

Town of Whitby

Staff Report

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Report Title: 2024 Annual Sustainability and Climate Change Report

Report to: Committee of the Whole

Date of meeting: June 2, 2025

Report Number: CAO 14-25

Department(s) Responsible:

Office of the Chief Administrative Officer

Submitted by:

Sarah Klein, Deputy CAO

**Acknowledged by M. Gaskell,
Chief Administrative Officer**

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1. Recommendation:

1. That Report CAO 14-25 be received as information; and
2. That the Clerk's office forward a copy of Staff Report CAO 14-25 to the Region of Durham's Sustainability Department.

2. Highlights:

- The 2024 Annual Sustainability Report (Attachment 1) highlights the Town of Whitby's sustainability and climate change actions and successes in 2024.
- This report allows the Town to meet its climate change commitments, including disclosing corporate greenhouse gas (GHG) emissions and Carbon Disclosure Project (CDP) score requirements as a member of the Global Covenant of Mayors and signatories on the C40 Cities Race to Resilience and Race to Zero campaigns.
- Key achievements in 2024 include:
 - The West Lynde neighbourhood was approved as Whitby's first Sustainable Neighbourhood Action Program (SNAP) in partnership with Central Lake Ontario Conservation Authority and Durham Region;

- Whitby community members planted over 800 trees through the LEAF spring and fall community planting events and 38 trees were planted through the Backyard tree planting program;
- Fourteen new EV chargers were installed throughout Whitby including the first level 3 – DC fast charging station; and
- The Town offered an additional incentive of up to \$5,000 through the Federal Housing Accelerator Fund grant for Whitby residents participating in the Durham Greener Homes Program to support home energy retrofits.

3. Background:

The Town of Whitby recognizes that sustainability is a priority, both corporately and within the community. The Town has the following Council-endorsed strategic plans and reporting commitments to guide implementation:

Community Strategic Plan (2023)

The Community Strategic Plan provides a shared vision and objectives for how the Town Council and Staff will work together to deliver on community priorities. Within Whitby's Community Strategic Plan are four strategic pillars with the second strategic pillar focusing on Whitby's Natural and Built Environment. The actions outlined in this report specifically align with the first objective of this pillar: Demonstrate environmental leadership in sustainability and addressing climate change.

Climate Emergency Response Plan

The Whitby Climate Emergency Response Plan is the primary mechanism to respond to a changing climate across the community. Due to the complexity and different approaches necessary to fully understand the response needed to address climate change, the Whitby Climate Change Master Plan has been divided into two phases:

- Phase 1: Resilience
- Phase 2: Mitigation

Phase 1 – Resilience (2022)

Phase 1 involved the development of a Resilience Plan, which was approved by Council in September of 2022. The purpose of the plan is to address the climate changes already experienced in Whitby and expect to experience in the future even with the adoption of GHG emissions mitigation measures. Risk and vulnerability modelling was done by developing two future scenarios for the Town of Whitby:

- An adapted scenario, where measures to reduce the direct and indirect risks of climate change are applied across the community; and
- A business-as-usual scenario, which includes growth and development without a climate adaptation lens.

To support the achievement of the adaptation actions, a detailed five-year community-led implementation plan has been developed.

Phase 2 – Mitigation (2023)

In December 2023, Climate Emergency Response Plan, Phase 2: Mitigation was completed and endorsed by Council. Phase 2 focused on climate mitigation and identified the sources of GHG emissions in Whitby and provided recommendations to reduce GHG emissions. The Mitigation Plan was developed to help prevent climate change from occurring in the future through the elimination of community greenhouse gas (GHG) emissions.

The development of the Mitigation Plan included modelling the size of the climate challenge in Whitby. The Mitigation Plan provides low-carbon pathway and recommendations to meet the Town's community-wide GHG emissions reduction targets. Implementing the Mitigation Plan's low-carbon scenario will result in improved energy efficiency in all sectors (i.e., residential, institutional, commercial, and industrial buildings; transportation; and municipal operations) and will create opportunities for economic growth and community development.

Whitby Green Standard (2020)

The Whitby Green Standard was endorsed by Council in September 2020 and is aimed to develop a more sustainable community and support Whitby's goal to reduce GHG emissions. It applies to all new development in the Town that requires a Site Plan or Draft Plan of Subdivision Application.

Council endorsed that all new Town Facilities are built to achieve Tier 3 of the Whitby Green Standard.

Zero Carbon Whitby (2021)

[Zero Carbon Whitby](#) was endorsed by Council in March 2021; this plan serves as the Town's Corporate Energy Management Plan and Corporate Climate Adaptation Plan.

Zero Carbon Whitby has been developed as a framework for implementing a low carbon decision mechanism across the organization. The Plan derives the amount of emissions that Whitby's corporate operations have to reduce to support global GHG emission reduction targets. Embedded in this framework, the Town of Whitby has identified the following short, medium, and long-term corporate GHG emissions reduction targets (relative to 2019 levels):

1. 20% GHG emissions reduction by 2025
2. 40% GHG emissions reduction by 2030
3. 100% GHG emissions reduction by 2045

These targets were developed to reflect the Town's contribution to limiting the global annual average temperature increase to 1.5°C.

Embedded within Zero Carbon Whitby is a Carbon Reduction Framework, an overarching framework for GHG emissions management, extending over multiple years and all aspects of municipal operations. This framework empowers staff to develop and implement actions from the bottom up to meet GHG reduction targets by aligning capital and operating budgets with GHG reduction targets.

Zero Carbon Costing Study (2022)

As the first step of the implementation of the Zero Carbon Whitby Framework, the Zero Carbon Whitby Costing Study was completed. The Study was one of the main recommendations of the Zero Carbon Whitby Framework. The Zero Carbon Costing Study provides a detailed implementation plan for the Town to remain within its carbon budget and reach zero emissions by 2045. The Zero Carbon Costing Study outlines a schedule and incremental budget for the Zero Carbon Whitby Plan that optimizes the Town's corporate carbon budget with its existing capital budget and asset management plans. It also provides guidance on the establishment of the Zero Carbon Revolving Reserve Fund. Council endorsed the Zero Carbon Whitby Costing Study in September 2022.

The estimated incremental cost of this work between 2022 and 2045 is \$63.7 million. In return, over the same period it estimated there will be \$75.3 million in total savings and avoided costs.

The Study proposes that this incremental cost could be paid for entirely from a Zero Carbon Revolving Reserve Fund, seeded with an initial \$34.8 million in funding and then utilizing cost savings from energy, carbon tax, and select capital projects to fund the balance of the program in later years.

Reporting Commitments

In addition to plans and strategies, the Town of Whitby is also dedicated to climate action through the following commitments:

Global Covenant of Mayors

The Town of Whitby joined the Global Covenant of Mayors (GCoM) in 2019. GCoM is a global network of more than 10,000 cities spanning 139 countries worldwide. These local governments all recognize that ambitious climate initiatives in their communities need to be taken to keep global temperatures from rising more than 1.5°C.

Whitby's participation in the Global Covenant of Mayors commits the community and Town of Whitby to the following milestones:

- Develop GHG emissions inventory;
- Assess climate risks and vulnerabilities;
- Define ambitious climate mitigation, resilience, and energy targets; and,
- Create complete climate action plans.

To meet the requirements of this campaign, Whitby reports all of its climate action through the Carbon Disclosure Project.

Race to Zero and Race to Resilience

[Race to Resilience](#) and [Race to Zero](#) are global campaigns run by the COP26 Presidency and high-level Climate Champions. The purposes of these campaigns are to rally leadership and support from cities, regions, businesses, and investors to help frontline communities build resilience and adapt to the impacts of climate change while

also reducing GHG emissions to stay within the 1.5°C global temperature increase, as outlined in the 2016 Paris Agreement.

In 2021, Whitby Council endorsed joining these campaigns. By joining Race to Resilience and Race to Zero, Whitby joined cities worldwide in committing to be catalysts for change while also demonstrating the commitment to and delivery of the goals of the Paris Agreement and COP26. To meet the requirements of this campaign, Whitby reports all its climate actions through the Carbon Disclosure Project.

Carbon Disclosure Project

The Carbon Disclosure Project (CDP) is a not-for-profit charity that runs a global disclosure system for investors, companies, cities, states, and regions to manage their environmental impacts.

The annual evaluation report is used to gain an overview of environmental performance and how the Town of Whitby's response can be improved in the future. Reporting through CDP meets yearly reporting requirements as a member of the Global Covenant of Mayors, Race to Zero, and Race to Resilience.

4. Discussion:

In 2024 several actions were taken towards achieving the goals and objectives of the Council-endorsed strategic plans discussed above. The following provides a brief summary of the progress made in 2024 on some of the key actions.

Community Strategic Plan

The Community Strategic Plan actions under Objective 2.1; *Demonstrate environmental leadership in sustainability and addressing climate change* that were implemented in 2024 include:

2.1.1 Develop community climate mitigation measures to achieve zero-carbon emissions by 2045

From the Climate Emergency Response Plan – Phase 2: Mitigation, 10 new actions were started in 2024, and six actions were completed.

2.1.2 Explore partnership opportunities to advance alternate energy systems designed to reduce Green House Gas (GHG) emissions of new developments.

The Geothermal Exchange System has been incorporated into the construction of the Whitby Sports Complex to provide heating and cooling for the facility.

2.1.3 Implement actions to increase community resilience to the impacts of climate change

From the Climate Emergency Response Plan – Phase 1: Resilience, 12 actions were started in 2024, and one action was completed.

2.1.6 Promote the use of electric vehicles and lead by example by implementing electric vehicles in the Town's municipal fleet.

14 EV charging stations were installed, including the Town's first Level 3 DC fast-charging stations at the Operations Centre and Iroquois Park Sports Centre.

2.3.4 Implement enhanced street design to improve walkability.

The new enhanced street design standard is in place and has been consistently applied to all new developments.

Climate Emergency Response Plan*Phase 1 – Resilience*

In 2024, 10 of the 106 total actions in the Phase 1 – Resilience Implementation Plan were started. In addition, 11 actions are currently in progress, having been initiated during the first year of implementation in 2023. Two actions were completed in 2023, and six actions were completed in 2024. This reflects a total of 29 actions with progress to date.

The key actions from the Phase 1 – Resilience Plan that were implemented in 2024 are listed below along with a high-level summary of the progress to date.

- 1.1.1 Update the asset management policy and plan to incorporate climate risk and mitigation into asset management, following the province's asset management mandate.

The updated Town's Asset Management Plan includes a Climate Change section with a focus on strategies for climate resilience and mitigation, and Whitby's Zero Carbon Budget.

- 1.5.1 Develop a communications strategy that includes a baseline assessment of knowledge and identifies education needs.

A communications strategy was finalized in 2024 based on the Emergency Preparedness and Climate Change survey that was released in Fall 2023.

- 2.1.2 Utilizing the 'Durham Region Climate Resilience Standard for New Houses', develop education materials and support programs for residents to complete resilience upgrades in their home to protect against basement flooding and extreme heat. Priorities should include actions that can be completed within existing buildings such as:

- Cool roof guidelines
- Landscaping guidelines including maintaining existing trees and adding addition trees and native plant species
- Energy efficiency upgrades including insulation, windows, doors, and high-efficiency heat pumps
- Sealing foundations
- Foundation drainage, sump pump, and downspout drainage and discharge

In 2024, Durham Region, in consultation with Whitby and other Local Area Municipalities, worked to expand the Durham Greener Homes program to include a

resilience (Weather Ready) component, which will offer residents opportunities to assess and improve their homes' ability to withstand extreme weather events.

2.1.4 Evaluate the need and ability to provide additional incentives and funding programs for energy-efficient new buildings and building upgrades.

Through the Housing Accelerator Fund, the Town of Whitby offered to match Region funding, up to an additional \$5,000 top-up, bringing the total incentive to \$10,000 for Whitby residents participating in the Durham Greener Homes program.

2.9.6 Incentivize and encourage the installation of high-efficiency heating and cooling options, such as heat pumps to minimize disruptions stemming from over peaking.

The Town promoted the Durham Greener Homes program, which provides incentives for homeowners to improve energy efficiency through upgrades such as heat pumps.

3.1.1 Assess current canopy cover in the Town, as a whole and separately in more and less developed areas of Whitby, and with an equity lens (e.g. are there at-risk communities with less canopy cover that could lead to increased heat risk?).

Whitby's canopy cover was assessed to help inform the development of the Urban Forestry Management Plan.

3.1.4 Develop an urban forest management strategy with recommendations on the following:

- Meeting the canopy cover target and number of trees planted, focusing on both individual plantings (street trees) and opportunities for creating new urban forests.
- Identifying trees resilient to expected changes in climate and build resilience through diversified plantings throughout the Town.
- Maintaining a town wide inventory and monitoring and tracking tree conditions.
- Introducing improved soil standards for new plantings for trees, as well as other plants.
- Monitoring for and managing climate-related risks to trees such as diseases, pests, invasive species, and heat stress and identifying the introduced species that can be planted to maintain canopy targets, as well as ways to manage habitat loss for birds and animals reliant on current tree species in Whitby.
- Identifying roles for the Town, local organizations, and citizen scientists including considering a collaborative tree monitoring program throughout the community.

The Town is working on developing an Urban Forestry Management Plan. The recommendations mentioned above have been considered during its development.

Phase 2 – Mitigation

In 2024, 12 of the 61 total actions in the Phase 2 – Mitigation Implementation Plan were started, and one action was completed. In addition, eight actions were already in progress prior to the plan's formal approval in 2023, and one action was completed at the time of Council's approval. In total, 22 actions have seen progress to date.

The key actions from the Phase 2 – Mitigation Plan that were implemented in 2024 are listed below along with a high-level summary of the progress to date.

2.1.2 Investigate the development of a residential Property Assessed Clean Energy (PACE) program. Similar programs have been implemented across Canada, including the City of Edmonton's Residential Clean Energy Improvement Program (CEIP), Toronto's Home Energy Loan Program (HELP), and Nova Scotia PACE, which can be used as a guide and precedent for the creation of a Whitby PACE program. Allow building owners to stack PACE loans with the Durham Greener Homes program.

In 2024, Durham Region, in consultation with Whitby and other Local Area Municipalities, developed a PACE/ Local Improvement Charge (LIC) program to support the implementation of the Durham Greener Homes program. In April 2025, Regional Council provided approval to move forward and implement the PACE/LIC program. Whitby will work with Durham Region to promote this program to residents to increase the number of households completing deep energy retrofits.

2.1.3 Investigate additional financing opportunities for residents to make retrofits and potentially stack with the Durham Greener Homes Program.

Through the Housing Accelerator Fund, the Town offered an additional \$5,000 top-up, bringing the total incentive up to \$10,000 for Whitby residents applying to the Durham Greener Homes program.

2.1.5 Educate residents on energy retrofits that can be completed in their homes, and the benefits of energy retrofits and heat pumps. For example, education materials/initiatives could include a video series of community members successfully undertaking home retrofits.

In December 2024, Durham Region and Windfall Ecology Centre hosted a Durham Greener Homes Heat Pump Workshop in Whitby to educate residents about the program and the energy retrofits they can take. There were 42 people in attendance, participating both online and in-person.

2.5.1 Complete construction of three new facilities (the Whitby Sports Complex, the Fire Station Training Tower/Fire Training Complex, and new Animal Services Building). Complete the Operations Centre Phase 2 Expansion to a net-zero standard as identified in the Zero Carbon Whitby: Costing Study to Eliminate Greenhouse Gas Emissions 2022-2045.

The construction of the Whitby Sports Complex, which will be LEED (Leadership in Energy and Environmental Design) Gold and CaGBC Zero Carbon Building Design certified, started in 2023 and continued in 2024.

In 2024, the final design of the Fire Training Tower project was completed. Construction is planned to commence in spring of 2025. As this project is not a building and has no occupancy the Whitby Green Standard does not apply.

The design process for the Operations Centre Phase 2 Expansion started in 2024. An update was provided to Council in October 2024, stating that the expansion will achieve Tier 3 of the Whitby Green Standard and will use CaGBC Zero Carbon Building Design Standard. The contract document phase will be occurring in spring 2025 and tendering is planned to occur in the fall of 2025.

In 2025, the Design Development phase for the Animal Service Building Project will be commencing. The Animal Service Building will be designed to Tier 3 of the Whitby Green Standard and to the CaGBC Zero Carbon Building Design Standard.

Whitby Green Standard

In 2024, Sustainability reviewed 91 unique Tier 1 Whitby Green Standard applications at various stages in the development application process. In addition, the Whitby Sports Complex is the first development in Whitby constructed to achieve Tier 3 of the Whitby Green Standard.

Zero Carbon Whitby

The net total GHG emissions reduction is 509.7 tCO₂e. This accounts for 46% of the Town's short-term 2025 reduction goal of 1,105 tCO₂e of GHG emissions.

To support progress toward the Town's medium-term GHG reduction target, a Deep Energy Feasibility Pathway Study is scheduled for 2025. This study will focus on seven of the Town's highest-emitting facilities. As a result, a more substantial decrease in greenhouse gas emissions is expected in the following years, positioning the Town to make significant strides toward achieving the 2030 goal of a 40% reduction.

2025 Key Projects

In 2025, the Town's Sustainability priorities include the following:

- Developing a Corporate Waste Management Strategy;
- Delivering emergency preparedness workshops;
- Implementing Zero Carbon Whitby projects;
- Completing a Deep Energy Feasibility Pathway Study; and
- Developing an incentive program to support the implementation of the Whitby Green Standard.

5. Financial Considerations:

The Town has identified approximately \$247,550 in the Sustainability capital budget to support sustainability projects in 2025.

In support of Zero Carbon Whitby, a Zero Carbon Revolving Reserve Fund (ZCRRF) was established in September 2022 to facilitate the implementation of zero carbon projects. The ZCRRF provides funding towards zero carbon retrofits, pilot projects and incremental retrofit project costs of zero carbon options. Operational savings from

completed projects, as well as session fees received from use of the Town's Electric Vehicle charging stations, are directed into the fund. The current uncommitted balance in the ZCRRF is approximately \$136,000.

In partnership with the Region on the Durham Greener Homes Retrofit Program, Staff allocated \$250,000 in 2024 from the Housing Accelerator Fund (HAF capital project # 55247606 that is fully grant funded) towards this multi-year rebate partnership with the Region. This program will run until December 2027.

Funds from the HAF are also planned for a Pilot Financial Program to support the Whitby Green Standard to advance sustainable development across the Town.

Town staff strive to seek additional funding support for sustainability initiatives. A detailed list of the funding that the Town was successful in securing is included in Appendix A of the 2024 Sustainability Annual Report (Attachment 1).

6. Communication and Public Engagement:

Public education and engagement are critical to the success of becoming a sustainable community. The following initiatives highlight the public engagement carried out in 2024:

- In support of the West Lynde neighbourhood SNAP, a survey was conducted that asked residents for feedback on what sustainability actions are the most important to them in their neighbourhood.
- To support the development of Version 2 of the Whitby Green Standard, a survey was conducted, and a public meeting was held to understand what sustainable building practices that the community believes are the most important for new developments. In addition, two meetings were held with the development community to obtain their specific input on the standard.

The Town will also continue to offer sustainability initiatives to build awareness and encourage community-wide participation through:

- Education events and seminars;
- Community Greening Program in partnership with LEAF (Local Enhancement and Appreciation of Forest); and,
- Community Anti-Litter Cleanup Online Tool.

7. Input from Departments/Sources:

The Strategic Initiatives Division has prepared this report with support from Operational Services, Finance, Community Services, and the Whitby Public Library.

8. Strategic Priorities:

The initiatives outlined in this report directly align with the priorities of the Community Strategic Plan endorsed by Council in 2023. Specifically, with Objective 2.1:

“Demonstrate environmental leadership in sustainability and addressing climate change” of Strategic Pillar 2: Whitby's Natural & Built Environment. As stated in Section 4 several, actions were implemented in 2024 to achieve Objective 2.1.

Sustainability initiatives are developed with considerations for inclusivity and accessibility. All documents for this report have been reviewed to ensure they are accessible to all readers.

The 2024 Sustainability Annual Report describes how the Town is meeting its goals of becoming a healthy and sustainable community while addressing climate change through a mitigation and adaptation lens.

9. Attachments:

Attachment 1 – 2024 Annual Sustainability Report