




**CITY OF HAMILTON**  
**PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT**  
**Office of Climate Change Initiatives**

<b>TO:</b>	Mayor and Members General Issues Committee
<b>COMMITTEE DATE:</b>	October 18, 2023
<b>SUBJECT/REPORT NO:</b>	Hamilton's Climate Action Strategy 2023 Annual Update (PED23222) (City Wide) <b>(Outstanding Business List Item)</b>
<b>WARD(S) AFFECTED:</b>	City Wide
<b>PREPARED BY:</b>	Beatrice Ekoko (905) 546-2424 Ext. 3589 Trevor Imhoff (905) 546-2424 Ext. 1308 Cathrin Winkelmann (905) 546-2424 Ext. 3916
<b>SUBMITTED BY:</b>	Lynda Lukasik Director, Office of Climate Change Initiatives Planning and Economic Development Department
<b>SIGNATURE:</b>	

**RECOMMENDATION**

- (a) That Appendix "A" to Report PED23222 "Hamilton's Climate Action Strategy Annual Climate Change Update 2023" be received.
- (b) That Appendix "B" to Report PED23222 "Status Update Regarding Climate Actions in Hamilton's Climate Action Strategy" be received.
- (c) That the following investments to be funded from the 2023 Budget allocation to the Climate Change Reserve (Account No 108062) be approved:
  - (i) E-Bike Pilot for Hamilton Bike Share to an upset limit of \$750k
  - (ii) Municipal Parking Lot Greening / Climate Adaptation pilot project to an upset limit of \$200k
  - (iii) Enhancement/Expansion of Secure Bike Parking Facilities to an upset limit of \$350k
  - (iv) De-paving pilot project to an upset limit of \$350k
  - (v) Fire Truck Anti-Idling Technology to an upset limit of \$900k

## **EXECUTIVE SUMMARY**

In March of 2019, Hamilton City Council unanimously declared a climate emergency. Coming out of that declaration was a commitment to work with the broader community to create a community roadmap to net zero, now known as Hamilton's Climate Action Strategy. Since that time, the evidence continues to mount; we are in a climate emergency that demands aggressive climate mitigation and adaptation actions at the local level.

Hamilton's Climate Action Strategy, and the climate mitigation and adaptation plans found within it, was adopted in August 2022 (Report CM22016/ PED22058(a)/ HCS22030(a)) and it is the City's roadmap to drastically cutting carbon emissions and achieving net zero by 2050, or sooner, as is now being urged.

As part of the City's Climate Action Strategy, the Office of Climate Change Initiatives was created in late 2022. This report is the first annual report of the Office of Climate Change Initiatives on the implementation of the Climate Action Strategy. It provides an update on the Office of Climate Change Initiative's 2023 Priority Areas of Focus, as well as a first-year status update on the implementation of actions found in Hamilton's Climate Action Strategy.

This report is also seeking Council approval of a number of investments into new initiatives and programs to further advance the City's Climate Action Strategy. The City's 2023 Budget included the creation of a Climate Change Reserve to fund projects and programs that advance the City's Climate Action Strategy. Through engagement and discussions with divisions across the City, the Office of Climate Change Initiatives has identified five initiatives representing an investment of \$2.55M as priorities for investing the 2023 Climate Change Reserve funds.

## **Alternatives for Consideration – Not Applicable**

## **FINANCIAL – STAFFING – LEGAL IMPLICATIONS**

Financial: There are no financial implications associated with the receipt of Hamilton's Climate Action Strategy Annual Climate Change Update 2023 attached as Appendix "A" to Report PED23222.

This report is also seeking Council approval of a number of investments into new initiatives and programs to further advance the City's Climate Action Strategy. As part of the 2023 Budget, Council approved the creation of a Climate Change Reserve. The Reserve is funded through the General Tax Levy by \$2.5M per year. In 2023, a one-time transfer of \$800K was also made through the allocation of a portion of the remaining capital levy. The

current uncommitted balance of the Climate Change Reserve (Account No 108062) is \$3.65M. Through engagement and discussions with divisions across the City, the Office of Climate Change Initiatives has identified five initiatives representing an investment of \$2.55M as priorities for investing the 2023 Climate Change Reserve funds.

**Staffing:** There are no staffing implications associated with the adoption of this report.

**Legal:** Not applicable

## **HISTORICAL BACKGROUND**

March 27, 2019 – City Council Report 19-006 approves the Climate Emergency Declaration directing staff to investigate actions for Hamilton to reach net zero emissions by 2050.

August 2022 – City Council approves Hamilton's Climate Action Strategy and the mitigation and adaptation plans within it, including approving the creation of an Office of Climate Change Initiatives, the transfer of a Senior Project Manager from Healthy & Safe Communities into the office and the hiring of a Director to lead the office (Report CM22016/PED22058(a)/HSC22030(a)).

November 2022 – The Office of Climate Change Initiatives is officially established.

March 2023 – As part of the 2023 Operating Budget, City Council approves two additional FTEs – a Project Manager and a Senior Project Manager – as part of the newly established Office of Climate Change Initiatives. The 2023 Budget also confirms a sustainable source of funding for the city's Climate Change Reserve via an annual charge to the General Tax Levy.

September 2023 – Council adopts its Term of Council Priorities which includes as Outcome 3 “accelerate our response to climate change” and establishes as a Measures of Success the accelerated reduction in the City's GHG emissions and the assessment of infrastructure projects against their impact on the City's climate resilience and readiness.

## **POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS**

Not applicable.

## **RELEVANT CONSULTATION**

Planning and Economic Development Department (Transportation Planning & Parking, Planning, Growth Management, Building, and Economic Development Divisions), Corporate Services Department (Financial Planning, Administration and Policy Division), Public Works Department (Environmental Services, Office of Energy Initiatives, Hamilton Water, Transit), and Healthy and Safe Communities Department (Healthy Environments, Hamilton Fire, and Housing Services Divisions).

## **ANALYSIS AND RATIONALE FOR RECOMMENDATION**

Hamilton is responding to the global climate emergency through a community-wide, comprehensive Climate Action Strategy. With mitigation and adaptation plans now approved and in place, efforts have shifted to implementation and it is essential that effective and accountable systems are developed to track progress over time. This report is the first annual report of the Office of Climate Change Initiatives on the implementation of the Climate Action Strategy. It provides an update on the Office of Climate Change Initiative's 2023 Priority Areas of Focus, as well as a first-year status update on the implementation of actions found in Hamilton's Climate Action Strategy.

### **Overview of Hamilton's Climate Action Strategy**

Hamilton's Climate Action Strategy is a strategy made up of two plans:

- "ReCharge Hamilton – Our Community Energy + Emissions Plan" (CEEP); and
- "Hamilton's Climate Change Impact Adaptation Plan" (CCIAP).

The CEEP addresses climate change mitigation through the reduction of greenhouse gases. The actions in this plan focus on five low-carbon transformations that are pivotal in achieving Hamilton's low-carbon future. They consist of:

1. Innovating our Industry;
2. Transforming our Buildings;
3. Changing how we Move;
4. Revolutionizing Renewables; and
5. Growing Green.

The CCIAP addresses climate change adaptation by building up the City's resiliency to the impacts of a changing climate. Objectives and actions in this plan are organized around four resilient theme areas consisting of:

1. Built Environment;
2. People and Health;
3. Natural Environment, Agriculture and Water; and,

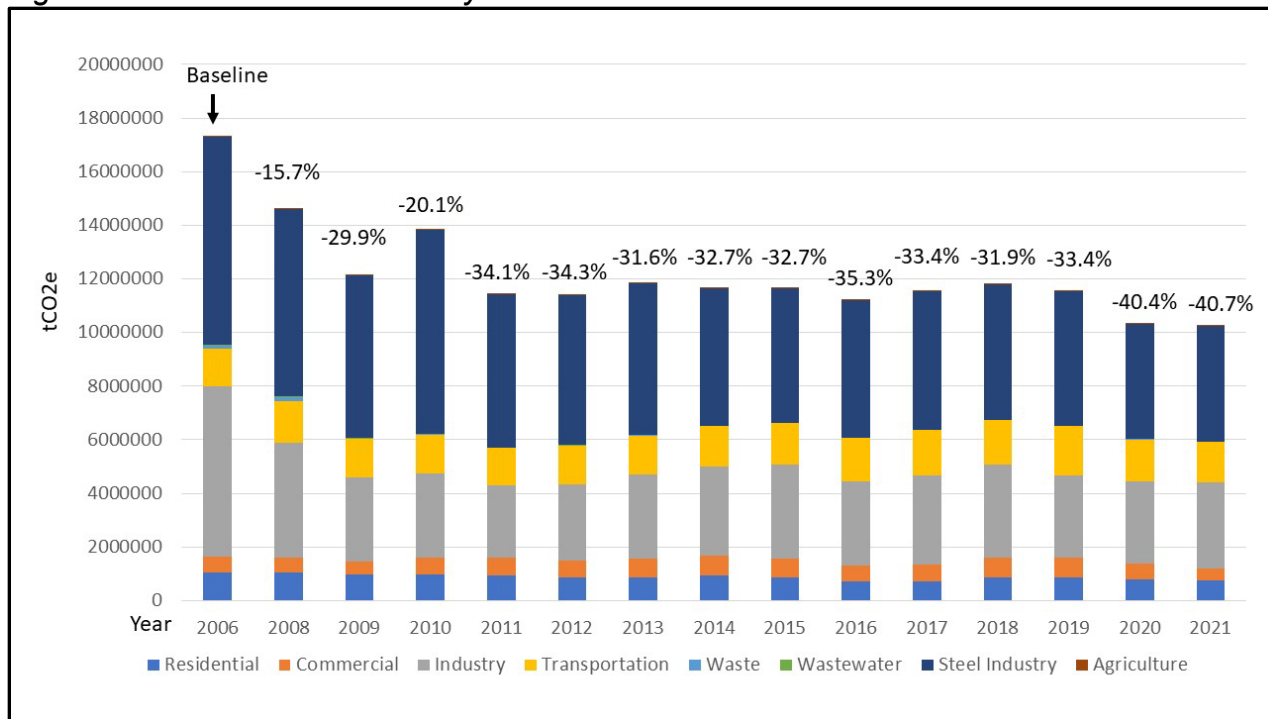
#### 4. Energy and Economy.

These two plans provide the framework and actions to address the climate change emergency.

#### **Hamilton Community Greenhouse Gas Inventory**

The City of Hamilton has been tracking and reporting annually community-wide greenhouse gas emissions from sectors including; Buildings (broken down by Residential, Commercial and Industry), Transportation, Industrial Emissions, Waste, Wastewater, and Agriculture since 2008. Using the year 2006 as a baseline and the most recent greenhouse gas inventory year of 2021, it is estimated Hamilton's community-wide emissions have been reduced by approximately 40.7%. This equates to 10,289,987 tCO<sub>2</sub>e in 2021 compared to 17,349,813 tCO<sub>2</sub>e in 2006.

*Figure 1.0 Hamilton's Community-Wide Greenhouse Gas Emissions 2006-2021*

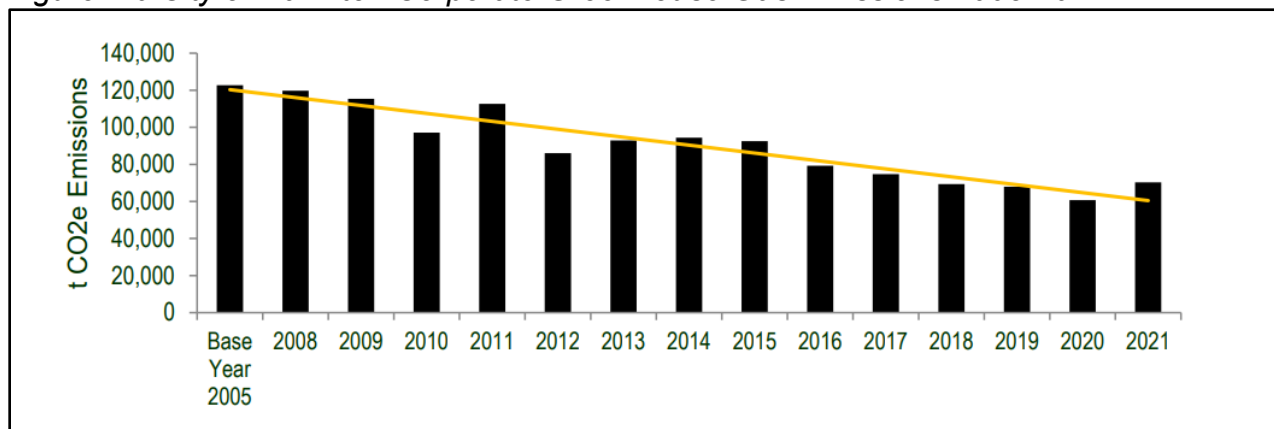


#### **Hamilton's Corporate Greenhouse Gas Inventory**

The City of Hamilton's Office of Energy Initiatives is responsible for reporting annually regarding corporate greenhouse gas emissions. The most recent report was presented to Public Works Committee on September 18, 2023 (Report PW21094(b)). The 2021 inventoried results show a 16% increase in corporate greenhouse gas emissions when

compared to 2020. As reported by the Office of Energy, this is partly due to increased city activity coming out of the pandemic. It is also partly due to an emissions calculation error that was corrected in 2021; emissions for the vehicle fleet and contracted vehicle fleet were being underreported prior to 2021.

*Figure 2.0 City of Hamilton Corporate Greenhouse Gas Emissions 2005-2021*



### **Hamilton's Climate Action Strategy - Progress Report on Action Implementation**

This annual progress report is the first from the Office of Climate Change Initiatives. Some highlights are provided below and a more detailed report can be found as Appendix "A" to Report PED23222. Note that the appended report will undergo enhanced formatting and graphic design for final posting to the City's website. Appendix "B" to Report PED23222 provides a summary chart with brief status updates for every action in the Strategy. This year's progress report is more comprehensive where city-led actions are concerned. Future reports will provide updates on progress for both city-led and community-led actions as we develop more formalized and rigorous methods for tracking progress.

#### **(i) Recharge Hamilton – Community Energy & Emissions Plan (CEEP)**

Highlights of some of the actions achieved to implement the Community Energy and Emissions Plan are provided below. A more detailed report can be found as Appendix "A" to Report PED23222.

#### **Low-Carbon Transformation #1: Innovating Our Industry**

Mitigation Action 1.0 calls for the creation of a net zero industrial working group in Hamilton. In May 2023 City Council approved a four-year funding contribution of \$240,000 for Hamilton's Regional Decarbonization Hub. Funding will also come from

higher levels of government and private partners. The plan is to establish the Hub in 2024.

### **Low Carbon Transformation #2: Transforming Our Buildings**

Mitigation Action 6b calls for a small-scale neighbourhood deep energy and emissions retrofit program. A pilot home energy retrofit opportunity – now known as the Better Homes Hamilton program – has been approved by Council and will launch this fall.

### **Low-Carbon Transformation #3: Changing How We Move**

Mitigation Action 7.0 calls for efforts to expand and connect active transportation networks. In 2023, approvals were in place to build 35km of new bike lanes. Hamilton City Council approved accelerating the implementation of the Cycling Master Plan in February of 2023. This has resulted in additional staffing and other resources for this work. A recommendation is also in place to update the Transportation Master Plan to identify where highest need for network improvements is and to prioritize these areas.

### **Low-Carbon Transformation #4: Revolutionizing Renewables**

Mitigation Action 19.0 is focused on both decarbonizing and expanding the Hamilton Community Enterprises downtown district energy system. Efforts are now underway to explore how to expand and decarbonize the system by using waste heat from industry.

### **Low-Carbon Transformation #5: Growing Green**

Mitigation Action 23 commits the broader community to planting 50,000 trees per year. The City, through the Forestry and Horticulture Division, is committed to planting 20,000 of those trees. Forestry gave away 3,500+ native trees to homeowners for rear yard planting and will increase that number to 5,000 trees in 2024.

### **(ii) Hamilton's Climate Change Impact Adaptation Plan (CCIAP)**

Highlights of some of the actions achieved to implement the Climate Change Impact Adaptation Plan are provided below. A more detailed report can be found as Appendix "A" to Report PED23222.

### **Resilient Theme #1: Built Environment:**

Action 2.2 calls for the City to improve winter travel conditions by further expanding sidewalk clearing. Public Works staff report that in November of last year, sidewalk clearing was expanded from 397km to 866km. A report is coming to Public Works Committee in October 2023 with additional proposed enhancements.

## **Resilient Theme #2: People and Health**

Actions 4.3 (initiate neighbourhood buddy systems for wellness check-ins during extreme heat events), 6.2 (expand heating and cooling centre programming and interventions) and 6.3 (improve monitoring, data collection, notification around extreme weather events) focus on vulnerable populations and climate adaptation. The Healthy Environments Division is developing a Heat Response Strategy going to Public Health Committee in Q1 2024. The strategy will address all of these adaptation-related actions.

## **Resilient Theme #3: Natural Environment, Agriculture and Water**

Action 8.1 calls for the City to build community partnerships to get more trees planted to address urban heat island effect and enhance ecosystem functioning. In 2023 Forestry staff aimed to get 1,800 trees planted on public property by partnering with community on community planting days. To date, over 3,600 trees have been planted using volunteer power, with 5,000 trees now the target for 2024.

## **Resilient Theme #4: Energy and Economy**

Action 11.1 calls for the City to establish low carbon back-up power systems in all of its facilities so these spaces might serve as community hubs during emergencies. The Corporate Facilities and Energy Management Division has started to review existing generators within corporate facilities, studying the viability of shifting to low-carbon fuels, and ensuring appropriate sizing of backup power systems for enhanced resiliency.

## **Office of Climate Change Initiatives 2023 Priority Areas of Focus**

For its first year of operation, the Office of Climate Change Initiatives set out Priority Focus Areas, presented to the General Issues Committee in April of this year (Report PED23064). Priorities were identified to enable focused action right from the start. Below is a progress update on the implementation of those Priority Focus Areas.

### **(i) OCCI Focus Area #1 – Climate Change Governance & Innovation**

In 2023, the following milestones have been achieved with respect to Focus Area #1 – Climate Change Governance & Innovation:

- Establishment of a **Climate Change Initiatives Steering Committee** made up of City Directors from across the corporation and with a central mandate to facilitate corporate-wide monitoring and centralized reporting on progress with city-led actions in Hamilton's Climate Action Strategy



- Establishment of an internal **Extended Leadership Group**, made up of managers and other relevant staff from key departments and divisions responsible for implementation of city-led Climate Action Strategy actions (first meeting to be held in Q4 2023).
- Establishment of a **Community Climate Change Advisory Committee** to review the City's corporate and community-wide climate targets and actions, and to monitor progress with implementation efforts. A Terms of Reference was approved by Council on January 25, 2023 (Report PED23028). In June, 2023, interested community members were invited to formally apply to serve on the Committee. Application review and Committee member selection is now underway through the Interview Sub-Committee of the General Issues Committee. The hope is that the Committee membership will be finalized and a first meeting held prior to the end of 2023.
- Launch of the first internal cross-departmental call for investment proposals from the Climate Change Reserve for City projects that **facilitate and support municipal innovation on climate mitigation and adaptation**. The recommended investments are outlined later in this report.

## **(ii) OCCI Focus Area #2 – Community Climate Outreach**

In 2023, the following milestones have been achieved with respect to Focus Area #2 – Community Climate Change Outreach:

- In 2023, the City finalized an updated 4-year **agreement and partnership with the Bay Area Climate Change Council**, the multi-stakeholder organization supported by the cities of Hamilton and Burlington to facilitate regional solutions to climate issues. The City provides the Council with \$160k in support each year, through a Memorandum of Understanding that also brings important collaborative supports to the City's efforts to develop and implement climate action priorities.
- The Office of Climate Change Initiatives has started the development of a **Climate Communications & Engagement Strategy** with both external and internal components. The goals include:
  - raise awareness about the climate crisis in Hamilton with the goal of mobilizing action;
  - raise awareness about the City of Hamilton's climate leadership, significant actions, and innovations happening through the Hamilton's Climate Action Strategy;
  - promote key programs, opportunities, and resources (Office of Climate Change Initiatives, City-led and other) and gain greater participation;
  - provide key messaging around programs and opportunities;

- center climate justice throughout our communications and engagement;
- celebrate and highlight stakeholder/community-led achievements;
- provide a platform for two-way communication on climate issues with the public; and,
- align with other relevant City Communications & Engagement Strategies.

### **(iii) OCCI Focus Area #3 – Carbon Budgeting**

Staff in the Office of Climate Change Initiatives have taken the lead on developing the scope of work for “Hamilton’s Carbon Accounting and Budgeting Framework”, a multi-phase and multi-year initiative that includes three main pillars of work:

- *Pillar 1 – Net Zero Calculations and Support Policies* - to calculate Hamilton's community and corporate 'fair-share' finite carbon budget that aligns with the 1.5 degrees Celsius global warming target
- *Pillar 2 – Protocols and Processes* - to establish clear and easy to understand, publicly transparent protocols and process that provide the City of Hamilton with the ability to align budget and planning processes with its finite carbon budget
- *Pillar 3 – Tools and Resources* - to support City staff, Council and community efforts to implement the Carbon Accounting and Budgeting Framework. This will include tools/resources for quantification, analysis and reporting.

This work is being initiated in 2023 via a pilot in two selected Divisions to generate lessons learned while working through a competitive tender process to hire an expert consultant to begin carbon budget calculations in early 2024.

### **(iv) OCCI Focus Area #4 – Green Buildings**

In 2023, the following milestones have been achieved with respect to Focus Area #4 – Green Buildings:

- The **Better Homes Hamilton pilot project** was approved by Council in May 2023 (Report PED23106). The program will provide property owners low barrier access to upfront capital for them to retrofit their homes, in order to reduce greenhouse gas emissions, improve energy efficiency, and live more comfortably. Up to 50 Hamilton homeowners may be eligible for a zero-interest loan for up to a maximum of \$20,000 for energy efficiency home improvements paid back via a local improvement charge through their property tax bill over a 10 to 15-year repayment term. Eligible property types are single detached houses, semi-detached houses, and town homes.

- Development of an **Energy Performance/Net Zero Standard for all new City of Hamilton facilities** is being pursued in close collaboration with the City's Corporate Facilities and Energy Management Division. The goal is to have a new Energy Performance/Net Zero Standard created by mid-2024 and a strategy for implementation – including a plan for funding any additional costs associated with constructing buildings in this manner - in place by Q4 2024.

#### **(v) OCCI Focus Area #5 – Urban Greening**

Hamilton's Climate Action Strategy sets the ambitious goal of seeing 50,000 trees planted each year across the municipality. The City of Hamilton itself has committed, through the Forestry and Horticulture Division, to have 20,000 of those trees planted via direct planting efforts by Forestry, in combination with free tree giveaways to residents, and Forestry-facilitated community tree planting events on city property. The Office of Climate Change Initiatives has taken on the task of creating a system to track the tree planting undertaken by community stakeholders, in order to evaluate our community's success in realizing the annual 50,000 tree target. Conversations are also underway with several key community partners to establish plans to amplify efforts to green up heavily urbanized areas through 'depave' projects and other innovative approaches to greening urban streetscapes and surrounding sites – including private property.

#### **Climate Change Reserve**

The City of Hamilton's Climate Change Reserve (Policy No. FPAP-RE-015) was established in 2018 to fund initiatives that advance the City's approved climate change goals. More specifically, the fund is intended to support the piloting of new and innovative climate mitigation and adaptation efforts. A preliminary allocation of \$1.5 M was placed into the Reserve when it was first established. As part of the 2023 Budget process, Council approved a sustainable source of funding for the Reserve through the general tax levy, allocating an additional \$2.5 M to the Reserve in 2023.

To date, Council has approved the following investments from the Climate Change Reserve:

- **Natural Areas Inventory Update** (\$200,000) – this inventory will provide current information on flora and fauna and natural area site boundaries to the public and other entities, including the City, that are responsible for protecting and enhancing these features. (PED21065(c))
- **Natural Areas Acquisition Fund** (\$150,000) – through this fund, the City will provide funding to eligible Conservation Organizations for land acquisition (direct fee-simple or conservation easements) up to 50% of the acquisition cost to a maximum of \$50,000 per property (PED21065(c))

- **Better Homes Hamilton Home Energy Retrofit Pilot** (up to \$275,000) – to cover costs for program administration (Report PED23106)
- **Hamilton Regional Decarbonization Hub** (\$80,000 over four years) – for the operation of this stakeholder roundtable process (CM22013(a)/PED22176(a))
- **Community Climate Change Advisory Committee** (\$9,000) – to support the functioning of the Committee, including provision of supports to participants. (PED23028)
- **EV Charging Electrical Upgrades at City Facilities** (\$535,000) – pending Council approval through Report PW23064.

Taking into account the investments outlined above, the current uncommitted balance of the Climate Change Reserve (Account No 108062) is \$3.65M.

In order to identify 2023 priorities for Climate Change Reserve funding for city-led initiatives, an internal process was created by the Office of Climate Change Initiatives. For 2024, the process will become more formalized with both the internal Climate Change Initiatives Steering Committee and the external Community Climate Change Advisory Committee reviewing and advising regarding applications for Reserve support.

Through this report, the Office of Climate Change Initiatives is recommending investment in five initiatives representing an investment of \$2.55M from the 2023 Climate Change Reserve funds. The initiatives are summarized in Table 1.0 below.

*Table 1.0: Recommended Climate Change Reserve Investments*

<b>Project</b>	<b>Details</b>	<b>Funding</b>
<b>E-Bike Pilot for Hamilton Bike Share</b>	Purchase of a minimum of 100 e-bikes and equipment to support the e-bikes, including contractual costs to Bike Share to manage and maintain the e-bikes as part of the Bike Share fleet, in order to enable a 3-year Bike Share E-Bike pilot in Hamilton. Pilot is anticipated to facilitate additional modal shifts by increasing the range within which people can easily travel.  Addresses CEEP Action 9.0 (expand e-mobility services)	<b>\$750,000</b>
<b>Municipal Parking Lot Greening/ Climate Adaptation</b>	Greening and introduction of permeable, sustainable surfaces at six city parking lots. Proposed improvements include piloting different porous asphalts, supporting greening with tree and native plant installation, and incorporating bike parking and street furniture. The parking lots proposed for improvement are at various locations including:	<b>\$200,000</b>

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	<p>Dundas (45 King St W &amp; 2 Foundry St), Kenilworth Ave N, 115 Campbell Ave, 51 Balmoral Ave N, and 346 Barton St E.</p> <p>Addresses CEEP Action 23 (plant 50k trees) and CCIAP Action 1.1 (develop &amp; implement low impact development (LID) guidelines)</p>	
<b>Enhancement/Expansion of Secure Bike Parking Facilities</b>	<p>Enhance existing secure bike parking facilities and establish new secure bike parking facilities at transit hubs and major destinations including: City Hall, Convention Centre, York Boulevard Parkade, McMaster University, Mohawk College, Eastgate Square Transit Terminal and other locations to be determined through further consultation.</p> <p>Upgrades to existing facilities: \$50,000  Development of three new facilities: \$100,000 per facility x 3 facilities = \$300,000</p> <p>Addresses CEEP Action 7.0 (expand and connect active transportation networks)</p>	<b>\$350,000</b>
<b>De-paving Pilot Project</b>	<p>Undertake targeted de-paving initiatives on City-owned lands, including boulevards and streets, to provide and test strategies for enhanced stormwater retention, tree canopy coverage, and urban greening. Focus areas to include locations identified as priorities through the Urban Forest Strategy.</p> <p>Addresses CEEP Action 23 (plant 50k trees) and CCIAP Action 1.1 (develop &amp; implement low impact development (LID) guidelines) and CCIAP Action 8.2 (Implement the Urban Forest Strategy)</p>	<b>\$350,000</b>
<b>Fire Truck Anti-Idling Technology</b>	<p>Purchase and install battery-powered auxiliary power units (APUs) on 15 existing heavy fire vehicles. This technology can reduce fire apparatus idling by up to 45% and overall engine use by up to 15%, leading to greenhouse gas emissions reductions of 18 tCO<sub>2</sub>e/yr per vehicle.</p>	<b>\$900,000</b>

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	Addresses CEEP target to achieve net zero across the entire municipal fleet by 2050.	
<b>TOTAL:</b>		<b>\$2,550,000</b>

**ALTERNATIVES FOR CONSIDERATION**

Not applicable.

**APPENDICES AND SCHEDULES ATTACHED**

Appendix "A" to Report PED23222 – Hamilton's Climate Action Strategy Annual Climate Change Update 2023