

Recommendation

That the report of the Sustainability Coordinator regarding the Corporate Greenhouse Gas Emissions (GHG) Progress as of 2023 be received for information; and

That staff continue to explore future recommendations outlined in the 2025 Corporate Greenhouse Gas Emissions (GHG) Progress Report to achieve further corporate GHG emissions reductions.

Information

The Province of Ontario's Green Energy Act requires all municipalities to do the following:

- a. Report annually to the Ministry of Energy, Northern Development and Mines on their energy use and greenhouse gas emissions and publish the report on their website.
 - a. Annually the Township submits data to the Ministry.
- b. Develop a five-year conservation plan (as of July 2014) and update it every fiveyears. Plans must be published on their website.
 - a. The Conservation and Demand Management Plan was updated in 2024.

The intent of this report is to highlight the Township's efforts to reduce GHG emissions across the Township's Corporate sectors and demonstrate its progress in reaching the GHG emission reduction targets outlined in Selwyn's <u>Climate Change Action Plan</u> (CCAP).

Corporate Greenhouse Gas Emissions

Corporate Greenhouse Gas (GHG) emissions refer to those generated by municipal operations. These emissions arise from the daily activities involved in providing services to the community. Selwyn Township has control over its corporate sector GHG

emissions and can reduce emission sources through strategic municipal decisionmaking and planning.

The corporate sector is comprised of fleet vehicles, solid waste management, municipal facilities, water and sewage treatment, and streetlighting. Corporate GHG emissions are represented as metric tons of carbon dioxide equivalent (tCO2e).

This report **excludes** Community Sector GHG emissions derived from buildings, vehicles, and industrial processes owned and operated by residents and businesses in the community for which the municipality does not have direct control over mitigation. An update on this data is underway and will hopefully be completed in 2025. The delay in reporting can be attributed to uncertainty and difficulty collecting accurate data on livestock numbers, emissions based on land use, and kilometres being travelled by private vehicles within Selwyn Township between 2011 and 2023.

Climate Change Action Plan and GHG Reporting

As of 2023, Selwyn Township has reduced its corporate GHG emissions by 68%, or 8,484 tonnes of tCO2e. As outlined in the 2016 Climate Change Action Plan, Selwyn Township set a goal to reduce its corporate GHG emissions by 40% (using 2011 as the baseline year) by 2031. This goal also translates to a reduction of 4,987 tonnes of tCO2e by 2031. As demonstrated by the findings below, Selwyn has already achieved this target.

Solid waste emissions were found to be underestimated in previous reporting, impacting the 2011 baseline year and onward. As of the 2024 re-inventory, the 2011 baseline emission amount is **12,269 tCO2e** which has been used and referenced throughout this report. In 2024, the values for solid waste were re-inventoried from 2011 to 2023 using an updated national average for methane producing waste. The original method significantly underestimated the percentage of methane producing waste. Moving forward, the approach will be to use the total commercial and residential garbage data from annual Cambium reports for the Smith Landfill and apply PCP composition ratios based on national averages to more accurately account for methane producing waste. This process of data collection aligns with PCP (Partners for Climate Protection), the City of Peterborough, and Climate Neutral.

As previously stated, **the newly re-inventoried 2011 baseline total for corporate emissions is 12,469 tCO2e.** This change is demonstrated in Table 1 below, with the waste sector changes highlighted in blue.

Sector	2011 GHG (tCO2e)	Re-Inventoried 2011 GHG (tCO2e)
Building	434	434
Vehicle	603	603
Waste *	4,744	11,294
Streetlights	42	42
Water and Sewer	96	96

Table 1. Re-Inventoried Corporate Sector GHG Baseline Emissions

Total GHG (tCO2e)

5,919

12,469

Corporate GHG Emissions from 2011 Baseline to 2023





Figure 1. Total Greenhouse Gas Emissions (tCO2e) for each Corporate Sector between years 2011 and 2023. Re-Inventoried 2011 data has been used. Between 2011 and 2023 there has been a 68% reduction in corporate emissions, equal to approximately 8,484 tCO2e

2023 GHG Emissions by Corporate Sector

Buildings

The Township has reduced GHG emissions associated with building operations by **120 tCO2e tonnes**, or **28%** since 2011. This has been achieved through a range of energy efficiency upgrades and fuel switching.

Vehicle

The Township has reduced GHG emissions associated with the fleet by **131 tCO2e tonnes**, or **22%** since 2011. This has been achieved by upgrading vehicles to meet the highest emissions standards which increase efficiency and

reduce air pollution, and opting for battery-powered equipment as opposed to gas or diesel.

Waste

The Township has reduced GHG emissions associated with solid waste by **8,124 tCO2e tonnes**, or **72%** since 2011. Solid waste is the Township's highest emitting sector, not uncommon for a municipality with its own landfill. Reductions have been achieved through waste diversion efforts, the clear bag policy, and composting programs.

Construction and Demolition (C&D) waste diversion was implemented in 2012. In 2014, the seasonal Hazardous Waste Depot was opened and mattresses were no longer accepted at the Landfill (diverted to the Bensfort where they are recycled). In 2016, the County implemented curbside/depot leaf and yard, diverting this highly methane producing waste to the compositing facility at Harper Road.

Streetlights

The Township has reduced GHG emissions associated with streetlights by **37 tCO2e tonnes**, or **88%** since 2011. Streetlights are also the lowest emitter of GHG out of all corporate sectors. This has been achieved by converting streetlights to LED, significantly reducing electricity consumption and achieving cost savings.

Water and Sewer

The Township has reduced GHG emissions associated with water & sewer operations by **71 tCO2e tonnes**, or **74%** since 2011. The upgrades to the air blowers at the wastewater lagoon are a major contributor to this GHG reduction result.

The Corporate Greenhouse Gas (GHG) Emissions update report is attached for Council's information. This report includes the data noted above and outlines some of the corporate initiatives that were implemented in the years 2020 to 2023 that contributed to the reduction in corporate GHG emissions. The public can review this report on-line to easily understand the Township's GHG reduction results.

The report also includes several recommendations to continue further corporate GHG reductions, some of which are outlined below:

- Installation of building automations systems to optimize building operations
- Implement the Climate Lens Tool (Pilot Program)
- Explore FCM funding for energy audits for corporate facilities

- Explore utilization of renewable energy sources e.g. solar powered signage, lighting and hot water heaters
- Using Township's Asset Management and Facility Assessment reports to upgrade or replace insulation, windows, lighting, HVAC systems, building envelopes, and more, with the aim of enhancing efficiency and reducing costs
- Continue to install electric charging facilities at new/existing Township facilities
- Right size fleet (fit-for purpose) and explore low emission/alternative fuel vehicles
- Retrofit parking lot lighting to LED
- Investigate corporate green procurement policies

Financial Impact

There are no budgetary or financial implications associated with the recommendation.

Environmental Impact

Tracking and reducing greenhouse gas emissions is crucial for a Township's environmental sustainability as it helps mitigate the impacts of climate change. By monitoring emissions, the Township can identify key sources of pollution, implement targeted strategies for reduction, and transition towards cleaner, renewable energy sources. This not only improves air quality and public health but also contributes to global efforts in limiting global warming. Additionally, reducing emissions can lead to cost savings through energy efficiency measures, while fostering a resilient, sustainable community for future generations.

Strategic Plan Reference

- Achieve excellence in governance and service delivery.
- Support a sustainable and investment-ready community.

Attachment (s)

• Township of Selwyn Corporate Greenhouse Gas Emissions Update 2025

Parys Carr

Prepared By: Parys Carr, Sustainability Coordinator (Acting)

Angela Chittick

Reviewed By: Angela Chittick, Manager of Community & Corporate Services/Clerk

Janice Lavalley

Approved By: Janice Lavalley, Chief Administrative Officer