

# Executive Summary

## 2021/22 GHG Emissions

### Introduction

Humber College's greenhouse gas (GHG) emissions inventory was compiled for the 2021/22 reporting year following the reporting requirements of The Climate Registry (TCR) General Reporting Protocol (Version 2.1, January 2016) and the TCR Local Government Operations (LGO) Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories (Version 1.1, May 2010).

In the 2021/22 reporting year, the College's corporate GHG emissions totaled 12,889 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e).

### Results

**Table ES-1. GHG Emissions by Scope**

	2014/15 GHG Emissions (tCO <sub>2</sub> e)	2019/20 GHG Emissions (tCO <sub>2</sub> e)	2021/22 GHG Emissions (tCO <sub>2</sub> e)	Change (From reporting year to baseline)
<b>Scope 1 Emissions</b>	<b>7,132</b>	<b>6,509</b>	<b>5,570</b>	<b>-21.9%</b>
Building Natural Gas Use	7,002	6,326	5,405	-22.8%
Building Fuel Use	14	18	21	54.2%
Fleet Fuel Use	115	165	143	24.0%
Building Refrigerant Use	0	0	0	0.0%
<b>Scope 2 Emissions</b>	<b>1,207</b>	<b>636</b>	<b>658</b>	<b>-41.4%</b>
Electricity Use	1,207	636	658	-41.4%
<b>Scope 3 Emissions</b>	<b>21,762</b>	<b>27,186</b>	<b>6,544</b>	<b>-69.9%</b>
Staff/Faculty Travel	1,513	1,640	307	-87.4%
Paper Use	395	185	16	-95.9%
Waste	443	458	129	-70.8%
Food	6,574 <sup>[1]</sup>	6,574 <sup>[1]</sup>	1,352	-79.4%
Student/Staff Commuting	12,839	18,329	4,857	-62.2%
<b>Total GHG Emissions</b>	<b>30,100</b>	<b>34,332</b>	<b>12,889</b>	<b>-57.6%</b>
GHG Emissions Per Student	1.15	1.08	0.41	-64.5%

Note [1]: Food Emissions were not incorporated in the GHG calculator until 2019 and as such, the values in 2014 are the same in 2019.

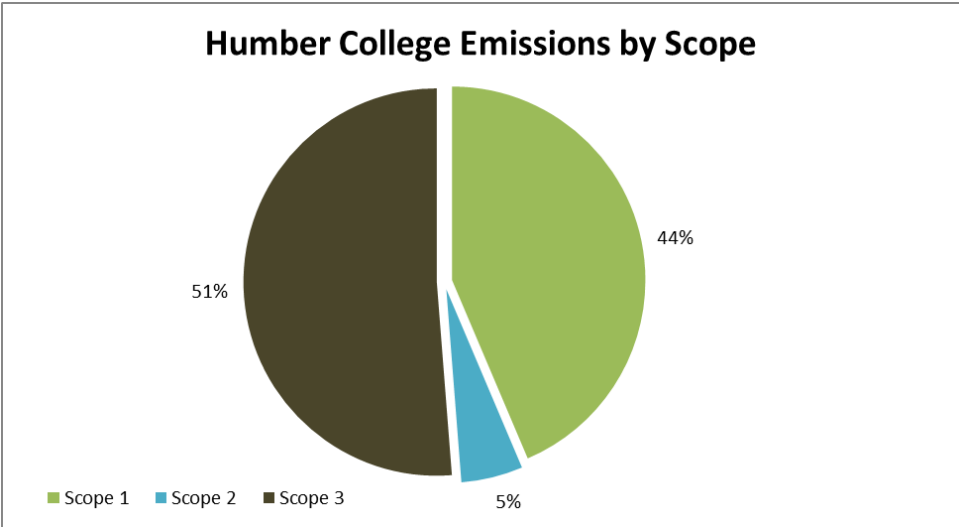
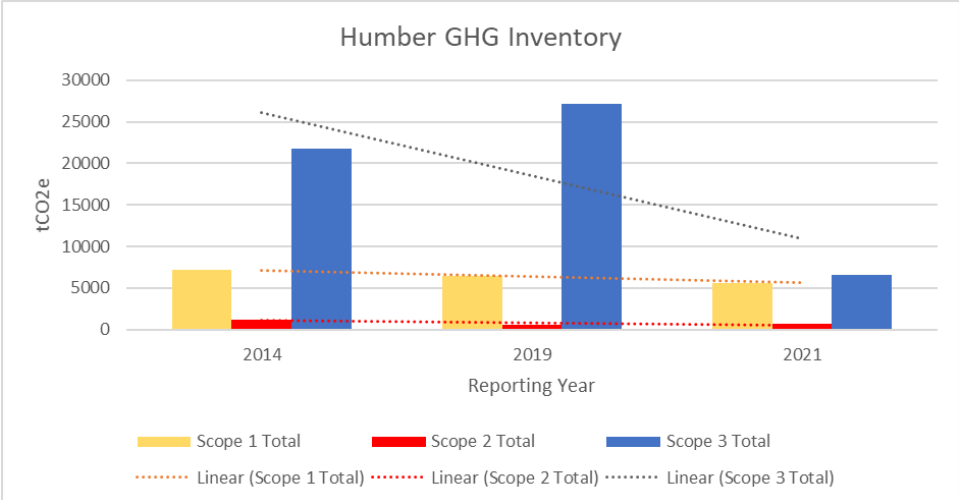
## Analysis

- Total emissions for 2021/22 are 12,889 tCO<sub>2</sub>e, having decreased by 57.2% since the baseline year
- Scope 1 Emissions are 5,570 tCO<sub>2</sub>e (-21.9%)
- Scope 2 Emissions are 658 tCO<sub>2</sub>e (-41.4%)
- Scope 3 Emissions are 6,661 tCO<sub>2</sub>e (-69.9%)

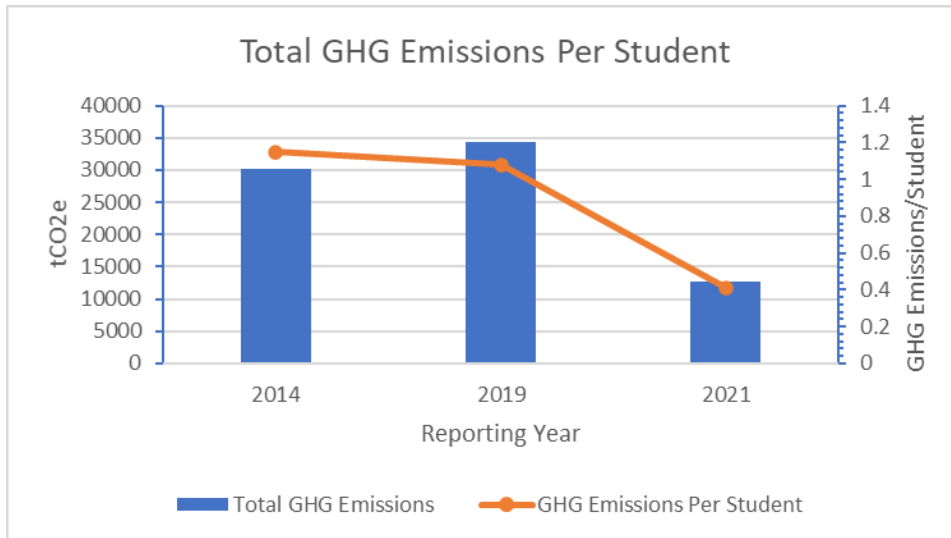
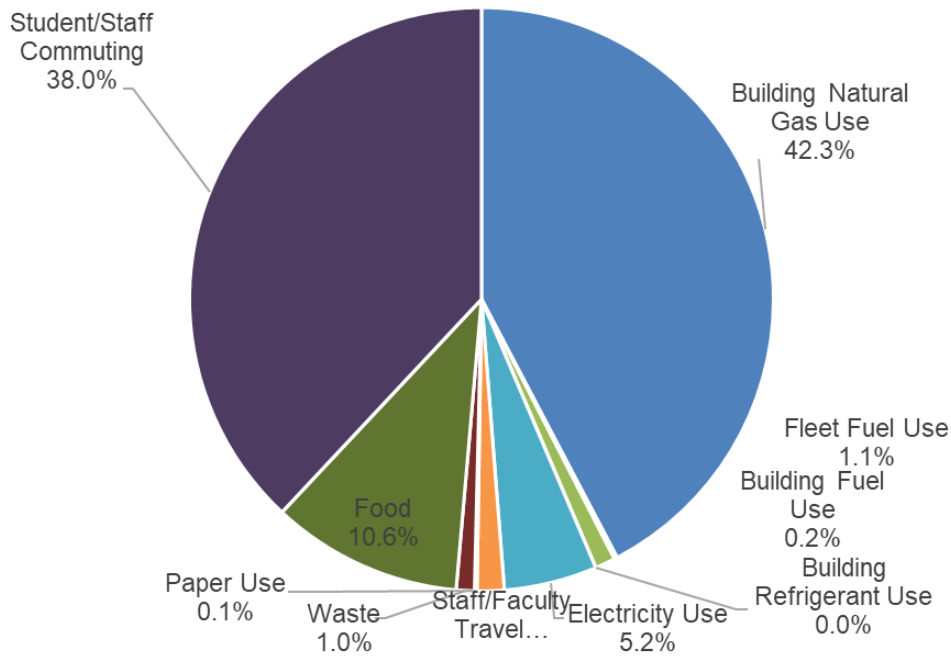
Overall, scope 1, 2 and 3 emissions have significantly decreased in contrast with the emissions reported from the years prior and the baseline year. This is primarily due to the COVID-19 pandemic which forced Humber College to shut down and impacted the college's overall direct and indirect operations.

Scope 3 emissions saw the largest reduction due to the following changes:

- **Staff/Faculty Travel:** This category describes the transportation by Humber staff, faculty and students that is paid-for/covered by the college. As in-person meetings, conferences and etc. were cancelled or moved to online platforms, and Humber paid-business travel was less frequent, all of which contributes to the reduction in Scope 3 emissions.
- **Paper Use:** This category quantifies the emissions related to Humber purchased goods and services. Significant reductions are due to the halt of printer use during college closure, and the policy change to only buying 100% FSC recycled content paper.
- **Waste:** Waste-related emissions are quantified by the total waste generated and the total waste diverted from landfills. Less people at the institution constitutes less waste generated.
- **Food:** This category quantifies the emissions related to Humber purchased goods and services. Significant reductions are due to the closure of the college and the decrease in food and beverage purchases from Humber's main food service providers, Chartwells and Longos Faculty of Business.
- **Student/Staff Commuting:** This category is based on emissions from student/employees commuting to campus by car or using alternative forms of transit. Reductions are due to the closure of the college and the change to at-home working and learning.



## 2021/22 GHG Emissions (tCO2e)



In the short-term, future GHG emissions are expected to increase as these are driven by enrollment and the number of buildings Humber owns and operates. This growth will be tempered somewhat by natural and regulated efficiency improvements including building code improvements (Provincial jurisdiction) and vehicle fuel efficiency standards (Federal jurisdiction), and the addition of energy efficient buildings. Over the long-term, Scope 1 and 2 emissions are expected to decrease with the implementation of the Integrated Energy Master Plan and Climate Action Plan.

Scope 1 and 2 Emissions can be reduced significantly by improving energy efficiency in buildings. SWITCH is a new infrastructure project modernizing the heating and cooling system at the North Campus. The project will reduce the reliance of natural gas to generate heat by switching from a steam-based system to a modern hot water system using mostly electricity. The project is expected to reduce natural gas use by 70% at Humber's North Campus, and will lead to a 30% reduction in the college's overall GHG emissions. The remaining Scope 3 emissions could decrease through the implementation of effective sustainability programs (e.g., carpool program, bike-share program, increasing the distribution of more sustainable food options on campus).