

# Residence Student Perceptions of Water Bottle Use

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Sustain 3S03 student team and CPCs displaying reusable bottles  
 Photo credit: Georgia Kirkos

## Overview

Every minute, over one million plastic bottles are purchased worldwide.<sup>1</sup> In 2016, 93% of plastic bottles purchased in the USA ended up in landfills or oceans.<sup>1</sup> To combat this, according to research conducted in 2018, 16 Canadian universities have banned the sale of single-use plastic water bottles.<sup>1</sup> However, research on the impact of these bans is limited.<sup>1</sup> One study showed an increased consumption of sugary beverages and more plastic waste.<sup>2</sup> While results are inconclusive, there seems to be agreement on the need to develop a “culture” of sustainability on campus.<sup>3</sup>

Survey data collected by McMaster in 2019 revealed that 80% of 800 residence student respondents purchase plastic water bottles and 60% keep cases of bottled water in their rooms. Our goal was to determine why residence students gravitate towards plastic bottles, so we can make data-driven recommendations to support reuse.

## Objectives

1. Understand residence students’ perceptions towards single-use plastic bottles
2. Determine barriers preventing students’ usage of refillable water bottles
3. Share results with McMaster for further sustainability research and action

## Reporting

To achieve our first two objectives, we conducted a textual analysis of 234 residence student responses to the open-ended question, “what would you do to reduce or eliminate the usage of single-use plastics in residence?” The most frequent response theme was ‘Reusable Bottles’, which included students suggesting bottle giveaways and commitment to bring their own bottle for refilling. The second most frequent response theme was ‘More Fountains’, which included suggestions to include more water fountains for more convenient access. The third most common response theme was ‘Filters’ suggesting individual water filters and more filtered water refill stations.

We then compared how both quantitative and qualitative survey responses varied amongst residences. We looked at data from each residence building and compared it to information on distance to eateries, building age, presence of Living Learning Communities, and water fountain infrastructure. We found that perceptions were similar between residences. However, students in older buildings seemed to be more concerned about water quality. As well, students with closer proximity to on-campus dining facilities expressed interest in a reusable drink program. Overall, students support the creation of a system that makes refilling convenient and trustworthy.

To achieve the final objective, we presented our findings to the McMaster Sustainability Advisory Committee. Recommended next steps include further research on how student perceptions have changed following the 2020 installation of residence fountains and filters. We also recommend awareness campaigns to continue improving trust in water quality.

## Collaborators

We would like to extend our gratitude to our Community Project Champions Liana Bontempo and Monica Palkowski. We also thank Dr. Kate Whalen from the Academic Sustainability Programs Office, Craig MacDonald from Facility Services, and members of the McMaster Sustainability Advisory Committee for their support with data analysis, infrastructure data, and a platform to share our findings, respectively.

\*A full report of findings can be found at [add link to new website for Past Projects]