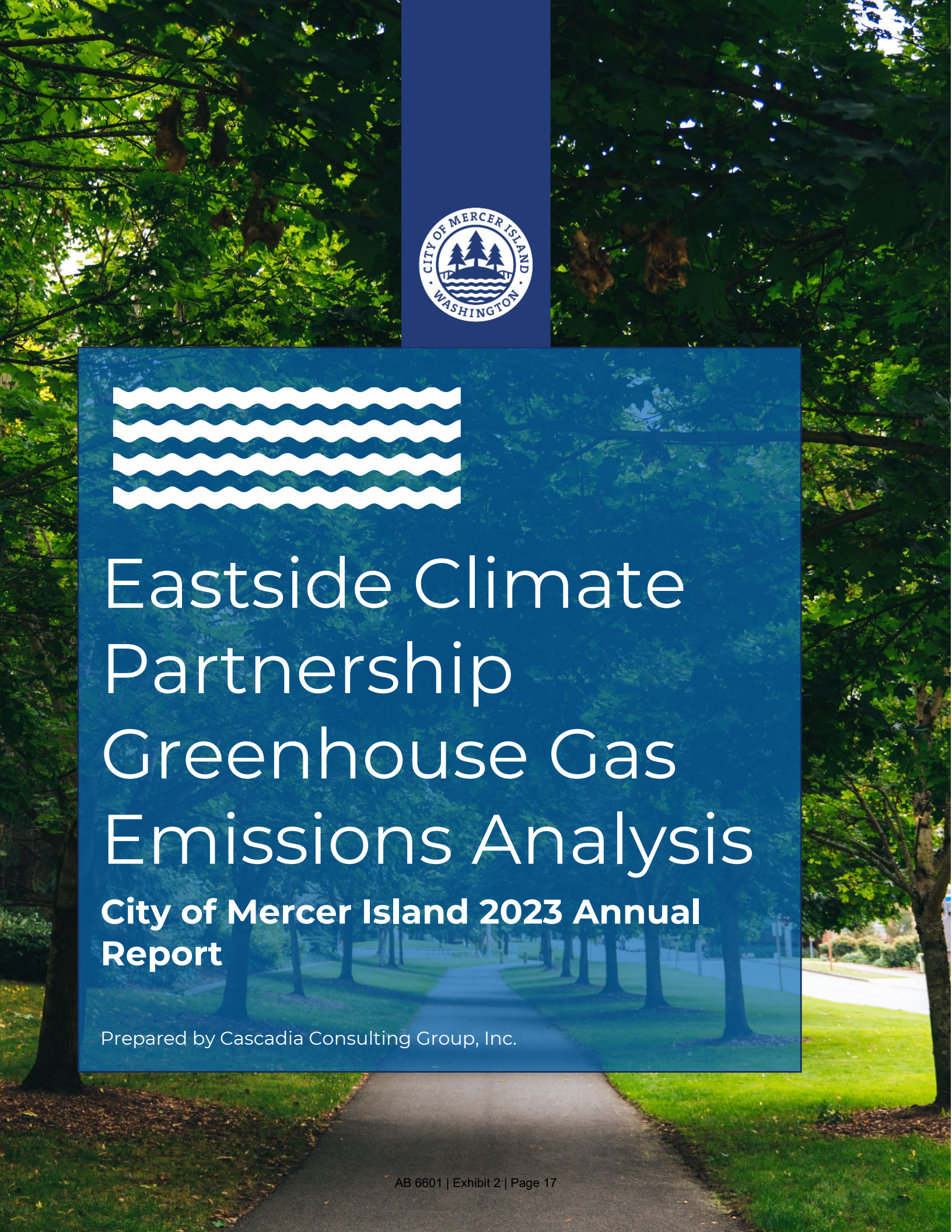


Eastside Climate Partnership Greenhouse Gas Emissions Analysis

City of Mercer Island 2023 Annual Report

Prepared by Cascadia Consulting Group, Inc.

INTRODUCTION

The City of Mercer Island has committed to reducing greenhouse gas (GHG) emissions from community sources and municipal operations as part of its climate action strategy. To track its progress in this effort, Mercer Island has completed an analysis of 2023 GHG emissions related to communitywide activities and government operations.

This summary report presents an overview of findings from this GHG analysis.

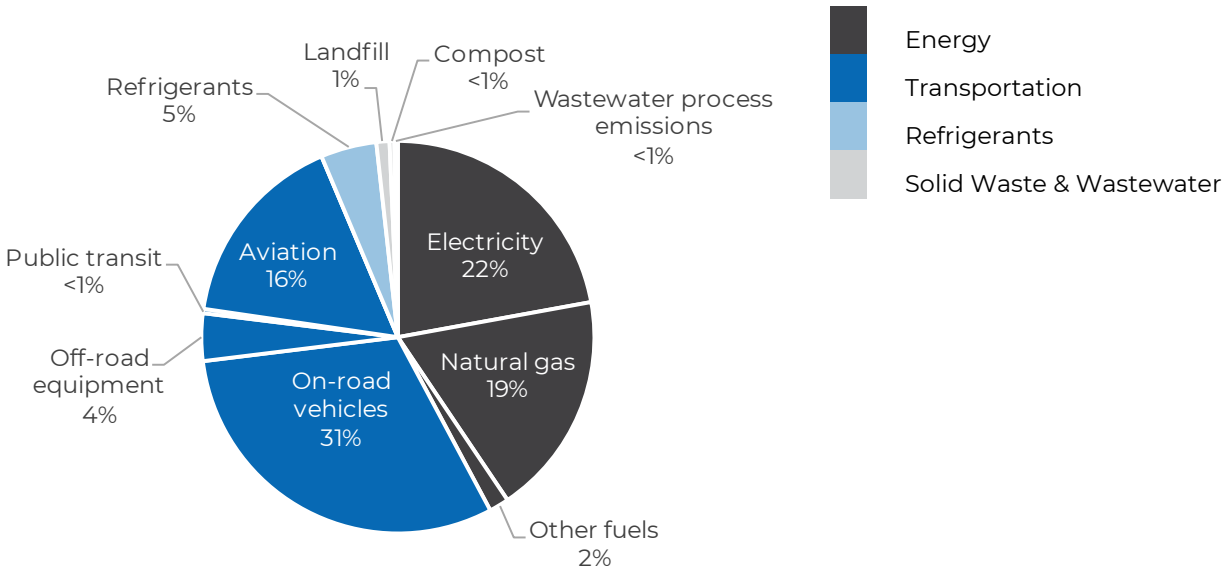
EMISSIONS OVERVIEW

Communitywide Emissions

The Mercer Island community emitted an estimated **307,892** metric tons of carbon dioxide equivalent ($MTCO_2e$) in 2023—equivalent to **11.9** $MTCO_2e$ per capita. Primary sources of community greenhouse gas emissions include (Figure 1):

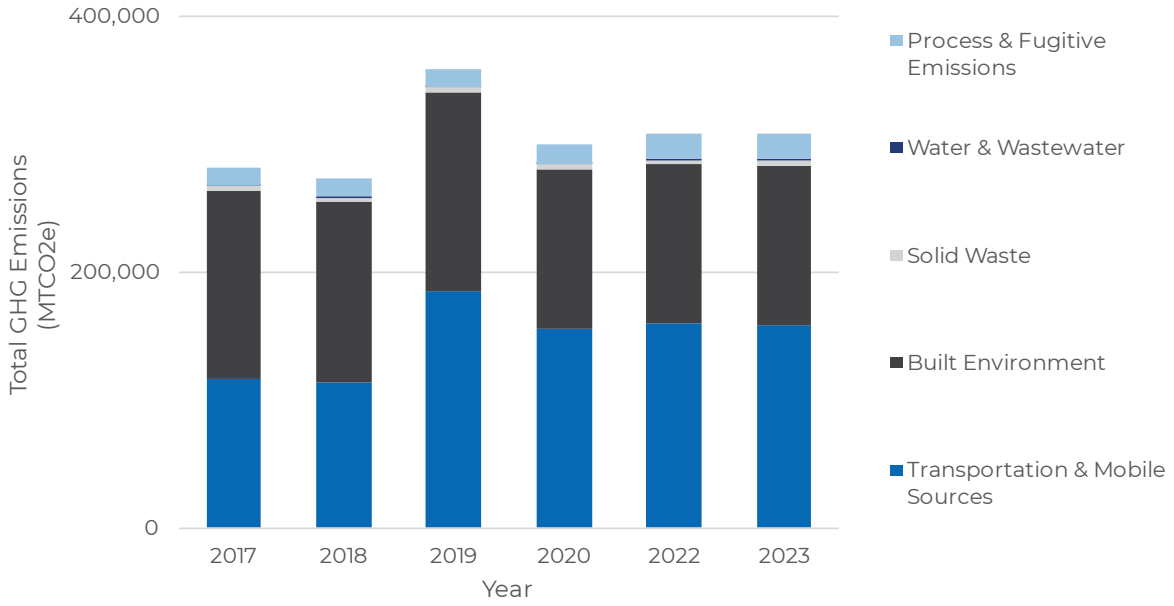
- On-road vehicles including passenger cars and heavy-duty trucks (**31%**) and air travel (**16%**).
- Electricity (**22%**) and natural gas (**18%**) to heat, cool, and power residential, commercial, and industrial buildings.

Figure 1. Mercer Island's community GHG emissions, by sector.



Mercer Island's 2023 communitywide emissions represent a **<1% decrease** compared to the last GHG inventory in 2022[1]. (Figure 2).

Figure 2. Communitywide GHG emissions trends over time, by sector.[2]



Government Operations Emissions

Mercer Island's government operations accounted for approximately **1,302** $MTCO_2e$ of emissions in 2023, equivalent to **7.7** $MTCO_2e$ per FTE (full-time employee)—representing **0.42%** of total communitywide emissions. Primary sources of government operations emissions include (Figure 3):

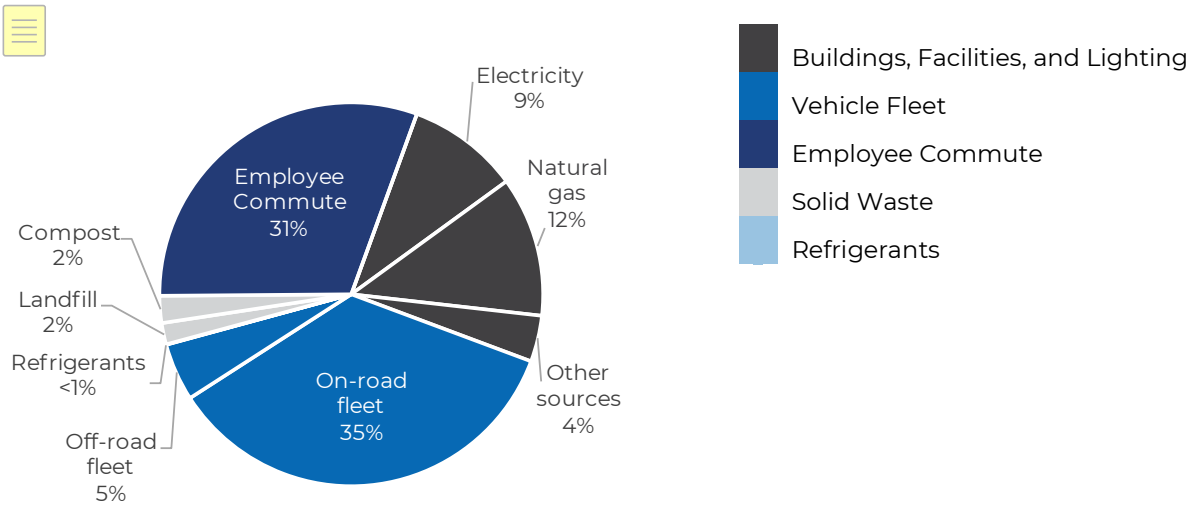
- City's vehicle fleet and equipment (**40%**).
- Employee commute (**31%**)

[1] 2022 GHG emissions were recalculated after the last published emissions inventory. An error was made in the attribution of fuel from SeaTac that misattributed an additional 15% of SeaTac's fuel use to King County cities. This change resulted in a 23% decrease in MI Aviation emissions and a 5% decrease in overall MI community emissions from 325,977 $MTCO_2e$ to 308,117 $MTCO_2e$.

[2] Refrigerants, as shown in the first pie chart, are a subset of the "Process and Fugitive" emissions shown in the bar graph. "Process and Fugitive Emissions" here to refer to emissions from both refrigerants **and** fugitive natural gas. However, while those are both "fugitive", they are separated in the pie chart and fugitive natural gas emissions are included in the natural gas category in order to show more granular data.

- Natural gas (**12%**) to heat, cool, and power government buildings and facilities.

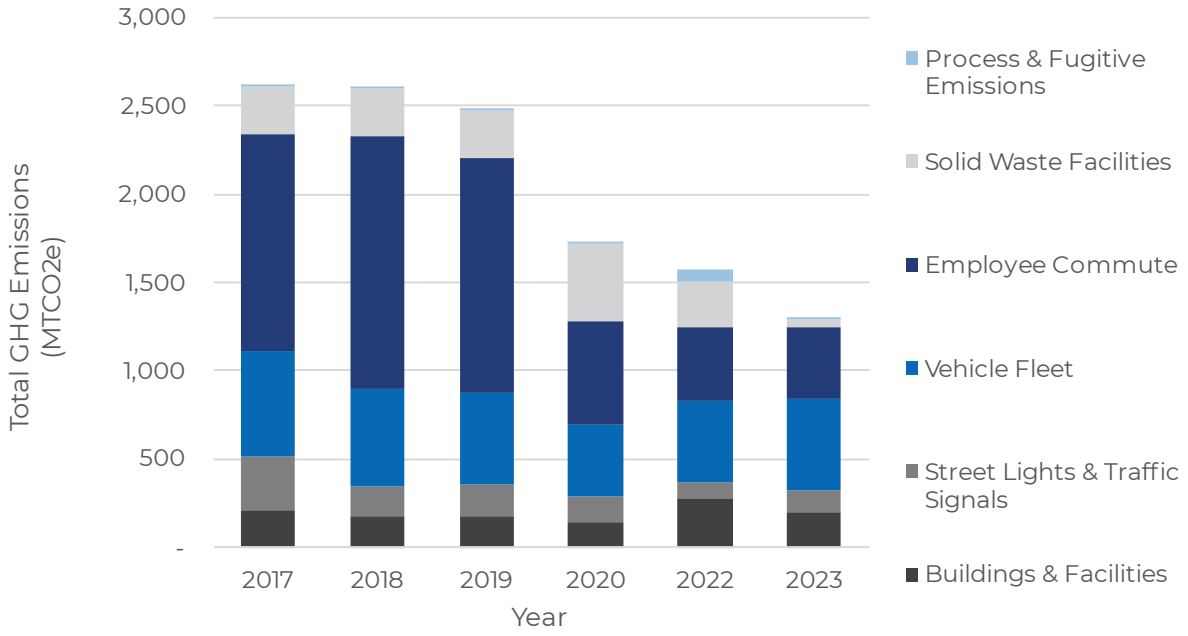
Figure 3. Mercer Island's government operations 2023 GHG emissions, by sector.



Mercer Island's 2023 government operations emissions represent an **18% decrease** compared to the last GHG inventory in 2022, primarily driven by decreases in solid waste generation[3], the closure of City Hall in late April 2023, and reductions in refrigerant usage (Figure 4).

[3] The City of Mercer Island completed a series of waste audits in 2024 as a method of improving the accuracy of tracking City-generated waste. The decrease in emissions from solid waste emissions from 2022 to 2023 is likely largely due to this change in waste tracking.

Figure 4. Government operations GHG emissions trends over time, by sector.[2]



NEXT STEPS

Though slight, the decrease in communitywide emissions puts Mercer Island back on the right track towards achieving the Climate Action Plan goal of a 50% reduction in Community emissions by 2030. The 18% reduction in emissions from municipal operations continues the trend the City needs to see in order to achieve carbon neutrality by 2030.

Findings from this inventory will be used to help prioritize CAP actions and budget requests for the upcoming cycle. The City will complete a 2024 inventory in order to continue to monitor the emission trends, with further annual updates moving forward.