



State College Area School District

Mike Fisher

Director of Physical Plant

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To: Curtis Johnson

From: Mike Fisher

RE: Greenhouse Gas Inventory Update

Date: October 13, 2025

As part of the District Wide Facilities Master Plan, a greenhouse gas inventory was conducted as shown in the attached report. The report outlines four (4) years of inventory covering three categories: waste, transportation, and facilities. Physical Plant recognizes that although the data outlines trends within the district, there is nothing to benchmark against. We are working with our consultants and local leaders to acquire data from a similar facility so that we can benchmark against square footage and potentially alternative metrics. If our team can find reliable data in which benchmarking is applicable, we will present to the board at a later date.



Greenhouse Gas Emissions Inventory

August 1, 2025

Introduction

The Centre Region has a tradition of responsible stewardship, prudent fiscal accountability, and inclusive local government and community practices to advance community prosperity. State College Borough, Ferguson Township and Harris Township have passed resolutions to address greenhouse gas (GHG) emissions, recognizing that actions to address climate change are more effective with regional and cooperative efforts.

The first step in managing emissions is to complete a GHG inventory to determine baseline emissions levels and the sources of activities generating emissions. State College Area School District (SCASD) utilized the ICLEI-USA ClearPath™ v1.0 software platform to conduct their inventory analysis. ICLEI-USA ClearPath™ is the leading online software platform for completing greenhouse gas inventories, forecasts, climate action plans, and monitoring at the community-wide or government-operations scales.

Boundaries of the Study

The SCASD GHG emissions inventory was prepared for 14 sites within the district - Corl Street, Easterly Parkway, Fairmount Ave, Ferguson Township, Gray's Woods, High School North/Delta, High School South, Mount Nittany Elementary, Mount Nittany Middle, Panorama Village, Park Forest Elementary, Park Forest Middle, Radio Park, and Spring Creek.

Inventories were created for each calendar year - 2021, 2022, 2023, 2024.

Data was analyzed in 3 use categories – Buildings & Facilities, Transit Fleet, and Solid Waste. This report does not account for emissions other than these listed.

Factor sets were used to determine total emissions, as follows:

- Energy (Grid Electricity): RFC West (RFCW) eGRID
- Solid Waste: US National Defaults
- Transportation: US National Defaults

Outputs are provided in CO₂e, or carbon dioxide equivalent, the standard unit of measure for GHG emissions.

Source Information

Data inputs were sourced, as follows:

- Energy (gas, electricity, propane): SCASD EPA Portfolio Manager Account
- Solid Waste: SCASD tables
- Transportation: SCASD tables



Results

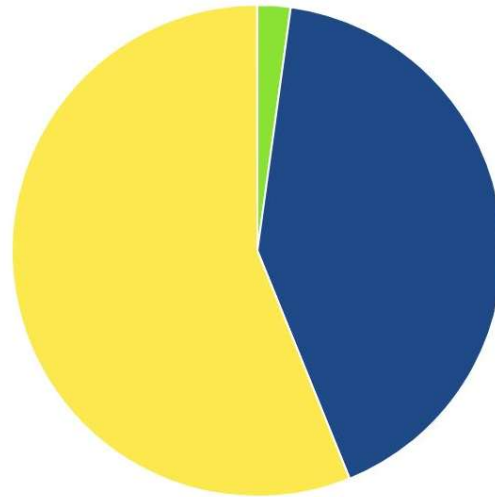
2021

Transit Fleet: 478 metric tons CO₂e

Solid Waste: 9,125 metric tons CO₂e

Buildings & Facilities: 12,286 metric tons CO₂e

Total Emissions: 21,889 CO₂e



● Transit Fleet ● Solid Waste Facilities ● Buildings & Facilities

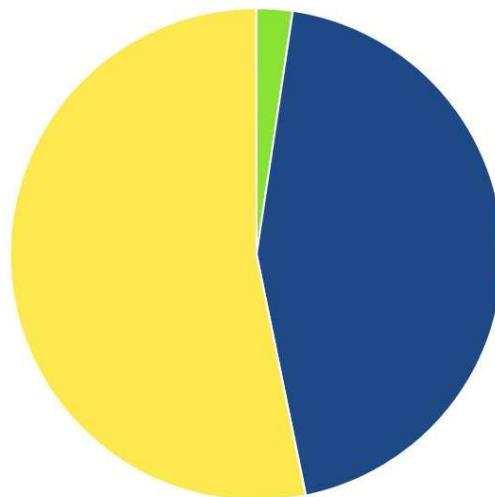
2022

Transit Fleet: 510 metric tons CO₂e

Solid Waste: 9,652 metric tons CO₂e

Buildings & Facilities: 11,552 metric tons CO₂e

Total Emissions: 21,714 CO₂e



● Transit Fleet ● Solid Waste Facilities ● Buildings & Facilities



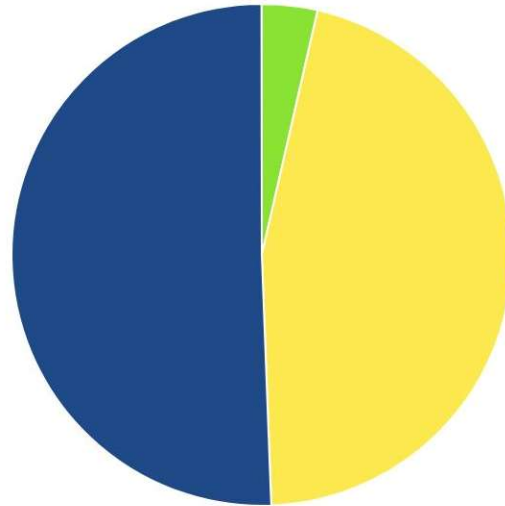
2023

Transit Fleet: 715 metric tons CO₂e

Solid Waste: 10,088 metric tons CO₂e

Buildings & Facilities: 9,133 metric tons CO₂e

Total Emissions: 19,936 CO₂e



● Transit Fleet ● Buildings & Facilities ● Solid Waste Facilities

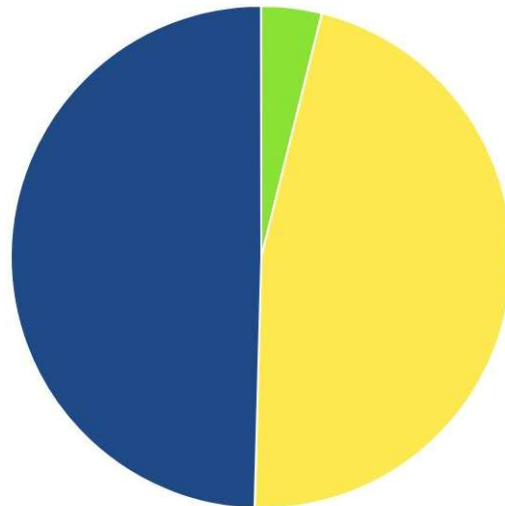
2024

Transit Fleet: 760 metric tons CO₂e

Solid Waste: 9,652 metric tons CO₂e

Buildings & Facilities: 9,062 metric tons CO₂e

Total Emissions: 19,474 CO₂e

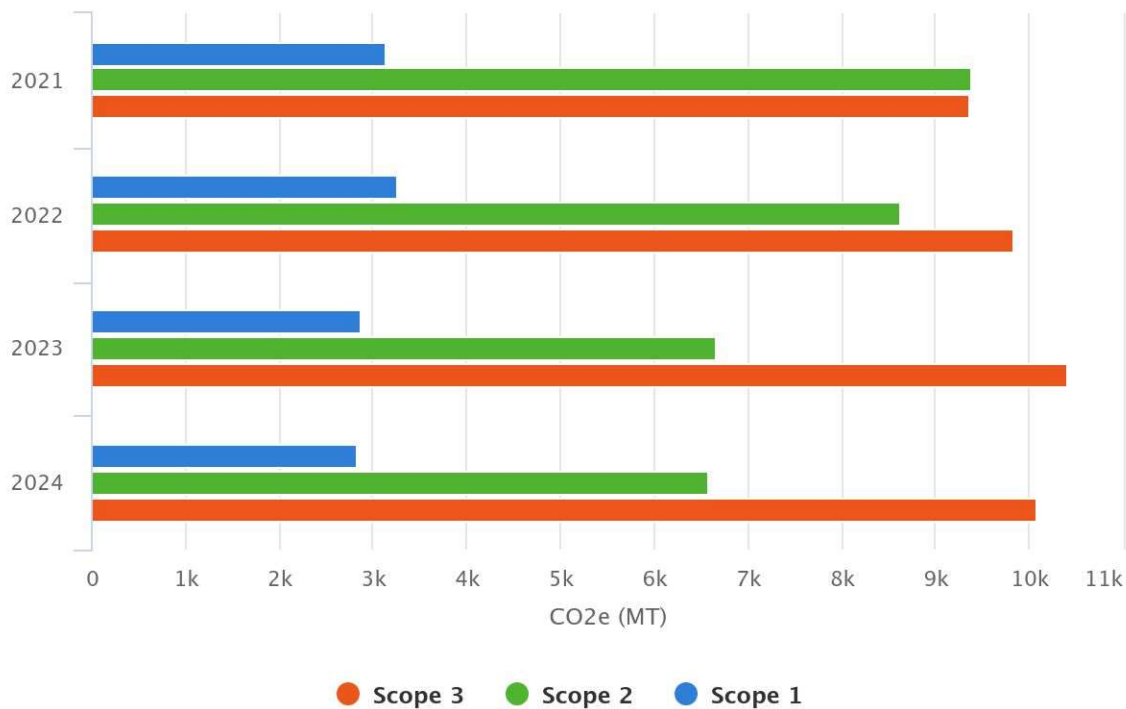


● Transit Fleet ● Buildings & Facilities ● Solid Waste Facilities



Inventory Comparison by Scope

Year	Scope 1	Scope 2	Scope 3
2021	3,142	9,390	9,368
2022	3,254	8,631	9,825
2023	2,874	6,649	10,409
2024	2,832	6,567	10,072



Scope 1: This includes all direct emissions from sources within the community's defined boundary, such as emissions from fuel combustion in buildings and vehicles owned or controlled by the community.

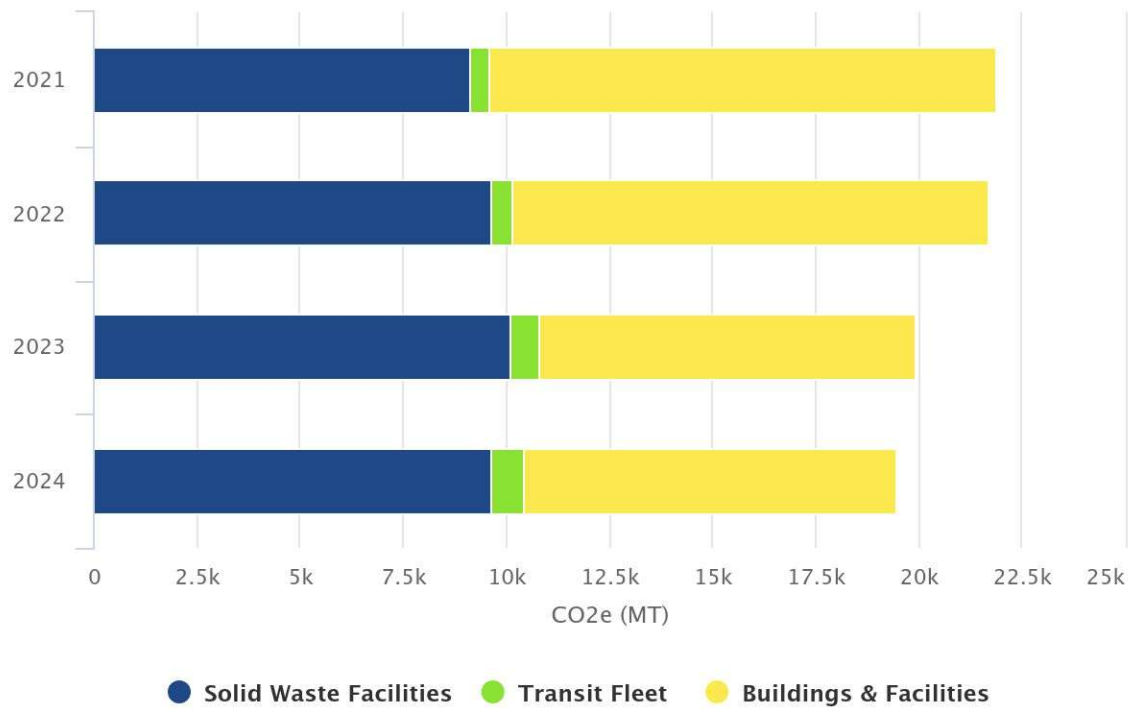
Scope 2: This encompasses indirect emissions from the consumption of purchased electricity, heating, and cooling within the community's boundary, but generated outside of it.

Scope 3: This category covers all other indirect emissions that occur outside the community's boundary due to activities within the community. This includes emissions from the production and transportation of goods and services used by the community, as well as waste disposal.



Inventory Comparison by Sector

Year	Buildings & Facilities	Transit Fleet	Solid Waste Facilities
2021	12,299	478	9,123
2022	11,552	508	9,650
2023	9,133	713	10,086
2024	9,059	762	9,650





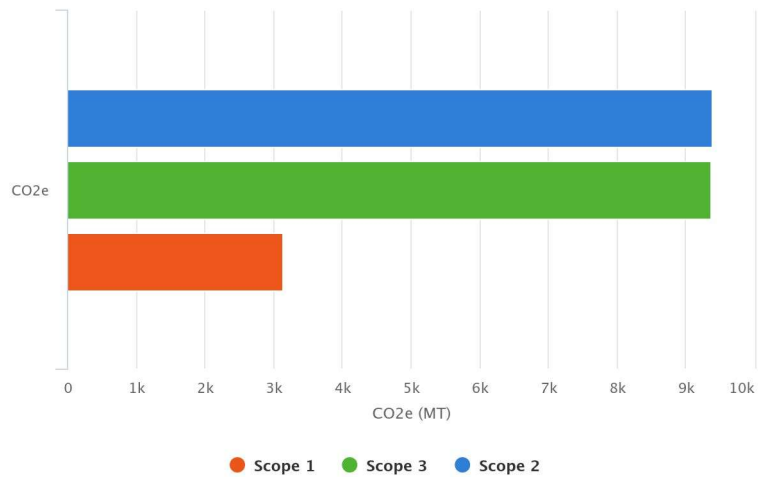
2021 Inventory

By Scope

Scope 1: 3,142 CO₂e

Scope 2: 9,390 CO₂e

Scope 3: 9,368 CO₂e

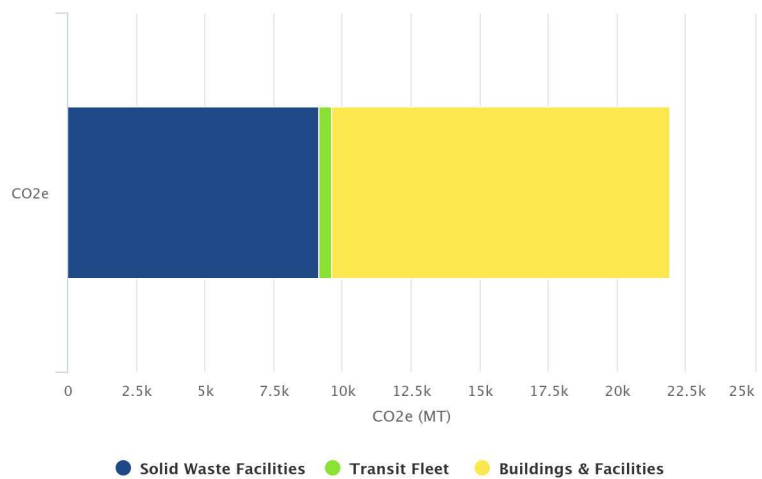


By Sector

Buildings & Facilities: 12,299 CO₂e

Transit Fleet: 478 CO₂e

Solid Waste: 9,123 CO₂e



By Scope and Sector

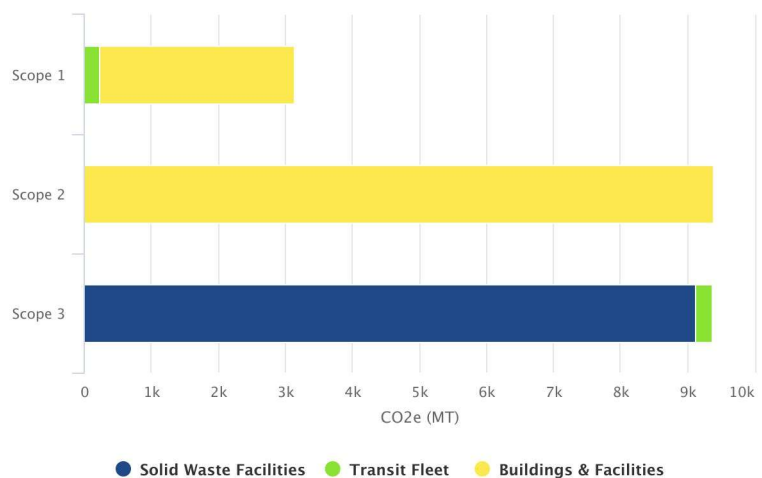
Scope 1 Buildings & Facilities: 2,909 CO₂e

Scope 1 Transit Fleet: 233 CO₂e

Scope 2 Buildings & Facilities: 9,390 CO₂e

Scope 3 Transit Fleet: 245 CO₂e

Scope 3 Solid Waste: 9,123 CO₂e





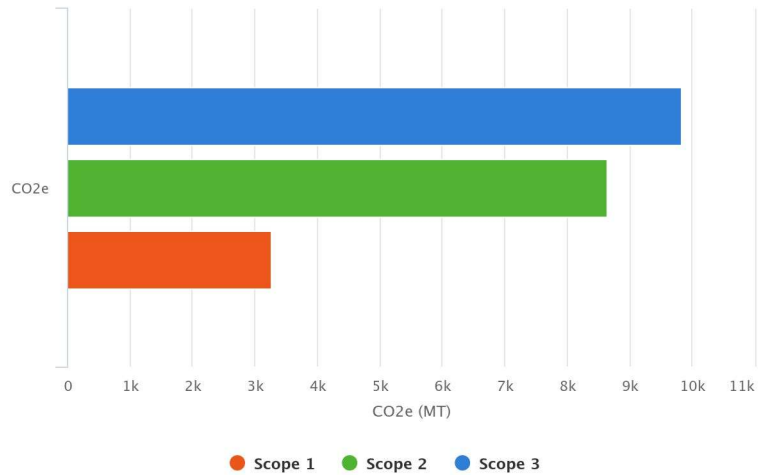
2022 Inventory

By Scope

Scope 1: 3,254 CO₂e

Scope 2: 8,631 CO₂e

Scope 3: 9,825 CO₂e

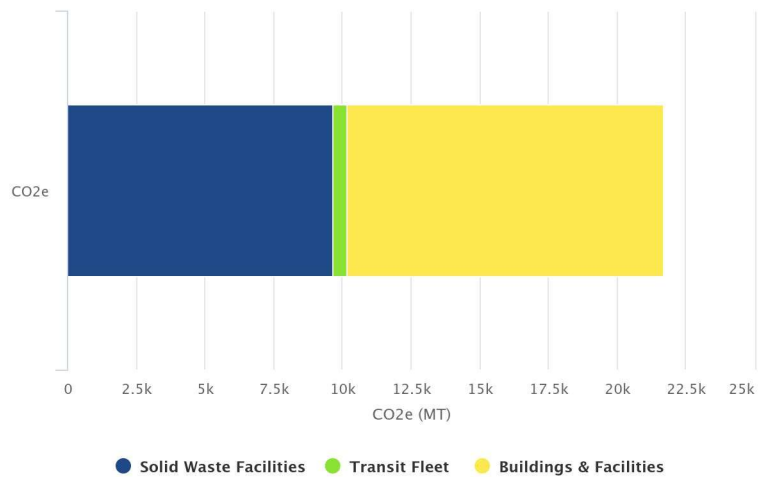


By Sector

Buildings & Facilities: 11,552 CO₂e

Transit Fleet: 508 CO₂e

Solid Waste: 9,650 CO₂e



By Scope and Sector

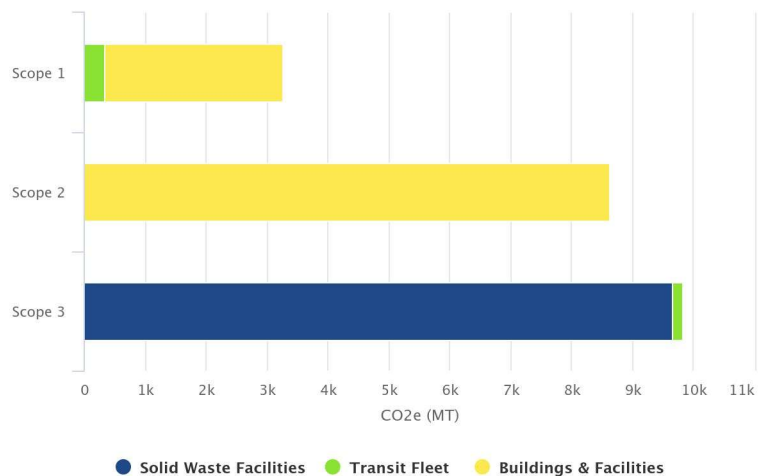
Scope 1 Buildings & Facilities: 2,921 CO₂e

Scope 1 Transit Fleet: 333 CO₂e

Scope 2 Buildings & Facilities: 8,631 CO₂e

Scope 3 Transit Fleet: 175 CO₂e

Scope 3 Solid Waste: 9,650 CO₂e





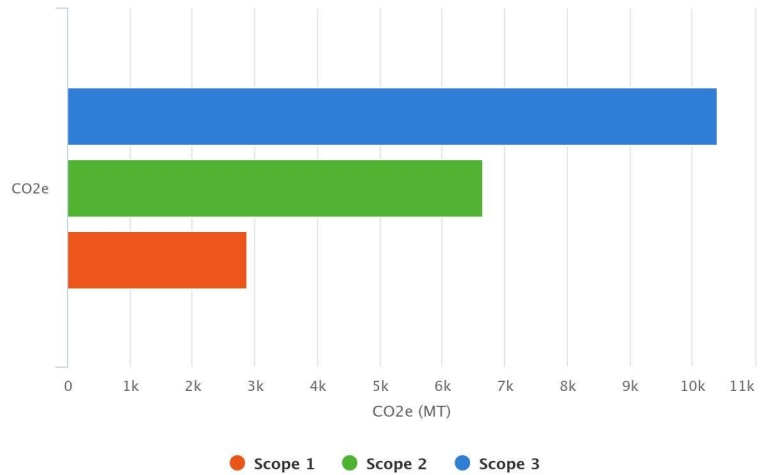
2023 Inventory

By Scope

Scope 1: 2,874 CO₂e

Scope 2: 6,649 CO₂e

Scope 3: 10,409 CO₂e

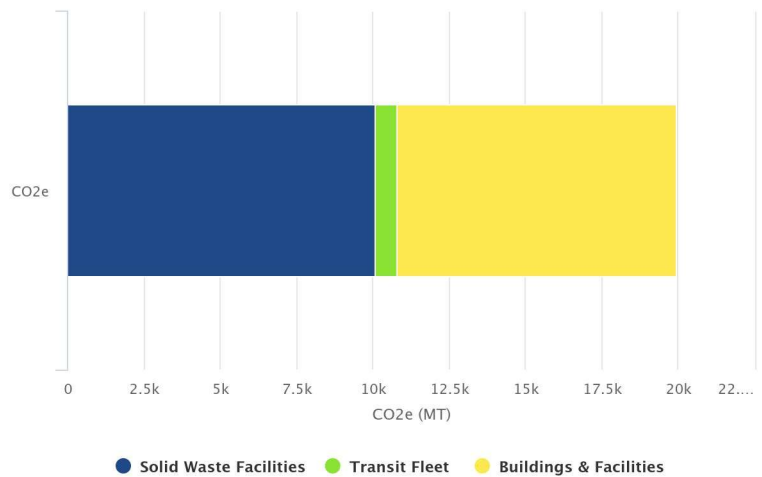


By Sector

Buildings & Facilities: 9,133 CO₂e

Transit Fleet: 713 CO₂e

Solid Waste: 10,086 CO₂e



By Scope and Sector

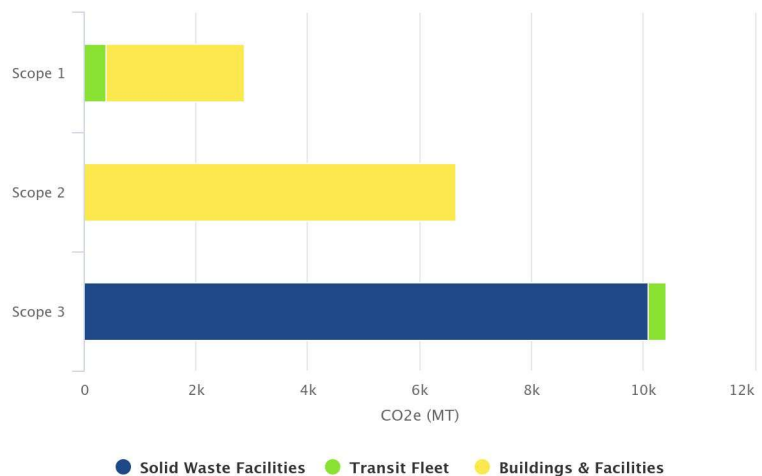
Scope 1 Buildings & Facilities: 2,484 CO₂e

Scope 1 Transit Fleet: 390 CO₂e

Scope 2 Buildings & Facilities: 6,649 CO₂e

Scope 3 Transit Fleet: 323 CO₂e

Scope 3 Solid Waste: 10,086 CO₂e





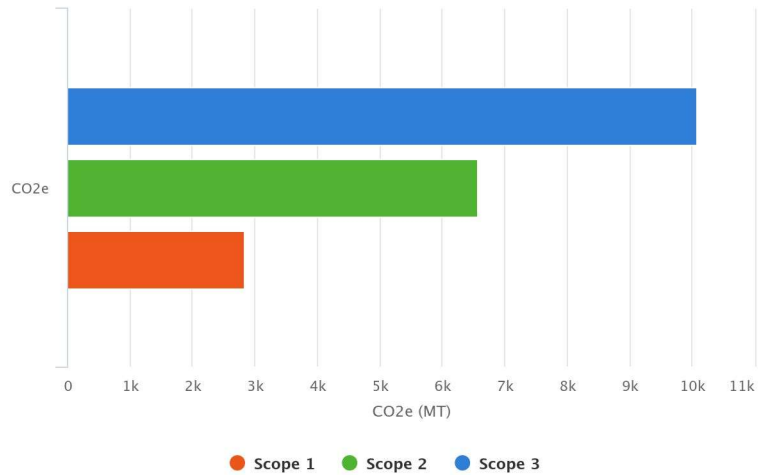
2024 Inventory

By Scope

Scope 1: 2,832 CO₂e

Scope 2: 6,567 CO₂e

Scope 3: 10,072 CO₂e

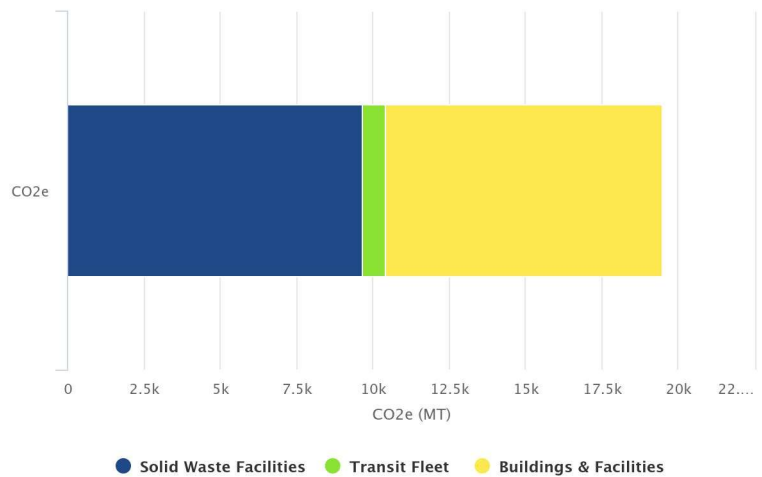


By Sector

Buildings & Facilities: 9,059 CO₂e

Transit Fleet: 762 CO₂e

Solid Waste: 9,650 CO₂e



By Scope and Sector

Scope 1 Buildings & Facilities: 2,449 CO₂e

Scope 1 Transit Fleet: 383 CO₂e

Scope 2 Buildings & Facilities: 6,567 CO₂e

Scope 3 Transit Fleet: 379 CO₂e

Scope 3 Solid Waste: 9,650 CO₂e

