gathered information about the support and interest regarding the permanent implementation of sustainable programs such as this pilot program. Additionally, we aimed to uncover barriers regarding pilot program use in order to strengthen and improve the program for perceived future implementation.

Using a mixed method approach, we collected data through qualitative (surveys) and quantitative (count observation) methods over one week during the primary stages of the program. Our results suggest that participants would use the reusable mug program, however many participants were not aware of it. The majority of the participants were in favour of having this program permanently implemented in the Killam Library, as well as in other buildings such as the Student Union Building and Life Sciences Centre. Quantitative count data suggested that 5% of individuals consuming beverages at the Second Cup used mugs provided by the pilot program, while the remaining used disposable cups and their personal reusable mugs. Overall, our research demonstrates that a reusable mug program could be an effective solution to reduce excessive use of disposable coffee cups in the Killam Library at Dalhousie University.

## 2.0 Introduction

Despite increasing awareness of the problem with single-use waste, many municipalities in Canada do not recycle various items that could be considered recyclable (Ziada, 2009; Denty & Dubé, 2018). The amount of waste sent to landfills is considered such a pressing issue because of the adverse environmental effects associated with large-scale landfills (Government of Canada, 2012). These effects include the contamination of surface and groundwater from leachate and the production of harmful greenhouse gases such as carbon dioxide (CO<sub>2</sub>), volatile organic compounds (VOCs), and methane (CH<sub>4</sub>) (Government of Canada, 2012). Leachate is a liquid by-product from landfills which contains harmful contaminants (e.g., heavy metals and hazardous organic contaminants) from household products such as detergents, personal care products, paint, etc. (Slack, Gronow, & Voulvoulis, 2005). Leachate can infiltrate into groundwater from precipitation or be transported by surface runoff into surficial bodies of water (Slack et al., 2005). Additionally, 20% of the methane emissions produced in Canada are from landfills, adding to global climate change (Government of Canada, 2017). The environmental effects of landfills are important considering the large amount of solid waste produced in Nova Scotia (Divert NS, 2017). A waste audit of the landfills in Nova Scotia, which are comprised of residential, and industry, commercial, and institutional waste (ICI), determined that 284,171 tonnes of waste was produced in 2017 (Divert NS, 2017). Therefore, efforts to reduce solid waste in Nova Scotia are an important environmental issue to address especially at a institutional-level.

Higher education institutions (HEI) have an important role in diversion and reduction of waste because they are comparable in size and population to small towns (Zhang, Williams, Kemp, & Smith, 2011). Reducing solid waste production is a critical component for creating and maintaining sustainable operations at universities (Symth, Fredeen, & Booth, 2010; Dalhousie University Office of Sustainability, 2014). There are many indirect and direct benefits from integrating sustainable waste operations that can result in economic, environmental, and health benefits (Davidson & Owen, n.d.). In particular, Dalhousie University has a somewhat unique role because of its commitments to waste reduction as well as its integral role for educating and spreading awareness in the Halifax community. Therefore, one of the Office of

Sustainability's main objective is to lessen the environmental impact of Dalhousie University by promoting sustainability in its operations (Dalhousie University Office of Sustainability, 2014). Solid waste generated at Dalhousie University is tracked as part of the university's sustainability efforts with the goal of reducing the amount of solid waste produced (Dalhousie University, 2015). As of 2015, 40% of the waste generated at Dalhousie was considered garbage including all disposable hot beverage cups and lids (Dalhousie University, 2015). This is because paper disposable coffee cups contain a polyethylene liner, preventing the cup from being recycled using existing recycling methods in the Halifax Regional Municipality (Ziada, 2009; Divert NS, 2017). Therefore, coffee cups are an effective product to target in campus waste reduction initiatives due to their widespread use (Ziada, 2009).

Coffee is a highly coveted and widely consumed beverage at Dalhousie University. This is evidenced by the perpetually long Tim Hortons line-ups and often overflowing garbage bins full of disposable hot beverage cups. There are numerous small and attainable changes being made at other international universities to help reduce the amount of trash produced from the food and service industry (Symth et al., 2010). Examples include bring-your-own-cup programs, the implementation of dish libraries, and the transition toward compostable cups (and recyclable lids) at a fee to the customer (e.g., Harvard University, n.d., McGill University, n.d.). These efforts help to reduce the number of coffee cups being thrown in the trash without inconveniencing the consumer or food establishment. At Dalhousie University, the Sustainability Office has recently launched a reusable mug pilot program at the Killam Library to reduce the use of disposable cups, which we will focus on for our project.

The purpose of our research is to determine campus perceptions of the program to gather information regarding program use, barriers, and recommendations for improvement. One of the objectives of this study was to gather empirical data in the primary stages of implementation in order to provide meaningful campus community feedback to Dalhousie's Office of Sustainability. This information will be valuable for gauging the program's success, as well as offering suggestions for the future advancement of this sustainability initiative. Currently, the reusable mug program is only a pilot but we believe this research will aid in the

development and refinement of the reusable mug program and endorse its permanent implementation. The following research question will be addressed in this project:

What are campus perceptions of the reusable mug pilot program in the Killam Library at Dalhousie University?

### **3.0 Methods**

#### **3.1 Qualitative**

The qualitative portion of our data was collected at Second Cup in the Killam Library using 13-question survey. The survey was designed to assess campus awareness of the reusable mug pilot program, uncover barriers to using reusable mugs, and determine whether the campus supports the large-scale implementation of this program. The survey included 11 single-response and likert-scale style questions and two open-ended questions. The survey was designed to allow people to express their thoughts and opinions in their own words while keeping the data collection process efficient. An in-person survey was elected as the most effective method to gather the opinions of multiple individuals in a short timeframe. This method was chosen because individuals would be more likely to fill out the survey if approached in person, allowing us to achieve a high response rate. No personal identifying information was collected as part of this study and no incentives were offered. A sample of the full survey can be found in Appendix A.

The researchers approached potential participants in the atrium of the Killam Library that were sitting at a table near Second Cup or waiting for their drink to be made. Survey participants were approached in this manner so that individuals had time to fill out the survey and could provide complete and thoughtful answers. All participants were asked if they would like to participate in a survey regarding the reusable mug program and were told the purpose of the research project. If they agreed, participants were given a clipboard with a copy of the survey to fill it out while standing in the lineup or at a nearby table. Once completed, the survey was returned to the researchers and put into a large envelope to ensure participant anonymity. This process was repeated on three different days throughout the week during peak (9-10 AM

and 12-2 PM) and non-peak times (remaining hours of operation). Peak and non-peak times were targeted to gather a representative sample of individuals that purchase drinks at Second Cup. The exact sample population was unknown, therefore we aimed to collect 100 surveys following a non-probabilistic, quota sampling method. This methodology enabled us to gather 102 surveys, providing a quasi-representative sample despite not knowing the exact sample population number.

The data was then entered into an excel spreadsheet where it was cleaned and categorized. Major themes were identified in the open-ended questions, which were coded according to an a-posteriori coding method. The open-ended questions that required coding included the barriers to using the reusable mug program (Q9) and what could be done to improve upon this program (Q13). Two group members completed the coding process to ensure consistency and codes were crossed-checked between researchers to confirm accuracy. Descriptive statistics and graphs were used to display and summarize the results.

### 3.2 Quantitative

For our quantitative portion of our mixed method study, we conducted count observations at the Second Cup in the Killam Library. Counts were taken during six hour-long and one half-hour-long period, including peak and non-peak hours, over the course of seven days. A non-probabilistic quota sampling method was used for count observations because an exact population size of the customers who purchased drinks at Second Cup was unknown.

Hour-long periods was chosen to count a relatively large number of cups while gathering a representative sample size. Peak hours and non-peak hours captured a wide variety of individuals in count observations as the number of individuals that purchase drinks at Second Cup varies throughout a typical business day. The peak hours were defined as 9-10 AM and 12-2 PM while non-peak hours were the remaining hours of operation. A potential limitation was that cups were counted four times during the 2-3 PM period which could have included similar groups of individuals using the same types of cups. Counts were conducted over a seven-day period to cover a wide variety of consumers. All cup types were counted to quantify the use of

the pilot program mugs in comparison to disposable cups and personal reusable mugs. Descriptive statistics were then used to represent the percentages of individuals that chose to use mugs provided by the pilot program. Plastic cups were not counted because they are recyclable and do not fall under the category of disposable cups. Our study participants included students, faculty members, and other staff members who purchased drinks at Second Cup.

After data collection, data was entered into an excel spreadsheet under three categories, disposable cups, personal reusable mugs, and the pilot program's reusable mugs. Then, we calculated the percentages of different types of cups used out of the 285 cups counted.

#### 4.0 Results

##### 4.1 Qualitative

Students comprised the majority of the 102 survey participants, but there was some feedback from faculty and staff members as well. Out of the students who completed the survey, there was a wide distribution of programs and faculties represented with 27 unique programs. The vast majority (93%) of individuals supported the permanent implementation of the reusable mug pilot program in the Killam Library and elsewhere on Dalhousie University campuses (Figure 1).

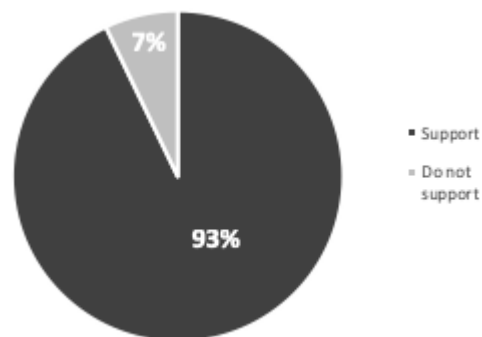


Figure 1. Percentage of those that support or do not support the permanent implementation of the reusable mug program at the Second Cup in the Killam Library at Dalhousie University.



At its current location at the Second Cup in the Killam Library, 92% of those surveyed would use the mug program, however only 50% of individuals that were surveyed knew about the pilot program (Figure 2). When asked whether the program would be successful in other buildings on campus, the Student Union Building (SUB) and Life Sciences Building (LSC) were the most commonly suggested (Figure 3). Individuals were predominantly motivated to use the reusable mug program due to its ability to reduce waste on Dalhousie University campuses (Figure 4, Q8). For example, many individuals believed that the reusable mug program would not only reduce the amount of single-use waste produced at Dalhousie (Figure 4, Q6) but believed that it plays a pivotal role in waste reduction (Figure 4 ,Q7). Considering the acknowledgement that there needs to be a reduction of single-use waste at Dalhousie University, there was a large portion of individuals that did not realize that coffee cups and lids could not be recycled with existing recycling facilities in Halifax (Figure 4, Q3).

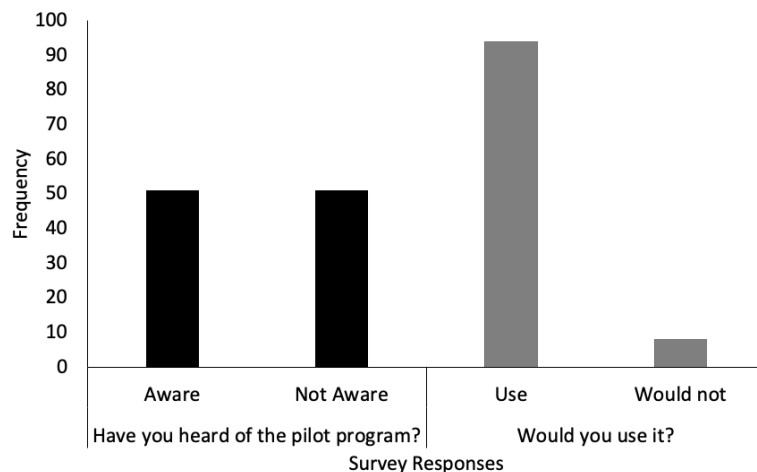


Figure 2. Survey-responses regarding awareness and usability of the reusable mug pilot program in the Killam Library, Dalhousie University.

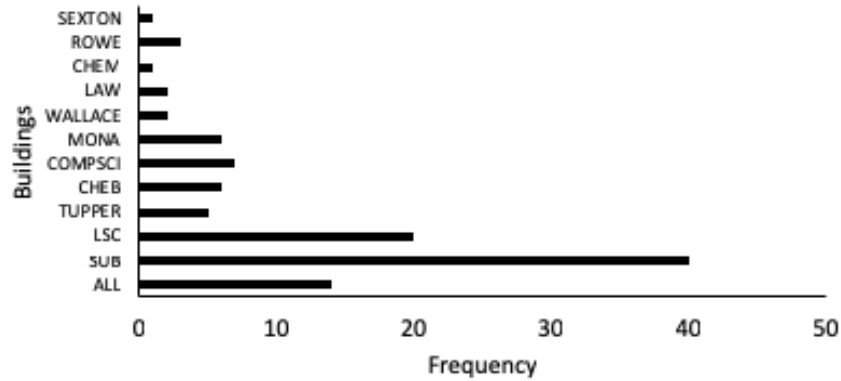


Figure 3. Proposed buildings for future reusable mug program implementation at Dalhousie University.

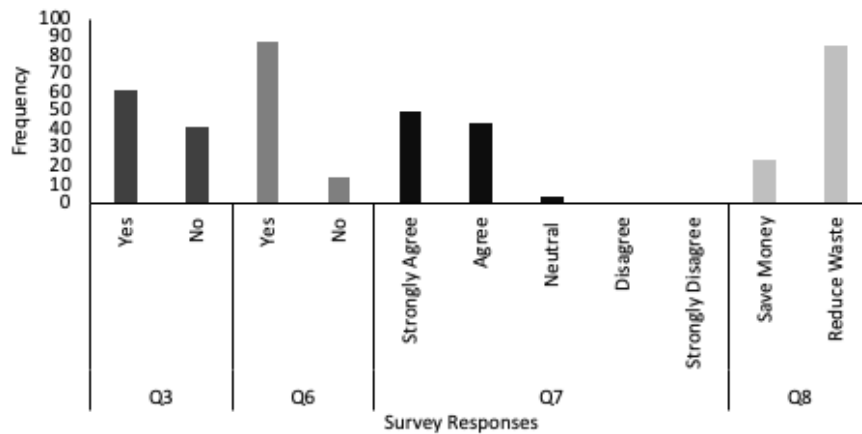


Figure 4. Survey responses to waste-related questions (e.g., Q3, Q6, Q7, and Q8). Refer to Appendix A for full questions.

Common concerns about the reusable mug program that were brought up in the survey included mobility and conveniences of mugs (Figure 5). Many participants raised concerns about their busy lifestyles which prohibited the ability to sit and drink a cup of coffee, thus requiring a To Go cup. Restrictions on where the mugs could be brought was also concerning to individuals as many would prefer if they could be brought into other parts of the Killam Library. Other frequently mentioned barriers to the program include a lack of awareness of the program, hygiene-related issues, and associated costs.

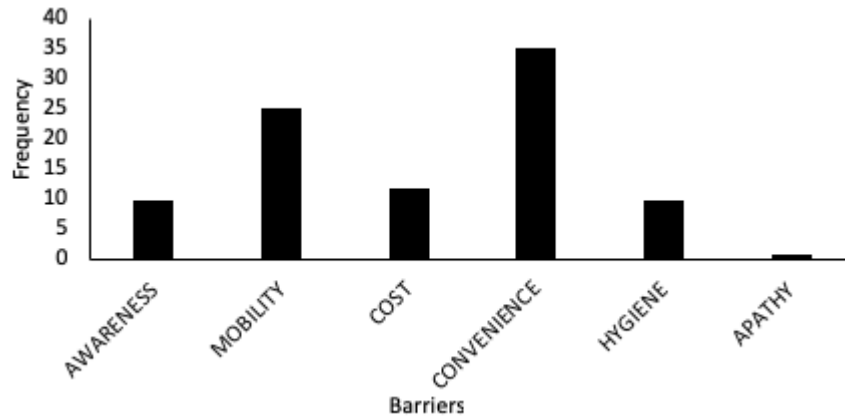


Figure 5. Barriers associated with the reusable mug program at Second Cup in the Killam Library at Dalhousie University.

4.2 Quantitative

Over the course of the seven-day count period, 285 cups were counted (Table 1). Our results demonstrate that 83% of cups used at the Killam Library are disposable cups, 12% are personal reusable mugs, and 5 % are the pilot program’s reusable mugs (Figure 6).

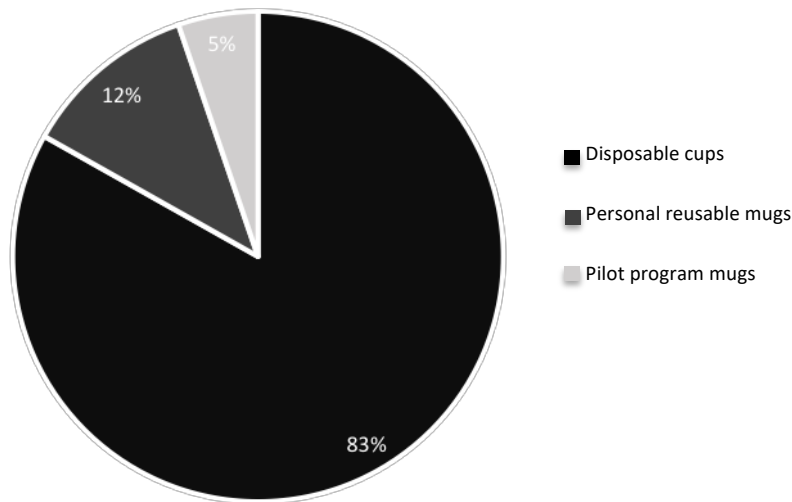


Figure 6. The percentage of different types of cup use at Second Cup in the Killam Library at Dalhousie University.

Table 1. The number of different types of cup use recorded during different time period at Second Cup at Dalhousie University

<b>Time</b>	<b>Disposable cups</b>	<b>Personal reusable mugs</b>	<b>Pilot program's mugs</b>	<b>Total</b>
13:07-14:16, Fri., Mar.15	40	9	1	50
10:30-11:30, Tue., Mar.19	36	8	1	45
14:10-15:10, Thur., Mar. 21	53	4	5	62
10:40-11:10, Wed., Mar. 20	19	5	2	26
14:30-15:30, Wed., Mar. 20	32	4	2	38
14:06-15:06, Sat., Mar. 23	22	1	3	26
14:30-15:30, Mon., Mar. 25	35	2	1	38

## 5.0 Discussion

The purpose of this research was to determine campus perceptions of the reusable mug pilot program and to gather information regarding program use, barriers, and recommendations for improvement. Empirical data was collected in the primary stages of implementation to provide campus community feedback to Dalhousie's Office of Sustainability. This information will be valuable in gauging the programs success, as well as offering suggestions for the future advancement of this sustainability initiative. Currently, the reusable mug program is only a pilot, but we believe this research will aid in the development and refinement of the reusable mug program and endorse its permanent implementation.

The results of the study indicate that campus perceptions of the reusable mug program are overwhelmingly positive. The vast majority of participants agreed that single-use waste reduction programs like this are important to have on campus, and that it should be permanently implemented on a larger scale. Despite receiving more input from students than faculty and staff, the data is believed to be a representative sample of people who buy drinks at Second Cup. These results support that the Dalhousie community is invested in reducing single-

use waste and believe the reusable mug program will help Dalhousie reach its sustainability goals.

Despite positive perceptions of the reusable mug program, our quantitative counts revealed that only 5% of consumers buying drinks at Second Cup are using the mugs provided as part of the program. This contradicted our survey result that over 90% of respondents agreed when asked if they would use the mugs. Therefore, there are likely barriers that must be overcome in order to improve upon the existing framework. After coding and analyzing the open-ended responses, repetitive themes were revealed regarding the barriers to using the reusable mug program and recommendations for improving it.

The results demonstrate that the main barriers to using the reusable mug program were convenience, mobility, awareness, hygiene, and cost (Figure 5). Convenience was the most mentioned, as many students are rushing between classes when buying drinks and are unable to return the mug. Mobility was also an issue, as the current rules state that consumers are only allowed to use the mugs in the Killam Library's atrium. This restriction prohibits consumers from taking the mug upstairs in the library to study or to other locations on campus where hot drinks are sold. We also found that only 50% of individuals knew about the program, highlighting a major issue in awareness and marketing. Another concern was hygiene because many people use the mugs and their cleaning procedures are unknown to consumers. The least mentioned barrier was cost which was mainly regarding the risks of lending the mugs out when they could be broken or stolen. It was also found that 40% of individuals did not know that all single-use cups provided by Second Cup are not recyclable or compostable and are sent to the landfill (Figure 4, Q3). This common misconception is an educational opportunity for Dalhousie to teach students, staff and faculty more about sorting waste items on campus. This information also uncovered an issue regarding the unavailability of compostable cups for To Go coffee cups.

In response to these barriers, there were many valuable recommendations made by our participants to improve the program. The most suggested improvement was to expand the program to all buildings on campus in order to overcome the mobility and convenience issues. It was suggested that all hot drink vendors should participate and multiple drop off locations in

each building should be installed for the easy return of the mugs. A convenient drop-off location would increase mobility allowing students to take the mugs to class, study areas, and other eating areas across campus. Consumers would be able to enjoy drinks from a variety of different vendors in a sustainable way. Participants felt that the Student Union Building and Life Sciences Centre on Dalhousie's Studley Campus would be the best buildings for program extension (Figure 3).

Other recommended improvements included an increase in the marketing of the reusable mug program, possibly including information about the cleaning process of the mugs and addressing the concerns about theft. Including this information would create a more transparent information exchange and give consumers more comfort regarding hygiene and cost. An marketing campaign could easily be carried out on social media or through traditional poster campaigns.

This was the first research study performed to evaluate campus perceptions of the reusable mug program at Dalhousie University. Our research indicates that the reusable mug program has gained campus support and is a good start for reducing the number of disposable cups entering the landfill. However, integrating the improvements mentioned above, as well as looking to successful programs at other institutions, would allow the further development and refinement of this pilot program. Offering more durable, insulated and covered containers would allow a safer and cleaner experience when using a program-provided mug. This would also further address convenience and mobility issues as mentioned by our participants. Higher levels of accountability could be ensured by using a token program, similar to McGill University where you receive a token upon the purchase of a drink, essentially by paying a deposit that will be refunded upon the return of a mug (McGill University, n.d.). This could be expanded to reusable plates and utensils as well, eventually allowing food services at Dalhousie to move towards a closed-loop system. Although these upgrades would require significant amounts of modifications to the current program, they would allow Dalhousie University to employ an innovative, modern reusable mug program that is comparable to international university sustainability leaders.

The main limitation of our data collection involved the timing of implementation of the reusable mug program. Due to the timeframe of this research project, we were limited to only collecting data immediately after the program began. Collection of data before and after the program, in addition with an advertising campaign, could have raised awareness while also collecting more meaningful information for the Sustainability Office. Additionally, setting a control condition with one week not offering the pilot program's mugs; and an experimental condition on another week offering the pilot program's mugs. Thus, the quantity of different types of cups used from two different weeks would allow us to perform statistical tests to determine if the pilot program reduced the use of disposable mugs. Additionally, we acknowledge that this data was collected in the primary stages of implementation, and therefore some of our observations regarding awareness and use of the program will need updating as time progresses.

### **6.0 Conclusion**

Based on our findings, we believe that the most appropriate course of action would be to follow the recommendations of the Dalhousie population and implement this program campus-wide. Campus-wide implementation would allow other busy hot drink vendors to get on board and likely reduce the number of disposable cups from Dalhousie University entering into the landfill each year. Marketing campaigns could also dramatically increase campus awareness of the current and future reusable mug programs. Integrating previous recommendations and overcoming barriers to program use could allow the program to be more convenient and accessible to all students. Additionally, upgrading the program to include more durable, insulated mugs borrowed on a token system would allow it to fully develop into a more modern mug program. If other dishware such as plates and utensils were added, foodservice at Dalhousie could begin to move toward a closed loop system.

Moving forward, future research can be done to monitor the success of the reusable mug program. As time progresses, it is likely that awareness of the program will increase, leading to a natural increase of reusable mug use. We hope to see the eventual full-scale

implementation of this program, however its current state is a good start for reducing single use waste at the Killam Library.

The Dalhousie University community seems very interested in this initiative and is willing to move toward more sustainable habits in order to reduce single-use solid waste on campus. However, there are multiple barriers that must be addressed to ensure its success. If these barriers are overcome, we believe that Dalhousie University can have a substantial impact on the amount of disposable cups being sent to the landfill. As a higher education institution, Dalhousie's role is to educate and spread awareness about the environmental epidemic and ultimately change the perception of disposable cups.

### **Acknowledgements**

First, we would like to express our deep gratitude to Dr. Amy Mui, for her inspiring teaching, guidance, and contribution throughout this semester. We would also like to thank Meghan Terpenning, our TA, for her help and feedback through the entirety of our research process. We would lastly thank Kariena D'Souza (Sustainability Manager, Office of Sustainability) for informing us about the reusable mug pilot program which gave us a chance to be a part of the beginning stages of this amazing project.



## References

- Dalhousie University. (2015). *Solid waste Management Plan*. Retrieved from <https://cdn.dal.ca/content/dam/dalhousie/pdf/dept/sustainability/Solid%20Waste%20Management%20Plan-Final.pdf>
- Dalhousie University Office of Sustainability. (2014). *Sustainability progress report for campus operations: 2014-2017*. Retrieved from <https://cdn.dal.ca/content/dam/dalhousie/pdf/dept/sustainability/Sustainability%20Progress%20Report%202014-2017.pdf>
- Davidson, G., Owen, R. (n.d.) *Sustainable Waste Management Practises*. Dalhousie University. Retrieved from <https://cdn.dal.ca/content/dam/dalhousie/pdf/dept/sustainability/NS%20ICI%20Waste%20Management%20Guide%20Final%20%28897%20KB%29.pdf>
- Denty, K., & Dubé, J. (2018). *Single-use item reduction strategy ESSC report*. Retrieved from <https://www.halifax.ca/sites/default/files/documents/city-hall/standing-committees/181206essc81.pdf>
- Divert NS. (2017). *2017 Waste audit report*. Retrieved from <https://divertns.ca/assets/files/WasteAudit2017.pdf>
- Government of Canada. (2017). *Municipal solid waste and greenhouse gas*. Retrieved from <https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/municipal-solid/greenhouse-gases.html>
- Harvard University. (n.d.). *Reduce disposables: Use reusables*. Retrieved from <https://green.harvard.edu/tools-resources/green-tip/reduce-disposables-use-reusables>
- McGill University. (n.d.). *Green practices*. Retrieved from <https://www.mcgill.ca/foodservices/sustainability/greenpractices>
- Slack, R. J., Gronow, J. R., & Voulvoulis, N. (2005). Household hazardous waste in municipal landfills: Contaminants in leachate. *Science of the Total Environment*, 337(1–3), 119–137. <https://doi.org/10.1016/j.scitotenv.2004.07.002>
- Statistics Canada. (2012). *Human activity and the environment*. Retrieved from <https://www150.statcan.gc.ca/n1/pub/16-201-x/2012000/part-partie3-eng.htm>
- Symth, D.P., Fredeen, A.L., & Booth, A.L. (2010). Reducing solid waste in higher education: The first step towards ‘greening’ a university campus. *Resources, Conservation and Recycling*, 54: 1007-1016.
- Ziada, H. (2009). *Disposable coffee cup waste reduction study*. Retrieved from [https://www.eng.mcmaster.ca/sites/default/files/uploads/disposable\\_coffe\\_cup\\_waste\\_reduction.pdf](https://www.eng.mcmaster.ca/sites/default/files/uploads/disposable_coffe_cup_waste_reduction.pdf)

**Appendix A: Sample Survey**

**Campus perceptions of the reusable mug pilot program at the Killam Library**

This survey is for a research project for Environmental Problem Solving II (ENVS/SUST 3502). The information collected from the survey will be used to assess campus perceptions of the pilot reusable mug program at the Killam Library. Participation in this survey is **COMPLETELY OPTIONAL** and all responses will be shared in aggregate form only (no individual responses will be identifiable). If you have any additional questions, please contact us by email at (ENVSSUST3502@gmail.com), our instructor Dr. Amy Mui (amy.mui@dal.ca) or our TA Meghan Terpenning (mg389735@dal.ca).

1. Are you a student, staff or faculty member?

Student                      Staff                      Faculty                      Other: \_\_\_\_\_

2. If you are a student, what is your major?

\_\_\_\_\_

3. Are you aware that most disposable coffee cups and lids available at Dalhousie are sent to the landfill (not recycled or composted)?

Yes                      No

4. Are you aware of the reusable mug library initiative that was piloted at Second Cup recently (March 5<sup>th</sup>) in the Killam Library?

Yes                      No

**The Dalhousie University Office of Sustainability has recently implemented a reusable mug library pilot program at the Killam Library with the aim of reducing single-use waste on campus. You can have your beverage served in a reusable mug provided by Second Cup, which you can drink in the atrium and return before leaving the building. There will be a \$0.20 discount on drinks if the program is used.**

5. Would you use this program?

PERCEPTIONS AND USE OF THE REUSABLE MUG PILOT PROGRAM

Yes                      No

6. Do you think this type of program will effectively reduce single-use waste on campus?

Yes                      No

7. Please rate your agreement or disagreement with the following statement:

I feel it is important to have reusable mug programs like this to reduce single-use waste on campus.

Strongly agree                      Agree                      Neutral                      Disagree                      Strongly Disagree

8. What would be your motivation for using this type of program?

Save money                      Reduce Waste                      Other: \_\_\_\_\_

9. What could be a barrier to using this type of program?

---

10. Do you think this program should be implemented permanently in the Killam Library?

Yes                      No

11. Do you think this program would be successful if implemented in other buildings on campus?

Yes                      No

12. If yes, which building(s)?

---

13. Do you have any suggestions for improving upon this program?

---

**Thank you for your participation! :)**